THIRD EDITION

ROUTLEDGE

EDUCATIONAL PSYCHOLOGY

EDITED BY TONY CLINE, ANTHEA GULLIFORD AND SUSAN BIRCH

TOPICS IN APPLIED PSYCHOLOGY

'This is a very welcome update of this key educational psychology text. Its accessible style clearly highlights the contemporary issues, challenges and opportunities in applying psychology in education. It will be an invaluable resource for undergraduates and trainee educational psychologists'.

Professor Caroline Bond, *University of Manchester, UK*

'This easily accessible textbook highlights the range of contexts where educational psychologists can make a valuable contribution. It covers a wide range of topics and provides an excellent primer to anyone wondering how psychology can be used to enhance outcomes for children and young people. We strongly recommend it to tutors and learners alike'.

Dr Sarah Wright *and* Dr Tim Cooke, *University of Southampton, UK*

EDUCATIONAL PSYCHOLOGY

Now in its third edition, *Educational Psychology* offers a comprehensive overview of how key advances in social, developmental and cognitive psychology impact upon the role of educational psychologists working today. Written by leading researchers, the book also explores controversies and dilemmas in both research and practice, providing students with a balanced and cutting-edge introduction to both the field and the profession.

Fully revised throughout, and with a new chapter exploring how educational psychologists work with schools to support children and young people's mental health, this third edition aims to encourage students to integrate their understanding of core psychological disciplines, as well as to consider what 'evidence-informed practice' really means. Organised into two broad sections related to learning and to social, emotional and mental health, the book features a selection of vignettes from educational psychologists working in a range of contexts, as well as tasks and scenarios to support a problem-orientated approach to study.

By integrating both research and everyday practice, the book is unique in engaging a critical appreciation of both the possibilities and limitations of educational psychology. It is the ideal book for any student wishing to engage with this important and evolving field of study.

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Graham Davey, Professor of Psychology at the University of Sussex, UK and former president of the British Psychological Society

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EDUCATIONAL PSYCHOLOGY

Third Edition

Edited by
Tony Cline,
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Susan Birch

Routledge
Taylor & Francis Group
LONDON AND NEW YORK

Cover Image: © Getty Images

Third edition published 2024
by Routledge
4 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

and by Routledge
605 Third Avenue, New York, NY 10158

Routledge is an imprint of the Taylor & Francis Group, an informa business

First edition published by Hodder Education 2008

Second edition published by Routledge 2015

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data
Names: Cline, Tony, editor. | Gulliford, Anthea, editor. | Birch, Susan, editor.
Title: Educational psychology / Edited by Tony Cline, Anthea Gulliford, and Susan Birch.
Description: Third edition. | New York : Routledge, 2023. | Series: Topics in applied psychology | "Second edition published by Routledge 2015" -- Title page verso. | Includes bibliographical references and index. |
Identifiers: LCCN 2022061770 | ISBN 9780367339142 (paperback) | ISBN 9780367339135 (hardback) | ISBN 9780429322815 (ebook)
Subjects: LCSH: Educational psychology.
Classification: LCC LB1051 .F733 2023 | DDC 370.15--dc23/eng/20230113
LC record available at https://lccn.loc.gov/2022061770

ISBN: 978-0-367-33913-5 (hbk)
ISBN: 978-0-367-33914-2 (pbk)
ISBN: 978-0-429-32281-5 (ebk)

DOI: 10.4324/9780429322815

Typeset in Times New Roman
by SPi Technologies India Pvt Ltd (Straive)

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SERIES FOREWORD

Psychology is still one of the most popular subjects for study at undergraduate degree level. As well as providing the student with a range of academic and applied skills that are valued by a broad range of employers, a psychology degree also serves as the basis for subsequent training and a career in professional psychology. A substantial proportion of students entering a degree programme in psychology do so with a subsequent career in applied psychology firmly in mind, and as a result, the number of applied psychology courses available at the undergraduate level has significantly increased over the years. In some cases, these courses supplement core academic areas, and in others, they provide the student with a flavour of what they might experience as a professional psychologist.

The *Topics in Applied Psychology* series consists of eight textbooks designed to provide a comprehensive academic and professional insight into specific areas of professional psychology. These texts cover the areas of clinical psychology, criminal psychology, educational psychology, health psychology, sports and exercise psychology, work and organisational psychology, forensic psychology and counselling psychology, and each text is written and edited by the foremost professional and academic figures in each of these areas.

It's my pleasure to introduce the third edition of the book covering *Educational Psychology* by Tony Cline, Anthea Gulliford and Susan Birch. This new edition reflects important changes occurring in research and practice in educational psychology over recent years, including increased coverage of subjects of current concern, a substantially revised and updated text throughout, and many new scenarios and vignettes supplied by practicing educational psychologists.

Through successive editions, each textbook is based on a similar academic formula that combines a comprehensive review of cutting-edge research and professional knowledge with accessible teaching and learning features. The books are also structured so they can be used as an integrated teaching support for a one-term or one-semester course in each of their relevant areas of applied psychology. Given the increasing importance of applying psychological knowledge across a growing range of areas of practice, we feel this series is timely and comprehensive. We hope you find each book in the series readable, enlightening, accessible and instructive.

Graham Davey
University of Sussex, Brighton, UK

PREFACE TO THE THIRD EDITION

This book builds on the content and methods of the previous editions, and we wish to pay tribute to those editors of the original who handed on the baton subsequently – Norah Frederickson and Andy Miller. On the basis of feedback about the second edition we have increased the coverage of subjects of current concern, reduced coverage of subjects of mainly historical interest and substantially revised and updated the text throughout. This latest edition reflects important changes that have occurred in research and practice in educational psychology over recent years. Many scenarios and vignettes have been supplied by educational psychologists (EPs), based on their work in the field. As before, we hope that this will enhance readers' sense of engagement with the practice of this profession and the evidence about childhood and schooling that it provides. We are grateful to Rachel Grace, Gurdip Theara, Lisa Hobkirk and Matthew Fuller for the contributions they made on the basis of their professional experience.

How can this book be used?

In this preface we outline for students and tutors the range of ways in which this book can be used to support teaching and learning about educational psychology. We first consider *purpose – why* you may have decided to open the book. We then discuss *approach – how* the chapters are structured and may be used to achieve each of a number of goals. In the third section we focus on *content* – what areas of knowledge and understanding are addressed and what sequencing options are available. We finish this introduction with some thoughts about what is involved in applying psychology to education.

Purpose

We first consider a number of different purposes for which this textbook might be used, focusing in particular on the needs and priorities of different target readerships.

Advanced level undergraduate psychology degree option

One primary audience we have had in mind in writing this book comprises advanced level undergraduate psychology students and tutors. Tutors will find material suitable for a one-term or one-semester Level 2 or Level 3 undergraduate course. Subject benchmarking statements for psychology suggest that 'there is a strong relationship between theory and empirical data, the results

of which may find their expression in applications to education, health, industry/commerce and other situations'. They specify that degree programmes should develop students' ability 'to extrapolate and comprehend the applications of knowledge within and across areas of psychology' (QAA, 2019, pp. 4–5). The book will support the achievement of this purpose in the area of educational psychology.

The main context for the application of knowledge in educational psychology is the school. While there are other important areas of educational psychology practice, in families and in the community, we will only touch on them occasionally in this book which will focus mainly on school contexts. All students have had experience of school, which in most cases is recent. We hope this broad familiarity will facilitate a ready grasp of the applications of psychology that are described.

Application to educational psychology training

For anyone who might be interested in applying for professional training as an EP, Chapter 1 'What do educational psychologists do?' is an obvious starting point for finding out about the professional role and training. For the serious applicant each chapter offers insights about aspects of professional practice and ways in which psychology can be applied in educational contexts. The criteria used by selection panels for educational psychology training programmes commonly include: *knowledge of ways in which psychology can be applied in educational, childcare and community contexts* and/or *experience of applying psychology theory and research in work with children and young people*. This book will contribute to the knowledge referred to in the first of these criteria and will assist both in planning and reflecting on relevant experience for addressing the second criterion.

Professional training in educational psychology

In the initial stages of doctoral professional training programmes in educational psychology there is often a need for trainees to enhance or update their knowledge of psychological theory and research relevant to professional practice. While many trainees will have completed their undergraduate psychology degree within the previous couple of years, some will have completed it a number of years prior to that, and for some there may have been less emphasis on the actual application of psychology in educational contexts. We have received feedback that this book meets the needs of those who have embarked on professional educational psychology training too, and is of value on the initial set reading list for these programmes.

Approach

This book is designed to be used to support a range of different course formats:

- a one-term/semester lecture course
- a seminar group meeting weekly alongside a lecture course
- a problem-based learning (PBL) course, structured as a series of tutor facilitated or self-directed learning group meetings (for example, see Dunsmuir et al., 2017).

Across each of these formats the text is designed to encourage and support a problem-orientated approach to learning. This orientation has been selected to engage interest and develop critical

analysis. It also aids the presentation of issues in practice contexts in ways that facilitate the representation of different perspectives and the development of a realistic appreciation of both the contributions and challenges in applying psychology to complex real-world problems.

The problem-orientated approach is reflected in a number of different ways. The titles of the chapters pose questions highlighting controversies and dilemmas in research and practice. For example: 'Why does mathematics make so many people fearful?' and 'Can we cure dyslexia?' Most chapters contain at least one focus box which features a suitable stimulus or 'trigger' for use by a PBL or seminar group as a starting point for the topic in question. This will often be a vignette or case study from the professional practice of EPs, but newspaper reports and other relevant materials are also included. Information on current theories and research is presented in relation to issues arising from the case study material. Using a variety of activities in the text, students are encouraged to critically evaluate potential implications of the different areas of research reviewed for practice and policy in education and to identify limitations of current methods and knowledge in the pursuit of 'evidence-based' practice.

New topics are frequently introduced in a way that encourages students to access (and, where working in groups, to share) existing knowledge of relevance to the scenarios presented. This is intended to assist them in building upon, extending to a more advanced level and, crucially, seeking to integrate information from topics covered in the core domains during the first two years of their degree: biological, cognitive, developmental, personality and individual differences, and social psychology.

Each of the chapters follows a similar overall structure:

- An introductory outline of the contents of the chapter orientates the reader to the topic.
- A set of intended learning outcomes is then presented.
- The text is organised in a number of sections addressing different facets of the topic with 'focus boxes' that contain stimulus material, activities, examples of applications and more detailed discussion of methodological or ethical issues.
- A summary of the main issues addressed in the chapter is presented.
- Key concepts and terms are listed.
- Recommendations for further reading are provided.
- Sample essay titles are suggested.

The problem-orientated approach is represented throughout. For example, the sample suggested essay titles in the chapter on autism include two that are representative of this approach, e.g.:

- Design an evidence-based intervention programme for Alex (Activity Box 8.1), justifying the approaches you decide to include with reference to relevant literature.
- You have been asked to give a talk to A Level psychology students on 'Supporting children with autism in school: Key insights from psychology'. Explain what you will include in your talk and why.

Alongside these is a more conventional essay title:

- Evaluate the strengths and weaknesses of research evidence on the use of social stories with children who have autism.

It is our objective throughout to maximise the flexibility with which the book can be used to meet the purposes of different tutors and groups of learners.

Content

The book is not intended to offer comprehensive coverage of all areas of educational psychology. It is deliberately selective with the aim of realising the goals set out earlier. Preparing the third edition has given us the opportunity to update every chapter reflecting a sample of key recent advances in research and practice as well as shifts of emphasis in the challenges facing EPs. These account for the insertion of a new chapter, on how educational psychology can address mental health in schools, replacing a chapter on intelligence that featured in earlier editions of the book. In addition, four broad, cross-chapter themes receive more attention than previously:

- the psychology and education of marginalised and excluded groups of pupils
- the impact of advances in neuropsychology on theory and practice in selected areas of educational psychology
- the application of psychology to the 16–25 year age range, reflecting a broadening of the scope of EPs' work introduced through the 2015 Special Educational Needs and Disability (SEND) reforms
- the importance of consideration of systemic contexts in educational psychology.

In Part 1, an introductory chapter (Chapter 1) focuses on the role and training of EPs. This chapter provides a basis for those that follow. It seeks to draw together some overarching themes and to encourage learners to make connections with information from topics across the core domains – biological, cognitive, developmental, personality and individual differences, and social psychology – covered during the first two years of the undergraduate psychology degree. It also includes some consideration of the processes used by EPs in establishing links between theory and practice.

A further introductory chapter, Chapter 2, extends this and addresses questions raised by the notion of 'evidence-informed practice'. It considers the range of methods that contribute to our understanding of what constitutes evidence and illustrates how diverse research methods in psychology can support our understanding of complex real-life problems in educational psychology. In doing so, it will also help the reader in the evaluation of evidence presented later in the volume.

The remaining chapters are organised into two further sections. Part 2, 'Cognition, learning and teaching', contains chapters which reflect EPs' work in relation to the core purposes of schools in promoting learning and raising achievement. They draw primarily on cognitive development, instructional psychology and individual differences. This part of the book ends with a chapter on autism, placed here due to the emphasis given to the role of cognitive theories in understanding autism. However, we recognise that insights from social psychology are also important.

Part 3, 'Social, emotional and mental health issues in school', contains chapters which reflect EPs' work in relation to the social context and ethos of the school and schools' responsibilities in providing for the behaviour, mental health and well-being of the pupils. The chapters draw primarily on social development and social psychology.

Depending on the purpose and structure of the course that you are considering using the book to support, Chapter 1 could potentially be used as both a starting and finishing point. Initially, it might provide an orientation to the work of EPs. However, the suggested essay questions for the chapter will be most appropriately addressed at the end of a course as students seek to integrate

topic areas, allowing more scope for individual interests to be followed and challenge provided for some students. At the end of the course, it might also be relevant to have a talk from a practising EP about their work – either a member of staff or an EP practising locally, within an educational psychology service or independently.

Otherwise, with the aim of allowing maximum flexibility after Chapter 2, the chapters have been written so that they can be studied in any order. Sufficient background is provided in each chapter for it to stand alone so that chapters can readily be used to support contributions to other Level 3 courses, for example contributing four lectures on educational psychology to a course on applied psychology. The associated caution issued to the reader is that while there are a small number of themes that recur across chapters, this recurrence is not necessarily flagged up in the text as it might be with a purposefully sequential structure.

Applying psychology to education

In Chapter 1 the work of EPs will be introduced in detail and the way in which they operate as scientist-practitioners will be highlighted in particular. Chapter 2 makes a case for the importance of psychologists understanding the methods used to generate the evidence they may choose to draw upon in practice. However, it has long been recognised that the application of psychology to education is not a matter of direct translation:

> You make a great, a very great mistake if you think that psychology, being the science of minds' laws, is something from which you can deduce definite programmes and schemes and methods of instruction for immediate classroom use. Psychology is a science and teaching is an art: and sciences never generate arts directly out of themselves. An intermediary, inventive mind must make the application, by using its originality.
>
> (James, 1899, pp. 23–24)

In this book we hope to illustrate both elements in William James's formula for the successful application of psychology to education: first, the basis in psychological science which allows clear principles and guidelines to be developed in particular areas of practice; second, the creativity, inventiveness and 'professional artistry' that are also involved in undertaking the process of translation into practice with different people in different contexts and across time. It is this combination, we believe, that makes educational psychology such a fascinating field of study and practice.

Tony Cline
Anthea Gulliford
Susan Birch

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PART 1

Overview

1 What do educational psychologists do?

Susan Birch, Norah Frederickson and Andy Miller

Educational psychology seems to be a rather mysterious profession. An education officer who claimed to have read over 1,000 reports written by educational psychologists (EPs) wrote an article (Wood, 1998) entitled 'Okay then, so what do educational psychologists do?' UK governments have appeared similarly baffled. Six reviews of the role, function and training of educational psychologists have been carried out since the turn of the century, one in Scotland (Scottish Executive, 2002) one in England and Wales (DfEE, 2000), and a further four in England (Farrell et al., 2006; DfE, 2011a; NCTL & HEE, 2016; Lyonette et al., 2019). Indeed, the findings of a fifth undertaken in England as part of a review of the system that supports children with special educational needs and disabilities (SEND) are currently awaited. Our main objective is that by the end of this chapter you will be able to answer the question in the title and will have gained an appreciation of some of the issues in the professional practice of educational psychology that led to the question being asked.

We begin this chapter by identifying the different levels at which EPs work and the core activities that they undertake. We consider similarities and differences between the work of educational psychologists in different places and at different times in the history of the profession. A case study of an EP's work in response to a teacher's concern about a child is presented to illustrate the way in which different activities are typically integrated and informed both by psychological theory and research, and by professional ethics and practice guidelines. The resulting central conceptualisation of the role of the educational psychologist as 'scientist-practitioner' is then examined, highlighting a number of current issues and possible future developments. The chapter concludes with information on training as an educational psychologist.

Learning outcomes

When you have studied this chapter you should be able to:

1 Describe what educational psychologists do and identify some of the key issues in their practice.
2 Evaluate the extent to which educational psychologists can be described as scientist-practitioners.
3 Outline the requirements for training as an educational psychologist and locate more detailed information if required.

DOI: 10.4324/9780429322815-2

How much do different accounts of educational psychology practice agree?

In this section we examine different descriptions of educational psychologists' work – from individual educational psychologists, from government reports and from information provided to the public by professional organisations and by local authority (LA) educational psychology services (EPSs).

However, before we do, let's clarify who we are talking about. One issue that emerges from the international literature is a potentially confusing difference in terminology. In North America psychologists undertaking the range of core activities carried out by educational psychologists in Great Britain are called 'school psychologists'.

Table 1.1 American Psychological Association divisions of educational and school psychology

Division 15: Educational psychology	'…for psychologists with interest in research, teaching or practice in educational settings at all levels… Division members' work is concerned with theory, methodology and applications to a broad spectrum of teaching, training and learning issues'.
Division 16: School psychology	'…is composed of scientific-practitioner psychologists… engaged in the delivery of comprehensive psychological services to children, adolescents, and families in schools and other applied settings'.

Source: APA (2021)

As can be seen from Table 1.1, the American Psychological Association (APA) has a separate division for EPs who are academic psychologists, such as cognitive or social psychologists, whose field of study includes the processes of teaching and learning. In the UK the British Psychological Society (BPS)'s Section for the Psychology of Education maps onto APA Division 15, while its Division of Educational and Child Psychology maps onto APA Division 16. In the UK, 'educational psychologist' is a protected title which means that only psychologists registered with the Health and Care Professions Council (HCPC, www.hcpc-uk.org) may use it. In this book 'educational psychologist/psychology' will be used to refer to the applied practitioners and their work.

In Activity Box 1.1 we start by looking at what EPs say they do.

ACTIVITY BOX 1.1

What do educational psychologists say they do?

Read the following descriptions, written by EPs about their work. Apart from their obvious enthusiasm, what do they have in common? How many different aspects of EP work are mentioned?

> I work in a service that uses consultation as the main form of service delivery and therefore in my role I am able to spend a lot of my time working directly with teachers, parents and children/young people (CYP). At the start of the year I map out the work with the school SENCo and Head Teacher, prioritising which CYP I will be involved with, based on the school's level of concern. I then meet with the key people involved through a process of consultations, where together we explore what is going on, what the strengths

are and what might be leading to the difficulties. This can often lead to a variety of involvements by the EP including individual assessment, staff training, teacher supervision, whole class consultation work and direct intervention with the CYP. The thing I find most helpful about consultation is that my involvement is a process, where I am working with the teacher and family over time, constantly reviewing progress and formulating ideas for strategies and support. Hypotheses are developed together with the key people who know the child best and there are lots of opportunities to involve CYP directly in my work.

(Dr Gurdip Theara, Educational Psychologist, Westminster, Kensington & Chelsea Educational Psychology Consultation Service)

It is hard for me to describe what an EP does, as I personally feel that there is no such thing as a 'standard' day for an EP. What I do as part of my work can vary hugely and the people that I work with can be so different. For example, I might start the day hiding under a desk drawing pictures with a three-year-old and then have a meeting with a group of teachers about systems for identifying and supporting children with maths difficulties. This might be followed by a multi-agency meeting about the development of a programme for supporting children with mental health needs, and I end the day by running an online webinar for parents about effective study skills. I might go from talking about Peppa Pig to speaking about evidence-based approaches for supporting adolescent wellbeing. I could be working with the parents of a two-year-old in a mainstream primary school or a 21-year-old in a care-home. One of the things I love most about the role is that there is very rarely a boring day because I am constantly learning and adapting. In addition to this, I get to build relationships with others and see the impact of my work. I often hold consultations with staff and then see the approaches we discussed being used in the classroom a few weeks later, or I see a child I worked with a year ago now interacting with others.

(Dr Matthew Fuller, Senior Educational Psychologist, Havering Educational Psychology Service)

One of the joys of working as an educational psychologist is the variety of activities that we can be involved with, that provide challenge and the opportunity to work in different and creative ways. Over the years, I have been involved in a lot of individual casework. This has been extremely rewarding, allowing me the opportunity to meet many different people and hear their stories. In our area, this has included supporting a number of military families, including those from a local Nepalese community. I have also been involved in supporting school staff and other Children's Services' professionals through individual and group coaching and supervision sessions, one-off problem-solving consultation sessions, and staff training, as well as being part of an initiative supporting staff who work in Children's Homes. As part of our Senior Leadership Team, I have been involved in a number of projects at a strategic/organisational level including looking at our new colleague induction processes, our use of technology, and the information that we share with different service users. Some of my favourite activities have involved

> supporting the development of future and newly qualified EPs, including being a placement supervisor/tutor for trainees, providing teaching input for the doctoral training course, and supervising colleagues. All of this is just a snapshot of the variety of work that we can be involved with, which would need a full chapter to describe in more detail!
>
> (Lisa Hobkirk, Senior Educational Psychologist, Hampshire and Isle of Wight Educational Psychology)

Using just the information in these extracts, write a one-paragraph description of what educational psychologists do. If possible, compare your paragraph with that produced by a peer. As you read the rest of the chapter annotate your paragraph to reflect the further information you obtain.

In the last 20 years, reviews of EPSs in England, Wales and Scotland have identified very similar levels of work and core activities. An overview of these taken from the Scottish report (Scottish Executive, 2002) is provided in Table 1.2. Notice the same levels which you will have already identified in the accounts given by practising educational psychologists in Activity Box 1.1.

More recent reports focusing on the role of the EP suggest that the range of work completed continues to be recognised and valued. In 2011, the DfE undertook a review of 'EP Training' which not only drew attention to the role of EPs in working with children with Special Educational Needs (SEN), but also in 'improving the opportunities of all children and young people, both in terms of local authority statutory responsibilities and more universal early intervention and preventative support' (DfE, 2011a, p. 5). The range of work was also highlighted in the more recent review of clinical and educational psychology training arrangements (NCTL & HEE, 2016, p. 8): 'The profession builds capacity in the workforce by working at a systemic and organisational level. They regularly liaise with other professionals from education, health and social services'. Therefore, EPs work across a number of different levels, in a range of contexts, with a range of different people influencing children's development in the broadest sense.

In 2013 Allen and Hardy wrote a paper for a British Psychological Society (BPS) book celebrating 100 years of EP practice. They noted key developments which they thought were likely to influence the shape of EP service delivery over the coming years, notably: the impact of legislative changes and the political context, the impact of technology, the increasing priority given to children's mental health and the raising of the school leaving age. In the discussions that follow, you might like to review the extent to which Allen and Hardy were right in their predictions.

In relation to legislation, the 2014 Children and Families Act, and the SEND reforms and Code of Practice that followed, introduced the need for the profession to work with young people aged 19–25 years with special educational needs and disabilities (DfE & DoH, 2015). EP training programmes responded with the development of new curricula for working with the 16–25 year age range (Atkinson et al., 2015) and EP services developed support for students in the older age range (Morris & Atkinson, 2018). The 2014 reforms also provided an impetus for EPs to develop their person-centred practice; a move welcomed by the profession (Hughes et al., 2019; Wood et al., 2019).

In recent years, there has also been an increasingly varied picture in terms of the employment of educational psychologists. While the majority of EPs continue to be employed by LAs, 'a wider range of organisations have evolved to deliver educational psychology services (EPSs), including

Table 1.2 Examples of the levels of work and core activities of educational psychologists

Core Function					
Level	*Consultation*	*Assessment*	*Intervention*	*Training*	*Reasearch*
Child and family	Individual discussions Contribution to IEPs Home visits Parents meetings Review meetings as appropriate	Overall assessment in context Standardised assessment instruments Identifying special needs	Behaviour management programmes Individual and family therapy Working with small groups (eg – harm, social skills, anger management)	Talks to groups of children (eg antibullying groups) Parenting skills	Single case studies Interactive video research with families (SPIN)
School or establishment	Joint Working with staff Advice on programmes for children young people Contribution to strategic planning Policy advice for schools, children's homes Review meetings, as appropriate	Contribution to school assessment policy and procedure	Contribution to whole- establishment Interventions (eg anti-bullying programmes, playground behaviour, discipline, raising achievement) Contribution to special exam arrangements Contribution to curricular Innovation/initiatives Joint working with class/subject teachers/LST Supporting inclusion Supporting special college placements	Staff training Disseminating evidence- based practice	Design, implementation and evaluation of action research in single establishments and groups of schools
EA/ Council	Contributing to strategic planning	Contribution to authority assessment policy and procedure Contribution to Best Value reviews	Contribution to establishing authority-wide interventions (eg anti-bullying initiatives, alternatives to exclusion, promoting social inclusion, resource allocation)	Authority-wide training in all areas relevant to psychology input to multi-disciplinary conferences	Design, implementation and evaluation of authority – wide action research (eg early intervention, raising achievement) Informing evidence – based policy and practice

Source: Scottish Executive (2002)

(publicly-funded) not-for profit community interest companies, other private organisations and independent EPs being self-employed' (Lyonette et al., 2019, p. 18). Alongside this, there has been a significant expansion in the development of traded services, both within and outside LA EPSs, with work being commissioned directly by schools and other organisations. Guidelines for ethical trading have been developed (DECP, 2013) and updated (DECP, 2018).

The mental health and emotional wellbeing of children and young people has always been an area of interest for EPs; from the profession's history of work in multi-agency child guidance clinics (Maliphant et al., 2013); the provision of therapeutic work in schools (Atkinson et al., 2013; MacKay, 2007); involvement in TaMHs (Targeted mental health in schools, DfE, 2011b) and the development and supervision of a multitude of programmes and interventions in schools (e.g., nurture groups, Bennathan, & Boxall, 2012; emotional literacy support assistants, France & Billington, 2020). EPs are now beginning to be involved in the work of mental health support teams (BPS, 2019), introduced after a governmental review of children's mental health services (DoH & DfE, 2017). Although this work is still developing, EPs are, in places, key to the training and supervision of the new education mental health practitioner (EMHP) workforce. Indeed, supporting children and young people's social and emotional and mental wellbeing was recognised as a fundamental part of the EP role by Lyonette et al. (2019) in their Government-commissioned review. More discussion of these developments can be found in Chapter 9.

Another significant driver to the shape of EP service delivery has been the Covid-19 pandemic and the resulting need for the profession to respond flexibly and creatively by moving services online. Individual EPs, services and professional organisations developed new procedures and resources to support CYP, educational settings and families with online assessment, consultation, training, supervision and telephone helplines (e.g., Hassard, 2022; Moore, 2022). EPs were also active contributors to national debates around CYP's mental health, wellbeing and education during the national lockdowns. Given the social inequalities already recognised, but further underlined by the pandemic (Marmot et al., 2010, 2020), together with increasing awareness of systemic racism, there have also been moves to consider, more explicitly, how the profession promotes social justice for the vulnerable children and young people it is working with (Schulze et al., 2019), i.e., how EPs can challenge inequities and discrimination and ensure a person-centred, inclusive approach in their work, with children's views given their rightful consideration.

ACTIVITY BOX 1.2

What do educational psychology services say they do?

Despite changes in the design and funding of EPSs, most EPs continue to be employed by LAs. Visit the websites of at least six LA EPSs, including the one for the area in which you are living. How do the accounts of what the EPSs say they do fit into the grid shown in Table 1.2? Update the paragraph you produced in Activity Box 1.1 describing what EPs do (keeping your description as succinct as possible). Note also whether the website talks about trading – activities that schools (and/or others) can buy. Which of the activities are available free and to whom? Which are traded? How does this vary across services?

Can you find accounts of services offered by EPs who are not employed by LAs? Again, how do the services offered by these EPs map onto the grid in Table 1.2?

Educational psychology: A historical perspective

The first LA EP in the UK was appointed by the London County Council in 1913 and held the half-time post for almost 20 years. The individual appointed to the post was Cyril Burt, who was later to become head of the psychology department at UCL, a Galton Professor of Eugenics, also at UCL, and later still, the subject of one of the most widely publicised controversies in modern psychology, concerning research ethics and data falsification (Macintosh, 1995). However, in relation to his role as the first LA EP, Burt was given the following brief:

- To report on problematic cases referred by teachers, doctors or magistrates for individual investigation.
- To construct and standardise tests.
- To organise and carry out surveys of large and representative samples of the entire school inhabitants.
- To be ready to report on any specific problem raised by the Education Officer or Committee.

There are parallels with themes identified in EP practice today. Although elements of his work are controversial in our current context, Burt's description of his work with individual children indicates an interactionist perspective which appears strikingly contemporary over a century later. 'Whatever the problem might be, instead of calling each child up to the office… I always found it far more effective to study him, as it were, in situ, and that of course meant visiting him in the school, calling at his home, and watching him with his play fellows larking in the streets' (Burt, 1964 address to the Association of Educational Psychologist's Conference, transcribed and reported in Rushton, 2002, p. 565). Of particular interest, given our later discussion of the conceptualisation of the role of the EP, is the place Burt saw for research in all aspects of professional practice, including individual case work: 'All my work in the Council's schools was of the nature of research. Even the individual cases… had each to form the subject of a small intensive investigation' (Burt, 1964, in Rushton, 2002, p. 565).

While Burt's model of practice was highly regarded by his employers in London (Maliphant, 1998), it did not immediately become established nationwide. Initially the number of EPs increased slowly and many were based in child guidance clinics run by health, rather than in education departments of LAs. The child guidance clinic teams comprised child psychiatrists, psychiatric social workers and EPs, offering the potential advantage of enabling a multi-disciplinary approach. However, there were many tensions. The psychiatrists were usually designated as team leaders and often adopted a narrow medical model which the psychologists did not consider appropriate to educational and social problems. The psychologists generally had a much more limited role than the one Burt had created which, in some cases, became confined primarily to psychometric testing. The use of psychometric assessment to categorise and label children and to inform decisions about provision continues to be debated, both in relation to historical and current practice. However, the need to give due consideration to the assumptions underlying tests, the appropriateness of the questions being asked and the tools used is now widely recognised.

The report of the first committee of enquiry into the work of EPs, the Summerfield Report (DES, 1968), recommended that EPs should be administratively responsible to LA education departments, but did not challenge the narrow focus on individual case work. Indeed, in 1975 a Department for Education and Skills circular identified the desirability of obtaining an assessment report from an EP in the special education ascertainment procedures run by the school doctors. This created something of a dilemma for EPs: 'On the one hand they would like to spend more time

on advisory and treatment activities, but on the other hand their "coming of age" relies on their having achieved official recognition for their contribution to assessment procedures as required in Circular 2/75' (Quicke, 1982, p. 39). Many argued for change, for a reconstruction of the EP's role. In an influential edited volume (Gillham, 1978) three main directions for change were advocated:

- Decreasing emphasis on individual work with children individually referred.
- Increasing emphasis on indirect methods aimed at the organisation, policy and structure of schools and the attitudes and behaviour of adults towards children.
- Increasing emphasis on preventative work, especially through courses for parents and teachers.

This period was described 'as a time when the profession was beginning to gird its loins and drag itself out of… the sterile treadmill of individual casework, psychometrics, and the professional suffocation of child guidance' (Dessent, 1992, p. 34). However, the 1981 Education Act enshrined in legislation and extended the role for EPs in advising on the special educational needs of individual children which had been introduced in the 1975 guidance circular. The new legal requirement to produce psychological advice, to inform Statements of Special Educational Needs issued by the LA, led to pessimism about reconstructing a broader professional role.

> Under the 1981 Education Act procedures, educational psychologists are firmly nailed and fastened as assessors of needs and definers of resources. They are likely to find themselves seeing and assessing an ever-increasing number of individual pupils.
>
> (Dessent, 1988, p. 74)

Balancing the demands for statutory and other assessments with other psychological work remained an issue. It was the stimulus for the governmental review of the work of educational psychologists following the 1997 Green Paper setting out the Government's vision for raising the achievement of children with SEN. Despite this review making 'a commitment to explore ways of changing the balance of educational psychologists' work to ensure their expertise is used more effectively' (DfEE, 2000, p. 1), this balance continued to be a theme in discussions around the EP role.

The next governmental report was commissioned only six years later (Farrell et al., 2006) to review the functions and contribution of EPs in England and Wales in light of priorities for services for children introduced in Every Child Matters (DfES, 2004). Many of the themes discussed in this report are still reflected in EP practice today, for example:

- A focus on improving outcomes for children.
- Shifting the focus of service delivery from school to community.
- An emphasis on multi-agency involvement and specialist educational psychology input.
- Defining the distinctive contribution of EPs with an emphasis on psychology.

One final word about the fourth of the above points. It was argued that identification of the distinctive contribution that EPs, as opposed to other professionals can make, should drive decisions about the balance of activities they undertake. 'The general view that the EPs' distinctive contribution lies in their psychological skills and knowledge would suggest that agreed clarity of the EP role should be focused around the particularly psychological function within it' (Farrell et al., 2006). It is interesting that almost exactly the same conclusion was reached almost 40 years earlier, in the Summerfield Report: 'The particular contribution of psychologists in education services derives from their specialized study of psychological science and its application to education and to other aspects of human development. It should be the main criterion in determining their work' (DES, 1968, p. xi).

The 2014 reform of legislation and regulations around SEND (the Children and Families Act 2014) consolidated the role of the EP within statutory assessment, and this activity continues to form a significant proportion of the work undertaken by EPs today. Indeed, in some LA contexts, statutory assessment (Educational, Health and Care Needs assessment) is currently the primary focus of the work of EPs, in light of increasing numbers of assessment requests from parents and schools, reduced budgets, lack of capacity in support services and struggling SEND services.

A further SEND review was published in March 2022, 'Right support, right place, right time' (DfE, 2022), set within the context of a governmental 'levelling-up agenda'. It outlined three challenges facing the SEND system post the 2014 reforms including poor outcomes for CYP with SEND, negative experiences of the system for CYP and their families and a lack of financial sustainability. The green paper went on to outline ideas relating to developing a 'single national SEND and alternative provision system' (p. 26), with inclusive quality teaching and support being offered in mainstream settings alongside specialist settings. National SEND standards were proposed as a way to ensure a more consistent approach across England, along with national criteria for determining whether an EHC needs assessment and an EHC plan are required, standards for appropriate provision and also for co-production of plans with parents and with the CYP themselves. Whether the proposals will be taken forward and whether they will improve the current challenging SEND context remains to be seen.

Educational psychology practice today: A case study

In this section, we present a case study which illustrates the integrated way in which different core activities and levels of work may be incorporated in EP practice. The starting point for this case study is a typical one for an EP engaged in consultative work with a school – a request from a school for advice about an individual pupil who is causing concern.

While the specifics of policy and practice vary between LAs, EP practice is guided by the Framework for Psychological Assessment and Intervention (see Figure 1.1) contained in the BPS Division of Educational and Child Psychology (DECP)'s Professional Practice Guidelines (BPS, 2002). The process cycle contained in this model is essentially a problem-solving process, and it has been argued that the applied psychology professions are at their core problem-solving professions (Pearson & Howarth, 1982). The method cycle to which it links describes stages in a consultation between an educational psychologist and adults concerned about a child's progress. A widely accepted definition of consultation makes this link clear '…an indirect problem-solving process between a [consultant] and one or more [consultees] to address concerns presented by a client…' (Sheridan et al., 1996, pp. 341–342). Models of consultation commonly used by EPs in the US (Gutkin & Curtis, 1999) and the UK (Woolfson, 2017) utilise a similar set of stages. The psychologist in this case study used a six-stage Problem Analysis Framework (Monsen & Frederickson, 2017).

Lukasz case study

Phase 1 – Collect background information, clarify role and expectations

During one of the educational psychologist's regular planning consultations with a primary school, the school's Special Educational Needs Coordinator (SENCo) requested EP involvement for Lukasz, a six-year-old pupil in their Year 1 class. The SENCo was concerned about both his

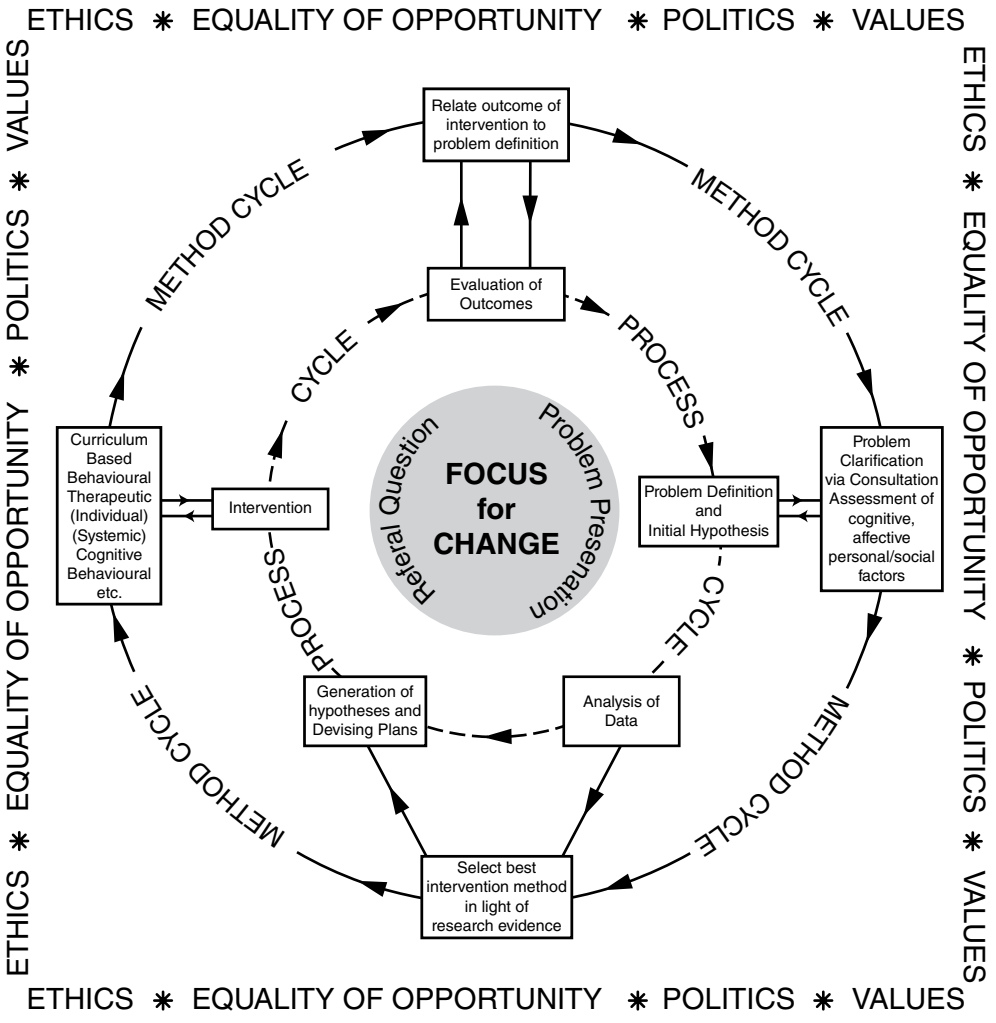

Figure 1.1 DECP Framework for Psychological Assessment and Intervention

learning and behaviour, and given this had obtained written consent from his parents to consult the EP about him, in line with the BPS Code of Ethics and Conduct (BPS, 2018) and the HCPC Standards of Conduct, Performance and Ethics (HCPC, 2016). After an initial exploration of the level of concern and of strategies tried previously, it was agreed that this was an appropriate case for educational psychologist involvement.

During the initial consultation meeting between the EP and the SENCo, the main areas of concern highlighted were that Lukasz appeared to have difficulty in:

- initiating and sustaining verbal interaction with adults and peers in a range of social situations
- engaging in turn-taking and sharing of learning materials with peers
- communicating needs and views to adults and peers
- behaving in a positive, non-disruptive manner within the classroom.

In addition, some background information was collected, for example Lukasz was born in the UK. He lived with both his parents and two younger siblings and the first language of the home was Polish. The profile of the class and school was also considered, in relation to Lukasz being one of a number of students from Polish-speaking homes and that the school had a number of strategies in place which aimed to support the inclusion of all of their students.

At the end of this initial consultation meeting, it was agreed that an intervention would be considered successful if Lukasz could:

- sit on the carpet without distracting others
- speak up more frequently within class and social settings
- engage in appropriate turn-taking behaviour and share things with his peers.

Phase 2 – Initial guiding hypotheses

On the basis of the information collected from the consultation with the teacher the EP begins to generate tentative initial guiding hypotheses, drawing both on the unique details of the presenting problem situation and the knowledge base within the discipline of psychology, as can be seen below.

1 A range of environmental contingencies could be maintaining and reinforcing inappropriate social behaviour (Spence, 2003).
2 There could be insufficient motivational factors in class to encourage verbal interaction (Petursdottir & Mellor, 2017).
3 Lukasz's expressive and receptive language skills in Polish and/or English could be delayed (Law & Stringer, 2014).
4 Lukasz's temperament could predispose him to behave in a shy and introverted manner (Rudasill & Acar, 2019).
5 Lukasz's social problem-solving skills could be delayed (Webster-Stratton & Reid, 2003).
6 There could be insufficient social opportunities for modelling/teaching of appropriate social behaviours (Spence, 2003).
7 English as an Additional Language could be a factor (Lauchlan, 2014).

Initial guiding hypotheses focus and direct subsequent assessment activities, whose purpose is the collection of data to test the applicability and relevance of these hypotheses to the problem situation surrounding Lukasz. In this case the EP and class teacher agreed that the EP would carry out structured classroom observations, meet with Lukasz's parents (with an interpreter) and conduct some assessments of language competencies and social cognition with Lukasz, taking into account his cultural and linguistic background. The teacher agreed to keep a record of specific behaviours, together with information about events occurring before and after the behaviour to help build up a picture of exactly when the difficult behaviours occurred.

Phase 3 – Identified problem dimensions

From the assessment information collected the following were identified as the main features of relevance in understanding the situation for Lukasz.

1 There were insufficient motivational factors within the classroom context to encourage verbal interaction. The teacher tended to ask a series of questions to which Lukasz could respond by nodding or shaking his head. Also, other pupils often responded on his behalf.

2 There was a range of environmental contingencies that appeared to be maintaining inappropriate social behaviour. From the behavioural record being kept by his teacher, it was apparent that her attention was often secured by disruptive behaviour and that Lukasz was sometimes able to retain and use resources which he had snatched from others or refused to share with them.
3 Lukasz presented in many social situations as shy and reserved.
4 Lukasz's expressive language skills in Polish as well as English were below average for his age.
5 Lukasz's social skills and social problem-solving skills appeared delayed, although further assessment over time was warranted in light of the factors identified above, specifically his shy temperament and limited expressive language skills.

These aspects, along with strengths and assets, would be used to inform intervention planning. A particular relevant strength was Lukasz's good oral comprehension skills, despite the fact that English was his second language. It was clear that Lukasz's class teacher and parents were also motivated to put into place interventions to support him both at home and at school.

Phase 4 – Problem analysis

This is the case conceptualisation or formulation that attempts to integrate the problem dimensions and represent relationships between them. In this case it was argued that the following three within-pupil factors could all be acting to form barriers to Lukasz's social participation: shy personality, limited knowledge of what is appropriate within social situations and delayed expressive language skills. It was anticipated that his shyness was limiting his level of social contact which would further perpetuate Lukasz's difficulties by limiting opportunities to model and practise appropriate social skills (Spence, 2003) and his expressive language. In addition to these within-child factors, the presence of insufficient environmental factors to motivate Lukasz's oral communication (Petursdottir & Mellor, 2017) and the presence of environmental contingencies that reinforced competing inappropriate social behaviours (Spence, 2003) were contributing to the low occurrence of verbal social communication and the higher-than-average levels of inappropriate social behaviour in school. This can be represented visually on an Interactive Factors Framework (IFF) (see Figure 1.2 in Methods Box 1.1) which also assists in the formulation of intervention plans.

Phase 5 – Agreed action plan

Table 1.3 summarises the actions that were discussed and agreed in an action planning meeting between the EP and the class teacher, Lukasz's parents and the SENCo. In addition, Lukasz's class teacher suggested that she might begin to explore available resources for supporting children's expressive language development, for example as provided by the local speech and language therapy service's website. Lukasz's mother was keen to find out more about opportunities in the local Polish community to support Lukasz in gaining confidence in his peer interactions.

Phase 6 – Monitoring and evaluation of outcomes

Table 1.4 shows how outcomes were evaluated in relation to two intervention goals for Lukasz. It can be seen that the EP again met with the class teacher and Lukasz's parents, and carried out observation in the classroom using interval sampling (where the presence or absence of a particular target behaviour within each of a number of short time intervals is noted).

METHODS BOX 1.1

Interactive Factors Framework

The IFF (see Frederickson & Cline, 2015) was developed from the Causal Modelling Framework (Morton, 2004; Morton & Frith, 1995). The IFF displays all of the problem dimensions identified, together with other relevant aspects of the problem situation for which there is evidence. The integrating hypothesis/es are shown via arrows indicating the connections between the behavioural, cognitive, affective, environmental and biological level variables as argued in the Integrating Statement. As can be seen from the dotted lines in Figure 1.2 the IFF diagram also represents the anticipated effects of suggested interventions on the priority problem dimensions.

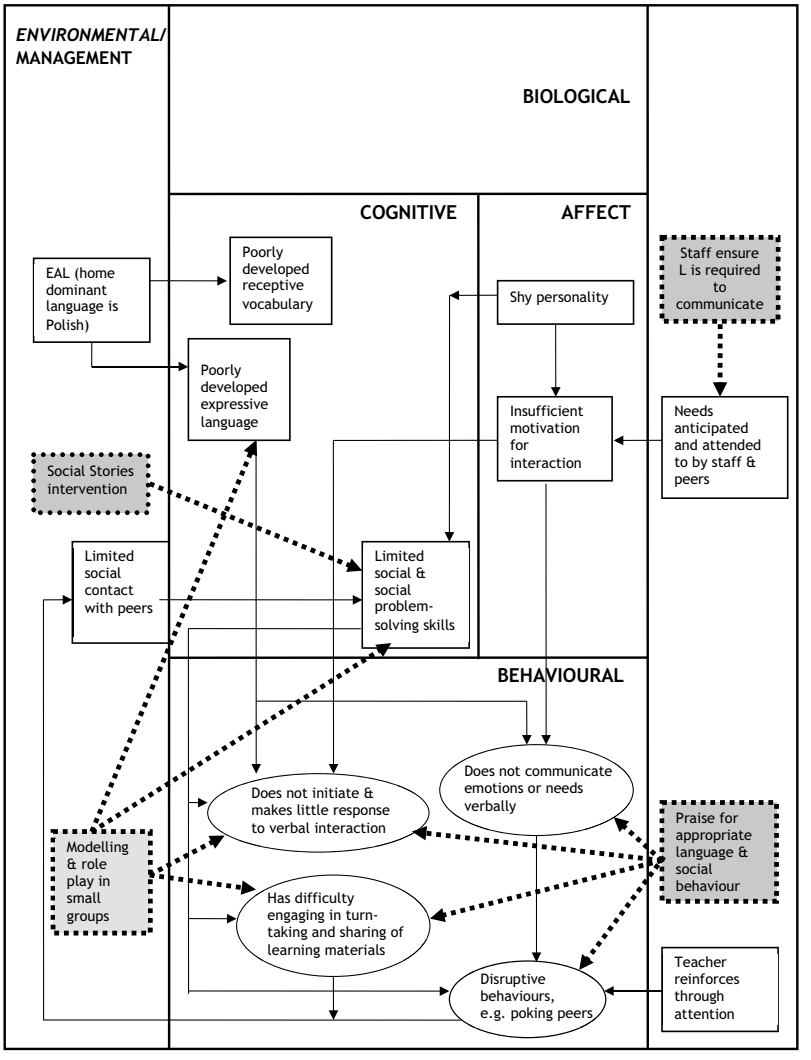

Figure 1.2 Interactive Factors Framework

Table 1.3 Agreed action plan for Lukasz

Priority problem dimensions	*Objectives and actions*
1. Social interaction and problem solving skills	To teach explicitly appropriate responses in various social situations.
	Agreed action: Lukasz's class teacher and learning support assistant to develop an initial social story (Kokina & Kern, 2010) for Lukasz focused around 'sitting nicely' for carpet time.
	To promote a positive and cooperative class environment to encourage socially appropriate behaviour.
	Agreed action: The EP and Lukasz's class teacher to have a follow-up consultation to share strategies and plan actions to promote cooperation in the classroom, including reviewing the whole class and Lukasz's individual behaviour management plan (See Webster-Stratton's framework for the Incredible Years Teacher Classroom Management Programme; Webster-Stratton, 2011).
2. Expressive language in social situations	To increase the need for verbal communication by altering environmental contingencies.
	Agreed action: Lukasz's class teacher to work with the EP to agree strategies for communicating with Lukasz – e.g. how to give him attention for positive behaviour and for asking for things appropriately and considering the good use of questions with him (see Chapter 6). Video Interaction Guidance to be considered as a way of reviewing the class teacher's interaction with Lukasz (Jilink et al., 2018).

In addition, Target Monitoring and Evaluation (TME) was used. This approach was developed by Dunsmuir et al. (2009) as a method which can be used efficiently and effectively by EPs working through consultation in applied practice. TME allows practitioners to consider whether progress is as expected, better than expected or worse than expected through the setting of 'specific measurable outcome descriptors that reflect the progress of an individual, group, agency or system receiving the intervention' (p. 57). TME is well suited to negotiating 'hoped for' outcomes for a particular child from a particular intervention, and also for reviewing perceived progress made. It can be used alongside other measures of progress, e.g. standardised scores on a checklist of a child's social skills. TME can be used in casework and also in the evaluation of a wider range of work, e.g. it has been used in the evaluation of Video Interaction Guidance with teaching assistants (TAs) in secondary schools (Hayes et al., 2011) and in the evaluation of CBT-based interventions for behaviour in schools (Brown et al., 2012).

While this is a thorough evaluation of this school-focused piece of work, concerns are often expressed that evaluation is an aspect of EP practice that is given insufficient attention (Leadbetter, 2000; Turner et al., 2010). Kratochwill and Stoiber (2000) writing in an American context suggest that due to pressure of work, 'school psychologists may fall into "crisis routines", rather than follow systematic procedures for intervention planning, monitoring and evaluation' (p. 247). EPs have an ethical duty to evaluate the outcomes of advice given in supporting children and young people so that effectiveness can be maximised and any unanticipated negative outcomes identified and rectified. In addition, successful work at the individual level can lead to invitations by schools to undertake organisational-level work that can efficiently impact on the learning and development of a larger number of pupils. For example, following their work with Lukasz, the EP was asked by the SENCo to deliver training on the Social Stories intervention approach to the whole staff. (More information on this can be found in Chapter 9.) The head teacher was very interested

Table 1.4 Evaluation of outcomes

Aims of intervention	*Pre-intervention measures*	*Post-intervention measures*	*Interpretation*
• Sitting on carpet square with hands and feet to self(does not poke peers) [Socially appropriate response]	• ***TME*** completed in teacher interview <u>Pre-intervention (Baseline)</u> Rated as a concern - 8 out of 10 Baseline descriptor: Needs reminding constantly by TA and ends up being moved to sit by teacher 4 morning carpet sessions out of 5 – disrupts teaching and distracts other children. L pokes his peers – "can't seem to keep himself to himself" <u>Target set (Expected)</u>: Teacher rating of 4 (i.e. he may still need reminders and may be moved once a week.)	• ***TME*** completed in teacher interview <u>Post-intervention</u> Rated as a concern - 2 out of 10 Post intervention descriptor: Occasionally L needs a reminder, but generally he keeps his hands and feet to himself. He likes to sit on his square and has also found having something to hold a useful distractor. "He does not poke his peers anymore."	• L's targeted inappropriate behaviour was no longer a cause for concern • L exceeded the initial target set for him
• Increase frequency of verbal interaction in class to peers and teacher: • Initiates conversation with teacher • Responds to teacher • Initiates conversation with peers	• Teacher interviews <u>Pre-intervention:</u> "L tends to be quiet in class. Compared to the rest of the class, he talks less to his peers and to me." • Observation using interval sampling (with attempts at establishing social validity by observing L along with two randomly selected peers, P1 and P2) <u>Pre-intervention</u> – L (none) – P1 (twice) – P2 (once) – L (twice) – P1 (7 times) – P2 (once) – L (7 times) – P1 (17 times) – P2 (19 times)	• Teacher interview <u>Post-intervention</u> "L has begun to respond more to me, will initiate questions and answers and will talk about his work." • Observation using interval sampling (with attempts at establishing social validity by observing L along with the same two other pupils in class, P1 and P2) <u>Post-intervention</u> – L (four times) – P1 (once) – P2 (four times) – L (once) – P1 (twice) – P2 (once) – L (13 times) – P1 (13 times) – P2 (11 times)	• L has shown improvement in his targeted behaviour

in the awareness the class teacher had developed about ways in which she had unwittingly been reinforcing undesirable behaviour (see Chapter 10) and about the use of language in the classroom. As a consequence, the educational psychologist was invited to a school senior management team meeting to discuss a systems project with the school focusing on 'teacher–pupil relationships in an inclusive classroom'.

Educational psychologists as scientist-practitioners

The central role of hypothesis testing in practice frameworks such as the Problem Analysis Framework described above demonstrates how EPs can function as scientist-practitioners. In keeping with other applied psychologists, this is a mantle which EPs have frequently aspired to adopt, often finding themselves acting as 'midwife' to the contribution of science to complex social problems (Lane & Corrie, 2006). Or, as Elliott (2000) puts it, 'the educational psychologist represents an important link between the worlds of academic psychology and education' (p. 4).

At its simplest level, and a simplistic one at that as it turns out, the term 'scientist-practitioner' might conjure up notions of an expert researcher, or an expert conversant with pertinent research, who is able to draw on this knowledge to advise others or engage directly in various activities designed to help others, especially those in some form of need. And this was indeed a conceptualisation to which early practitioners attempted to adhere.

The origins of the scientist-practitioner

The idea of the applied psychologist as a scientist-practitioner originated from the Boulder Conference, held in Colorado in 1949 in an attempt to forge the identity of the new profession of clinical psychology, which was felt to be engaged in an 'erratic process of expansion'. Basically, this professional group was faced with a choice between allying itself somehow to psychiatry and other therapeutic approaches or establishing itself as a separate profession built upon academic and research-based psychology. As a result of that conference, it chose the latter.

No sooner had this decision been taken than a fundamental tension began to reveal itself, a pull between two positions that is still felt to this day (e.g. see Lilienfeld et al., 2017) and which is exemplified by the two quotes in Focus Box 1.1 that illustrate extreme ends of a spectrum:

FOCUS BOX 1.1

An example of a competing pull on the priorities of the applied psychologist as scientist-practitioner

> we must be careful not to let social need interfere with scientific requirements.
>
> Eysenck (1949)

> even after 15 years, few of my research findings affect much of my practice. Psychological science *per se* doesn't guide me one little bit… My clinical practice is the only thing that has helped me in my practice to date.
>
> Matarazzo (cited in Bergin & Strupp, 1972)

Further dilemmas and challenges for educational psychologists as scientist-practitioners

Other tensions and competing pulls became apparent as educational psychologists, who also adopted an identity as scientist-practitioners, attempted to develop this role and to deal with the increasing demands and expectations placed upon them by wider society (see Miller & Frederickson, 2006). Some of these issues, which recur in different forms throughout this book, are now briefly introduced.

1 *Unidirectional or bidirectional influences?* In many successful fields of human endeavour, such as medicine and engineering, there is a well-established tradition that 'basic research' (in laboratories) informs 'applied research' (in 'simplified' field settings) that in turn, after a period of development, informs professional practice (Tizard, 1990). Can we automatically assume that this unidirectional influence will also hold for psychology? Or might we equally, or more plausibly even, look to the everyday problems brought to the attention of applied psychologists as the starting points for the investigations of academic research psychologists? After all, the study of cases of acquired neurological problems has been valuable in learning about normal neurological processing (e.g., Shallice & Warrington, 1975) and the study of cases of atypical development in seeking to learn about normal development (e.g., Snowling & Hulme, 1989). The notion of practice-based evidence is also relevant here – using professional experience to develop expertise relating to what works, for whom and in which context in EP practice (Fox, 2011; Maliphant et al., 2013). Chapter 2 provides further discussion of these issues.

2 *Generalisable results and idiographic problems*. A major goal of psychological research is to arrive at a generalised account of some underlying psychological process or processes (Clarke, 2004). In order to do this, research is usually carried out with groups of participants where only a few 'variables' are subjected to study. For educational and other applied psychologists the situations where their help is being sought – either with individuals, groups or organisations – are usually idiographic and complex in nature. Significant findings from group studies offer an indication of likely efficacy, not a prescription. For CYP with all kinds of psychological problems the 'best available' treatment does not work in up to one-third of cases, and some children's situations deteriorate in response to intervention (Carr, 2000). Therefore, consideration of the empirical evidence for a particular approach is necessary, but not sufficient. EPs following the framework for evidence based practice put forward by the APA (2006) will consider not only research around the efficacy of the intervention and the knowledge base in terms of psychological theory, but also the context of the client, and their own professional skills as a practitioner, in recommending and devising interventions. Interventions will be carefully monitored and evaluated so that the EP can be sure that they are not doing harm. Here, clinical reasoning or judgement is key in bridging 'the gap between one's experience and knowledge base and the strategies used to solve real-life problems' (p. 4, Andrews & Syeda, 2017). The use of a systematic approach and reference to 'evidence' is key, in supporting psychologists in avoiding the risk of cognitive errors and bias inherent in any human decision-making processes (Andrews & Syeda, 2017; Lilienfeld et al., 2012). These issues are also explored more fully in Chapter 2.

3 *The systemic context of individual problems*. Individual problems of learning or development are typically embedded within a complex pattern of cause and effect, inside a system where changing one aspect can potentially affect others. The dynamic context of many problems

means that interventions aimed at an individual may stand no chance of success if other interfering organisational features cannot also be controlled or modified. Traditionally, most academic research has been conducted outside such contexts, leading to possibly successful outcomes in the research context, but poor transfer into a child's everyday environment (see Chapter 2). Woolfson (2018) also draws attention to the need for EPs to be critical in appraising research relevant to real-life intervention planning for CYP. In an increasingly diverse society, educational psychologists are often in the position of needing to adapt interventions, to ensure accessibility and cultural and linguistic relevance which can prove a challenge with regard to consideration of an 'evidence base'. Understanding the broader systemic context for the implementation of an evidence-based intervention, including key stakeholders and monitoring outcomes, is therefore key.

4 *'Giving psychology away' – what if some people don't seem to want it?* Many EPs responded enthusiastically to George Miller's classic injunction to 'give psychology away' (Miller, 1969). The needs of CYP were too many and too widespread and the potential benefits to them, their teachers and parents too substantial not to adopt this approach. As an academic subject with practical applications, psychology was being incorporated into the training of teachers, social workers and childcare professionals. Likewise, many EPs appreciated the potential advantages of putting useful elements of their own knowledge and practice into the hands of, and then supporting, frontline professionals and parents, who were in regular contact with CYP. It came as a shock to find that advice was sometimes not followed and recommended interventions not implemented. However, instead of construing these responses as 'non-compliance' or 'resistance', EPs explored barriers to the implementation of psychological advice and interventions, a field of study now often incorporated within the rubric of 'consultation' (Truscott et al., 2012). In addition, these responses have also been explored by EPs working at a systems level within the framework of implementation science (e.g., Chidley & Stringer, 2020).

5 *The 'political' context of educational psychologists' work*. A final challenge for EPs attempting to work as scientist-practitioners lies in the political context in which they operate, political in the sense that their time is a scarce resource that is inevitably distributed in favour of a few, however those particular recipients come to be selected or however the resource is paid for. It can take a determined effort from within the profession and some assertive negotiation of system boundaries to maintain and promote the benefits of practice as scientist-practitioners within the constraints of the current system. The context of traded services and direct commissioning may prove helpful in this respect, with different funding streams enabling clearer differentiation of workstreams and the potential for protecting time for the development of preventive work with schools, colleges and others commissioning services. The recognition of the centrality of psychological science in determining the EP role (Fallon et al., 2010; Lyonette et al., 2019) and the need for LAs to have regard to evidence of 'what works' in making their commissioning decisions suggest that the modern scientist-practitioner model continues to provide a sound basis for EP practice. In writing about the training of clinical psychologists in the US, Lilienfeld et al. (2017) refer to a framework or pedagogical philosophy termed 'epistemic humility': a recognition that 'we are all susceptible to biases and that science is the best means of compensating for them' (p. 6). Taking this as a standpoint, whilst acknowledging the paucity of the evidence base in some areas of clinical practice, appears to offer a helpful stance for the profession in continuing to explore the unique contribution of the EP.

Training as an educational psychologist

The requirements for HCPC registration to practise as an EP are: an undergraduate degree in psychology that confers the graduate basis for chartered membership (GBC) with the BPS, followed by a three-year postgraduate programme of supervised training and practice accredited by the BPS. In England, Wales and Northern Ireland, three-year doctoral training programmes are currently offered by 15 universities: Birmingham University, Bristol University, Cardiff University, Exeter University, Manchester University, Newcastle University, Nottingham University, Queens University Belfast, Sheffield University, Southampton University, the Tavistock and Portman NHS Trust, University College London, the University of East Anglia and the University of East London. Funding is available through three-year bursaries. The arrangements in Scotland are different from the rest of the UK with a two-year training programme based in a university followed by a year of supervised practice in the field. See the websites listed below for details of the training programmes and the funding arrangements.

Teaching experience is no longer a requirement for training as an EP in any part of the UK. However, the application process is highly competitive and applicants are unlikely to be successful in obtaining an interview unless they can demonstrate relevant experience of working with children within educational, childcare or community settings. Examples of relevant experience include work as: an assistant psychologist, a teacher, a learning support assistant, an education mental health practitioner, a speech and language therapist, a care worker or a worker in an early years' setting. Voluntary experience of various kinds over a number of years may assist applicants in demonstrating a breadth of relevant experience. Whatever experiences have been gained, universities will primarily be interested in what applicants have learnt that is relevant to work as an EP, and how they have been able to apply the knowledge of psychology gained through their first degree.

Readers who are interested in training as an EP are advised to visit the BPS website (www.bps.org.uk), the DfE website (www.gov.uk/guidance/educational-psychology-funded-training-scheme), the website for the Association of Educational Psychologists (AEP) (www.aep.org.uk/training/) and the websites of the training providers, listed above, for up-to-date information.

The AEP is the profession's trade union, and you will be able to find information on the AEP website about a wide range of issues including pay and conditions for educational psychologists (www.aep.org.uk). The AEP, in collaboration with the publisher Taylor and Francis, also produce the most widely read UK professional journal for EPs, *Educational Psychology in Practice*, which you would be well advised to read if you are thinking of applying for EP training.

The content of professional training as an educational psychologist

BPS-accredited training programmes all offer, with distinctive individual variations, a three-year programme that follows the BPS-approved Core Curriculum. This curriculum includes an intensive period of advanced knowledge acquisition, alongside a high level of research training and a minimum of 300 days supervised professional practice, across two years, within an EPS. During training, students develop problem-solving, consultation, assessment and intervention skills. They also study advanced research methods and carry out a major piece of empirical research, so demonstrating the knowledge and skills expected of a postgraduate researcher.

It is in the two-year professional placements in particular that trainees are expected to demonstrate a high level of what might be termed 'professional artistry' (Schon, 1987): inter-personal

skills, agile problem-solving abilities and a self-questioning reflective and reflexive stance. No amount of knowledge can improve outcomes for a vulnerable child if this knowledge cannot be utilised appropriately, communicated effectively, tailored to the contexts and understandings of those in the best position to help, and conceptualised within a set of values that are truly humanistic and person-centred. This is what constitutes the training challenge – a challenge which, if met, places applied psychology in a position where it can make major contributions to the education, welfare and safety of all children and young people.

Summary of the main issues addressed in this chapter

- EPs carry out a range of activities aimed at promoting the learning and development of CYP through the application of psychology. They work with schools and other education providers, but also with early years' settings, with children and their families in their communities, and with other agencies.
- The first EP in the UK was appointed in London in 1913 and fulfilled a broad role including work with individual children experiencing problems and research and development work across the LA. There has long been a tension between providing detailed assessments of special educational needs for a small number of pupils and engaging in prevention, intervention and training that can benefit a whole school and wider community.
- The distinctive contribution EPs make derives from their specialist knowledge of psychology. However, their role, both historically and currently, has also been determined by political imperatives and the availability of other staff to carry out key functions.
- EPs' consultation, assessment and intervention work is carried out with regard to the BPS DECP professional practice guidelines. Underpinning these is a problem-solving process model which involves hypothesis generation and hypothesis testing as central activities.
- Like other applied psychologists, EPs are conceptualised as scientist-practitioners. A number of the tensions and issues surrounding this conceptualisation are discussed.
- Professional training in educational psychology in the UK requires a three-year undergraduate degree in psychology that confers graduate basis for chartered membership with the BPS followed by a postgraduate programme of BPS accredited supervised training and practice approved by the HCPC.
- The title 'educational psychologist' is a legally protected title and all EPs must register with the Health and Care Professions Council (HCPC), meeting standards of Proficiency, of Conduct, Performance and Ethics and for Continuing Professional Development.

Key concepts and terms

Educational psychology; school psychology; hypothesis testing; British Psychological Society (BPS); consultation; Education, Health and Care Needs Assessments; problem-solving framework; Interactive Factors Framework (IFF); Target Monitoring and Evaluation (TME); chartered status; graduate basis for chartered membership (GBC); Health and Care Professions Council (HCPC).

Recommendations for further reading

Journal articles

Annan, M., Chua, J., Cole, R., Kennedy, E., James, R., Markusdottir, I., Monsen, J., Robertson, L., & Shah, S. (2013). Further iterations on using the Problem-Analysis Framework. *Educational Psychology in Practice*, *29*(1), 79–95.

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Books

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Williams, A.J., Billington, T., Goodley, D., & Corcoran, T. (Eds) (2016). *Critical Educational Psychology*. John Wiley & Sons.

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Sample essay titles

1 To what extent can EPs be described as scientist-practitioners?
2 Select any psychology course from the first two years of your degree and critically evaluate its applicability to EP practice.
3 Identify any area of psychological theory and research which you think is relevant to the practice of educational psychology and which is not featured in a chapter of this book. Produce an up-to-date review of the literature in this area and outline its implications for EP practice.

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2 Evidence-informed practice in educational psychology

The nature and uses of the evidence

Anthea Gulliford

Chapter summary

This chapter begins by considering the differing types of evidence that can be used to support practitioners seeking to inform their practice with evidence, as raised in Chapter 1. The journey from evidence to practice (and practice to evidence) will lead us to consider the varying methods used in the evidence bases for applied educational psychology, and to touch on different paradigms of knowledge. Some of the considerations for controlled evidence in educational psychology are explored, leading to a particular focus on single-case experimental designs (SCEDs), and how EPs can be involved in generating practice-based evidence. The growth of qualitative approaches and the way in which they may illuminate questions faced by EPs are then addressed.

Turning specifically to evidence-based practice, the chapter reviews a number of challenges to the notion, particularly as they relate to applied psychology. A distinction is drawn between the evidence available through controlled methods on the one hand and exploratory qualitative methods on the other, and between the extent to which researchers wish to understand the effects of an intervention versus the mechanisms of change, or its implementation, or indeed altogether more exploratory questions to help understand the contexts where professional practice is located. The implications for evidence-informed approaches and for implementation science are considered. The chapter offers this overview of methodological issues in research evidence in order to assist with critical evaluation of some of the evidence presented later in this volume, and of the research-based issues within educational psychology.

Learning outcomes

By the end of this chapter you should be able to:

1. Understand some of the ways in which both traditional scientific methods and qualitative research contribute to the knowledge bases for educational psychology practice.
2. Explain the key features of single-case experimental design methods.
3. Explain the origins, key features, and critical challenges for evidence-based practice.
4. Understand the issues leading to *evidence-informed* approaches.
5. See the value of practice-based evidence.
6. Critically evaluate the evidence drawn on in later chapters in this volume.

DOI: 10.4324/9780429322815-3

Introduction

Educational psychology, as we saw in Chapter 1, has long debated its precise identity. It has, arguably, been clearer about its function, namely the support for any area of a child or young person's development, in any context, but this can sometimes translate into questions about role and activities. A further area of interrogation for professional educational psychology is that of the paradigms, and thus the knowledge bases, to which the profession wishes to affiliate itself (Burnham, 2013). As Chapter 1 explored, the scientist-practitioner model comes with some challenges for this branch of applied psychology. Enquiry here revolves around the following questions:

- What is the nature of the knowledge bases for educational psychology, drawing on which methods?
- What is the nature of the relationships between evidence and practice?

These questions will take us from a traditional scientific and post-positivist view of methods, to one that can be described as post-modern, where qualitative research methods have thrived, and how the voices of the marginalised are heard through such research will be considered. Whilst many allied topics of relevance lie on the periphery of this journey, such as questions of epistemology and ontology, these cannot be explored in depth here, but readers may feel encouraged to undertake further exploration through studying the references identified at the close of the chapter, through Robson and McCartan (2016), for example.

Developing the evidence: Controlled designs

The roots of psychology were grounded in the traditional positivist thinking that led to the primacy of experimental methods in examining human behaviour (Thomas, 2021). While the search for causal inference drives all controlled research, an applied researcher faces particular challenges in this respect, since by its very nature, 'real world' research must sacrifice the control achieved in the laboratory. In the 1960s, traditional scientific method was supported in its complex transition to the applied world by *post positivist* methods (Shadish et al., 2002) to allow for robust accounts of *threats to internal validity* to be thoroughly described in research seeking causal explanations (Gopalan et al., 2020).

Such accounts of the threats to validity capture contextual and participant details for applied studies, and are particularly valuable for a researcher in educational psychology. Schools (where many studies of interest will be located) are complex organisations, containing multiple variables that defy easy control: pre-existing class or curriculum groupings, for example, may undermine the quest for group equivalence or randomisation. The populations under comparison are also likely to be significantly different through influences that are not easily captured, such as organisational ethos, culture and behaviour (Banerjee et al., 2013). Controlled studies therefore require thorough and close descriptions of populations under study, sampling procedures, and of the procedures in random allocation to groups (Torgerson & Torgerson, 2001), and treatment integrity in intervention studies, as a minimum (Killerby & Dunsmuir, 2018), to ensure that it is possible for others to conduct a robust evaluation of the reliability and validity of a study. These points are considered further below, see 'Implementation science and evidence-informed practice'.

Despite such challenges, accounts of intervention research by educational psychologists have increased in recent years (e.g. see Rodgers & Dunsmuir, 2013). Whilst the complexity of educational contexts for practitioner researchers, together with inevitable resource restrictions, sometimes leads to low power in the statistical inferences (Button et al., 2013) potentially threatening the conclusions of some studies in education, their ecological validity (Burns, 2011), that is, their relationship to and significance for the real world, arguably, is enhanced through their applied nature. Yet such studies are difficult for the practitioner to generate, which leads us to the topic of SCEDs.

Developing controlled evidence: The special case of single-case experimental designs in educational psychology

Educational psychology is very often concerned with supporting the learning and development of individuals with complex and unique combinations of need (Kratochwill et al., 2012). Inter-individual differences within such a-typical populations make the generation of evidence from group experimental designs less meaningful. Instead it becomes crucial to think in a focused way about the characteristics of the learner and their individualised educational contexts. The quest for causal evidence here leads us towards the study of single (or a few) cases. SCED[1] methods are a unique category of single-subject designs, presenting an opportunity to blend the study of individual responses to their environment, in careful systematic ways that also introduce some control, allowing examination of intervention effects at an individual level, whilst drawing wider causal inferences.

Despite the tendency to assume the primacy of group methods in psychological research, the origins of psychological research and theory included a focus upon single subject investigations, for example, in the investigations of operant conditioning in the 1950s and 1960s (Kazdin, 2011). Retrospective case study methods have, however, a limited capacity to generate scientifically plausible evidence regarding the association of any change detected in an individual with any features of an intervention they might be receiving. Kazdin (2011) highlights the example of psychotherapy, where controlled measurement was warranted in order to boost the causal explanations people wished to attach to various forms of intervention, historically.

The insight giving rise to single-case experimental methods was the notion that rather than grappling with the challenge of matching subjects across conditions in order to create experimental control the subject could act as their own control (Barlow et al., 2009). In order for this to be achieved, certain features must be present: distinct, planned, baseline and intervention phases; multiple repeated data points through each of these phases, rather than measurements of key variables at (typically two) single time points; and, crucially, the use of measures that have been clearly defined, and objectively applied, to ensure high reliability in measurement (Tate et al., 2016). If the subject is to act as his or her own control there is a risk of autocorrelation, that is, that each data point has some interdependence (Todman et al., 2012). SCED methodology attempts to overcome this problem, through robust measurement procedures, and through steps in analysis, although there is significant variation in how these are employed (Parker & Vannest, 2012).

FOCUS BOX 2.1

Experimental validity in SCEDs

The simplest form of SCED offers a comparison between two phases: A (baseline) and B (intervention) (AB design), where sufficient confidence in the validity of the baseline data must be established, for example through a minimum of five data points showing relative stability (Kratochwill et al., 2012). Confidence in internal validity is enhanced through elaborations upon this core design. A return to the baseline phase measures a participant's responses when the intervention is withheld, but this (technically known as a *withdrawal* design) is difficult, ethically, where a treatment is proving to be beneficial. An ABAB design may offer some help, in that respect, with the restoration of the intervention for further comparison.

A further design utilised to support internal validity explanations is that of the *multiple baseline* design (see Focus Box 2.2), which involves a number of delayed parallel investigations, with a time variation prospectively specified between each investigation, to enhance confidence in inferences drawn regarding effects found. For this design, variance can come from multiple participants (across subjects design), or from multiple targets (within subjects). There are practical difficulties with this design, but the use of additional subjects can be helpful in explaining features of change in individuals. SCEDs risk the same threats to internal validity as do group experimental designs, with a particular risk being any practice effects from repeated measures taken.

For the traditional scientist, the absence of a large sample through which to test hypotheses is problematic. In effect, the SCED subject's progress against baseline attainments is being examined. It is difficult, though not impossible, to develop the use of inferential statistics in this case. For some, therefore, the use of SCEDs is exploratory, *inductive*, and post-modern in its scientific epistemology (Plavnick & Ferreri, 2013). For others, SCEDs are a valid use of the *deductive* scientific process at the level of the individual, allowing us to achieve explanations of causal inference. Since these explanations are at the level of the individual, the key element that will enhance the external validity of such practice-based evidence is *clear descriptions of the population being investigated*, whereby consumers of such research are able to identify for themselves the relevance of this evidence for their setting (Hitchcock & Horner, 2014).

In theory SCEDs have the potential to liberate the resource-challenged practitioner, who nevertheless wishes to generate high-quality practice-based evidence. In practice, achieving highly reliable data can be a challenge. The greatest test in SCEDs for the practitioner is the challenge of drawing a tight framework, such that repeated instances of measurement have an optimal chance of reliability. This, more than any potential question of statistical inference, is at the heart of SCED designs and their capacity to describe cause and effect.

SCEDs therefore offer one route for the applied psychologist to achieve *practice-based evidence* at a case level, potentially extending the insights gained through the Target Monitoring Evaluation approach to casework evaluation (Dunsmuir et al., 2009) described in Chapter 1. SCEDs can also support theory building, through supplying evidence on the effects of an intervention for particular populations (Kazdin, 2011). Single subject designs have been noted to offer ecological and

social validity (Hitchcock & Horner, 2014), being typically conducted within the natural ecology of a child's learning environment. Usually, the intervention being researched through a SCED is one that can be introduced in the course of usual provision: ethically, this needs to be the case. Indeed, the SCED can even be argued to play an ethical role, in ensuring that practitioners or researchers do examine the effects of an intervention closely and precisely: something we know may be lacking in systematic or reliable ways in education provision (Cole & Dunsmuir, 2018).

The use of repeated measurement in SCEDs allows exploration of patterns and features in context that may be relevant to the changes observed, and the evolving progress of the interventions, this focus on each case being known as 'idiographic' (Barlow & Nock, 2009) – an important focus for a practitioner. This can also bring insight into the *mechanisms* of an intervention, not only its effects. Since SCEDs are concerned with measuring progress and change in an individual in response to an intervention, it is common for behavioural observational data to be collected, that is, on external manifestations of change, although some studies explore self-report too (White & Kratochwill, 2005). The link here to Applied Behaviour Analysis is clear, which, from its inception, has depended on the measurement of behavioural change (see Chapter 10).

The potential for rigorous exploration of case-based evidence through SCEDs has been illustrated through a robust literature from the USA. In the UK there is an emerging literature, indicating the significance of the method in generating practice-based evidence, illustrating the potential for the approach with a-typical populations, as well as to investigate the power of specific instructional features of a programme, for more typically developing young people with mild delays in skills acquisition. Focus Box 2.2 supplies two such examples.

FOCUS BOX 2.2

Illuminating impact through SCEDs

Levy and Dunsmuir (2020) examined the effects of a Lego-Therapy group intervention on the social skills functioning of individual young adolescent males with autism in secondary school. The researchers derived repeated measures of impact of the intervention through the coding of video recordings of naturalistic interactions on the duration of social engagement and frequency of social initiations, responses, and positive social behaviours. The SCED, which included measurement at follow-up times, involved six focus participants, with staggered starts to the intervention, in a multiple-baseline design. The authors established some confidence in the effects of the intervention, although parent and teacher ratings of change in social skills following the intervention were less confident. This study illustrates, among other things, how repeated measures can be taken in highly naturalistic contexts (in this case, in 15 minute free-play Lego sessions), so that the required 'control' is ensured through the systematic application of structured observational methods, to judge natural behaviours.

In contrast some SCEDs employ repeated measures where a young person is asked to perform against a target skill, for example word reading. Kaminski and Powell-Smith's (2017) study illustrates this approach, in asking young children to respond on a test of phonemic knowledge as the dependent variable, to examine the effects of a phonological awareness training in early childhood. In this study, there was some cautious confidence in the positive

effects of the intervention for some children but less so for others: it therefore offers a good illustration of how differential individual responses to an intervention can be illuminated (perhaps in comparison with a child's peers, or perhaps capturing different rates in learning) though a SCED; this then highlights for educators the necessary preconditions if the intervention is to be successful. There are therefore many valuable aspects of SCEDs, when seeking to understand the effects of targeted interventions in classrooms.

Qualitative methods: Exploration and insight

The scientific, positivist position that underpins controlled designs was fractured open during the latter half of the twentieth century by the acceptance, across disciplines, of a need for a widening of horizons; there was a realisation of the need to ask exploratory, inductive (rather than explanatory, deductive) research questions, in order to illuminate the complex circumstances in which practitioners work. To do so it was necessary to draw on methods that could gain insights from the perceptions of those involved in circumstances being investigated. Thus, researchers were moving from quantifying what was significant within the data obtained, to qualifying it: that is, drawing on the thoughts and words of their study participants, or on occasions their own reflections (depending on the method used) regarding the phenomenon being investigated. This might, for example, include work to illuminate the features of interventions and their ecologies to provide deeper understanding of mechanisms than purely causal associations, through mixed methods (see for example Gulliford et al., 2021).

Alternatively, researchers might abandon the search for causal inference altogether, and only address exploratory questions. As we have seen above, the search for causal inference in complex settings such as schools was, for some, insufficiently helpful in explaining either the phenomenon under investigation or its effects (Thomas, 2016). For those who wished instead to attend to the very complexity of detail that defies causal explanation, the solution was not to attempt casual inferences with low validity but to focus on restricted (low external validity) explanations to local questions, underpinned by deep exploration and insight. Qualitative approaches were needed, from this viewpoint, in order to reveal just that: the essential *quality* of a phenomenon, illustrated by rich detail to capture the diverse perceptions of those involved *in situ*, often as stakeholders to the research (refer to Focus Box 2.3). Many diverse qualitative methodologies rest under these super-ordinate purposes. Relying on various processes to collect and analyse participant perceptions, through semi-structured interviews or focus groups, for example. Such studies typically aim to capture both synthesis and depth of detail, often through thematic analysis of speech or text (Braun & Clarke, 2012).

The *epistemological* foundations of qualitative methods are broadly interpretive or relativist, by which a researcher signals that they do not adhere to a notion of a single realist objective truth. Mngaza (2021) makes a valuable point, highlighting the risks of normative and potentially oppressive assumptions in positivism, where researchers appear to assume authority through a supposed self-defined 'objectivity'. Contrastingly, arguing for 'epistemic justice' in educational psychology, Mngaza contends the valuable repositioning of the knowledge of the marginalised or oppressed and the validation of the lens that their experience can bring, through adoption of epistemologies consonant with those positions, such as black feminist epistemology.

In place of deductive testing of hypotheses, then, inductive research typically acknowledges and even invites the explicit positioning of the subjectivity of the researcher in the interpretation of data, in the concept known as 'reflexivity' (Dodgson, 2019), in contrast to traditional methods where objective measurement is paramount. Qualitative approaches, more interested in description and illumination of phenomena, assume that little can be done to understand the complex social phenomenon under investigation through measurement of single variables. Nevertheless, qualitative studies often undertake activities involving some classification, and categorisation, through thematic organisation or patterning of data, often giving implicit scales of value to data rather than explicit ones, for example in reporting the emphasis or value found by the researcher in the data to its attributes: as Clarke (2004) says, 'There is no hard and fast boundary between quality and quantity' (p. 81). Qualitative researchers do not seek 'external validity', but examine 'transferability', although qualitative research reports sometimes risk *seeming* to seek generalisable truths.

FOCUS BOX 2.3

Qualitative methods in education and psychology

The percolation of qualitative paradigms in educational studies quickly led to their predominance in that field (Torgerson & Torgerson, 2001), where they hold a consistent and valued place. Through qualitative methods, challenging educational issues that defy change over time, yet where the spotlight may not often fall, or where policy and provision to remediate those problems are difficult to develop, can be helpfully examined and informed.
For example:

- There are known disparities in long-term educational achievement by ethnicity in the UK (Strand, 2014): Sultana (2015) therefore examined the influences of educational experiences on the development of academically successful Pakistani students, using phenomenological methods, highlighting the role of 'identities' in forging educational pathways.
- For those excluded from mainstream school there is risk of long-term detriments (see Chapter 10); pupil perspectives upon educational provision in pupil referral units were therefore captured by Michael and Frederickson (2013).
- Widnall et al. (2022) explored adolescents' experiences of school closures during the Covid-19 pandemic, using focus groups and interviews, helping to illuminate pupil educational experiences, potentially informing their subsequent educational provision.

We shall now turn to the issues of how a practitioner might draw upon such methodological richness and variety, in the scope and nature of the evidence available to inform practice.

Evidence-based practice

Evidence-based practice, raised in Chapter 1, is a phrase with strong resonance in the provision of social policy and its underpinning practices. Originating in the field of health, the term has grown in significance for applied psychologists, with an ever greater focus on accountability within public

services bringing questions on *what* interventions are likely to work best, and *for whom*, and therefore *why* (Washburn et al., 2019). Its aim at the outset was to generate systematic and reliable insights regarding the likely *efficacy* of an intervention in a given field, for example, medications of choice for particular populations identified with common ailments (Cochrane & Fellowship, 1972). The evidence-based practice movement aspired to overcome the local and national variations whereby practitioners' professional decision making might be driven by personal preference (Lilienfeld, 2019), anecdotal report or local cultures of practice, and the artefact of historical accident or 'postcode lottery' that might determine whether patients received particular treatments. Instead, through the systematic analysis of evidence drawn from accumulations of randomised controlled trials (RCTs), the likely effects of particular interventions for particular populations were examined, and in turn a practitioner, so the thinking went, was enabled to make decisions based on judgements regarding the best available evidence.

The *evidence* in question was, at the outset, presumed to be the kind of evidence that described the outcomes of controlled interventions, and thus was typically drawn – wherever possible – from accumulations of RCTs. This focus on intervention research, it was argued, was pivotal in evidence-based practice precisely because *the effects* of an intervention, for example a psychological therapy, needed to be made clear. The processes developed by Cochrane and colleagues rely heavily on traditional perspectives on 'scientific' endeavour, on objective, deductive methods. In order to examine evidence, a so-called 'hierarchy of methods' was often cited, which explicitly gives precedence to experimental designs, and low weight to those designs founded on the qualitative approaches described above (although it must be remembered, these typically seek to address different questions: exploratory, rather than explanatory). Figure 2.1 illustrates the traditional hierarchy of evidence, as it is often represented:

Despite the 'control' offered by individual experimental studies, unless a strong protocol is applied when journeying from evidence to practice, there are hazards whereby well-intentioned practitioners may inadvertently adapt their practice according to the findings of a recent study, slipping towards incidental or accidental choices. To avoid such risks, when examining the evidence available on a particular topic, robust knowledge of experimental methods is important. The possible threats in a study, which potentially undermine the confidence that can be placed in its findings, can be overlooked at the expense of the well-known human preference (on the part of researcher and practitioner) for significant findings (Button et al., 2013; Kirkham et al., 2010). This is very evident in the phenomenon of publication bias, which has a strong influence on whether readers ever even hear of those intervention studies where no significant effect was identified (Ekholm & Chow, 2018). Countering this, and at its heart, the evidence-based practice

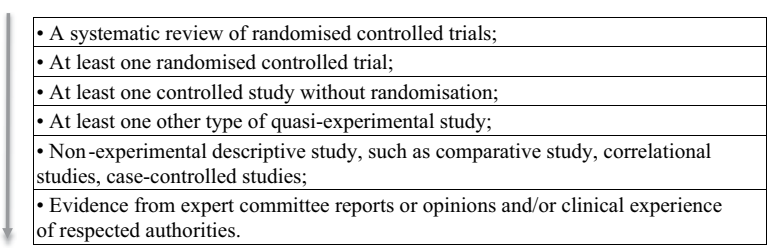

Figure 2.1 Hierarchy of evidence

Source: Based on Fox (2003)

pathway seeks to employ analytic approaches, *systematic reviews*, where evidence is potentially generated through aggregation or meta-analysis of quantitative data (Petticrew et al., 2013; Petticrew & Roberts, 2008). The systematic review of studies allows key features of an intervention study's context to be identified, together with an overview of the methods used, and aggregation of data, ideally with an understanding and awareness of the implications of statistical analysis, including effect size, for aggregating evidence (Page et al., 2021).

The activities implied by traditional evidence-based practice models of evaluating research evidence quality were dominated by a positivist view of scientific endeavour, allied to methods that aim to discern *causal* associations and explanations (Shadish et al., 2002). This position depends on a *positivist epistemology* and on research activities involving *objectivity*, allowing for consensus on measurement, and for *nomothetic* (explanations achieved are at the population level), *realist* explanations, described as *modernist* (Ramey & Grubb, 2009). As we saw in Chapter 1, traditional evidence-based practice models were the inevitable consequence of applied psychology's affiliation with the scientist-practitioner model. Yet the precepts in the hierarchy of evidence reverberate across the profession of educational psychology creating both consensus and fragmentation (Burnham, 2013; Fox, 2011).

There has been a relative explosion of approaches to systematically reviewing research evidence, aligned to the greater focus on qualitative methods, which can be synthesised through various interpretive approaches (Flemming & Noyes, 2021). A key step in understanding the evidence, of whatever type, is that of critical appraisal, involving activities aiming to determine the quality of the evidence. Critical appraisal allows the review of evidence to be guided by systematic steps, and researchers have a plethora of guidance to choose from, to support the searching for, selection, appraisal, and synthesis of evidence. One approach to systematic evidence review that has proved useful in professional educational psychology is Gough's (2007) Weight of Evidence model. Gough advises working through a number of criteria by which to evaluate each study included in a review: a) the methodological quality of the study on its own terms; b) the methodological relevance of a study for the question being addressed by the reviewer –for example, whether the study contains the methods which are likely to illuminate the question; c) the relevance of the topic and research question for the systematic reviewer's question; leading to d) an overall weighting of a study's evidence quality for the review.

Critiquing evidence-based practice

Despite the movement's good intentions, evidence-based practice has faced many theoretical critiques (Nevo & Slonim-Nevo, 2011). To begin with, in its demand for causal explanations, it has been charged with reductionism, mutating complex research narratives to simple quantification for the purposes of comparisons of 'effect' (Hammersley, 2005; Thomas, 2016). The concerns relate to the extent to which studies are able to identify the contextual variables that contribute to the successes or failures of an intervention: traditional evidence-based practice models, the arguments goes, obscure through their core processes the key features of contexts and interventions which contribute to the causal inferences being drawn (Thomas, 2021). In adopting a 'what works' paradigm there was a risk, it was argued, of a focus on *outcomes* at the expense of insights into the *mechanisms* involved in the *processes of change*.

For a practitioner seeking to implement evidence-based practice, other concerns focus on 'client' characteristics, which are likely to vary from those reported in studies, despite attempts by original authors to describe external validity (Callahan et al., 2013). Since in the RCT, or group

design, individual response to interventions is masked by measures of central tendency, average effects obscure those details which are needed in order to gain insight into the likely effects of an intervention for *individuals* or for the population from which they are drawn (Smith, 2013). Meta-analyses (quantitative examination of effects of multiple studies), in this critique, only compound the problem, through aggregation. In short, statistical inference is a solution to many questions, but generates many others for the practitioner. Larger samples, which contribute to greater internal and external validity and statistical power in a study, obscure relevant detail regarding *individual* characteristics, it is argued (Callahan et al., 2013). We can question how successfully studies' populations represent the wider society that they claim to (Rad et al., 2018; Ramey & Grubb, 2009), and this is a critical issue for domains such as education, where there are clear inequalities in outcomes by population (Strand & Hessel, 2018). Whilst studies may seek to describe sample characteristics closely, those features of an individual that are relevant to functioning or to responding to an intervention may go obscured, or unrecorded, and this can be a fundamental issue for intervention programmes, giving added impetus to the movement that seeks to address this issue, that of 'implementation science' (see below).

A further concern is the problem of 'treatment integrity'. Description of an intervention's core features is essential to allow for comparison and replication, as well as for the generation of theoretically explanatory accounts regarding the mechanisms of an intervention; yet its absence from empirical research accounts is often noted (Killerby & Dunsmuir, 2018). Highlighting the critical need for such data, Connolly et al. (2018) reviewed 1,000 RCTs in education, and found only around 20% reported implementation data. This information is critical in complex applied contexts, where robust accounts of intervention features, and their relationship to the psychosocial context in which they were delivered, are key in supporting the practitioner to apply research evidence.

An overarching concern regarding the notion of evidence-based practice in education is the extent to which its precepts can encompass the long chains of correlation or causality found in circumstances other than direct medical intervention from whence the paradigm originated (Kelly et al., 2010). In the field of education, the linking of input variables to outcome variables becomes complex (Cartwright et al., 2009), more than can easily be captured within a controlled study. An example of this complexity in studying complex social processes when intervening to support pupils in educational contexts is given in Focus Box 2.4.

FOCUS BOX 2.4

Generating evidence: The case of Circles of Adults

Despite the articulated role for educational psychologists in supporting evidence-based practices in the world of education (Dunsmuir & Cole, 2018) there are examples of interventions, popular among educational psychologists, which may have struggled to secure clear underpinnings in research evidence (Styles, 2011). In viewing some of these, the task of rigorous investigation appears highly complex.

Circles of Adults (CoA) (Turner & Gulliford, 2020) is an approach used to guide adults through a group problem-solving process. It can help staff involved in supporting a student

who is experiencing difficulties within the school setting, or beyond, guiding them through a problem-solving sequence to enhance their insights into a pupil's needs and possible adaptations to provision. CoA gained swift popularity despite only anecdotal evidence regarding its *outcomes* (Bennett & Monsen, 2011). The process was, at the outset, hypothesised to be based on a number of core mechanisms, akin to that of other problem-solving and staff-sharing processes, identified from exploratory case studies (e.g. Bozic & Carter, 2002). Explorations of participant perceptions of other *similar* group processes indicated that participating staff find it helpful to be part of a support group and receive emotional containment through the process; to expand their understanding of the young person's background and needs; to enhance the hypotheses they bring as explanations regarding a young person's needs; and to amplify the potential solutions and ways forward in working with the young person.

Since CoA aims to help with the inclusion of children in school it is important that its *efficacy* is investigated. Should the *mechanisms* within the *process* be the focus of attention? Or, in line with the 'what works' movement, is the greatest imperative to understand whether or not the process results in changes in *pupil outcomes*? If the latter, how can causal inferences be confidently drawn between a problem-solving group process among adults, and effects upon pupil functioning, where many intervening variables (threats to internal validity) will occur?

In doctoral theses both Symes (2011) and Dempsey (2012) (through mixed methods or quasi-experimental designs) reviewed the effects of the CoA upon teacher *causal attributions* (see Chapter 10), with the former noting some effects, but the latter none. Both authors noted the difficulties in reliable measurement of key variables, and in securing sufficient *power* to support the investigation. They also found no significant effects of the process upon *teacher self-efficacy*. Turner and Gulliford (2020), however, in a published study that failed to supply convincing controlled evidence on these issues, nevertheless found clear qualitative evidence of staff perceptions that they valued the group process. The data indicated an increase in their empathy for the pupil, and an increase in their self-efficacy, and importantly, in their intention to act and deliver revised plans for the focus pupil.

Such studies illustrate the importance of close investigations of the mechanism and processes likely to optimise behaviour change on the part of staff, whilst also illustrating and illuminating the difficulties for a researcher involved in the analysis of causal pathways around complex social processes. It is helpful here to be reminded of the ethos statement of the Evidence-Based Practice Unit (EBPU): 'All research is provisional and raises as many questions as it answers' (EBPU, 2021).

Increasingly, then, practitioners and researchers have drawn attention to the question of the various *processes* involved in delivering intervention effects. Arguably, research has an important role to play in 'learning about' the intervention in interaction with its context (Owen et al., 2022) as much as about the *effects* of the intervention itself. This point is reflected in guidance from the Education Endowment Foundation (EEF) (Humphrey et al., 2017) where attention is given to 'Implementation and Process Evaluation' and to models to support insights into how RCT data can be best understood, in relation to the contexts from which it derived. Some researchers from

qualitative traditions explicitly position such features as *central* to the research account: giving primacy to the details of interventions as perceived by those delivering them, and the intervention's relationship with the environment in which it is implemented, capturing, rather than controlling or reducing, the complexity of this interaction (Gale et al., 2013). A broad history of 'soft' evaluation research stands behind such ideas, with very different goals from those of RCTs (Owen et al., 2022). Rather than identifying generalisable explanations of cause and effect (Ling, 2012), from this viewpoint, evaluation methods have held at their heart the need to gain insight into the participant perceptions, and give accounts of ecological detail coloured by postmodern epistemology (Koenig, 2009). One such approach is that of *realistic evaluation* (Pawson & Greenhalgh, 2005), an approach aiming to capture the mechanism of an intervention through identifying and patterning the relationships between the intervention's context and its outcomes, and in doing so, appearing to offer the best of both worlds through striving for causal explanations which are specific to the context of study, but avoiding fully generalisable explanations. To achieve this the positivist realist ontology of science is softened, to critical realism, which allows both for measurement and subjective inferences (Clegg, 2005). Grosz et al. (2020) go further, arguing that psychological researchers should be more confident in articulating the causal inferences they wish to draw from qualitative studies, and that doing so would allow for a better accumulation of evidence.

Integrating these ideas, and allowing systematic review to encompass qualitative research evidence, Murad et al. (2016) offer a revised model of evidence synthesis, where firstly a more flexible approach to the type of evidence considered is adopted, and then a separation of the systematic review stage from the usual hierarchy allows us to suspend the assumption around which type of review or synthesis is to be undertaken, implying equivalent weight for both qualitative and quantitative data, capturing the methodological plurality we need in the scrutiny of evidence.

A final dilemma for evidence-based practice is that when considering the translation of ideas from *theoretical evidence* to *applied practice*, the intuitive skills of the practitioner are potentially undermined (Nevo & Slonim-Nevo, 2011). The translation of evidence into practice requires the unique skills of practitioners in delivering interventions: models that quantify data, it has been argued, overlook the contribution of the practitioner in interpreting and delivering interventions. This includes practitioners' therapeutic rapport skill in their work, known to be a significant contributor to the client or recipient's perception of and response to an intervention (Levant et al., 2006). Additionally, whilst practice might be evidence-*led* other factors will influence policy and practice developments, including the *values* that influence policy developments, and the delivery of interventions. Furthermore, where the evidence is communicated in such a way as to obscure the practical implications of a theoretical finding, the translational pathway from 'laboratory' to 'clinic' is obscured (Dozois, 2013). Wentworth et al. (2017) therefore suggest research partnerships to support decision-making regarding the use and implementation of evidence.

Implementation science and evidence-informed practice

For some, the answer to these various dilemmas is to describe the process as 'evidence-informed practice' (Nevo & Slonim-Nevo, 2011), signalling by this a preference for a softer approach to the adoption of evidence in practice. This approach embraces the skills, the varied knowledge bases, and above all, the creativity of the practitioner in exercising their judgement as to what interventions are likely to work in their context (Joyce & Cartwright, 2020). Through this, there is an

important opportunity to draw on the practitioner's close, detailed knowledge of local contexts, valuable precisely because the data illuminates the setting from which it is drawn and does not attempt to create nomothetic explanations; instead, the focus is on questions for that localised context, or at most, insights which may, for example, contribute to generalisable explanations of mechanisms in an intervention. Qualitative data can then also play a role in the illumination of stakeholder and participant perceptions of what is crucial. Various authors in any case describe this as a *sine qua non* of evidence-based practice, and attuned to addressing the needs and views of service users (Ling, 2012). Signalling the diversity of positions in this field, Owen et al. (2022) however adhere to a model where evidence-based practice remains the ultimate goal, with the *evidence-informed* approaches guiding only the early phases in the practitioner's consumption of research.

Many of the ideas discussed above are captured within approaches known as 'implementation science', where the core aim is to attend to context, focusing on the issues that affect the journey from evidence to practice (Hagermoser Sanetti & Collier-Meek, 2019). For a researcher this involves careful capture and reporting of all the relevant variables about interventions, participants, and contexts, as discussed above. Responding to this challenge, Outhwaite et al., (2020) report one example of how an RCT conducted in schools can include mixed methods to build explanatory accounts that draw on qualitative data to develop a determinant framework (a model of key factors influencing the intervention's outcomes) of how and why (mechanism) an intervention's effects are at play. Importantly, researchers in this mode should consider and report those aspects that will help implementation by the practitioner: including, as Baumann et al. (2015) highlight, cultural adaptations to support implementation in diverse communities.

For the practitioner, implementation science involves the considered application of research data into diverse contexts, of the many details of the intervention and context that warrant attention or adjustment in order to enable a fit between that intervention and the practitioner's context (Kelly, 2016). The goal is for the practitioner to gain better insights into how to optimise outcomes for those they are working with, avoiding a 'one size fits all' approach – a task Chidley and Stringer (2020) highlight as an optimal role for the EP. An example of how implementation can be addressed is provided by Sugai and Horner, (2020), in the case of Positive Behaviour Interventions and Supports (see Chapter 10). The authors note that the intervention's success relates not only to the attention that is paid to contextual factors and systems that support implementation fidelity, but to the resources and insights that support sustainability and scaling – something often overlooked in the development of interventions. Fallon et al. (2018) found a positive association between training by school psychologists and an intervention's implementation by education staff, when examining implementation and sustainability.

In addition, when using the careful evidence review processes described above, professionals may appear to adopt theoretical preferences (Bowes et al., 2020), with such biases often being stubborn and leading to 'pseudoscience' (Lilienfeld, 2019). The selection of interventions can be random, or even iatrogenic (holding negative consequences for the individual). Lilienfeld and Basterfield (2020) therefore actively encourage self-doubt in practitioners and highlight fears as to whether reflective approaches are sufficient to build protections for service users: a significant point, since 'reflective practice' is a cornerstone of practice for many EPs. Seeking to overcome such risks and dispositional biases, doctoral training programmes in applied psychology ensure skills in the scrutiny of large data sets through systematic review or meta-analysis, or qualitative synthesis (Cole & Dunsmuir, 2018). The extent to which practitioners employ those skills in

guiding their own judgements of the evidence in relation to casework activity is a question that requires continued scrutiny and investigation. The risk that EPs may not readily access high-quality peer-reviewed material, for example, has been highlighted (Sedgwick & Stothard, 2021). However, for educational practitioners there is now support from the EEF (2021), which plays a key role in supporting the scrutiny and dissemination of evidence to promote educational outcomes, and in particular, to address inequalities and reduce attainment gaps. Overall, Washburn et al. (2019), arguing for evidence-based practice for reason of ethics and protection of the public, suggest that the term *science-based practice* may be preferable when training practitioner psychologists, aiming to ensure practitioners take an active and continued careful and rigorous view of the data.

Educational psychologists and evidence-based practice

Unlike in the USA, where it has been possible to state 'Research and the scientific method is the foundation for school psychology practice' (Burns, 2011, p. 32), within the UK the relationship of educational psychology with the natural sciences is complex. The discussion above has already noted the pull of interpretive methods for educational researchers, and educational psychology, as an applied psychology, experiences the call of both of its home disciplines. In the UK, the manifest tension between the natural sciences and the humanities can be found in the variety of research submitted to professional journals in contrast to those of academic educational psychology. For some, the profession commenced with the work of measuring intelligence and has continued with other nomothetic presuppositions (Miller & Frederickson, 2006). For others, such supposedly scientific activity is not only unreliable in casework activity, but remains incompatible with the espoused values of the professional practice of educational psychology when undertaking research (Fox, 2011). It might be argued that educational psychology as practised in the UK has long shown wariness towards approaches perceived to be driven by causal models. Whereas a call for the abandonment of a medical model in favour of ecological approaches (Sheridan & Gutkin, 2000) could be described at the turn of the century in the USA as 'revolutionary' (Burns, 2011), such perspectives had long been integral to the *relativist* and *postmodern* thinking of much of the EP profession in the UK. Traditional evidence-based practice approaches have therefore appeared to challenge the epistemological foundations of a profession which has sought to retain its position as one which accepts both empiricist and constructive precepts (Miller & Frederickson, 2006. Burnham (2013) suggests that the supposed epistemological divide within the profession may be given unwarranted prominence, and Owen et al. (2022) call our attention to the need to adopt questions and solutions according to relevance and expediency, ensuring a strong methodological foundation for any approaches adopted.

Developing policy and provision

The research to practice gap has become increasingly highlighted as a social policy concern. Chapter 1 explored a number of pathways to evidence-based practice, through the use of problem-solving frameworks which aim to systematise the selection of evidence. To enhance the legitimacy and validity of the evidence-based practice process, a research-to-practice sequence is suggested by Schraw and Patall (2013), a *policy*-driven approach which involves scrutiny of evidence by expert (and varied) groups and the application of criteria for valid causal inference. The proposed sequence involves 'generating data, aggregating data, summarizing aggregated data into

prioritized EBP strategies, and implementing and evaluating those strategies in the field in conjunction with stakeholders' (p. 346). Such an approach, showing collegiality in its steps to analysis and implementation, is demonstrated in the work of many policy units, and these scrutiny processes do something to bring the traditional evidence-based practice movement closer to the world of the practitioner, and indeed, to the consumers and the policy-makers of services (Cartwright et al., 2009), whilst also enhancing the robustness of quality controls in the evidence-informed practice process. Gorard et al. (2020) note that authors could themselves suggest how the dissemination of their research should be best accomplished.

Conclusions

Evidence-based practice as an approach has exerted a powerful influence across disciplines and has made a significant contribution to the general understanding of the need to examine and understand interventions used to support wellbeing and learning in diverse areas of practice. However, the term evidence-informed practice may help us capture the depth and range of evidence that educational psychology needs to draw on, and the complex processes involved in achieving this. Professional educational psychology's capacity to embrace evidence from diverse methodologies, addressing many different types of questions, is important. The move amongst applied psychology professions, and other disciplines in social policy, to evidence-based practices has highlighted some pertinent questions regarding the epistemological foundations for the profession. How a practitioner receives and deploys such evidence will depend on their clarity of purpose, rendering much of the debate regarding methodological preferences secondary to the primary concern of rigour and quality in research.

Summary of the main issues addressed in this chapter

- Traditionally, scientific methods have underpinned psychology. Post-positivism has supported the translation of traditional, deductive positivist methods to applied contexts, through allowing researchers to describe threats to internal validity.
- In educational psychology SCED methods provide a helpful approach to research with a-typical populations, allowing for controlled experimental study at the *individual* level.
- Qualitative methods make a contribution to the study of applied contexts, and many educational psychologists espouse relativist, interpretivist, or constructivist approaches in practice, and this informs approaches to research and research evidence, too.
- Some approaches to evaluation allow researchers to blend quantitative controlled methods and qualitative approaches, and to develop models of the change process in organisations or in complex real-world situations, to draw some inferences about cause and effect.
- Evidence-based practice has a background in the field of health but has made a transition to other fields. It is an approach which aims to enhance the rigour and understanding of interventions' effects.
- Difficulties with evidence-based practice models in education include the focus on causal explanations, arguably reductionist approaches, the possible neglect of population characteristics, and the varying skills of practitioners in implementation.
- Moving from evidence to practice requires robust procedures, which can valuably be informed by *stakeholders* in the research, such as client groups and practitioners, and the skill of the

practitioner in understanding, selecting, and applying evidence. Evidence-informed practice can be a more helpful term.

- Implementation science is a term that captures many of the ideas addressed in the critiques of evidence-based practice and focuses the practitioner on the interaction of research and context.

Key concepts and terms

Evidence-informed practice; evidence-based practice; scientist-practitioner; educational psychology; causal inference; single-case experimental designs; qualitative methods; evaluation; epistemology; positivism; hierarchy of evidence; systematic reviews; practice-based evidence; paradigm.

Note

1 Synonyms include *single-subject* and *single-participant* experiments. In the USA *Brief Experimental Analysis* approaches have also been adopted which are less formal than the methods described here, but have a similar aim.

Recommendations for further reading

Journal articles

Burnham, S. (2013). Realists or pragmatists? 'Reliable evidence' and the role of the educational psychologist. *Educational Psychology in Practice*, *29*(1), 19–35.

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Books

Barlow, D., Nock, M., & Hersen, M. (2009). *Single Case Experimental Designs: Strategies for Studying Behavior Change*. Allyn & Bacon.

Petticrew, M., & Roberts, H. (2008). *Systematic Reviews in the Social Sciences: A Practical Guide*. Blackwell.

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Sample essay titles

1 How should educational psychology draw on the idea of evidence-based practice?
2 Describe some of the difficulties with the concept of evidence-based practice when applied to the practice of professional educational psychology.
3 How can single-case experimental designs be useful in educational research and practice?
4 Discuss the potential contribution of qualitative methods to educational psychology practice.

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PART 2

Cognition, learning and teaching

3 Raising educational achievement

What can instructional psychology contribute?

Anthea Gulliford and Andy Miller

Chapter summary

In this chapter you will learn about various ways that educational psychologists have attempted to employ 'instructional psychology' (IP) to help raise educational attainments in schools, especially with pupils whom teachers have traditionally found to be the hardest to teach. We will begin by considering how the term 'underachievement' has been used and how educational psychologists have supported the employment of IP-based interventions to overcome it. The term IP refers to aspects of a young person's learning environment, and particularly to actual teaching style and methods, such as the use of behavioural objectives, task analysis, direct instruction (DI), and precision teaching (PT) as they relate to the learning of core skills. Each of these approaches will be examined and the basic tenets illustrated by individual case examples. Finally, the results from larger-scale applications of IP aimed at lower-achieving children across a number of classrooms and schools will be explored, which highlight the potential for this type of IP to support achievement by supporting the attainments of all learners.

Learning outcomes

When you have studied this chapter you should be able to:

1 Explain issues of low educational achievement and the rationale for and value of IP methods for supporting achievement.
2 Explain IP and the evidence for its efficacy as an approach to teaching, for individuals and groups.
3 Analyse data recording methods within instructional approaches to literacy skill learning, in order to draw conclusions about teaching effectiveness.

Introduction

At the heart of the profession of educational psychology is a focus upon the achievements of children and young people – the reaching of the learner's potential. This challenge, of promoting attainment, translates into the premise that the task for the EP is to analyse the current status quo and support educational arrangements to facilitate next possible steps for the individual – in

DOI: 10.4324/9780429322815-5

whatever domain of development. It is this that arguably positions the profession within the perennial debate around attainment (what the learner has learned) and achievement (what the learner has achieved against a set benchmark) in schools.

Historically governments have sought to raise educational standards in schools, and to eradicate a seemingly stubborn 'tail of underachievement': the phenomenon whereby the lowest achievers in our schools seem to be the hardest to reach. Whilst EPs have typically found their work focused upon supporting the learning of *individuals* there has been, too, some consideration upon the way in which they may be involved in larger-scale interventions to help *many* pupils. In both these approaches, EPs have argued for, and demonstrated, the potential contribution of IP to raising achievement.

Conceptions of 'underachievement'

The term underachievement is found within everyday discourse in education, although its field of reference and its popularity as an explanatory construct has passed through a number of fashions and phases in the past half century. Implicit in this term is the notion of potential: that a learner 'ought' to be achieving better in some way, based upon expectations of them as individuals or as representatives of a particular population (Goodman & Gregg, 2010).

Historically, when EPs drew more routinely upon cognitive assessment, the notion of *underachievement* might be applied where a child or young person was found to be attaining in a core academic area at a level below that which 'might be expected' given their 'intelligence quotient' (IQ) score, thus 'not reaching their potential'. In the domain of literacy, norm-referenced reading or spelling tests allowed psychologists to identify the extent to which the measure of one differed from the other in terms of statistical likelihood. Through this, the extent to which a young person might be considered to be 'underachieving' could be stated not only in terms of the delay in acquiring some academic abilities (e.g. 'three and a half years behind their expected level in reading') but also in terms of the probability of this (e.g. 'a disparity of this magnitude or greater is likely to be found in only 1.7% of pupils of his age'). Furthermore, historically, an ingredient in the diagnosis of 'dyslexia' or specific literacy difficulties was often a discrepancy between some measure of literacy difficulties and an IQ score. This approach to identifying notional *underachievement* has been carefully disputed, with discrepancy models effectively discredited (see Frederickson & Reason 1995). This reminds us that attainment in one area of skill may not be reliably predictive of another, bringing some fragility to that notion of underachievement.

Another approach to the concept has drawn attention to achievement gaps *between* individuals or groups, and since achievement brings lifetime consequences for individuals, this issue is a significant societal concern, which has been studied in education and sociology. Early work identified that young people from working class communities appeared to underachieve in comparison to their middle-class counterparts, and subsequent analyses have uncovered a complex picture. Socio-economic status (SES) and ethnicity were found to be key factors relating to attainment (Gillborn et al., 2021). There are complex interactions between them. For example, Strand (2014, 2021) highlights the complex interactions between SES and ethnicity. He reports that low SES, for example, impacts significantly upon White British and Black Caribbean boys, whereas at high SES only Asian students exceed the progress made by White British students: and that when low SES is controlled for, Black pupils do less well than their peers, with Black pupils' placement in lower educational sets being viewed as a significant impediment to their academic progression. Among

other factors that influence achievement in complex ways are language status (Hessel & Strand, 2021) and the experience of being in public care (O'Higgins et al., 2021).

In international comparisons the proportion of children in the UK scoring in the upper and middle ranges has compared favourably with the highest attaining countries, but the UK was noted to have a greater than average proportion of lower achieving children. This tail of underachievement was judged to be not only too long but also resistant to modification for over 60 years (Tymms & Merrell, 2010). This occurs also in the USA, Scotland, and Singapore, leading to the suggestion that its occurrence may in part at least be associated with the irregular features of the English language which hamper literacy development. These authors, and others since (e.g. Denoe et al., 2017) have also noted that the *average* attainments of UK pupils continues to be relatively high in international comparisons, allowing concern to rest, then, upon the proportionate issue of those who do not reach average levels.

EPs, instruction, and underachievement

For EPs the issues associated with underachievement can be complex. As we saw in Chapter 1, the core functions for the role include assessment – the task of helping those around a struggling learner to come to a better understanding of the child's needs. Assessments by EPs can occur to support early intervention, or within the statutory framework in a staged model of assessment and intervention. For the most needy learners, unable to respond to the various levels of provision offered to them by schools, a local authority is required to consider the assessment and provision for more complex needs. In either case, the intention has been to ensure first that a child's needs can be assessed, and second that the provision required to meet these can be identified.

These processes reflect the way in which SENDs have been broadly understood and responded to at a policy level in the UK since the Education Act of 1981. EPs became pivotal in these processes, with their role in statutory assessment sometimes identified by others as being their key role (Lee & Woods, 2017). Some disappointment has been articulated over the years at the scope within this for an EP to enable the development of interventions at an early stage, to better support learners' achievements. This tension has continued, despite a pivotal call as far back as 1978 by Gillham and colleagues for greater attention to be paid to the learning environment in promoting benefits for a child. An axiom of the EP profession has long been that in order to change the learning of a child, the learning environment has to be changed (Gillham, 1999).

Those interested in raising achievement in schools attend to many environmental factors, including leadership, organisation, grouping, curriculum, and school culture (Muijs et al., 2004). As well as the need for support for staff professional development (Slavin et al., 2011) the need for high-quality instructional practices is known to be key (Hattie, 2009). There have been high levels of debate regarding instructional methods and processes in schools, often focusing upon lesson planning and structures, or upon features of the learning environment. A group of approaches that fall under the term IP draw this focus very specifically towards features of pupils' immediate learning environment that can be manipulated in order to attain appropriate responses by the learner (De Corte, 2000). This leads us to the interest of EPs in IP.

Applications of IP in the UK grew through the work of a number of psychologists in the last century who began to draw attention to the need to consider the conditions for instruction and learning more closely. Alongside this, a strong evidence base for its use began to emerge in the United States (Gallagher et al., 2006). Proponents of IP in the UK have argued for its place in

shaping the curriculum delivery for all children. As Solity et al. (2000) stated, 'the key to ensuring that children make progress is what and how they are taught rather than the availability of additional resources, parental support or one-to-one teaching' (p. 124). Contentious as elements of this view might be to some, there is evidence from classroom investigations which indicates that simply ensuring the presence of additional help, such as teaching assistants, cannot per se be guaranteed to enable a struggling learner's progress (Blatchford & Webster, 2018). Support for learners needs to be very carefully attuned if it is to have any positive effect, and indeed avoid detrimental effects, on pupil progress (Webster & De Boer, 2019). A review of the Pupil Premium fund, a funding initiative aiming to support the most educationally vulnerable groups, underlines the same point, observing low levels of change in provision for under-attaining pupils, or of outcomes, at that early stage in the fund's inception (Ofsted, 2012). More recently Gorard et al. (2019), whilst highlighting the need for more sensitive analyses, and for greater targeting of the funding, have suggested that the Pupil Premium fund may be having a positive influence, reducing the attainment gap, where it is well-targeted. By implication, all these lines of evidence enhance the case for a carefully scaffolded learning environment as being central to a child's progress.

Instructional psychology

The term IP refers to a broad church of ideas relating to environmental adjustments for the learner, in particular those which aim to mediate a controlled and reduced learning environment which promotes core academic skills. The roots of IP lie in behavioural psychology, which points the way to the need to adjust the context to ensure successful performance by the learner on their task (Lindsley, 1992: Vostanis et al., 2020). Contingencies between task presentation and learner response are important, and the place of reinforcement (Skinner, 1954) (or *feedback*, in educational terms) in learning is scrutinised. A key feature of this approach is that the learner's attainment on a task is not only just that: it also becomes the assessment which, crucially, informs the next presentation of a task, and thus 'success criteria' (the short-term target for the learner, within a task) drive the delivery of a learner's programme.

Within the work of some EPs in the UK, a number of elements from IP – such as behavioural objectives, task analysis, DI, and PT – are found and the remainder of this chapter examines each of these in greater detail.

Behavioural objectives

Ainscow and Tweddle (1979) called for an approach based on curriculum (or task) analysis and the generation of learning objectives, echoing school psychologists from the US, who had developed educational approaches incorporating operant conditioning into instructional design. These authors argued for a much greater focus upon *behavioural objectives*, i.e. upon factors over which teachers had some control.

Behavioural objectives have two main characteristics: they contain an action and they are observable. So, 'writes down the numbers 1 to 10 from a model', would meet these criteria whereas 'knows the sounds of the letters a to j' does not, the latter not being expressed as an observable action. Ainscow and Tweddle argued that a major advantage of using behavioural objectives was that teachers were then far better able to plan their teaching activities with an explicit goal for the learner in mind. Whilst this may seem obvious, it should be remembered they were specifically

concerned with pupils who had failed to progress very much with less 'precise' methods. Focus Box 3.1 presents an example of such a pupil.

FOCUS BOX 3.1

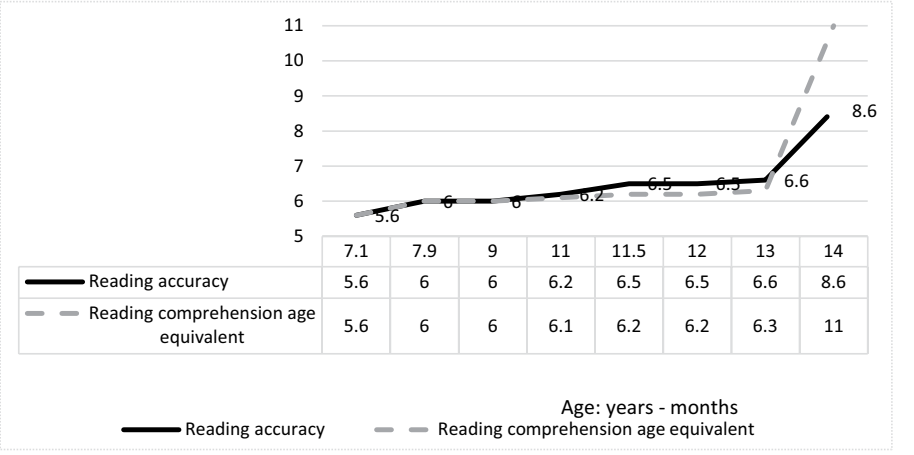
Michael: A case example

Michael was a 13-year-old student in a secondary school where staff sought support from the Educational Psychology Service, because his parents wanted to know whether he might be better placed in a small unit for young people with dyslexia/specific literacy difficulties. He had been experiencing difficulties with reading and spelling throughout his school career and, upon transfer to secondary schooling, he struggled seriously with the subject-based academic curriculum and especially with homework, despite the best efforts of a skilled special needs support department.

Michael had identified Special Educational Needs (SEN), with his specific literacy difficulties recorded, but was very reluctant to be withdrawn from some lessons into the special needs department, to which he attached great stigma. In conversation, it was apparent that he was an articulate and thoughtful young person and assessments showed his level of verbal comprehension to lie within the high average range for his age.

When Michael was assessed at age 13 years 2 months (13-2) using the Wechsler Objective Reading Dimensions he obtained a reading age for reading accuracy of 6-6 and for reading comprehension of 6-3. This test has a basal level of 6-0 for both measures. So, in Figure 3.1 these scores are partially extrapolated back to a chronological age of 6-0, where typically developing youngsters might be predicted to obtain reading ages of around 6-0 for both accuracy and comprehension, indicating just how little reading progress Michael had made in seven years of schooling, some of this as the recipient of the special attention paid through already having identified SEN.

At around the time of this testing, Michael's case file was also scrutinised in order to ascertain any types of special provision of teaching approaches that had been applied; these are represented and explained in the key below Figure 3.1.



	7.1	7.9	9	11	11.5	12	13	14
Reading accuracy	5.6	6	6	6.2	6.5	6.5	6.6	8.6
Reading comprehension age equivalent	5.6	6	6	6.1	6.2	6.2	6.3	11

Figure 3.1 Reading accuracy and comprehension age equivalent years: Wechsler Objective Reading Dimensions

Provision key:

Age in years-months	*Provision or intervention*
7-1	Michael is in a class of 32 children with 2 teachers. His parents request an assessment of his abilities when he is about to transfer to Junior School/ Key Stage 2.
7-9	Transfer to a resource-based teaching unit in a local junior school at age 7-9.
9-0	The local authority undertakes a statutory assessment of his needs and recommendations include the development of 'sight vocabulary and phonic skills' and 'a support for self-esteem'.
11-0	A red filter (transparent plastic overlay) is temporarily introduced over reading materials based on a suggestion that this aids reading by reducing glare and/or facilitating visual processing.
11-5	At a formal annual review of his needs Michael's teachers and parents note his mood swings: they report he is 'obstreperous and uncooperative' at home and school and 'appears very depressed'.
12-0	In secondary school Michael's teachers and parents are very concerned about his ability to access the curriculum and carry out the work required of him at this new phase of schooling.
13-2	The EP assessment occurs.
13-3	The EP supports teachers by introducing a behavioural objectives curriculum, outlined below.
14-6	Michael has made significant gains in reading accuracy and comprehension.

At age 13-3 it was clear that various interventions over a seven-year period had failed to make any substantial impact on his levels of reading and hence on Michael's ability to access whole areas of the curriculum.

Consequently, and with the agreement of everybody involved, a programme based on IP and on the use of behavioural objectives and knowledge of results in particular was developed. A structured set of resource materials was selected, which offered a graded sequence of phonic exercises aimed particularly at young people with specific literacy needs. A sequence of behavioural objectives was devised, with start and finish dates to be entered on a teacher record. The first objective, for example, read:

> Task 1: Recite after a model the first eight letters of the alphabet, A–H (for two days running)
> *Start date*:
> *Finish date*:

Behavioural objectives continued, ending with 'Task 10: Recite the five vowels'. The tasks were sequenced to include writing tasks as well as reciting. Michael's teachers were

encouraged to use teaching methods they found helpful in enabling Michael to achieve the objective. It was also explained to Michael that, although some of the early objectives would feel very elementary, they were part of a long sequence that would be approached ten at a time. At the beginning of each daily (or, where possible, twice daily) teaching session Michael was *always* shown the current ten pages of objectives, with those already achieved and those still to be worked upon being emphasised. No more than ten objectives were ever set in advance but, as the teaching progressed, the ever-growing set of those already mastered was always revisited at the beginning of each session.

Michael and his teachers responded positively and persevered with this system for 15 months, including later objectives on writing and spelling. After this period Michael was assessed on the same reading test and his impressive achievements are captured in Figure 3.1 above.

This case study illustrates that a 15-month period of teaching using task analysis was able to produce rates of reading improvement far in excess of the gains from following standard SEN procedures that involved small classes, expert help, and formal reviews (and red filters). This explicit attention to task-analysed small steps, to the fine grain of teaching and learning arrangements, and the motivational consequences of unambiguous feedback from success, enabled Michael to build his literacy skills, access the wider curriculum more easily, become more settled into his secondary school, subsequently achieve a number of GCSE passes, and eventually enrol for a full-time course in computing at a college of further education.

Attention should be paid to aspects of task analysis such as the 'step size' between objectives, the correct ordering of objectives, and the links with overall teaching goals (Ainscow & Tweddle, 1979). In Michael's case example, the task (or curriculum) analysis was achieved fairly easily by sequencing the objectives so that they corresponded closely with reading materials being used to support delayed learners in his school.

Critics of task analysis argue that, if spread across a pupil's whole curriculum, a behavioural objectives approach would deliver an extremely restricted and excessively dull educational diet. Many learning theorists, in contrast to task analysis approaches, are interested in the *dynamic* ways in which social interaction mediates learning (Slavin et al., 2009), from which viewpoint a task analysis approach could appear minimalist and even at times sterile. Advocates, on the other hand, reply that, as in Michael's case study above, a regular approach for a *small* part of each day could produce considerable and valuable gains in essential skills (Denoe et al., 2017).

Direct instruction

DI is a highly teacher-directed and prescribed approach to teaching first outlined by Bereiter and Engleman in their 1966 book *Teaching Disadvantaged Children in the Preschool*. From the outset DI has generated strong feelings in parts of the educational world. For some, it is seen as overly reductionist, turning learners into automata who must attend only to specific details of the mechanics of learning. Furthermore, DI appears to leave little room for the learner's own motivations (Kuhn, 2007), to their potential detriment. To counterbalance this, as for task analysis, arguments are made that highlight the way in which teaching a skill directly, concisely, and without

Table 3.1 An example of a portion of a 'teaching trial' for single word recognition

	Teacher	*Pupil*
Introduction	We are going to learn to read this list of words today. I'll go first then we'll say them together, and then you can have a go on your own	
Model	Ready. This word says *house*	
Lead	Let's say it together. Ready. This word says… *house*	*House*
Test	Now you try. This word says…	*House*
Correction after test (only if needed)	This word says 'house'. You say it	*House*

environmental distractions, offers the learner a robust and effective opportunity to learn what needs to be learned (Solity, 2020).

In DI approaches, particularly in respect of a struggling learner where the goal is to build core skills, a focused period of instruction is tightly organised and aims to maximise students' 'academic engaged time', even if this is to occur for only a few minutes each day. The teacher employs a pre-prepared script and a set of materials containing a task-analysed sequence of objectives. The teacher's delivery on a discrete task (e.g. see-to-say recognition of a set of phonemes) emphasises clarity and lack of ambiguity, building in rhythm, pacing, intonation, and pointing. The teaching technique always employs some form of a *model-lead-test* sequence, again seen by its critics as potentially robotic, whereas its advocates emphasise the security and high level of scaffolding provided for the learner and the inclusion of 'errorless learning'. An example extract is provided in Table 3.1.

The teacher adheres very closely to the script, avoiding extra comment and ensuring that a brisk pace and good flow are maintained. Within the approach, teachers' additional utterances, even when intended as helpful or reassuring, are seen as distractions from *academic engaged time* and interruptions to the learning. Each run through or 'trial' is completed quickly, and its outcome – either 'correct' or 'correct with correction' – recorded before the next trial is commenced. The correction option ensures 'errorless learning' in that the student always finishes with a correct response. Sequences of objectives move the learning from early core skills onto fluency building using such methods as PT (see below). Within reading, subsequent objectives could also address reading passages of prose, developing phonic skills, and the comprehension of passages.

Large-scale evaluation of direct instruction

During the 1960s, the US government undertook a huge initiative – the Headstart Project – that aimed to provide cognitive and affective enrichment to disadvantaged preschoolers in the inner cities. Despite some considerable successes, one disappointing finding was that the gains, the 'head start', made by these children during this preschool intervention, were not maintained through their first few years of formal schooling. Consequently, a second initiative, Project Follow Through, dubbed at the time the largest educational experiment ever, was funded over a nine-year period and aimed to compare the effects of a range of different educational interventions carried out

during the first three years of schooling (Carnine, 1979). Basic skills and cognitive skills were found to have improved more with DI than with more child-centred approaches. More surprisingly for its critics, there were more positive results on affective measures too. A prevalent feeling at the time was that DI might be able to encourage the 'rote learning' of very basic skills, but it would not be able to develop higher order cognitive skills or happier, more confident learners. These latter areas were seen as the province of a more child-centred ethos. This finding has been extended by studies that explore the variables influenced by learners under DI, including self-concept (see below).

The evidence for DI is now strong. Swanson (2000) examined the effects of DI in a large meta-analysis of studies. The major finding was that a combined programme of DI and strategy instruction (e.g. guidance to support students on how they are learning) yielded higher effect sizes (0.84) than DI (0.68) or strategy alone (0.72). The conclusion drawn was that a combined model of DI and strategy instruction can positively influence children with learning difficulties, with regression analysis showing several components to be particularly effective (e.g. sequencing, daily testing, segmentation, and synthesis). This was confirmed in a further meta-analysis by Stockard et al. (2018), who comment that the evidence for DI's positive effects is so robust that now comparative investigations of the effects of DI upon specific vulnerable populations, aiming to close attainments gaps, should occur. In terms of literacy, Treiman (2018) highlights evidence that reading instruction should draw upon DI principles, and these are now embedded in the National Curriculum and the systematic teaching of phonics.

The pitting of DI against other teaching approaches persists, and is part of the mainstream discussion regarding effective teaching approaches to promote achievement. Zhao (2017) suggests one approach to considering effectiveness is to also be mindful of side effects: and notes studies of DI that *seem* to deter creative thinking in the child. The answer may be that any curriculum needs to have a blend of approaches, as noted in Denoe et al.'s (2017) 'sweet spot' of a balance between DI and discovery-based learning. Arguably DI can support core skill *acquisition*, and in the *generalisation* phase, the learner should be helped to develop wider thinking and problem-solving skills involving meta-cognition, problem-solving, and cooperative learning work (Slavin, 2011). Interestingly, Stockard et al. (2018) give their view that whilst DI may seem in opposition to constructivist approaches to education, which lean toward more discursive exploratory approaches to teaching and learning, there is common ground between DI and constructivism, through the interpretation of context made by the learner: in DI the learner plays an active role, but within a prescribed context.

Mayer (2004) helpfully outlined ideas that seek to account for DI's contribution, through explaining a learner's processes when developing new knowledge. Noting *cognitive* rather than *behavioural* activity as central to successful learning, he identified the key events for the learner as: *receiving incoming information*; *organising it into a coherent structure*; and *integrating it with other organised knowledge* as needed. This model proposes 'incoming information' as the critical element, which DI supports, whereas in discovery learning the learner may not acquire key information or skills, or indeed may proceed with the wrong information at the very outset of a task or problem (Treiman, 2018). This modelling of the learning process helps to identify the *mechanisms* through which DI may promote its positive effects. In a meta-analysis, Wisniewski et al. (2020) highlight the importance of feedback in learning processes, and in particular note that feedback is more effective where its information load is high, containing information on both the task, and its

Table 3.2 Haring and Eaton's (1978) five stages of instruction and learning

Acquisition	Learners become able to perform a skill accurately for the first time
Fluency	Learners become able to perform the new skill fluently as well as accurately
Maintenance	Accuracy and fluency are maintained even in the absence of periods of direct teaching of the skill
Generalisation	Learners become able to apply the skill across different contexts
Adaptation	Learners are able to make novel adaptations to the skill in order to solve new problems

process, and potentially the leaner's self-regulation. The authors suggest this corroborates an earlier comment by Hattie and Timperley (2007) that feedback shapes the knowledge and learning of the learner, helping them to avoid erroneous associations in their learning.

Haring and Eaton's instructional hierarchy

In the hypothetical DI example above, we imagined a pupil who might be learning to read a set of common words 'by sight' (rather than, say, by phonic analysis). Some young learners, especially those with additional learning needs, may have difficulty in retaining their learning and may not be able to read those words on future days, leading either to unproductive repetition for the child, to a search for other teaching methods, or to the abandonment of this particular teaching objective. It is in these circumstances that Haring and Eaton's (1978) instructional hierarchy can prove a very useful explanatory framework.

Haring and Eaton (1978) proposed five stages of instruction and learning (see Table 3.2). Within this framework, the child who learns something one day and has forgotten it the next has only reached an *acquisition* stage for that skill (in our example, the reading of a list of words). Their learning will not be maintained unless an explicit strategy aimed at ensuring *fluency* is also devised. This is where PT comes in.

Precision teaching

PT was developed by Lindsley (1971) in the US as a method for improving learners' fluency, through daily assessments of progress and providing immediate feedback to both learners and teachers. PT allows for close structuring of the skills the learner is to work on, with each step in delivery being closely tailored to previous performance. In parts of the USA there is evidence of PT being adopted with some success (Gist & Bulla, 2020). In the UK a number of EPs embraced the approach early on (e.g. Raybould & Solity 1982), and PT was given further impetus by the British Psychological Society's 1999 working party report *Dyslexia, Literacy and Psychological Assessment*. Amongst the conclusions was the recommendation that *PT* (and single-subject experiments) offer 'a set of strategies for carrying out focused assessments of pupil performance over time and for recording progress in a way that facilitates judgements about accuracy and fluency of performance' (BPS, 1999, p. 55).

An important aspect of the approach is its brevity: brief structured teaching (of the teacher's choice) of around five minutes is followed by a one-minute 'probe', containing random presentation of the target items being learned, to assess progress towards success criteria. Vostanis et al.

(2020) note that PT contains all the quality indicators for successful teaching, and the key features of the method are captured by Kubina (2020) as:

- the pinpointing of specific targets
- the measurement of behaviours in a manner that involves precision
- the recording or graphing of those measures
- clear processes that allow for review of the data by the learner and instructor, and for adjustments, accordingly.

Focus Box 3.2 presents a case study example.

FOCUS BOX 3.2

Using precision teaching with Ayesha: A case example

A PT approach was used by a Trainee Educational Psychologist to support a young girl in Year 1, aged six years, Ayesha, with identified literacy needs. Assessment found a need for Ayesha to develop her fluency in reading high frequency words at sight, to complement her emerging phonological skills. Daily brief teaching interventions were followed by presentation of a one-minute timed 'probe sheet' containing the taught words repeated in randomised sequences. Ayesha's correct and incorrect responses were logged on a graph. An *aim rate* for accuracy appropriate to each child is set as part of the intervention, and fresh targets are added as each one is achieved.

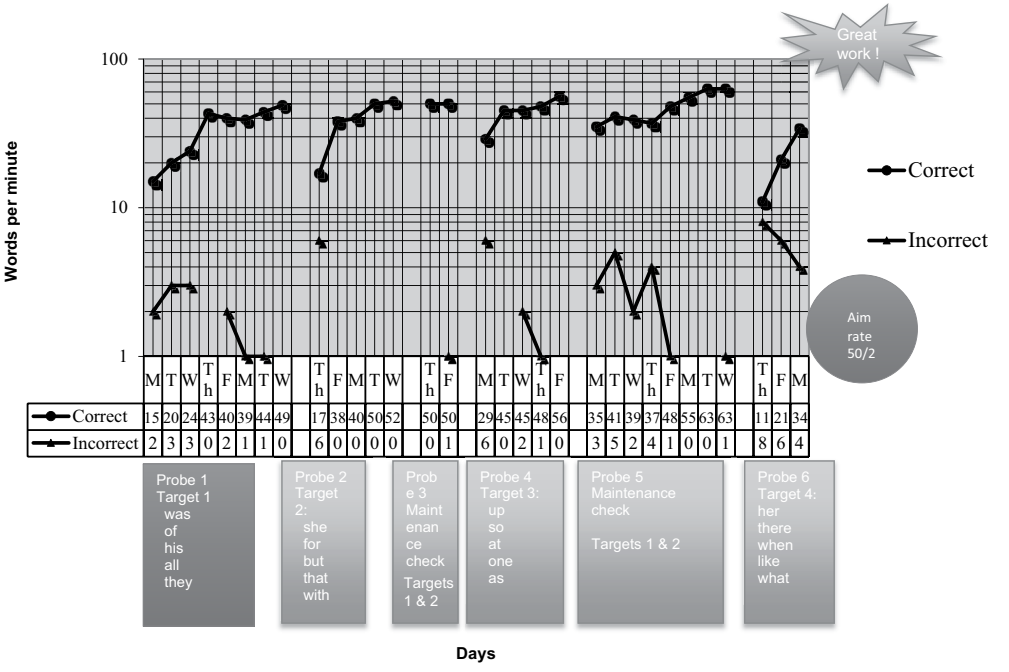
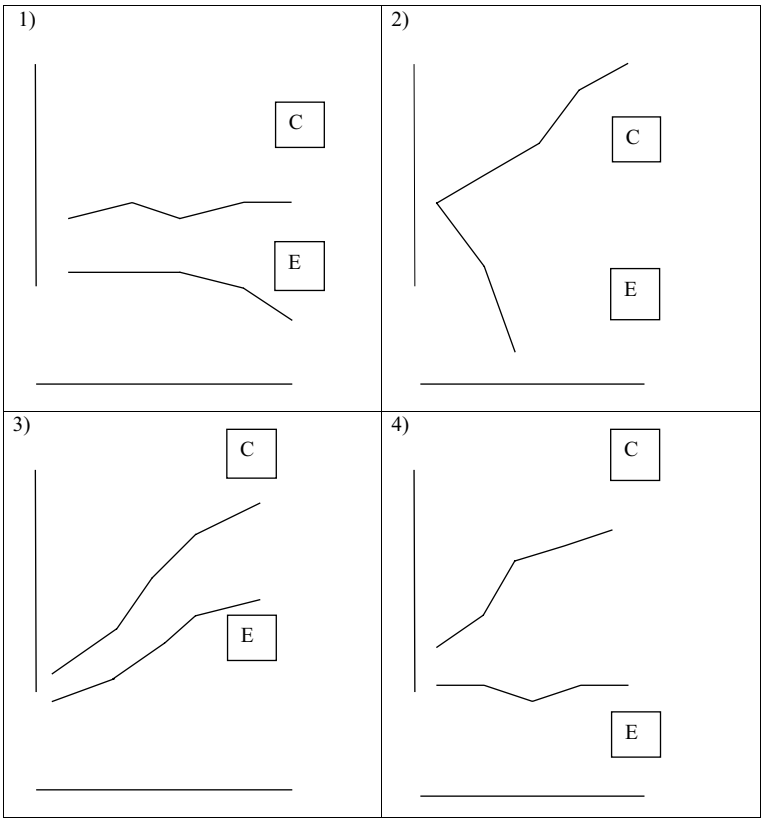


Figure 3.2 Ayesha's precision teaching chart



(C = correct; E = errors)

Figure 3.3 Fluency charts

The y-axes for frequency charts are represented as a semi-logarithmic rather than a linear scale so that similar *rates* of progress, for example, doubling a success rate from, say, 5 to 10 correct per minute has the same gradient as doubling the rate from 20 to 40 per minute – or any other doubling. The student's rate of learning is the key aspect that the process is trying to capture and support (Gist & Bulla, 2020). Ratio or 'celeration' charts, as they are known, which the student themselves should be involved in completing, play an important part, through allowing students to receive feedback from their performance. This is hypothesised in turn to support the learner's growth of task-related self-efficacy associated with PT (Roberts & Norwich 2010; Vostanis et al., 2020).

In the example on the previous page, Figure 3.2, Ayesha has undertaken three targets. On target one, for example, she has increased her success rate from 15 to 49 per minute whilst simultaneously reducing her errors. Haring and Eaton's hierarchy predicts that the learning will be retained, having achieved such fluency, allowing instruction for maintenance and generalisation to be considered, and for new skills to be built upon this foundation.

The growth of self-concept on the part of the learner is explored by Magliaro et al. (2005) who observe that the success orientation of DI, for example, is designed to feed not only the attainments of the individual, but the *sense* of academic capability. Outside of the discussion upon IP,

there is evidence of a reciprocal relationship between academic self-concept and achievement (Marsh & Craven, 2007). Research suggests the importance of support for learner self-concept, and a reciprocal relationship also between what are described as achievement emotions, and achievement outcomes (Putwain et al., 2021). This, again, gives us insight into the *mechanisms* of IP, and it is possible to see the potential circularity of success from learning that is likely to be generated through its approaches.

PT has continued to be recognised amongst EPs as potentially powerful (Downer, 2007), although there is perhaps less take-up in the wider UK education system (Gallagher, 2006). Accounts in the UK have investigated its value as a targeted intervention to teach specific skills for small numbers of underachieving children in various contexts, supporting a range of skills: for example, reading skills in secondary schools (Roberts & Norwich, 2010), maths for primary aged pupils (Gallagher, 2006), or literacy (Hughes et al., 2007). In Ireland, Griffin and Murtagh (2015) employed PT to support sight vocabulary and reading fluency, and Mannion and Griffin (2018) used it to support skills in 'second language acquisition' (in this case, Irish). Hayes et al. (2018), in an investigation of a web-based synthetic phonics PT programme in secondary schools, found positive effects on implementation of PT by teachers, and on decoding and sight-word reading in learners. Ramey et al. (2016) also identify PT as an 'emerging' approach with young people with learning delays or associated difficulties, for example, autism. These studies imply the broad utility of IP for young people identified as potentially vulnerable underachievers.

ACTIVITY BOX 3.1

Using fluency charts to make decisions about teaching

Look at the four fluency charts in Figure 3.3 and then attempt to match each of these with a statement from the list of possible interpretations. Then, try to make the further link between each of these and a related teaching implication.

Possible interpretations

a) The task is appropriate, learning is taking place and the error rate has been reduced.
b) Learning is taking place but the error rate is not reducing.
c) Learning is not taking place.
d) Learning is taking place but the error rate is increasing.

Teaching implications

w) Change the emphasis of the teaching to focus specifically on the items leading to errors.
x) Re-emphasise the need for accuracy and encourage the child to go more slowly for a while.
y) Move to the next task in the sequence if the pre-selected success criterion has been achieved.
z) Reduce the size of the task, change the teaching method, or increase incentives.

Larger-scale applications of instructional psychology

In the main, this chapter has considered IP interventions for individual pupils. However, the case has also been made for IP's contribution to all lower-attaining young people, by applying the IP principles of teaching, learning, and curriculum design across a whole school.

Solity et al. (2000), in a two-year study, followed children from reception age in six experimental and six comparison schools. The experimental school teachers were trained in instructional principles to teach their children using 'distributed practice', rather than massed practice, three times a day for 10–15 minutes. Distributed practice, spacing shorter teaching sessions across a day, supports retention of new material – where the time lag conditions are right (Son & Simon, 2012). Intervention schools also used a process known as interleaved learning, whereby learned items are reintroduced, ensuring that further exposures of material are offered, to support retention and minimise forgetting. Interleaved learning is held to enhance discriminant responding, that is, the capacity of the learner to distinguish similar skills during acquisition (Rohrer, 2012) hypothesised to be an important feature of securing developing knowledge. Interestingly, Rohrer (2015) suggests extending the overall instructional intervention period, since this produces benefits through the learner meeting repeated presentations of similar material. He also argued that post-tests taken at a greater temporal distance from the intervention capture greater learning.

Staff in Solity et al.'s (2000) intervention schools were also trained to support learners in generalising their learning, informed by IP. After two school years children in the experimental group outperformed the comparison school children on all measures of literacy – word reading, comprehension, letter sounds, synthesis, segmentation, and spelling. The researchers also found that their approach had made a significant impact on the learning outcomes of both lower- and higher-achieving pupils and concluded that there are 'alternative ways of making provision for lower achieving pupils than through the legislative and administrative approaches promoted within the field of special education' (Solity et al., 2000, p. 125).

In a further study arguing for the efficacy of whole-class instruction for early readers, Shapiro and Solity (2008) found an intervention focusing on the phonological skills of children using IP led to significant reading gains for all, but in particular the *lower* but not *lowest* achievers in a class group. Those who benefitted most appeared in fact to be those identified, statistically, as the 'under-achievers' in population studies. This study again illustrated the value of two important features of IP, namely, distributed practice and interleaved learning.

Ward et al. (2017) also report on a study implementing the features of IP at a wider level, supporting staff at a whole-class level, thereby also raising achievement for lower-attaining learners. The gains from the project were robust; for example, one class of six- and seven-year-old children made 18 months' progress in 8 months. Despite this, and despite staff perceiving value in the project, the authors remained frustrated by the absence of subsequent intended uptake, or change to classroom practice, in the face of their evidence, beyond those staff responsible for SEND. Their comments are reminiscent of Rowland and Francis' (2021) reflections, when considering how to optimise the effects of Pupil Premium funding. They argue that holistic, whole-school approaches are pivotal to raising achievement and closing the disadvantage gap.

Conclusion

We have seen that teaching approaches that derive from IP can help to overcome educational underachievement, through its pinpointing of learner progress, task analysis, scaffolding, and feedback. The implementation of such approaches has, in turn, brought into view a range of linked issues: the formal arrangements for addressing special educational needs, the relationship between learning and self-esteem, and the balance between instructional control and discovery-based learning. Given that IP can impinge on many educational concerns, it is perhaps not surprising that it has generated its supporters as well as critics, with strong debate often flaring up between these two camps. Ultimately, any evidence of long-term learning gains is the key measure that should guide practitioners.

Summary of the main issues addressed in this chapter

- Educational 'underachievement' has been conceptualised in varying ways, including the notion that some individuals do not reach their potential, and that some groups achieve at a lower level than others.
- The UK has been found to have a longer tail of underachievement than many other countries.
- EPs have a statutory role in contributing to the assessment of a minority of significantly low-achieving young people who are seen as having SEND. Some have argued that they can broaden that contribution by drawing on IP, addressing a far wider group of low achievers. IP under this argument is seen as a key to ensuring that all children progress.
- Carefully sequenced behavioural objectives can provide successful learning opportunities.
- When different teaching approaches have been compared in terms of their impact on the progress of low SES kindergarten children, there was some evidence that DI was the most effective approach in terms of basic skills, cognitive skills, and affective measures.
- A five-stage instructional hierarchy developed by Haring and Eaton, with stages of *acquisition*, *fluency*, *maintenance*, *generalisation*, and *adaptation*, has assisted intervention work focusing on helping children to retain new learning.
- PT approaches can be used to make daily assessments of learning, to improve learners' fluency level, and support effective intervention.
- Some EPs have supported larger-scale applications of IP in successful teaching interventions.

Key concepts and terms

Educational underachievement; instructional psychology (IP); learning environment; behavioural objectives; task analysis; direct instruction (DI); academic engaged time; errorless learning; model-lead-test; Project Follow Through; instructional hierarchy; precision teaching (PT).

Recommendations for further reading

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Books and book chapters

Frederickson, N., & Cline, T. (2015). *Special Educational Needs, Inclusion and Diversity: A Textbook*, 3rd edn. Open University Press.

Sample essay titles

1 Can instructional psychology help eradicate the long tail of educational underachievement?
2 Instructional psychology encourages teaching approaches that focus on dull rote learning and only the most basic of skills and knowledge. Discuss.
3 What are the key effective features of IP, in your view?
4 What are the arguments against DI approaches? Why then have some educational psychologists persisted in promoting these and other aspects of IP?

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4 Inclusion for children with special educational needs

How can psychology help?

Nathan Lambert and Norah Frederickson

Chapter summary

This chapter will examine some of the complexities and controversies surrounding the prevailing international policy of inclusion. Though inclusion in fact pertains to all students, the focus here will be upon the inclusion of children with special educational needs (SEN). Definitions of inclusion will be explored, the history of inclusive education will be outlined, and current practice will be described. Research into the efficacy of inclusion, typified by investigations comparing mainstream placements with segregated 'special' schooling, will be considered. Discussion will illustrate the range of methodological challenges encountered in research of this type and the need for more varied methodological approaches in future research. Further discussion will examine how psychological theory has been conscripted to support arguments on both sides of the inclusion debate and will consider the contribution that psychological theory has made, and could make, to this area of social policy and educational psychology practice.

Learning outcomes

When you have studied this chapter, you should be able to:

1. Critically evaluate the arguments that are made for and against inclusion and identify their socio-political or scientific bases.
2. Discuss the research evidence on the efficacy of inclusion, its methodological limitations and the methods that can be used to collate and appraise this evidence.
3. Describe the different strands of psychological theory that have contributed to research on the social outcomes of inclusion.
4. Describe the wider relevance of psychological theory to inclusive practice in education.

What is inclusion?

The broadest definition of inclusion is that it involves maximising the participation of *all* learners in mainstream community schools, regardless of ability, gender, language, ethnicity, economic status, social class, care status, religion, disability or sexual orientation. At the heart of inclusive

DOI: 10.4324/9780429322815-6

education is the development of policies, curricula, cultures and practices that ensure diverse learning needs can be met, whatever the origin or nature of those needs, in mainstream educational settings (UNESCO, 2009). Although it is clear from such a definition that inclusion in fact pertains to all students, the focus here – as in the inclusion literature itself – is on the inclusion of children with SEN.

The history of inclusion in education

The establishment of Thomas Braidwood's Academy for the Deaf in 1760 represented the beginning of more than two centuries of steady expansion for 'special schooling' across the UK that, by the early 1980s, saw almost 2 per cent of the UK school-age population – essentially, those whose development was considered in some way atypical – being taught in non-mainstream special schools, away from their typically developing peers. This policy of segregated provision, intended to enable and educate children previously thought to be 'uneducable', became the subject of significant debate from the 1960s onwards, however, notably within the movement for comprehensive schooling (Norwich, 2008) and within the context of the civil rights movement (Hodkinson, 2010). The debate reached a critical point in 1978 with the publication of the influential Warnock Report on educational provision for 'handicapped children and young people' (DES, 1978), which led to the adoption throughout UK education of a policy of *integration*. According to the 1981 Education Act, children with SEN were in future to be integrated in mainstream schools, as long as they could receive the educational provision they required, their parents were supportive of such a placement, their integration did not lead to the education of others being disrupted, and the arrangements were consistent with the efficient use of resources.

With nearly a decade of integration to reflect upon, the late 1980s and early 1990s saw further debate regarding the efficacy of integration. An important distinction emerged between integration (also referred to in the US as 'mainstreaming') and the notion of *inclusion*. Where integration had tended to be seen in terms of the pupils adapting, or else receiving additional support so as to be able to 'fit in' with existing mainstream education, those promoting inclusion placed greater emphasis on the need for schools to adapt, so as to be better placed to meet the needs of *all* pupils.

Essentially, with inclusion:

> It is not the child who is included but the school and the teaching which are inclusive. The special needs are therefore no longer those of the child, but those of the school, and thus go beyond the limits of integration.
>
> (Thomazet, 2009, p. 553)

As Lindsay (2007) has noted, this important conceptual distinction is not always clear in practice. Indeed, it is often difficult to judge just how inclusive a particular arrangement is, with many pupils who have been described as being included actually receiving their education through a combination of segregational, integrational and inclusive practice. As one way of accounting for this problem, Norwich (2008) has suggested considering inclusivity as a continuum, as set out in Figure 4.1.

Most separate:

- Full time residential provision
- Full time day special school
- Part time special – part time mainstream
- Full time special unit within mainstream school
- Part time special unit within mainstream school, part time ordinary class
- Full time ordinary class within mainstream school with some withdrawal and some in-class support
- Full time ordinary class within mainstream school with some in-class support
- Full time in ordinary class

Most included

Figure 4.1 Continuum of special education provision
Source: Norwich (2008). ©2008 Brahm Norwich journal compilation, ©2008 NASEN. Reproduced with permission

The current picture

Over the past 30 years, inclusion has been embraced by many countries as a key educational policy.

The Salamanca Statement, which was signed by the representatives of 92 countries, called on governments 'to adopt the principle of inclusive education, enrolling all children in regular schools unless there are compelling reasons for doing otherwise' (UNESCO, 1994, p. 8). 'Inclusion and participation', it was stated, 'are essential to human dignity and to the enjoyment and exercise of human rights' (UNESCO, 1994, p. 18).

In 2008 the Convention on the Rights of Persons with Disabilities was adopted by the United Nations General Assembly, with Article 24 (Education) of the Convention calling for an inclusive education system at all levels. The Committee on the Rights of Persons with Disabilities, which monitors the implementation of the Convention, later published further guidance on how Article 24 – and more specifically *inclusion* – should be understood and implemented, clarifying that:

> Inclusion involves a process of systemic reform embodying changes and modifications in content, teaching methods, approaches, structures and strategies in education to overcome barriers with a vision serving to provide all students of the relevant age range with an equitable and participatory learning experience and the environment that best corresponds to their requirements and preferences.
>
> Placing students with disabilities within mainstream classes without accompanying structural changes to, for example, organization, curriculum and teaching and learning strategies, does not constitute inclusion.
>
> (United Nations CRPD, 2016)

Many countries, including the US (Individuals with Disabilities Education Act, 1997) and the UK (DfEE, 2001), have followed such international declarations by developing their own national legislation in order to promote inclusive education for pupils who have SEN or disabilities. The UK Special Educational Needs and Disability Act of 2001, for instance, required that children who have significant additional needs (currently identified through an Education, Health and Care (EHC) Plan and previously through a Statement of Special Educational Needs) must be educated

in a mainstream school unless this would be incompatible with parental wishes or with the provision of efficient education for other children (DfEE, 2001, Section 324), a requirement that was repeated in the more recent Children and Families Act (2014).

The impact of such legislation on practice, however, is perhaps not as apparent as one might expect. Norwich (2008) identified a decrease in the percentage of students being taught in special schools from 1.87 per cent to 1.30 per cent in the period from 1983 to 2001, but also reported that the percentage of students in special provision plateaued between 2001 and 2008 at around the 1.2–1.3 per cent level (Norwich, 2008). Considering the data since 2008, Black and Norwich (2019) report a *rising* national trend between 2007 and 2017 – the first such rise in 30 years (Black et al., 2019) – and Black (2019) concludes that the proportion of children in special schools rose from a low of 1.12 per cent of the overall school population in 2005 to a high of 1.38 per cent in 2018.

Significantly, it has also been argued (e.g. Lloyd, 2008; Greenstein, 2013) that, despite all of the attention on inclusive education over recent decades, educational policy has generally failed to recognise or address 'the inherent injustice of an education system where the curriculum continues to be exclusive and to emphasise narrow academic content, and where the measurement of success and achievement is concerned with attaining a set of norm-related standards' (Lloyd, 2008, p. 234). Essentially, in the absence of significant changes to schools and schooling in general, practice that is often referred to as inclusion remains, in many cases, more akin to integration.

The political debate around inclusive education thus remains very much alive, with questions being raised over recent years regarding the ability of mainstream schools to meet the needs of pupils with SEN. It is notable, for instance, that in 2011 the UK Department for Education (DfE) published a Green Paper entitled *Support and Aspiration: A New Approach to Special Educational Needs*, in which it stated its intention to 'remove the bias towards inclusion' and to 'prevent the unnecessary closure of special schools' (DfE, 2011, p. 5).

The following extracts from the 2015 DfE Code of Practice on the identification and assessment of SEN, the document to which all relevant bodies must have regard when making decisions relating to the educational placement of children with SEN, usefully illustrate the complex picture of inclusive education today:

- 'High-quality teaching that is differentiated and personalised will meet the individual needs of the majority of children and young people. Some children and young people need educational provision that is additional to or different from this' (DfE, 2015, 1.24, p. 25).
- 'The majority of children and young people with SEN or disabilities will have their needs met within local mainstream early years settings, schools or colleges' (DfE, 2015, 9.1, p. 142).
- 'There may be a range of reasons why it may not always be possible to take reasonable steps to prevent a mainstream place from being incompatible with the efficient education of others – for example, where the child or young person's behaviour systematically, persistently or significantly threatens the safety and/or impedes the learning of others' (DfE, 2015, 9.93, p. 177).
- 'The child's parent or the young person has the right to request a particular school, college or other institution of the following type to be named in their EHC plan: maintained nursery school; maintained school and any form of academy or free school (mainstream or special); non-maintained special school' (DfE, 2015, 9.78, p. 172).

Inclusion and the educational psychologist

The issue of inclusion is understandably one that has a high profile in the work of educational psychologists. Much of the work is carried out at an individual-child level, in terms of consulting with parents and teachers, advising the local authority and supporting schools in developing skills and strategies to meet a broader range of needs. EHC Plans (formerly Statements of Special Educational Needs) are produced by means of a statutorily regulated, multi-agency assessment, to which an educational psychologist must contribute their advice. Educational psychologists are also involved with the development, research and evaluation of inclusive initiatives, where they may, for example, work to support the broader school community to change culture, improve systems or reconsider curricula (e.g. Hick, 2005; Frederickson et al., 2007). (For further consideration of how psychology can usefully contribute to inclusive education, see Activity Box 4.2.)

Should children with SEN be educated in mainstream schools?

Jacob's teachers in Activity Box 4.1 have some doubts that he should be educated in a mainstream school, but his parents, and Jacob himself, are committed to a mainstream placement. Whereas his teachers focus on actual or possible outcomes (academic progress, language and communication development), his parents focus on aspirational outcomes, such as being part of his family and local community. Fundamental differences in view are also apparent in the debates between researchers. Lindsay (2003) provides a review of one key aspect of such debates, considering, on the one hand, the view that the efficacy of inclusive education in achieving improved outcomes for children with SEN is a justifiable area for scientific enquiry, while exploring on the other hand the position that the adoption of inclusion as a public policy is properly regarded as a matter of rights and morality, to which evaluations of efficacy are largely irrelevant. In fact, there are problems with both the 'rights' position and with efficacy research.

ACTIVITY BOX 4.1

Case study: Jacob

Read the following case study and decide, on the basis of the debate highlighted above, how inclusive Jacob's educational provision is?

Jacob is a nine-year-old boy who has Down's Syndrome. He has attended his local primary school since the age of four. He spent two years in the reception class, which means he is now in Year 4, one year behind his chronological peers. His parents are committed to him receiving his education in his local mainstream school, which his brother also attends.

Jacob's language development is delayed, and he currently employs Makaton signing to support his communication. He is able to read basic text and write simple sentences. Each morning, for literacy and numeracy lessons, he joins the whole class for the introductory aspect of the lesson and is then withdrawn to work in a quiet room with one other child, with close support from a learning support assistant (LSA). For afternoon sessions, he works in

the classroom with LSA support. He has his own learning programmes in everything except project work and PE/games and generally completes different work from the rest of the class.

Jacob has developed a close friendship with one other child, who also has significant SEN, and considers himself friends with a number of other children in the class, joining in with games at playtimes and lunchtimes. He favours games of physical play and sometimes becomes frustrated when others don't want to play his favourite games. His teachers have reported that, over the past few years, as playground interactions have become less physical and more verbal in nature, Jacob's social circle appears to have narrowed.

Jacob has always said he enjoys school and remains keen to attend. More recently, however, he has made a number of comments indicating that he feels he is 'stupid' and has begun to display behaviour that suggests he may be frustrated by some of the challenges of school work.

Jacob's teachers fear that he will not be able to make a successful transition to secondary school. In particular, they fear that the increasingly challenging work will make it even more difficult for Jacob to engage meaningfully in group learning experiences, and that his need for an individualised curriculum means that most of his learning will eventually take place outside the classroom. They are concerned that his language and communication skills are not developing as quickly as they would like. They feel that his needs might be best met through placement in a school for children with moderate learning difficulties.

Jacob's parents feel that the challenges of mainstream education have increased over the years and will increase further still in secondary school. They are keen, however, that he remains in his current placement at least until secondary transfer. Jacob has indicated that he wishes to remain in his current class, with his friends.

Farrell (2000) illustrates some of the dilemmas that may occur when different sets of rights conflict:

> A parent may feel that their child has a right to be educated in a mainstream school but an objective assessment of the child might indicate that his/her rights to a good education could only be met in a special school. Whose rights should take preference in cases like this, the parents' or the child's? In addition, what if placing a child with SEN in a mainstream school seriously disrupts the education of the other pupils? Surely they have a right to a good education as well?
>
> (Farrell, 2000, p. 155)

Strong advocates of the 'rights' position also recognise such dilemmas:

> There are also situations in which some choose exclusion – the deaf community comes to mind immediately. Few would argue against their right to choose to be educated together in a school other than their local neighborhood one, despite concerns that segregation may serve to perpetuate the prejudices that make separate schooling desirable in the first place. To argue categorically against the right to make such choices can therefore be seen as an arrogant denial of another's fundamental right to self-determination.
>
> (Gallagher, 2001, p. 638)

The problems with research in this area, and in particular empirical efficacy research, are also substantial and well documented (Madden & Slavin, 1983; Siegel, 1996; Lindsay, 2007) (see Chapter 2 for further discussion of the many challenges presented by 'real world research'). Particular challenges include:

- *Difficulties specifying the independent variable*: The inclusivity of placements is often difficult to ascertain and can certainly vary greatly. Indeed, some practices that are evaluated as inclusion are, in many cases, more akin to integration.
- *Poor matching of participants across groups*: There are often systematic differences between 'included' and 'special school' groups, such that those in the latter group typically have a range of additional problems, rendering group-based experimental design studies particularly challenging.
- *Different objectives across settings*: There are often differences between the curriculum being followed in various settings, typically with greater emphasis being placed on academic subjects in mainstream settings and on self-help and social education in special schools and classes.
- *Different resources across settings*: There are often also differences between the qualifications and experience of teachers in mainstream and special placements, and between the resources available within those settings.

Research investigating outcomes for children with SEN

Methodological problems notwithstanding, most reviews of efficacy research over the last three decades have reached fairly similar conclusions. Early narrative reviews highlighted the inconclusive nature of the evidence but tended to come down marginally in favour of integration/inclusion, with some qualifications. Madden and Slavin (1983), for example, concluded that there appeared to be some advantage to integrated placements in relation to both academic and social progress, but only if a suitable individualised or differentiated educational programme was offered.

During the 1980s and 1990s, a number of meta-analyses were also conducted. These more structured approaches aimed to reduce the possibility of reviewer bias by using statistical summary techniques to explore the numerical results of the reviewed studies. Baker et al. (1994–1995) summarised three such studies (see Table 4.1). Effect sizes were calculated to provide a measure of the strength of the findings that was relatively independent of different study sample sizes. The positive effect sizes reported indicated a small-to-moderate benefit of inclusion for both academic and social outcomes.

Table 4.1 Results of meta-analyses on effects of inclusive placement

Author(s)	*Carlberg and Kavale*	*Wang and Baker*	*Baker*
Year published	1980	1985–6	1994
Time period	Pre-1980	1975–84	1983–92
Number of studies	50	11	13
Academic effect size	0.15	0.44	0.08
Social effect size	0.11	0.11	0.28

Source: Baker et al. (1994). Reproduced with permission

Odom et al. (2004) conducted a systematic review of articles in peer-reviewed journals and data-based chapters, published between 1990 and 2002, on 3–5-year-olds with disabilities and their typically developing peers in inclusive classroom-based settings. The results were reported using a theoretically based structure capable of accommodating both scientific and social policy issues, Bronfenbrenner's bioecological model (Bronfenbrenner & Morris, 2006). The nested systems within which children are thought to develop were mapped onto particular areas of the research literature as follows:

- biosystem: child characteristics
- microsystem: classroom practices
- mesosystem: interactions among participants (family members, multi-professional teams)
- exosystem: social policy
- macrosystem: cultural and societal values
- chronosystem: changes in variables over time.

Conclusions from research considering child characteristics (biosystem) and classroom practices (microsystem) were similar to those drawn through the meta-analyses described above. Overall, a range of positive developmental and behavioural outcomes were identified for children in inclusive settings, although children with SEN were not as socially integrated as their typically developing peers.

Subsequent reviews by Lindsay (2007) and Lindsay et al. (2020) have confirmed the marginally positive findings of earlier research. Lindsay et al. (2020) acknowledge the challenges and significant limitations of such research, and conclude that in the absence of clear findings, the main case for inclusive education is currently based on children's rights.

Research focusing on social and affective outcomes

Whilst acknowledging the limitations of inclusion efficacy research, it is worth noting that positive findings have also emerged from a number of reviews that have focused specifically on the social and affective outcomes of inclusion. Interest in these areas has been particularly strong because of predictions, which claimed a basis in psychological theory, that inclusion could be expected to increase social interaction, peer acceptance and positive social behaviour of children with SEN. Initial findings failed to support these expectations and showed that children with SEN were less socially accepted and more rejected by their mainstream classmates. This led some authors to pose the question, 'Is integrating the handicapped psychologically defensible?' (Stobart, 1986), and others to express concern that placement of children with SEN in mainstream schools without appropriate preparation constituted 'misguided mainstreaming' (Gresham, 1982).

Gresham and MacMillan (1997) conducted a review of the social competence and affective functioning of children with high-incidence SEN (e.g. 'moderate learning difficulties', behavioural difficulties, attention deficit hyperactivity disorder (ADHD) and dyslexia) and concluded that the research on the social position of children with moderate SEN was very clear. Compared with their mainstream classmates, they were more poorly accepted, more often rejected and had lower levels of social skills and higher levels of problem behaviours. Findings in the affective area of self-concepts were, however, less clear. Some studies reported lower self-concepts for children with SEN, whereas some reported higher self-concepts, and still others failed to find any differences between pupils with SEN and their peers. Drawing on social comparison theory, it was found that

much of the research could be interpreted by considering the social group with which children were comparing themselves in different situations. A child's self-concept was usually higher when it was assessed in a special education classroom than when it was assessed in a mainstream classroom, where the achievement of the other children was higher.

Nowicki and Sandieson (2002) also reported some clear findings regarding children's attitudes towards those with intellectual and physical difficulties, following a meta-analysis of articles published between 1990 and 2000. Overall, children without disabilities were preferred to children with either physical or intellectual disabilities; however, inclusive classrooms had a medium-sized effect on facilitating positive attitudes. No consistent effect of type of disability was identified, although there were indications that context–disability interactions might have been operating to shape attitudes. For example, Tripp et al. (1995) found that attitudes towards hypothetical children with physical difficulties, assessed by questionnaire during a PE class, were more favourable in non-inclusive classes. By contrast, attitudes to children with learning difficulties did not differ between inclusive and non-inclusive PE classes. In apparent contradiction to contact theory, discussed below, the experience of contact with children who have physical difficulties in these PE lessons appeared to have had a negative impact.

More recently, focusing on four key aspects of social participation (friendships/relationships, contacts/interactions, students' social self-perception and acceptance by classmates), Koster et al. (2010) reported that, compared with students without SEN, students with SEN appeared less well accepted and had significantly fewer friends, fewer interactions with classmates and more interactions with the teacher. They reported, however, that the social self-perception of both groups of students was not significantly different, and that 'a comparison between students with different categories of disability regarding the four themes of social participation revealed no significant differences' (Koster et al., 2010, p. 59).

Research investigating outcomes *for the classmates* of children with SEN

The effect of the inclusion of children with SEN on classmates without SEN has also been an important focus for enquiry over recent years, and research in this area similarly suggests inclusion to have a 'neutral to positive' effect.

Reporting on research utilising the National Pupil Database, Dyson et al. (2004) reported that there was no real evidence of a relationship between the inclusivity of a local authority and overall pupil attainment across that local authority, or between the inclusivity of a school and overall pupil attainment within that school.

In a subsequent review of 26 (predominantly North American) studies considering the effect of increasingly inclusive classrooms on children without SEN, Kalambouka et al. (2005) stated that 23 per cent of reported outcomes indicated positive academic and social outcomes for children without SEN, 53 per cent indicated a neutral impact, 10 per cent indicated a mixed impact, and only 15 per cent indicated a negative impact – outcomes being more positive on academic as opposed to social measures.

Ruijs and Peetsma (2009) reviewed literature considering the effects of inclusion on students with and without SEN, in terms of both cognitive development and socio-emotional effects. Again, they reported neutral-to-positive effects of inclusive education.

Szumski et al. (2017) reported on a meta-analysis of 47 studies investigating the effectiveness of inclusive education for students without SEN, and provided further evidence for the efficacy of

inclusive practices, demonstrating a weak positive effect of inclusive education on non-SEN peers' academic achievement.

Similar findings were also reported in Ruijs (2017) – which sought to investigate the effects of inclusive education on the academic achievement of 'regular students' within the Dutch educational context. Results showed that the presence of children with SEN had no apparent impact on the academic achievement of children without SEN in the same class, and that there were no apparent differential effects for the inclusion of students with different types of SEN (e.g. visual or behavioural problems). Interestingly, Ruijs (2017) draws attention to their research focusing on children with 'diagnosed' SEN, suggesting that these students generally have more severe problems but also that they are generally in receipt of additional resources and support. They report that inclusive education is highly funded in the Netherlands and hypothesise that this high level of additional funding might be sufficient to avoid negative effects of inclusion on the achievement of regular students.

Research investigating teacher attitudes

The importance of teachers' attitudes to the success of inclusion has been increasingly recognised over recent years (e.g. Avramidis and Norwich, 2002; Blecker and Boakes, 2010) and has become another area of interest for researchers. Humphrey and Symes (2013), for example, surveyed 53 teachers across 11 secondary schools in the north-west of England, ascertaining their perspectives on the inclusion of children with autistic spectrum disorder (ASD) in mainstream secondary schools. They reported finding generally positive attitudes, with senior managers and SEN coordinators (teachers with a special responsibility for, and generally greater experience of, working with children with SEN) reporting greater self-efficacy in coping with challenging ASD-related behaviour than other school staff. Larger-scale studies, however, and particularly those wider in scope, have reported less positive findings. De Boer et al. (2011, p. 331), in a review of 26 international studies investigating primary-school teachers' attitudes to inclusion, reported that 'the majority of teachers hold neutral or negative attitudes towards the inclusion of pupils with special needs in regular primary education' and that 'no studies reported clear positive results'. Teachers tended to report lacking the competence and confidence to teach children with SEN. Interestingly, the less teaching experience the teachers had, the more positive their view of inclusion tended to be, though the more experience they had of teaching children with SEN specifically, the more positive their view of inclusion. Teachers were reportedly most negative regarding the inclusion of children with learning and behavioural difficulties, and were most positive regarding the inclusion of children with physical and sensory difficulties (De Boer et al., 2011).

As a consequence of such findings, there is now a growing argument for teacher attitudes towards inclusion to be addressed more directly through initial teacher training programmes (e.g. Florian et al., 2010) and increasing examples of developing practice in this field. Killoran et al. (2013), for example, reported a positive change in the attitudes of trainee teachers towards inclusion as a result of a pre-service inclusive education course, and Kurniawati et al. (2017) reported a similarly positive impact for an inclusion-related in-service teacher training programme on both teachers' attitudes and their knowledge about SEN and related teaching strategies.

Interestingly, it has also been argued that teacher attitudes, and more specifically the teacher–pupil relationship, can have a significant impact on the social acceptance of children with SEN

among their peers (Humphrey & Symes, 2011). Robertson et al. (2003) reported that the more negative a teacher's relationship with a child with SEN, the less likely it is that the child will be socially accepted by their peers.

How can psychological theory contribute?

It appears, as Lindsay (2007) argues, that more detailed consideration of the contribution of psychological theory would be of value in developing optimal educational experiences for children with SEN. Indeed, psychological theory arguably has a particularly important part to play in the development of optimal inclusive cultures and environments wherein children and young people will be genuinely socially included. In this section, we will examine four psychological theories that have been applied to understanding and changing children's attitudes and behaviour towards peers who have SEN:

- theory of planned behaviour
- contact theory
- labelling/attribution theory
- social exchange theory.

Theory of planned behaviour and contact theory

According to the theory of planned behaviour (Ajzen, 1991), there are three major influences on behaviour, such as positive interaction with classmates with SEN (see Figure 4.2): one's attitude toward the behaviour (one's own positive or negative view of the behaviour), the subjective norm (one's perception of the views of other significant people, e.g. parents, teachers, friends) and perceived behavioural control (self-efficacy in relation to the behaviour). These three factors combine to account for the strength of the intention to perform the behaviour in question, which is the major determinant of whether the behaviour is actually carried out. In addition, actual behavioural control may directly impact on ability to carry out the behaviour. To the extent that children are aware of the barriers to carrying out the behaviour, the measure of perceived behavioural control can serve as a proxy for actual control, and this is represented by the dotted line in Figure 4.2.

For example, a child may have difficulty carrying out their intention to interact with a classmate with SEN because of organisational arrangements in the classroom, such as teacher-determined groupings. This theory suggests that both attitudes towards classmates with SEN and the balance of environmental facilitators and barriers will be important determinants of behaviour towards children with SEN, and that intervention efforts are likely to need to address both aspects.

A small number of studies have used the theory of planned behaviour to investigate the attitudes and behaviour of children towards peers with SEN in mainstream schools. Consistent with the theory, Roberts and Lindsell (1997) found that 8–12-year-old children's attitudes towards peers with physical disabilities strongly predicted their intentions to interact positively with them. Additionally, children's attitudes correlated significantly with those of their teachers and mothers (the subjective norm).

Roberts and Smith (1999) found that children's attitudes towards peers with physical disabilities and their perceived behavioural control were significant predictors of their behavioural

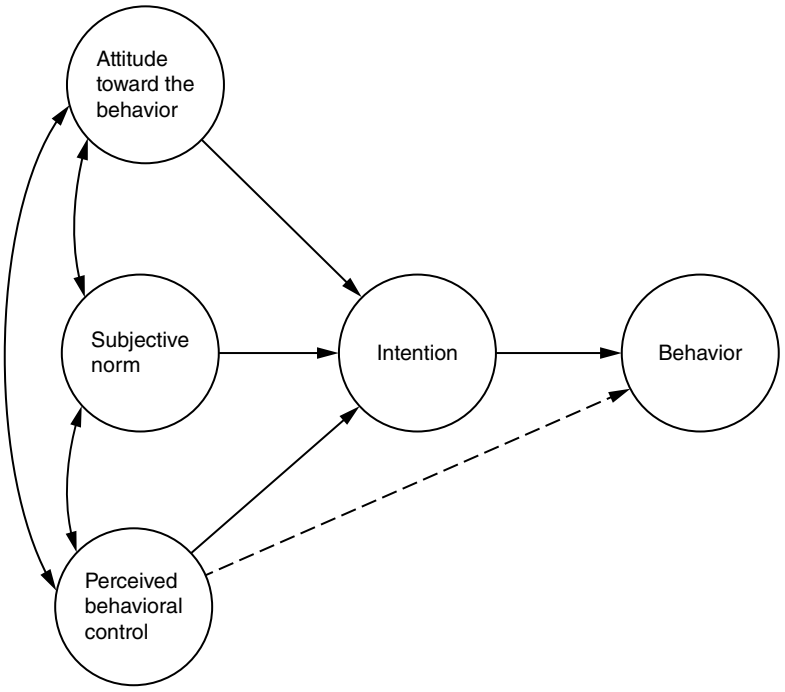

Figure 4.2 Theory of planned behaviour
Source: Ajzen (1991). Reprinted with permission of Elsevier

intentions to interact with and befriend such peers. In addition, intentions predicted the amount of time children reported spending with their classmates with physical disabilities in the classroom and playground.

de Boer et al. (2014) investigated an intervention that sought to influence attitudes of 'kindergarten' and 'elementary' aged children towards peers with intellectual, physical and severe physical and intellectual disabilities. The intervention consisted of a three-week project comprising six lessons about disabilities. Attitudes towards children with peers with SEN were investigated prior to, shortly after and again one year following the intervention, analysis demonstrating positive, immediate effects on attitudes of the younger 'kindergarten' aged children, but only limited effects on the attitudes of the older 'elementary' aged children.

Contact theory was identified by Stobart (1986) as one of the theories that, at an early stage, had been 'conscripted to handle the psychological implications of the policy of inclusion' (Stobart, 1986, p. 1). The original theory holds that interaction between groups can change attitudes of in-group members (e.g. pupils who do not have disabilities) towards out-group members (e.g. pupils who have disabilities) and can reduce stereotyping and prejudice if four conditions are met: equal status between the groups in the contact situation, common goals, no competition between groups, and authority's sanction of the contact (Allport, 1954). It is not difficult to see that these conditions are unlikely to have been met in the PE classes in the study by Tripp et al. (1995) described earlier.

Both contact theory and the theory of planned behaviour were used by Marom et al. (2007) in designing an intervention for children aged 10–12 years intended to improve disability-related attitudes and self-efficacy for interacting with children with disabilities. The intervention was a

direct-contact programme between students with disabilities who attended special schools and students without disabilities who attended mainstream schools. A control group of students who were not subject to the intervention was also recruited. The intervention had two phases: (1) children in the intervention group received specific information from special-school staff about the disabilities of the students they were going to meet, together with general information about people with disabilities; (2) children met and interacted directly with pupils with disabilities via joint, non-competitive activities such as music, art and social games. The meetings were held weekly to fortnightly throughout one school year. Improvements in attitudes and specific self-efficacy were found for the intervention, but not the control group.

A number of other studies that have drawn on contact theory have also reported positive findings. Maras and Brown (1996), for example, reported that children from a mainstream primary school who were involved in an integration programme with children from a school for children with severe learning disabilities (SLD) showed more positive social orientation towards the pupils with SLD over time, whereas the control group showed little change. However, there are also some less positive findings. Maras and Brown (2000) did not find attitudes to pupils with SEN to be significantly more positive in schools where various kinds of integration were occurring than in control schools that did not have integrated provision. The authors raise questions about the extent to which the contact in some of these schools met Allport's (1954) conditions for success, given large class sizes and limited use by teachers of cooperative learning activities. Nonetheless, this study set out to investigate generalisation of effects from contact with one or more members of an out group to the whole group. Two contrasting models were tested:

1 The *decategorisation model* (Brewer & Miller, 1984) holds that generalisation will be facilitated by a focus on enabling in-group members to get to know out-group members as individuals and minimising the salience of category distinctions.
2 The *'intergroup' contact model* (Hewstone & Brown, 1986) holds that generalisation will be facilitated by a focus on maintaining the salience of 'in-group' and 'out-group' boundaries and emphasising the typicality of the 'out-group' members met, so that attitudes will readily transfer to those not met.

Maras and Brown (2000) selected schools operating integration approaches that related to the two models of contact:

1 where children with SEN were not clearly identified by the schools to their mainstream peers as being members of a wider group
2 where children with SEN were clearly identified by the schools as members of a group of similar others who were taught separately for all or part of the time. In addition, mainstream children were given information about the children with SEN and how to interact with them.

Children in the intergroup-contact-model schools were found to have more sharply differentiated attitudes across groups and relatively less positive attitudes to children with than without SEN. The hypothesis that the intergroup contact model would facilitate generalisation, however, received support from the finding of correlations between sociometric preferences for known and unknown peers with SEN that were stronger in the categorised than in the decategorised schools.

The intergroup contact model also proved more effective than the decategorisation model in an 'extended contact', as opposed to an actual contact intervention (Cameron & Rutland, 2006). The

extended contact effect, or 'indirect cross friendship hypothesis', suggests that vicarious experiences of friendship – for example, *knowledge* of in-group members being friends with out-group members – might be effective in reducing prejudice. The intervention was designed for 5–10-year-olds in British primary schools. Once a week, for six weeks, stories were read about friendships between non-disabled and disabled children and discussed in small groups. In some stories, the protagonist's disability-category membership was de-emphasised, and their individual attributes were highlighted (decategorisation model); in other stories, category membership was emphasised, and the child's typicality was highlighted (intergroup contact model). In this study, intended behaviour showed positive change in both conditions, and attitudes also showed change in the intergroup condition.

Cameron et al. (2011) have subsequently taken the idea of 'extended contact' one step further, investigating the effects of 'imagined contact' – the 'mental simulation of social interaction with a member or members of an outgroup category' (Crisp et al., 2009, p. 8). It was hypothesised that a child imagining themselves interacting positively with an out-group member would activate feelings similar to those experienced in real life intergroup interactions, and that the effects of such imagined contact might, therefore, be similar to those of 'direct' or 'extended' contact. The 'imagined contact' in the study of Cameron et al. (2011) involved children (aged 5–10 years) being given a picture of a park setting, pictures of park-related objects and photographs of an in-group (non-disabled) child and an out-group (disabled) child. They were asked to imagine themselves in the place of the in-group (non-disabled) child depicted in the photograph and to spend three minutes using the photographs and pictures to help them imagine that they were in the park having fun, playing with a disabled friend. Compared with a control group, the children who had engaged in imagined contact subsequently showed reduced intergroup bias in their general attitude and in their ratings of warmth and competence. For the youngest of the children (5–6 years old), imagined contact also led to more positive intended friendship behaviour towards disabled children, though this wasn't apparent in older children (7–10 years), suggesting that imagined contact might be of most benefit to younger children, possibly as they tend to have less out-group experience.

Drawing on aspects of both the theory of planned behaviour and contact theory, Ginevra et al. (2021) investigated the effectiveness of a *cognitive* intervention providing information to students about peers with SEN (specifically peers with sensory disability, intellectual disability and behavioural difficulties), a *behavioural* intervention using imagined contact with peers with these disabilities, and an intervention combining information with imagined contact. Measures of attitudes, stereotypes, and feelings toward and intention to engage in contact with peers with such difficulties were administered, and it was reported that the combined cognitive and behavioural intervention improved all outcome variables.

The implications of such findings for practice are significant, with extended and imagined contact having useful advantages over direct contact. For example, extended and imagined contact might avoid negative affect, such as any anxiety elicited by direct contact, and could be particularly useful in preparation for direct contact prior to the arrival of a child with SEN in a particular mainstream class. Extended and imagined contact might also be especially useful where there is very little opportunity for direct contact, Cameron et al. (2011) suggesting that this is particularly advantageous, as it is in low-diversity contexts that intergroup bias is most likely to form and go unchallenged.

Labelling and attribution theory

The implications of recent research on the contact hypothesis would seem to be that more positive attitudes towards children who have SEN can be fostered if their 'special' category membership is clearly apparent to other children. This appears contradictory to the critiques of labelling that played an important role in advocating integration. Dunn argued that labels such as 'mentally retarded', in common use then, served as a 'destructive, self-fulfilling prophecy' (Dunn, 1968, p. 8); however, even research on labelling has consistently shown that peer-group attitudes are more influenced by a child's behaviour than by a categorical label. For example, videotapes of children engaging in positive or negative behaviours were shown to 8–12-year-old viewers, half of whom were told that the child was in a 'special class for the retarded' (Van Bourgondien, 1987). The child's social behaviours, but not the label, had a significant effect on the viewers' attitudes towards them.

More recently, the attitudes and behavioural intentions of 11–12-year-old children towards hypothetical peers described as having ADHD were assessed through response to vignettes (Law et al., 2007). Attitudes towards the characters in the vignettes were found to be mainly negative, and there was a significant relationship between attitudes and willingness to engage in social, academic and physical activities, suggesting that the behaviour of children with ADHD could lead to substantial exclusion by classmates. Diagnostic/psychiatric labels, however, had no additional influence upon attitudes or behavioural intentions. There is some evidence that a categorical label may sometimes have a protective effect, in terms of helping to ameliorate negative attitudes held by mainstream peers towards children with SEN who exhibit poor social behaviour. Bak and Siperstein (1986), for example, reported on a study in which 9–12-year-old children viewed a video of a child reading. Conditions varied in terms of whether the child was labelled 'mentally retarded' and whether they were depicted as socially withdrawn or aggressive. Assessment of the viewers' attitudes suggested that the label had a protective effect, in that attitudes were less negative with the label when the child was withdrawn; however, this did not hold when the behaviour exhibited was aggressive, when only a weak effect was apparent.

Attribution theory (Weiner, 1985) has proved useful in examining the relationship between perceived deviance and negative peer reactions. A key concept is perception of responsibility. A negative or an unexpected event triggers attributional processes in a search for explanation. Someone who is perceived to be responsible (for example, someone who fails an exam because they don't bother studying) is likely to elicit anger from other people, whereas a person who is not held responsible (someone who fails an exam because they have been ill) is likely to evoke sympathy. Juvonen (1991) suggested that reactions to 'deviant' or different individuals are amenable to attributional analyses, as encounters with such individuals may be regarded as negative or non-normal events that elicit a search for explanation.

Sigelman and Begley (1987) investigated links between the personal controllability of problems and peers' evaluations of blame among 5–6-year-old and 8–9-year-old children. They were told about peers who were either in a wheelchair, obese, learning disabled or aggressive and were either given no causal information or given information about the cause (controllable or uncontrollable) of each problem. Children in both age groups were responsive to the causal information provided and assigned blame in proportion to ascribed responsibility. When causal information was lacking, the children tended to hold all but the child in the wheelchair responsible, although, with age, increasing emphasis was placed on external causes.

The idea that children spontaneously identify 'deviance' among peers and attribute responsibility in ways that lead to particular affective reactions and accepting or rejecting behaviour was investigated by Juvonen (1991). Twelve-year-olds were asked to identify classmates they considered different to themselves and describe how they were different. They also completed a sociometric measure assessing peer acceptance and rejection. Six categories of deviance were identified: rule breaking (including aggression), social image (including bragging), activity level, low achievement, social withdrawal and physical condition. The more children perceived a classmate as different, the more likely they were to reject that classmate. Juvonen (1991) also investigated mediating processes, both in judgements of hypothetical children and judgements of actual classmates. In both cases, perceptions of responsibility for the deviance predicted interpersonal affect (anger and sympathy) and how liked or disliked the 'deviant' child was. These, in turn, predicted social consequences, such as rejection and social support.

Social exchange theory

We have seen from research on attribution theory that non-normative behaviour may receive a more supportive response from classmates where the perpetrator is identified as having SEN or other 'non-blameworthy' difficulties. Comparable findings have been obtained from research on social exchange in children's interpersonal relationships. Social exchange theory (Thibaut & Kelley, 1959; Kelley & Thibaut, 1978) holds that desire for affiliation with others relates to the sum of the perceived costs and benefits of interacting with them, set against some minimum level of expectation – the comparison level. The comparison level may be different for children who have SEN.

A number of studies have found that different behavioural norms are associated with peer-group acceptance and rejection for children who have SEN to those for their mainstream school classmates (Nabuzoka & Smith, 1993; Frederickson & Furnham, 2004). The majority of children who were rejected by classmates scored high on costly social behaviours (e.g. aggression) and low on beneficial social behaviours (e.g. cooperation) (Newcomb et al., 1993). The opposite pattern of scores – high on beneficial and low on costly behaviours – was found for well-accepted children. By contrast, children with SEN who were rejected did not show a symmetrical pattern: they had low scores on beneficial behaviours, but did not have high scores on costly behaviours (Frederickson & Furnham, 1998). Asymmetry was also apparent when high acceptance was differentiated from average acceptance. For children with SEN, beneficial behaviours were not characteristic of good peer acceptance, only low levels of costly behaviours.

These findings can be considered in terms of the distinction drawn between *exchange relationships* and *communal relationships* (Clark & Mills, 1979, 1993). The symmetrical behavioural assessments received from classmates by normally developing children are consistent with the application of exchange-relationship norms. The asymmetrical assessments received by children with SEN suggest a special responsiveness to their social needs, consistent with the application of asymmetrical communal norms (Clark & Mills, 1993). Many case studies of relationships between children with SEN and their typically developing classmates also support this conceptualisation. For example, 'Although there is undeniable warmth between the children, most of the comments and nonverbal interactions reflect a helper–helpee relationship, not a reciprocal friendship' (Van der Klift & Kunc, 2002, p. 22), and 'The interactions, although tending to be highly positive, had the feel of a parental type of role on the part of the children without disabilities' (Evans et al., 1998, p. 134).

In an experimental test of these ideas, Frederickson and Simmonds (2008) investigated the way in which children, aged 8–9 years and 10–11 years, distributed rewards, jointly earned for work done, with classmates who were acquaintances or children with SEN. Among the older, but not the younger, children, findings supported the characterisation of relationships with acquaintances as exchange relationships and those with children who have SEN as asymmetrical, communal relationships.

Social exchange theory can also predict features of the social environment likely to affect intention to interact with classmates who have SEN. For example, Frederickson and Furnham (1998) predicted that the costs, as opposed to benefits, of interaction would be higher in classes that are less cohesive. They also hypothesised that, in classes where mainstream peers perceive their work to be difficult, perceived similarities with children who have SEN will be increased, and the relative costs of working with them will be reduced. In line with these predictions, high levels of classroom cohesiveness (in addition to low levels of disruptive behaviour) were found to be associated with peer acceptance towards children with SEN. On the other hand, rejection of this group was lower, both when they were rated by peers as 'cooperative' and where the majority of children in the class found the work difficult. This again points to the importance of classroom ethos.

ACTIVITY BOX 4.2

How else might psychological theory usefully contribute to inclusive education?

In this chapter, the focus has been on how psychological theory and research contribute to our understanding of children's and young people's social inclusion in schools – how theories help us understand and influence children's attitudes and behaviour towards peers with SEN. There are, however, many other ways in which psychology can contribute to inclusive education. The job of an educational psychologist is essentially to draw on psychology to promote positive outcomes in education. Consider, then, the psychological domains that form the basis of the work of educational psychologists:

- Behavioural psychology/learning theory helps us to understand the effect of context and environment on learning, as well as how one might manipulate these aspects to optimise learning.
- Cognitive psychology helps us to understand internal mental processes (for example, how people perceive, remember, speak, solve problems) that are of fundamental importance to the development of effective teaching and intervention programmes.
- Developmental psychology has furthered understanding of the systematic psychological changes that occur over the course of a life span and informs, in particular, the assessment of children's abilities and needs.
- Social psychology helps us to understand how people's thoughts, feelings and behaviours are influenced by the presence of others.
- Instructional psychology is concerned with identifying optimal methods of instruction.
- Cognitive behavioural approaches concern therapeutic approaches based upon a combination of behavioural and cognitive theory that encourage the questioning of existing cognitions so as to promote new ways of behaving and reacting.

- Systems psychology and organisational psychology concern behaviour within complex systems and organisations, both having particular relevance for those intent on making educational organisations – for example, classrooms, schools and local authorities – both more effective and more inclusive.

With these psychological domains in mind, what other aspects of educational psychology discussed in this book might be considered to be important for the development of inclusive education?

The influence of school-ethos factors on pupils' attitudes to peers with SEN was also investigated by McDougall et al. (2004). They found that positive student relationships at the school level and a school goal task structure that promoted learning and understanding for all, rather than social comparison and competition among students, had significant associations with positive attitudes. They suggest that schoolwide, ecologically based initiatives aimed at modifying the environment to create a supportive school should be an important element of any effort to enhance attitudes towards students with disabilities.

Inclusion: Implications from psychological theory and research

In this section, we have reviewed a number of strands of psychological theory that have been applied in investigating and endeavouring to enhance inclusive practice. There are two consistent findings. First, that aspects of the school social environment can have a predictable and important influence on pupils' attitudes, intentions and actions. Second, for many children with SEN in many school contexts, clearly acknowledging differences, as well as what they have in common with their classmates, appears more likely to facilitate their inclusion than appearing not to recognise or address the differences that exist. This may appear counter-intuitive to some in the field of education; however, it has long been known that, even at relatively young ages, children notice and react to atypical behaviours in other children (Coie & Pennington, 1976; Maas et al., 1978). Rather than classmates being left to make their own (often rather negative) attributions, more positive outcomes are likely to result if adults provide advance information, ongoing explanations and appropriately structured and supported opportunities for contact.

Summary of the main issues addressed in this chapter

- Inclusion involves providing education in mainstream schools for all children and contrasts with the provision of separate special schools or classes for children with SEN. There remains much debate about the nature of inclusive education.
- The role of scientific research in shaping the social policy of inclusion is disputed. Neither rights considerations nor research evidence are clear cut. Conflicting rights can create ethical dilemmas, and methodological problems with the research evidence can render clear conclusions elusive.
- Reviews of efficacy research using different methodologies have generally identified a marginal advantage of inclusive placements for academic and social outcomes. However, the position of children with SEN on measures of social and affective adjustment is less positive than for their classmates who do not have SEN.

- Four strands of psychological theory addressing aspects of social perception and attribution, interpersonal relationships and group relations were identified, and their contribution to promoting the social inclusion of children with SEN was examined.

Key concepts and terms

Inclusion; integration; mainstreaming; special educational needs (SEN); meta-analysis; effect size; bioecological model; self-concept; subjective norm; theory of planned behaviour; contact theory; self-efficacy; decategorisation model; intergroup contact model; extended contact effect; imagined contact effect; attribution theory; communal relationship; exchange relationship.

Recommendations for further reading

Journal articles

Boer, A., Pijl, S.J., & Minnaert, A. (2011). Regular primary schoolteachers' attitudes towards inclusive education: A review of the literature. *International Journal of Inclusive Education*, *15*(3), 331–353.

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Books

Dunsmuir, S., Frederickson, N., & Cline, T. (2023). *Special Educational Needs, Inclusion and Diversity: A Textbook*, 4th edn. Open University Press.

Sample essay titles

1 What are the implications from psychological theory and research for the design of programmes to promote the social inclusion of pupils with SEN?
2 Is labelling always a bad thing? Discuss with reference to the inclusion of children who have SEN.
3 The conditions set by contact theory cannot realistically be met in mainstream schools for most children with severe SEN. Discuss.

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5 Effective communication in school

Do teachers and students talk the same language?

Tony Cline

Chapter summary

The effective use of language is fundamental to school learning, but the language of school is very different from the language that many children acquire within their families. That difference is experienced in an extreme form by children whose family speak a different language at home from the main language of instruction at school. But even children in a majority language community have to learn to vary their use of language in different environments. This chapter will review how monolingual children learn to communicate in infancy and will examine how the language they learn at that stage differs from the language that they will later need at school. Do differences between home talk and classroom talk inhibit students' engagement with the curriculum? In the final section of the chapter we will see how ideas from sociocultural theory based on the work of Vygotsky have been applied to help teachers to overcome these challenges.

Learning outcomes

When you have studied this chapter, you should be able to:

1. Describe key features of the development of children's language and other modes of communication before they start school.
2. Evaluate the claim that some children find school learning more difficult because the language and communication skills they have learned at home have not prepared them well for the demands that are made at school.
3. Analyse key features of different forms of classroom talk, employing a well-researched sociocultural approach.

DOI: 10.4324/9780429322815-7

ACTIVITY BOX 5.1

Laurie Lee, the writer, described his first day at school in his autobiography, *Cider with Rosie*, and recalled that his teacher told him to "Wait there for the present". "He went home at the end of the day bitterly disillusioned because he was not given one" (Perera, 1981, p. 4).

In a nursery school in London a teacher was talking to a four-year-old girl whose mother, she knew, was from America.

> Teacher: Were you born in America? [No reply.] Or were you born in England? Do you know?
> Child: I was… I was born in my mummy's tummy.
>
> (Tizard & Hughes, 1984, p. 207)

> A 9 year old Portuguese child who had recently arrived in the United States was struggling to finish copying a homework assignment from the board when the teacher started erasing it. "Stop it!", called the child emphatically, using a phrase she had learned from her classmates in the playground. The teacher looked surprised.
>
> (Menyuk & Brisk, 2005, p. 87)

> The actor, Stephen Fry, recalled going up to his older brother, Roger, at his new prep school and calling him by his name. He was told off for doing so: "You call me bro here. Bro. Understood?" Only surnames were used: Roger was Fry, R.M., & Stephen was Fry, S.J.
>
> (Fry, 1997, p. 2)

When Harry Potter met his future friend, Ron Weasley, on the train going to Hogwarts School at the beginning of his first term there, he tried to explain that he had grown up in an ordinary "muggle" family and felt quite ignorant about everything to do with wizardry:

> "…and until Hagrid told me, I didn't know anything about being a wizard or about my parents or Voldemort."
> Ron gasped.
> "What?" said Harry.
> "You said *You-know-who's name*!" said Ron, sounding both shocked and impressed.
>
> (Rowling, 1997, p. 75)

In each of those episodes a child misunderstood something or made what counted as a mistake. Can you explain exactly what the problem was in each example and how it occurred? What does your analysis tell you about the challenges children face when they move from the language environment of their home to a different setting such as the language environment of a school?

The early development of language and communication skills

The initial experiences that lay the foundations for language development

The main questions addressed in this chapter concern how children use the language and communication skills that they have developed in early childhood once they start school. In order to tackle these questions it is necessary to review key features of pre-school language development. The foundations are laid from the very beginning. If infants are given a choice shortly after birth between listening to speech sounds and non-speech sounds that are equally complex, they show a preference for the speech sounds. The selective perception of speech is driven, in part, by a search for meaning (Werker, 2018).

At the outset infants produce sounds that simply relate to their physical state – reflexive vocalisations such as crying and sneezing. But within two months they move on to squealing, growling, cooing and gurgling, producing sounds that express a wider range of moods and needs (Oller et al., 2013). This activity evolves through experimenting with sounds, playing with their vocal tract and producing squeals, hoots and some vowel-like sounds. As they experience others' attunement and reactions to them and eventually observe their caregivers' modelling of effective communication, infants are stimulated to develop the active use of language themselves.

There is a good deal of evidence that the basic structures of this development are built into humans' genetic make-up. Those structures are stimulated by caregivers' behaviour – the constant use of the names of objects that an infant can see or hear and the verbal description of actions and events as they are happening in the infant's vicinity. When the child makes clear what they want by pointing or looking or touching, they are reinforced by obtaining gratification and receiving others' attention. As they hear more and more talk from their family, they begin to babble selectively, making increasing use of the sounds that characterise the languages of those who speak to them. Eventually they acquire the languages, dialects and accents that they hear around them. The immediate factors in this development are their interactions with those who look after them, but more distant factors play a part too through creating the environment for those interactions (Ford et al., 2020).

In trying to understand how these early developments lay the foundation for effective communication in school it is helpful to consider the ideas about language development associated with the sociocultural theory of Lev Vygotsky. He tried to show how the culture in which a person is brought up influences the course of their development. He used the term culture broadly to describe the customs of a particular people at a particular time – the learned traditions and aspects of lifestyle that are shared by members of a society, including their habitual ways of thinking, feeling and behaving. Speech was seen as having the role of containing and transmitting culture, since language stores social experience from the past and makes it available to others in the future. Through language a person can be not only an active agent who is immersed in what they are doing at this moment but also "a reflexive agent" who is distanced from their immediate context (Valsiner, 2000).

Culture has a material aspect in the environment and the objects that people create, and also a symbolic (or semiotic) aspect in the language that they use to describe these things to others. Vygotsky saw culture as having a key formative role in development, as it is transmitted both

through social interaction and through speech. Thus he envisaged the development of language as forming the basis for the development of thinking. The foundation of that process is an infant's social interaction with those around them. This is expressed in what he called "the general, genetic law of cultural development":

> All the basic forms of the adult's verbal social interaction with the child later become mental functions… Any function in the child's cultural development appears twice, or on two planes. First it appears on the social plane and then on the psychological plane. First it appears between people, as an interpsychological category and then within the child, as an intrapsychological category.
>
> (Vygotsky, 1978, p. 73)

There is little direct empirical evidence for this theoretical construction of how the process might operate, but it has had a great deal of influence. We will discuss later in the chapter ways in which researchers with a background in education and psychology have suggested that teachers can draw on Vygotskian ideas to help pupils overcome the challenges that they face in effective classroom communication. One aspect of those challenges is that the initial experiences that provide the foundations of language development vary greatly between children. In many parts of the world children are exposed to more than one language during their early years and grow up as bilingual speakers. It is estimated that more than half of the world's population are bilingual or multilingual (Grosjean, 2021). But that is not a universal experience, and some countries, such as England, have, until relatively recently, been mainly monolingual. That has changed: in January 2022, 21.2% of pupils in English state-funded primary schools were classed as having English as an additional language (DfE, 2022).

Even within the same language or dialect there may be differences in socioeconomic status (SES) or ethnic background that correlate with variations in children's language experiences at home. For example, when Hart and Risley (1992) made regular observations for a period of just over two years in the homes of 40 families in a Mid-Western city in the United States, they found marked differences in the frequency of different kinds of utterances by parents in high- and low-SES homes. In the families with lower SES a substantial proportion (up to 20%) of parent utterances to children functioned to prohibit the children's activities within the home, whereas discouraging prohibitions of that kind were rarely heard in families with higher SES. Instead the children in higher SES families were more likely to hear questions (up to 45% of parent utterances) and more frequent repetitions and elaborations of their own topics (up to 5% of parent utterances). Similar findings on SES group differences in the use of language by parents to their children have been reported in other countries, including the UK, and have led to the use of such terms as "verbal deprivation" to explain weaker school performance in children from lower SES backgrounds.

Such differences in the outcome of early parenting do not appear to be simply the result of differences in the amount and type of talk between parents and children at home, as Hart and Risley's study suggested. In addition, more subtle factors may have an influence. For example, Raviv et al. (2004) studied 1016 families and analysed the relationship between parenting behaviours and three-year-olds' scores on scales of expressive language, receptive language and the ability to understand basic verbal concepts. The hierarchical regression analyses that they conducted indicated that measures of "maternal sensitivity" (assessed on the basis of observations of a mother–child play session conducted in their lab) and "cognitive stimulation" (assessed on the

basis of an interview and home observations) mediated the relationship between SES and the language outcome measures.

Thus socio-economic status may not be adequate as an explanatory variable. Advances in both science and practice may depend on a closer analysis of the processes that directly influence young children's language development which may or may not be associated with SES. In fact, improved methods of recording and analysing children's early language environments indicate that, while differences between SES groups are robust, within-group variability is high. For example, Gilkerson et al. (2017) obtained automated recordings of the voices of children in 329 families and those they encountered in the course of a full day. They concluded that "many high SES children experience a relative paucity of adult language input, and many lower SES parents can and do talk with their children at above-average levels" (p. 261). In a review of research on the processes that might mediate the relationship between SES and language development, Pace et al. (2017) offered a different perspective. They suggested that, while differences in parent–child interaction have a crucial impact, there are other factors to be considered, e.g. group differences in child characteristics such as processing speed and the availability of learning resources such as books in the home.

In parallel with research that examined the context of children's language exposure more closely, work has begun on identifying the neural processes through which that exposure may impact on subsequent language development. Romeo et al. (2018) found that 4–6-year-old children who had experienced more conversational turns with adults in the first stage of their study exhibited greater activation in Broca's area in the left inferior frontal area of the brain when listening to a short story. This region of the brain was initially associated with speech production and more recently with a wider range of language processing functions. This research team has gone on to show other changes in the same brain area in response to a family intervention designed to enhance the language environments provided for children in the family home (Romeo et al., 2021).

Non-verbal communication and pragmatic skills

When young children speak their first word, most parents celebrate what they see as an important milestone in development. Doherty-Sneddon (2003) has pointed out that they tend not to recognise key milestones in non-verbal communication in the same way: "we seldom hear parents report when their children first began pointing to ask for something, or when they first used an action like flapping their hands to represent a bird" (p. 9). She argues that people underestimate the importance of such steps in the development of children's overall communicative competence. Just as infants are attuned to recognise and seek out speech sounds, they are also sensitive to some forms of non-verbal communication such as smiling and pointing.

This ability to read the non-verbal signals communicated by those around them is mirrored by an ability to develop the use of many forms of non-verbal communication themselves. Young children learn to direct their eye gaze at what they want others to know they are interested in. They also develop increasingly sophisticated ways of communicating their feelings and desires through facial expressions. They learn the conventional meanings that different hand gestures have in their society so that they can convey agreement or dissent with their hands alone. They learn to illustrate their speech with gestures to support the message they want to communicate, e.g. by drawing a visual picture in the air or pointing at something while talking about it or beating out the rhythm of their speech to emphasise particular words as they are spoken. The linking of non-verbal and verbal communication in this way fosters effective language learning

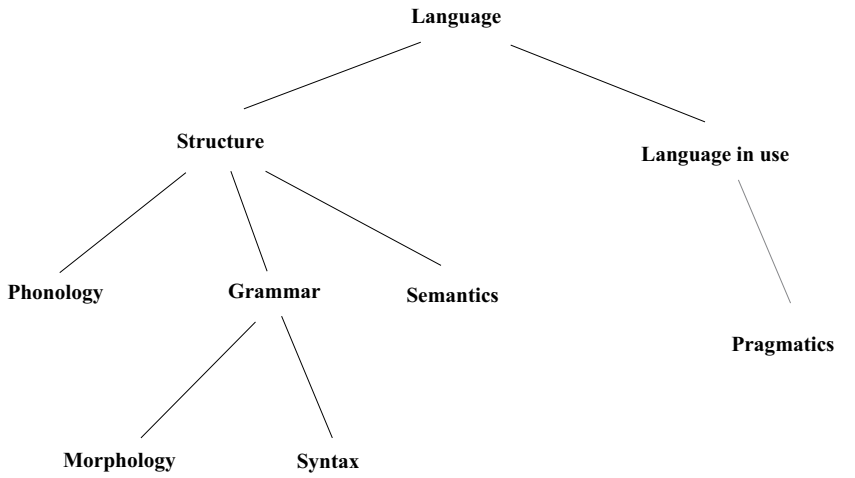

Figure 5.1 Aspects of language
Source: Adapted from Crystal (1988)

(Goldwin-Meadow & Alibali, 2013). Eventually they can draw on the full range of their communication resources, non-verbal and verbal, to understand others and to convey their own meaning and intentions. What they do not learn at this stage are the conventions of communication that hold sway at school. The foundations are laid, but the specific expectations of teachers and peers in that setting will be learned later.

In order to be a competent user of a language a child must develop knowledge of and skills in using its structure and key components:

- Its sound system (phonology), e.g. which sounds normally occur in words and which do not.
- Its structural rules at the level of the word (morphology), e.g. how the form of a noun changes when it is plural (*dogs* as opposed to *dog* in English).
- The ways in which words may be combined together to form sentences (syntax), e.g. the rule that states that the object of a verb comes after the verb in English (*The dog gnawed the bone* rather than *The bone gnawed the dog*).
- The ways in which words and sentences convey meaning (semantics), e.g. the link between the word *dog* and the "meaning" of the word, *a four-legged, domesticated animal of a particular type*.

It is not enough, however, to have a grasp of the key components of a language. In addition, a person who is to use the language effectively for the purposes of communication with others needs to know *how* it is used, they require pragmatic skills. For example, they need to appreciate and follow the conventions of turn taking in conversation, and they need to understand when a change in the tone of a person's voice means that a question is really a command, e.g. when a child's parent says *Aren't your toys in an awful mess?*

Pragmatic rules may vary between social and ethnic groups within a society as well as between societies. For many children the move from home to nursery or school is made more challenging because the pragmatic rules they have learned at home lead them to misinterpret communications from others in the new setting or to communicate a meaning they do not intend. They may fail to make eye contact when it is expected and thus give the inaccurate impression of being sullen and

unwilling to talk. Like the Portuguese girl who was quoted in Activity Box 5.1, they may put requests in a direct way (*I want*…) when an indirect form is considered more polite and respectful (*Can I have*…). Like Harry Potter, they may unselfconsciously use a word or name that is normally considered taboo in their new environment.

Entering the new language environments of nursery and school

Bridging the gap between home and school

When children leave the domestic environments of early childcare for the larger-scale, more institutional settings of nursery or school, new language demands are made of them. They encounter a wider range of different people from a greater variety of speech backgrounds, they are involved in a new set of social routines requiring different types of language and they must learn to use the vocabulary and syntactical forms associated with the demands of school subjects. They bring multi-faceted communication skills to these new challenges. However, a child is unlikely to achieve their full potential for communicating with others unless the people they are talking to are able to play an active role in interpreting, repairing and augmenting what they are trying to say. This can be a key role of staff in the early years in schooling (Dockrell et al., 2012).

Thus, from the outset bridging the language gap between home and school is a major challenge for all those involved – children, parents and school staff. Children's play sometimes focuses on bridging that gap. A key feature of nurseries and other early years settings is the provision for free play where children can participate in activities that represent lifelike situations such as cooking and cleaning a "house" or driving a "car". When they play a role in these situations, children often imitate the more mature language they have heard from adults engaging in those activities. They not only practise the kind of language that accompanies these activities but also further their knowledge of how to participate in different kinds of conversation (Menyuk & Brisk, 2005, Chapter 4).

The learning process extends beyond the school when they take school language home while playing "school" in the home setting. Children import the vocabulary, syntax and tone of their classroom when playing the role of teacher with younger siblings at home. For example, Gregory (2005, p. 228) presents an excerpt from a maths "lesson" in which 11-year-old Wahida took the role of teacher and her 8-year-old sister Sayeda was pupil. Sayeda had solved one problem successfully.

Wahida: So, I'm going to put some sums on the board for you, OK? Ready?
Sayeda: Yes.
Wahida: The first sum's going to be – OK Sayeda do you remember to write the date first? –
Sayeda: Yes, Miss.
Wahida: Well done! Now I'm going to write the sums. The first sum is 30 x 5 = ? If you want to do lattice, you can. Or you can do your own way, you can or you can do in your mind, but I would love to see some working out.

Gregory points out that Wahida models her use of language on that of her teacher both in her choice of lesson-related words and in the way that she structures her speech, e.g. referring to her requirements using indirect rather than direct speech (that she "would love to see some working

out") (p. 228). Sayeda cooperates readily and also adopts the conventions of school speech. When psychologists highlight the gap between the language of home and the language of school in some social groups, they often focus on the language models provided by parents. Gregory argues that "playful talk" provides a bridge between the two domains, and she has shown that siblings and grandparents may play a role in such talk as well as parents and carers.

Meanwhile teachers can help their pupils to bridge the gap at school by valuing the knowledge and skills, including language skills, that they bring from their home and their community. The challenge will be greatest when children are learning English as an additional language, but it can be overcome when teachers recognise that the culture of the school can be co-constructed with their pupils, creating a social and cultural "safe space" that is fertile for learning (Conteh & Brock, 2011). For example, in a report on a study conducted in an unnamed French city, Mary and Young (2017) analysed how a monolingual French-speaking teacher was able to create such an environment in her pre-primary classroom of 3–4-year-old emergent bi/plurilingual children. They show how her "intercultural competence" facilitated the children's transition from home to school, e.g. by encouraging parents to spend time in the classroom with their child and to continue to teach him/her the family's original languages. She also asked them to teach her some words and expressions in those languages which she hoped would help her to communicate more effectively with their child and build bridges between their languages.

Key features of language development in the middle years of childhood

Attending school full-time leads to a significant increase in the range of sources of input to children's language learning. Their vocabulary and what they try to say encompasses new kinds of abstraction and ambiguity. During this developmental stage, there are also dramatic developments in their pragmatic competence as they become more able to take the perspectives of other people with whom they are talking. These major trends are summarised in Table 5.1.

Table 5.1 Critical processes in early and later language development

	Young children	*School-age children and adolescents*
Types of input	Learn language through listening and watching.	Learn language through listening, watching *and* reading.
Level of awareness	Absorb language unselfconsciously from those around them.	Often learn through reflecting on and analysing language as an entity in itself influenced by increasing metalinguistic awareness.
Level of abstraction	Add words to their vocabulary that generally have concrete referents (e.g. traffic lights, Peugeot, motorway).	Also add words to their vocabulary that represent abstract concepts (e.g. welfare, relevance, democracy) and words or phrases that are interpreted metaphorically (e.g. "skeleton in the closet").
Level of ambiguity	Tend to interpret what they hear literally.	Appreciate and come to enjoy word play in puns, riddles, jokes and advertisements.
Awareness of the perspectives of others	Adjust their linguistic style to the person they are speaking to, only to a limited extent.	Are increasingly aware of the thoughts, feelings and needs of whoever they are speaking to and adjust the content and style of their speech accordingly.

Source: Adapted from Nippold (1998, pp. 4–6)

The central process is the growth of vocabulary. This can be thought of as a step-by-step process in which each exposure to a word helps a child to deepen and broaden their understanding of what the word means and how it is used.

As the child's vocabulary grows, the structural features of their speech change. They speak in longer and more complex sentences, and they use the morphological options in the language more extensively, e.g. adding prefixes and suffixes to familiar words such as *displeased* and *excitement*. Their increasing literacy skills transform the range of language to which they are exposed and make available to them models and sources that encompass specialist vocabulary and formal syntax outside the scope of everyday conversation. When they come across unfamiliar words in a story, they soon add them to their growing lexicon. They themselves learn to tell a story (employing narrative skills) and to explain concepts (employing expository skills). These modes of discourse are quite distinct: narratives focus on people, their actions and motivations, and describe the unfolding of events over time, while expository texts focus on concepts and issues and explain ideas, claims and arguments in terms of the logical interrelations among them (Berman & Nir-Sagiv, 2007, pp. 79–80). In a study of written texts produced by native English speakers of different ages, Berman and Nir-Sagiv showed that young people use more advanced vocabulary and grammar in expository texts than in narrative texts and that they learn to organise the telling of a story by middle childhood but do not generally master the construction of an expository text until adolescence. Vilar and Tolchinsky (2021) studied the latter with Spanish students from elementary schools, high schools and university. There were developmental improvements with age in the rhetorical structure of their arguments and a transition from what the researchers termed "assertion-based texts" (focused on their own standpoint) to "exposition-based texts" (in which more attention is given to data and evidence in support of their viewpoint).

The language environment in school

Educational research has focused on two major pedagogical functions of talk in schools:

- Learning *through* talk where talk is used for teaching and learning.
- Learning *to* talk where the aim is to develop children's oracy skills (Mercer, 2021).

A broader view from a political perspective was given in a report commissioned by an All-Party Parliamentary Group on Oracy (APPG, 2021). In their view there are five key areas where oracy has a particular impact on children and young people's progress and life prospects:

- academic outcomes
- tackling social disadvantage
- transitions into further education, training and employment
- wellbeing
- citizenship and empowerment.

Research in this field has relied on systematic observation of the characteristics of the language environment in classrooms and its impact on children's learning and communication. What is highlighted for observation is determined by the researchers' theoretical modelling of how the environment impacts on pupils. Dockrell et al. (2015) developed a broad-based measure, the Communication Supporting Classroom Observation Tool (CSCOT), that examined three major aspects of the environment:

- Language Learning Environment – the physical environment and learning context, e.g. the way in which space is organised in the classroom.
- Language Learning Opportunities – structured opportunities to support children's language development.
- Language Learning Interactions – ways in which adults in the setting talk with children. This includes techniques used by adults:
    - to acknowledge the children's needs (such as getting down to the child's level, pacing language used, confirming contributions)
    - to support them in developing their language skills (such as labelling, using appropriate open-ended questions)
    - to encourage non-verbal communication (such as praising good listening skills)
    - to direct language learning (such as commenting)
    - to model language responses (such as scripting).

Their aim was to design a tool for teachers of 4–7-year-olds that would be "sensitive to the key elements within classrooms that support oral language growth" (p. 274). They intended this to help school staff to monitor their own practice and improve it.

An example of a more tightly focused observation schedule is the Scheme for Educational Dialogue Analysis (SEDA) which was developed by a Cambridge team for research purposes. Its basis was a theoretical account of dialogic forms of interaction in school (Hennessy et al., 2020). Examples of its major headings include:

- Invite elaboration or reasoning (e.g. ask for explanation or justification).
- Positioning and coordination (e.g. evaluate alternative views).
- Build on ideas (e.g. build on/clarify others' contributions).

The application of this type of analysis to improving classroom practice can be illustrated by an earlier piece of work from the same research team, which is described in the next section.

Reviewing the rules of classroom talk

What is the best way of running a whole-class discussion so that all the children articulate their ideas about the topic that is being discussed? Traditionally the teacher stands at the front of the classroom and asks a series of questions. Pupils who know the answer to a question put up their hands, and the teacher chooses one of them to tell the class what they think the answer is. It has recently been suggested that this practice is unhelpful. It is a well-established way of managing a lesson, and almost all of us will have experienced it as pupils. What can possibly be wrong with it? Critics have highlighted many limitations:

1 Some children who know the answer will not put up their hands for fear that they will look foolish if they are wrong or that they will be labelled as "geeks" or "swots" if they are right.
2 Some who do not know the answer will put their hands up eagerly anyway because they cannot bear to be left out.
3 The procedure may be undermined by teacher bias that leads to children from particular groups rarely being given the chance to contribute.
4 The exercise addresses only the teacher's agenda and risks overlooking important questions and concerns that some children have.

5 If a substantial proportion of the teacher's questions are closed questions and they rarely ask open-ended questions, the children will be given limited practice in articulating more complex ideas on the topic. With a closed question the task may simply become guessing what the teacher has in mind. This has become known as an Initiation-Response-Feedback pattern (e.g. "What is the nearest planet to the sun?"), Response (e.g. "Mars"), Evaluation/Feedback (e.g. "No, it's Mercury").

Teachers' strategies for ensuring the active participation of all pupils in classroom talk often involve some form of discussion in pairs or small groups which is sometimes followed by plenary discussion with the whole class or by a presentation of each group's conclusions to their peers or some combination of these. But it would be wrong to assume that discussion in small groups necessarily leads to children practising worthwhile communication skills. They may often be unclear about what exactly they are expected to do, and they may have little idea of what would constitute a good, effective discussion. After all, for many of them school will be the only place where they experience such discussions. Focus Box 5.1 presents an extract illustrating the kind of unproductive talk that can result if a group of 9–10-year-old children are set a discussion task with little training or preparation. This extract was collected by Mercer et al. (2004) as part of a larger-scale study. It was recorded by a group who were working through a computer-based task on the soundproofing qualities of various materials:

FOCUS BOX 5.1

Transcript 1:	Control school group who are working on "Keep it quiet"
Hannah:	(*Reads from screen*) Keep it quiet. Which material is the best insulation? Click "measure" to take a sound reading. Does the pitch make a difference?
Darryl:	No we don't want clothes. See what one it is then. (*Points to screen*)
Hannah:	No it's cloth.
Darryl:	Oh it's cloth.
Hannah:	Go down. This is better when Stephanie's in our group.
Darryl:	Metal?
Hannah:	Right try it.
Deborah:	Try what? That?
Hannah:	Try "glass".
Darryl:	Yeah.
Deborah:	No one.
Hannah:	Now.
Darryl:	(*Interrupts*) Measure.
Hannah:	Now measure. Hold. (*Turns volume control dial below screen*)
Darryl:	Results, notes.
Hannah:	Results. We need to go on a different one now. Results.
Darryl:	Yeah, you need to go there so you can write everything down.
Hannah:	I'm not writing.

(Mercer et al., 2004, pp. 368–369)

Focus Box 5.2 presents an extract from the discussion of a group who had received training designed by Mercer and his colleagues on the basis of sociocultural principles which had been derived initially from Vygotsky's theoretical ideas on the development of language and cognition.

FOCUS BOX 5.2

Transcript 2:	Target school group who are working on "Blocking out light"
Ross:	OK. (*Reads from screen*) Talk together about a plan to test all the different types of paper.
Alana:	Dijek, how much did you think it would be for tissue paper?
Dijek:	At least ten because tissue paper is thin. Tissue paper can wear out and you can see through, other people in the way, and light can shine in it.
Alana:	OK. Thanks.
Alana:	(to Ross) Why do you think it?
Ross:	Because I tested it before!
Alana:	No, Ross, what did you think? How much did you think? Tissue paper. How much tissue paper did you think it would be to block out the light?
Ross:	At first I thought it would be five, but second–
Alana:	Why did you think that?
Ross:	Because when it was in the overhead projector you could see a little bit of it, but not all of it, so I thought it would be like, five to block out the light.
Alana:	That's a good reason. I thought, I thought it would be between five and seven because, I thought it would be between five and seven because normally when you're at home if you lay it on top, with one sheet you can see through but if you lay on about five or six pieces on top you can't see through. So that's why I was thinking about five or six.

(Mercer et al., 2004, p. 369)

One of the team's training strategies was to ask pupils to draw up a set of "ground rules" for making effective, productive discussion happen during a joint activity. Here is one example developed by a group of trainee teachers:

- Seek contributions from all group members, ensuring that everyone has a chance to speak
- Actively listen and stay involved
- Be positive and open to new ideas
- Question others about their ideas
- Respect and value other people's opinions and feelings
- Explain your ideas concisely but clearly
- Give clear reasons for your opinions, and expect them from others
- Challenge and discuss points if you disagree
- In case of alternative proposals, decide together which is supported by the best reasons
- Keep to the subject
- Be ready to compromise and reach agreement if possible

(Mercer, 2005, p. 19)

ACTIVITY BOX 5.2

Distinguishing between different types of classroom talk

Mercer and his colleagues suggested that the extract in Focus Box 5.1 exemplifies a type of group exchange which they called *disputational talk* and that the one in Focus Box 5.2 could be described as *exploratory talk*. The second of these extracts was recorded in a school where they had introduced a training programme to help the children learn "Thinking Together". You will not be surprised that they considered the second extract educationally more valuable than the first and that they thought it showed higher order communication skills.

1 Can you identify what specific differences there are in the use of language between the two groups?
2 The extracts that are given here show only the language the children used and not their non-verbal communication. If a video had been available, what characteristics would you expect to find in the non-verbal behaviour and pragmatic skills displayed in each group?

When you have arrived at an answer to the first question, you may like to examine Mercer's own account of differences between *disputational talk* and *exploratory talk*, which is summarised in the Appendix to this chapter. How far has your analysis of these extracts identified the points he highlighted?

The programmes of study for English in the revised National Curriculum that was introduced in England in 2014 stipulated that children in primary schools should be taught to:

- listen and respond appropriately to adults and their peers
- ask relevant questions to extend their understanding and knowledge
- use relevant strategies to build their vocabulary
- articulate and justify answers, arguments and opinions
- give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings
- maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments
- use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
- speak audibly and fluently with an increasing command of Standard English
- participate in discussions, presentations, performances, role play, improvisations and debates
- gain, maintain and monitor the interest of the listener(s)
- consider and evaluate different viewpoints, attending to and building on the contributions of others
- select and use appropriate registers for effective communication.

(DfE, 2013, p. 7)

The research programme undertaken by Mercer's team suggests one way in which educational psychology can help teachers to achieve these objectives. He has argued that it is because some children do not gain access to the use of language for sustained, shared reasoning at home that an

explicit and structured intervention is required to enable all pupils to benefit from these approaches at school (Mercer, 2005, 2021).

Summary of the main issues addressed in the chapter

- The chapter began by outlining some key features of early language development – infants' early sensitivity to the speech sounds they hear, their experimentation with producing their own sounds and the stimulation provided by caregivers.
- The ideas about language development associated with the sociocultural theory of Lev Vygotsky may be helpful in trying to understand how these early developments lay the foundation for effective communication in school.
- Non-verbal communication skills and pragmatic skills are crucial aspects of the overall communicative competence that children must develop.
- For many children the move from home to nursery or school is made more challenging because the pragmatic rules they have learned at home lead them to misinterpret communications from others in the new setting or to communicate a meaning themselves that they do not intend.
- When children leave the domestic environments of early child care for the larger-scale, more institutional settings of nursery or school, new language demands are made of them. They bring multi-faceted communication skills to these new challenges, but many still benefit less than they could initially because of a mismatch between their language skill and the demands made of them.
- This mismatch is a particular challenge for both pupils and teachers when the language of the school is different from the languages spoken at home.
- There are continuing impressive advances in language development during the middle years of childhood – in vocabulary and range, syntactical complexity and pragmatic competence.
- Research on how children's oracy skills are developed in school has focused on the broader language environment and on specific ways in which verbal interactions and classroom dialogues are managed.
- Psychology has been successfully applied to improving the strategies that are used to plan and manage discussion in the classroom. The aim was to draw on principles derived from Vygotsky's sociocultural theory in order to help children move from "disputational talk" to "exploratory talk" when working in groups.

Key concepts and terms

Communication skills; classroom talk; deprivation; disputational talk; exploratory talk; language environment; non-verbal communication; pragmatic skills; sociocultural theory; socioeconomic status (SES); vocabulary; Vygotsky.

Recommendations for further reading

Journal articles and public lectures

Dockrell, J.E., Bakopoulou, I., Law, J., Spencer, S., & Lindsay, G. (2015). Capturing communication supporting classrooms: The development of a tool and feasibility study. *Child Language Teaching and Therapy*, *31*, 271–286.

Ford, A.L.B., Elmquist, M., Merbler, A.M., Kriese, A., Will, K.K., & McConnell, S.R. (2020). Toward an ecobehavioral model of early language development. *Early Childhood Research Quarterly*, *50*(1), 246–258.
Mercer, N. (2021). *It's Only Words: Why Classroom Talk Is Important*. Available at www.youtube.com/watch?v=1s1cY1RHOXI

Books and longer research reports

APPG (2021). *Speak for Change: Initial Findings and Recommendations from the Oracy All-Party Parliamentary Group Inquiry*. Available at: https://oracy.inparliament.uk/speak-for-change-inquiry
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Sample essay titles

1 Many teachers think that their pupils lack the language skills they require when they start school. How would you account for this?
2 "Teachers and children talk a different language". Discuss.
3 What contribution can psychology make to helping teachers foster children's language development in the classroom?

Appendix

Mercer and his colleagues (Mercer et al., 2004; Mercer, 2005; Mercer & Littleton, 2007) differentiated between three types of talk in classroom groups, two of which are exemplified in Focus Boxes 5.1 and 5.2.

Talk of a mainly "disputational" type, they thought, has these features:

- It is not usually associated with processes of joint reasoning and knowledge construction.
- Although the children interact a good deal, they think on their own rather than developing ideas and reasoning jointly.
- They tend to be defensive and competitive.
- They show off with information and ideas or withhold them, but do not often share them.
- There are often what the research called "tit-for-tat 'yes it is', 'no it isn't' patterns of assertion and counter-assertion".
- They pass negative judgements on each other's contribution.
- They squabble and bicker rather than pursuing a reasoned argument.

This is to be differentiated from "cumulative talk" which has these features:

- Ideas and information are shared and joint decisions are made.
- Participants rarely challenge each other's arguments or ask for evidence or offer constructive criticism of what someone else has said.
- There appears to be solidarity and trust among group members, and they draw on each other's ideas, but typically only by repeating or confirming them rather than building on them and taking the argument further.

Note that cumulative talk is not illustrated with an extract here.

The features of "exploratory talk" are:

- Group members work together and show "a joint, coordinated form of co-reasoning in language with speakers sharing knowledge, challenging ideas, evaluating evidence and considering options in a reasoned and equitable way".

- Ideas and reasoning are put before the rest of the group in an explicit form that others can understand and evaluate.
- Peers compare possible explanations and seek to agree on the best reasoning possible with the information they have available.
- There is conflict, but it is constructive. It is clear that the group's aim is to achieve a consensus.
- "Everyone is free to express their views and… the most reasonable views gain acceptance".

(Adapted from Mercer, 2007, pp. 62–63)

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6 Can we cure dyslexia?

Ben Hayes and Norah Frederickson

Chapter summary

Some children find reading more difficult than others. Some struggle to read well even after well-designed and focused interventions have been used. What causes these difficulties? What do we mean when we say a child has 'dyslexia'? Can children get better? What do we know about how to help children like this? In this chapter we explore these and other, often controversial, questions. In the chapter you will discover some of the extensive psychological and educational research that has helped us move closer to a full understanding of why children find reading difficult and what we can do about it. We explore the neuropsychology of reading, how teaching might help or hinder children, and how factors such as genetics might play a part.

Learning outcomes

When you have studied this chapter you should be able to:

1. Evaluate the advantages and disadvantages of different approaches to the definition of dyslexia.
2. Identify similarities and differences between different theories of dyslexia and evaluate their utility both in explaining findings from group studies and in describing the problems faced by particular individuals.
3. Describe the principal approaches to the teaching of reading and their underpinnings in psychological theory and research.
4. Evaluate the extent to which children with reading difficulties can recover from the difficulties they have when effective interventions are used.

Can we cure dyslexia?

A number of controversies surround the concept of dyslexia. McGuinness (2004, p. 2) wrote that:

> the source of English children's difficulties in learning to read and spell is the English spelling system and the way it is taught. [Cross cultural] comparisons provide irrefutable evidence that a biological theory of 'dyslexia', a deficit presumed to be a property of the child, is untenable,

DOI: 10.4324/9780429322815-8

> ruling out the popular 'phonological deficit theory' of dyslexia… [adding that] English-speaking children have trouble learning to read and spell because of our complex spelling code and because of current teaching methods, not because of aberrant genes.

By contrast Vellutino et al. (2004, p. 25) concluded that 'results obtained in genetic, neuroanatomical and psycho-physiological studies' support the view that dyslexia involves 'basic cognitive deficits of biological origin'.

Elliott and Grigorenko (2014) reviewed the 'dyslexia debate' in some detail and have argued that the 'The term "dyslexia" has surely outgrown its conceptual and diagnostic usefulness' (p. 176). What dyslexia is and what causes it are the first two controversies that will be explored in this chapter.

Another controversy relates to what schools and teachers can do to support children who find reading and spelling difficult to learn. Some describe dyslexia as a lifelong condition where those who have dyslexia will need to learn to cope with the long-term effects of their condition (Firth et al., 2013). Others argue that children who have dyslexia can recover the skills they need for reading and spelling if they get the right support: 'There is good evidence to show that phonological-based interventions are effective in ameliorating dyslexic difficulties' (Duff & Clarke, 2011, p. 9).

In this chapter we will examine these areas of controversy. Firstly, we investigate definitions of dyslexia and review the evidence on different theories about the causes of dyslexia. The chapter then explores how reading is taught, how effective interventions have been in helping children learn to read when they have difficulty and the extent to which dyslexia can be overcome using the right teaching approaches.

What is dyslexia?

Dyslexia is derived from Greek and translates as 'difficulty with words'. It is a term that has wide public recognition and lacks the stigma associated with many learning difficulties. In a journal editorial introducing research looking at how concepts of dyslexia have changed over time, Snowling (2012, p. e2) notes that 'The science of dyslexia is well advanced' and that views on dyslexia are converging. Nevertheless Wagner et al. (2022) argue that we are not there yet, asking 'What is the best way forward toward improved operational definitions of dyslexia?' (p. 431). Whether we can point to a useful definition or not, conceptualisations of dyslexia have changed a great deal over time, competing definitions have sometimes stood in stark contrast to each other and there is certainly not universal consensus.

ACTIVITY BOX 6.1

1. Read the following definitions of dyslexia and identify what they have in common.
2. Decide to what extent they use exclusionary criteria (say what dyslexia is not) or inclusionary criteria (say what dyslexia is).
3. What would be the implications of these different approaches for teachers and educational psychologists in identifying and assessing children with dyslexia?

Definition A: 'A disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence and sociocultural opportunity. It depends on fundamental cognitive disabilities which are frequently of constitutional origin' (World Federation of Neurology 1968, in Critchley 1970, p. 11).

Definition B: 'Dyslexia is evident when accurate and fluent word reading and/or spelling is learnt very incompletely or with great difficulty. This focuses on literacy learning at the 'word level' and implies that the problem is severe and persistent despite appropriate learning opportunities. It provides the basis for a staged process of assessment through teaching' (British Psychological Society, 1999, p. 18).

Definition C: 'Dyslexia is a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling. Characteristic features of dyslexia are difficulties in phonological awareness, verbal memory and verbal processing speed. Dyslexia occurs across the range of intellectual abilities. It is best thought of as a continuum, not a distinct category, and there are no clear cut-off points' (Rose, 2009, p. 10).

Definition B differs from the other two in that it is descriptive, with no explanatory elements. This accords with arguments made by some (e.g. Tonnessen, 1997) that identifying characteristics should be differentiated from causal factors and the latter excluded from definitions of dyslexia. This is considered desirable in order to provide a common basis for identifying a population on which various scientific explanatory models can be tested. However, definitions of dyslexia are not only used to select participants for psychological research. A major reason for the controversy surrounding definitions of dyslexia has been their use in conferring eligibility for special educational resources.

Definition C makes reference to specific explanatory elements, such as phonological awareness. It also contrasts with A by explicitly ruling out the need for 'adequate intelligence' as being a factor that should be considered.

Until the turn of the century variants of Definition A had been either explicitly or implicitly incorporated in special education assessment policy and practice both in the UK (Frederickson & Reason, 1995) and the US (Gresham, 2002). Identification had in effect come to depend on the demonstration of a sufficiently large discrepancy between the child's scores on an intelligence test and a reading test. This 'IQ-achievement' discrepancy approach to defining dyslexia, apparently based on the assumption that intelligence defines potential for reading attainment, has now lost credibility.

It has been demonstrated that children with low IQs can have good word reading skills, so undermining the assumption on which the IQ-achievement discrepancy approach is based (Siegel, 1992). Steubing et al. (2002) conducted a meta-analysis of 46 studies to assess the validity of classifying poor readers into those who demonstrated an IQ-achievement discrepancy and those who did not. They concluded that large overlaps between the two groups and negligible to small differences found on variables closely related to the reading process undermined the discrepancy approach. In addition, the utility, and indeed equity, of the approach has been challenged by findings that poor readers with and without a discrepancy do not differ in their response to intervention (Stage et al., 2003).

Response to intervention

Following the decline of the discrepancy approach a response to intervention (RTI) approach was advocated. RTI replaced an IQ-achievement discrepancy criteria with a new one: the degree of response a child's reading difficulties show to a properly delivered evidence-based intervention (Gresham, 2002; Vaughn & Fuchs, 2003). When the RTI approach was used to select for research studies participants who had failed to respond adequately to interventions validated as effective for most children of comparable age/stage of reading development (see Vellutino et al., 2004), the ease with which children's reading difficulties could be remediated was found to be unrelated to IQ and it was concluded that the use of IQ scores is contraindicated as a selection criterion in scientific studies.

The US Department of Education, Office of Special Education Programs (2002) recommended the elimination of discrepancy criteria from identification of learning disabilities and the use instead of RTI approaches using interventions that are supported by research. Additionally RTI selection criteria have now become a good practice standard for identifying participants in research (Duff, 2008). An RTI approach however makes no mention of what dyslexia is caused by, but rather it defines the phenomenon based on the outcome seen, specifically a persistent difficulty which is unexpected given good quality intervention.

Given the huge volume of research that has been done to help understand dyslexia have we moved closer to an agreed definition over the years? In November 2013 *The Psychologist* magazine reported on a talk given by Margaret Snowling on this (Jarrett, 2013; see Focus Box 6.1).

FOCUS BOX 6.1

Showing text in magazine style

The way the term 'dyslexia' is bandied around in the popular press, you get the sense that it's a precise diagnosis, something you either have or you don't. Answering questions at the end of her joint British Psychological Society/British Academy lecture, BPS Fellow Professor Margaret Snowling exposed this as a myth. 'Dyslexia is just another name for poor reading', she said. 'Where you put the cut off between dyslexia and normal reading has to be agreed within your education system, your school – it could be a national policy, a policy within a local authority – there isn't any gold standard'.

There may not be universal agreement on where to draw the line, but research into developmental dyslexia has come a long way since the first case was described by a British GP as 'word-blindness' in 1896. Such early accounts, Snowling explained, suffered from referral bias – the deficits had to be severe enough that a child wound up in a doctor's clinic. Back then the condition also tended to be seen as specific and perceptual, so that it became the domain of 'eye doctors'.

Our understanding of dyslexia – nowadays recognised as a 'neurodevelopmental disorder' affecting the ability to read and spell – was placed on surer footing by a seminal paper published in the mid-1970s. Snowling explained how Michael Rutter and William Yule's epidemiological work on the Isle of Wight led them to distinguish between children who read poorly

relative to their IQ (they called this 'specific reading retardation') and those who read poorly for their age ('general reading backwardness'). This research made an important contribution, Snowling said, because it showed that both groups of children experienced language delays and deficits that pre-dated their reading problems.

Today there are several agreed-upon facts about dyslexia, Snowling continued. It runs in families; it's associated with a phonological deficit (i.e. a difficulty translating letters into sounds); and it can manifest in various ways behaviourally. 'The contemporary view', said Snowling, 'is that dyslexia is not a diagnosis, rather it's a dimensional disorder. Many people have dyslexia and it will vary from mild to severe. It occurs in individuals with all levels of intellectual ability, and it's associated with multiple risk factors, not a single cause'.

Although there are a range of views on what underlies the persistent difficulties that some children have with reading, Snowling has argued that there are increasingly areas of agreement. The evidence that these difficulties are not a diagnosis but are a continuum also leads many educational psychologists to see the term 'dyslexia' itself as redundant. For simplicity's sake we continue to use it here, mindful of Snowling's points. Alongside views on what these difficulties are, there are many questions about *why* they occur, or why 'dyslexia' exists if you choose to use the term. So what are the risk factors that might cause dyslexia? It is to this question that we now turn.

What causes dyslexia?

Early researchers in the field characterised dyslexia as a visual processing problem: 'congenital word blindness' (Hinshelwood, 1900) or 'strephosymbolia' (twisted symbols) (Orton, 1925). Orton considered delayed establishment of hemispheric dominance responsible for failure to suppress mirror image alternatives leading to confusions of 'b' and 'd', 'saw' and 'was' etc. These ideas held sway until the 1970–80s when careful experimental work showed that verbal mediation was implicated in the apparent visual difficulties (Vellutino, 1987). Instead it was suggested that dyslexia was a subtle language difficulty which appeared to involve difficulties with phonemic segmentation and phonological coding (representing and accessing the sound of a word as an aid to memory). It is argued that children with dyslexia form mental representations of the sounds of language that are poorly specified or 'fuzzy' which makes it difficult to develop an awareness of the internal sound structure of words and to learn letter-sound relationships (Snowling, 2000).

This understanding of dyslexia became established as pre-eminent. From a review of research on dyslexia over the previous four decades, Vellutino et al. (2004, p. 2) concluded:

> The evidence suggests that inadequate facility in word identification due, in most cases, to more basic deficits in alphabetic coding is the basic cause of difficulties in learning to read. We next discuss hypothesized deficiencies in reading related cognitive abilities as underlying causes of deficiencies in component reading skills. The evidence in these areas suggests that, in most cases, phonological skills deficiencies associated with phonological coding deficits are the probable causes of the disorder rather than visual, semantic, or syntactic deficits, although reading difficulties in some children may be associated with general language deficit.

Although phonological difficulties are generally seen as the primary causal mechanism, research invariably shows that it is too simplistic to take one variable and see it as 'the cause' of persistent difficulties with reading. Carroll et al. (2016) conducted a longitudinal study with an unselected sample of 267 children. The children completed a wide battery of tasks associated with dyslexia when they started school. Their reading was then tested two, three and four years later. Over time 42 poor readers were identified. Four areas were found to be precursors of reading difficulty. As would be predicted by the phonological core deficit model, phonological awareness was indeed one of them. The other three were print knowledge, verbal short-term memory and rapid naming. Almost all of the children who struggled with reading showed deficits in at least one area at school entry, but there was no single deficit that characterised the majority of poor readers.

The authors noted that there was considerable individual variability among poor readers, with many different deficits linking to the disorder and most poor readers showing more than one deficit. They concluded: 'Results indicate that the causes of poor reading are multiple, interacting and probabilistic, rather than deterministic' (p. 750). This conclusion illustrates a clear move in recent years from earlier single cognitive deficit models for understanding developmental disabilities such as dyslexia to multiple deficit or risk factor models (Pennington, 2006; Snowling & Hulme, 2021). Work has begun on analysing the implications such models have for the diagnostic process with neurodevelopmental difficulties such as dyslexia (Astle et al., 2022).

Brain, biology and genes

Anatomical areas of the brain have been highlighted as potential candidates for a causal explanation for the difficulties that children might have (Seidenberg, 2017; Kearns et al., 2018). However a critical approach to thinking about brain function does not necessarily assume that anatomy is a cause of the cognition and behaviour, but rather that anatomy may result from the behaviour and learning that has taken place. Anatomy and function may be a record or representation of the way the child has been trying (or taught) to read, rather than the brain determining what the child does. Protopapas and Parrila (2018) argue that:

> findings of brain differences [in dyslexia] do not constitute evidence for abnormality; rather they simply document the neural substrate of the behavioural differences. We suggest that dyslexia is best viewed as one of many expressions of ordinary ubiquitous individual differences in normal developmental outcomes. Thus, terms such as 'dysfunctional' or 'abnormal' are not justified when referring to the brains of persons with dyslexia.
>
> (p. 1)

When considering specific genes that might play a part, Paracchini (2022) reviewed progress towards understanding the genetic causes of dyslexia, concluding that 'there is no convincing evidence for the effects of specific genes on dyslexia' (p. 496). This is not to say that genes don't have a role to play.

Smith (2011) noted that although specific gene *mutations* that could cause dyslexia have not been found it is the processes that regulate gene *expression* that are most likely to influence the biological aspects of language processing and reading difficulties. Smith argues that these regulatory processes are likely to be key, and that these processes are epigenetic, rather than genetic. The distinction has great significance: a genetic mutation can be passed down from generation to

generation. Even if you change your life in a way that compensates for (or even overcomes) the difficulty the mutation might have given you, the same mutation is passed down in the genetic code to your children and they will experience the same effect. However an epigenetic process will influence how genes are expressed in biology. If people live in a way that means that the effect the gene has is changed, then they can affect the impact the gene has on their biology. Crucially, however, this epigenetic difference can then be passed on to subsequent generations, changing the expression of the gene in their biology. Carey (2011) gives the example of transgenerational inheritance effects of malnutrition seen in the Dutch Winter Hunger of 1944 to explain how acquired characteristics can be passed down from generation to generation in mechanisms where the genetic code is not altered, but the way it is expressed is. Individuals who were prenatally exposed to famine during the Dutch Hunger Winter in 1944–45 had, six decades later, less DNA methylation in some genes compared with their unexposed, same-sex siblings. The environmental impact of the famine had altered how their genes were expressed in that generation and the next. This same mechanism, Smith argues, underpins transgenerational inheritance in language processes and associated reading skills.

So can transgenerational inheritance of literacy difficulties be changed? Can children born into families where epigenetic processes might be making it harder to learn to read change the pathway that they are following? Snowling et al. (2007) followed 'at-risk' children born in families with a history of dyslexia. The children had been studied longitudinally from age three years up and were seen again at age 12–13 years. Almost half the sample were classified as having significant reading and spelling problems (and emotional difficulties), while even those who did not meet the classification criteria did not read fluently. There was evidence of enduring literacy difficulties, with no evidence of catching up with normally achieving controls between ages 8 and 13. Although the at-risk children with and without significant literacy problems did not differ on measures of their family literacy environment, those who had significant problems read less themselves.

As research progresses an increasingly refined picture emerges. New ways of understanding how the environment can affect our gene expression and transgenerational inheritance can potentially offer greater insights into why reading difficulties can persist.

Can teaching methods cause dyslexia?

McGuinness (1997, p. 122) describes dyslexia as 'a label applied to children who are so confused by their poor reading instruction that they can't overcome it without special help', adding 'nor do so-called dyslexic children have any more trouble learning to read than other children if they are taught with an appropriate method'. To what extent can it be said that methods of teaching reading cause dyslexia?

Vellutino and Fletcher (2005) argue that because the acquisition of important reading subskills such as phonological awareness and letter-sound correspondences can be dependent on the type of teaching approach received (Foorman et al., 1998), it is important to establish that there has been adequate instruction before assuming the cause of early reading difficulties is biological. Indeed, Vellutino et al. (1996) reported findings which suggest that most early reading difficulties are related to deficiencies in early literacy experience and/or teaching and concluded that these are often a primary cause. Methods Box 6.1 shows that there is now evidence of the impact of intervention at the neuropsychological level.

METHODS BOX 6.1

Neuroscience and reading interventions – connecting brain and behaviour

Some studies with children have shown differences in measures of brain functioning between dyslexic and normally developing readers that ameliorate with improvements in word reading following intervention. For example, initial differences between normally developing readers and those with dyslexia were established by Simos et al. (2000). They used magnetic source imaging, which detects changes in magnetic fields surrounding neuronal electrical discharges, to describe the following sequence of activation when normally developing children read: occipital areas that support primary visual processing, followed by basal temporal areas in both hemispheres followed by three areas in the left temporal and parietal areas of the left hemisphere (the superior temporal gyrus, Wernicke's area and the angular gyrus). By contrast in children with dyslexia in this final stage these areas are activated but in the right rather than the left hemisphere. It is unclear whether this different pattern reflects compensatory processing.

In a further study (Simos et al., 2002) eight children aged 7–17 years with severe dyslexia were given intensive (ten hours per week over eight weeks) phonologically based instruction. Reading accuracy scores rose into the average range and there was a significant increase in left hemisphere activation of those areas typically activated in normally developing readers. Consistent with the greater resistance to intervention of reading fluency, delays were apparent in these left hemisphere responses.

A further study provided evidence that normalising changes in brain activity and adequate response to intervention were linked, but also that resistance to evidence-supported intervention was reflected in patterns of brain activity. Simos et al. (2007) monitored spatiotemporal profiles of brain activity in 6–8 year old children with dyslexia during a two stage intensive intervention delivered to pairs of pupils. Stage 1 focused on phonological decoding skills for eight weeks (2 × 50 minute sessions/day) while Stage 2 focused on rapid word recognition ability for a further eight weeks (one hour/day). The 15 children in this study had previously been identified as inadequate responders to reading instruction that was effective for most participants.

Clinically significant improvement in reading standard scores was noted in eight children who also showed 'normalising' changes in their spatiotemporal profiles of regional brain activity (increased duration of activity in the left temporoparietal region and a shift in the relative timing of activity in temporoparietal and inferior frontal regions). Seven children who demonstrated 'compensatory' changes in brain activity (increased duration of activity in the right temporoparietal region and frontal areas, bilaterally) did not show an adequate response to intervention. A control group of normally developing readers did not show systematic changes in brain activity during the study which suggests that the changes observed were associated with the special programme and were not simply the result of developmental changes or of normal classroom teaching.

The instruction received is one important environmental influence on dyslexia, the orthography of the language in which instruction occurs is another. Alphabetic writing systems demand high levels of phonological skills. Writing systems that do not use small speech sounds as the basis for written symbols, but instead use syllables, whole words or meanings, should present fewer difficulties for individuals with phonological problems. This is illustrated by the case study presented by Wydell and Butterworth (1999) of a dyslexic boy, bilingual in English and Japanese, who only showed reading and writing difficulties in English.

Alphabetic languages vary in the transparency of their orthographies (the consistency with which the written symbols map onto sounds). English is notoriously inconsistent and Seymour et al. (2003) found that the rate of literacy skills acquisition relates to the consistency of the orthography of the language. Correspondingly, Caravolas (2005) reviewed studies showing that children with dyslexia typically experience milder difficulties, in particular with reading accuracy relative to reading fluency and spelling, and suggested that this reflected the lower levels of demand placed on phonological skills. Research study selection criteria for dyslexia in more transparent orthographies tend to centre on speed and fluency rather than error rate. Goswami (2005) has suggested that the failure of most studies to find differences between the efficacy of large versus small unit phonics instruction may reflect relative advantages of each instructional approach in dealing with the inconsistency of English and cautioned that generalisation of research findings in English to other languages may not be valid.

Vellutino et al. (2004) describe dyslexia as a 'complex condition that depends on the dynamic interaction between certain innate susceptibilities as well as the home and school environments on the one hand, and the cultures in which children learn to read on the other' (p. 18). They note that some transparent orthographies may aid learning to the point where the underlying difficulty is hidden, while others like English may aggravate the problem. There are clear parallels with reading instruction. It is possible to argue both that inadequate instruction or other experiential factors are responsible for the problems of many poor readers and that biological factors are important. This reflects developing understanding of the ways in which brain and environment interact in the process of learning to read.

Can dyslexia be cured?

At the start of this chapter it was noted that Duff and Clarke (2011) have concluded that the difficulties dyslexic individuals face can be 'ameliorated'. We have also reviewed neurological evidence from Simos and colleagues indicating that dyslexic children's brain function can be 'normalised' through intensive intervention. In this section of the chapter we will now turn our attention more fully to the question of intervention and to what extent we now know how to 'cure' children who are described as having dyslexia. The section begins by analysing the debates that have existed about how reading should be taught, before focusing specifically on interventions for children who have persistent difficulties learning literacy.

What is the best way to learn to read and write?

The set of problems facing children learning to read were summarised by Snow and Juel (2005, p. 501):

> the problem of the alphabetic principle, which requires learning how to segment speech into sounds represented by graphemes; the problem of English orthography, which requires going

beyond simple phoneme-grapheme links to represent the morphemic, historical and etymological information preserved in the writing system; and the problem of comprehension which requires building a representation of textual and situational information.

All of the major theories of reading development represent the solution of the first two of these problems as key achievements needed to move between qualitatively different stages or phases in the acquisition of word recognition skill (see Table 6.1). Logographic strategies involve the use of distinctive visual or contextual features to recognise words, alphabetic strategies focus on sound-spelling rules and orthographic strategies on larger spelling patterns, especially morphemic units (as in 'sign', 'signal', 'signify').

The focus on sub-lexical (e.g. letter, syllable) elements apparent in the theories of early reading development in Table 6.1 parallels the findings of later reviews and meta-analyses of the effectiveness of different methods for teaching reading. These have highlighted a need for explicit and systematic teaching of letter-sound correspondences in reading alongside a focus on reading for meaning (Snow & Juel, 2005).

Savage (2022) reviews the literature on what we know about how to effectively teach literacy skills to all children and concludes that 'there are few well-executed large-scale studies investigating all relevant issues' (p. 226). Savage notes particularly that research looking at the best approach to whole-class teaching is problematic and complex. However when teaching children who are finding reading difficult to learn there are some points of relative certainty. A large-scale review by Galuschka et al. (2014) concluding that 'Phonics instruction is… the only approach whose efficacy

Table 6.1 A schematic summary of different stage/phase theories of learning to read

Proponents	*Chall (1983)*	*Frith (1985)*	*Ehri (1999, 2002)*	*Stuart & Coltheart (1988)*	*Seymour & Duncan (2001)*
Number of Developmental Periods	5	3	4	2	4
1. Pre-reading	Stage 0: Letters/book exposure	Logographic	Pre-alphabetic	↑	Pre-literacy
2. Early reading	Memory and contextual guessing		Partial alphabetic	Partial orthographic	Dual Foundation
3. Decoding	Stage 1: Decoding, attending to letters/sounds	Alphabetic	Full alphabetic	Complete orthographic	Alphabetic Logographic
4. Fluent reading	Stage 2: Fluency, consolidation	Orthographic	Consolidated alphabetic, Automaticity	↓	Orthographic Morphographic

Source: Adapted from Ehri (2005).

on the performance of children and adolescents with reading disabilities is statistically confirmed' (p. 9). But what do we mean by 'phonics instruction'?

In the UK government guidelines promote a systematic synthetic approach to reading (DfE, 2021) and the 'simple' view of reading (Gough & Tunmer, 1986) where reading is seen as the product of single word decoding and language comprehension

The synthetic phonics approach was defined by Torgersen et al. (2006) as focusing on the phonemes associated with particular graphemes which are pronounced in isolation and blended together (synthesised). For example, children are taught to take a single syllable word such as *cat* apart into its three letters, pronounce a phoneme for each letter in turn /k, æ, t/, and blend the phonemes together to form a word. Synthetic phonics is often contrasted with analytic phonics in which children analyse whole words to identify the common phoneme in a set of words. For example, teacher and pupils discuss how the following words are alike: *pat*, *park*, *push* and *pen*.

A synthetic approach is not without some controversy. Johnston et al. (2012) published data for children who were six years into their reading instruction in school and either following a synthetic or a contrasting analytic approach. The results highlight the benefits that synthetic phonics can have for word reading, spelling and reading comprehension and that there may be particular benefits for boys. Other research has revealed a less clear picture. Stasio et al. (2012) undertook a randomised controlled trial that discovered advantages for analytic phonics for particular groups. The authors conclude that:

> early analytic phonics interventions might have greater long-term effects when delivered in pre-formal school education to children from low-SES backgrounds who often had English as an additional language. More research using true experimental designs (and ultimately, systematic review) is needed to explore the differences between the two intervention methods over longer periods of time using larger representative samples of children to drive evidence-based policy.
>
> (Stasio et al., 2012, p. 82)

Do the same conclusions apply to young children at risk for reading failure?

A study by Hatcher et al. (2004) suggests that they may not. Reception-year children (aged 4–5 years) were divided into four matched groups and randomly assigned to one of three experimental teaching conditions (delivered to groups of 10–15 children for three ten-minute sessions per week) or the control group:

- Reading with Rhyme.
- Reading with Phoneme.
- Reading with Rhyme and Phoneme.
- Reading – control condition where children were taught as a class, in groups and as individuals.

In each experimental condition there was a strong phonic component and the same amount of time was devoted to reading instruction. For normally developing children no differential effects of the different teaching programmes were found. However, for children identified as being at risk of reading failure, training in phoneme skills resulted in greater gains in phoneme awareness and in reading skills. These findings suggest that any reading programme that contains a highly structured phonic component is sufficient for most 4–5-year-old children to learn to read effectively, but

for young children at risk of reading delay, additional training in phoneme awareness and linking phonemes with letters is required.

What intervention strategies are effective for children with dyslexia?

Compared with children who learn to read with ease, children who experience difficulties learning to read appear to need instruction that is more explicit, more intensive and more supportive, in terms both of motivating encouragement and cognitive structuring or scaffolding (Torgesen, 2002, 2005). There has been convincing evidence for many years that children with dyslexia can respond well to intervention, which can produce large gains in reading attainment so that children catch up with others of their age. An important caveat being that just looking at group mean scores can mask the fact that the interventions were not equally successful with all children. In addition, despite improvements in reading accuracy, reading fluency can remain below average, a common finding from intervention programmes for children described as having dyslexia (Torgesen, 2005).

In reviewing the general principles of effective intervention for dyslexia and other specific learning difficulties identified by research over the last 50 years, Grigorenko et al. (2020) conclude that teaching should be explicit, focused on the academic skill concerned, comprehensive and differentiated. However they also argue that there should be careful progress monitoring to facilitate individualisation and the adjustment of intervention intensity to ensure success, for example by increasing instruction time and decreasing group size.

Most recently Savage (2022) argues that those with dyslexia need highly targeted assessment of their phoneme awareness combined with optimal teaching of grapheme-phoneme correspondences and that there are modest advantages to taking a synthetic (rather than an analytic) approach. Arguably this makes it no different to the approach taken to teach all children (DfE, 2021), but with a higher level of personalisation and intensity.

What about changes at the biological level?

Earlier in the chapter a series of studies by Simos and colleagues were presented to illustrate how methodological developments have changed the way we can investigate responses to intervention. In fact these studies represent only a fraction of the work that has been conducted in this area and others have come to similar conclusions (Aylward et al., 2003). Molfese (2012) reviewed the results of eight different neuroimaging studies published between 2002 and 2008. These studies used either functional magnetic resonance imaging (fMRI) or magnetoencephalography (MEG) to generate images of brain function before and after instruction. The instructional programmes varied from 28 hours to 670 hours but all studies showed patterns of 'normalisation'. Molfese concludes that 'both MEG and fMRI [studies show] consistent findings that adequate response to intervention is accompanied by in most cases normalization in the brain of children with reading disability to more closely resemble the brain activation profiles of typically developing children'. While 'most cases' is very encouraging, a proportion of children in these studies, 0.5–1%, did not respond.

Fact and opinion

The debate about how to help children who struggle with literacy can involve many different points of view, opinions and claims of 'evidence', as can be seen from the magazine article in Focus Box 6.2.

FOCUS BOX 6.2

Extract from: 'How to cure dyslexia'

Sam Blumenfeld, writing in *The New American*, describes an experience he had teaching a student who had been taught to read using a look–say method. He describes how the student misread words and how he found reading so difficult that he never read for pleasure. Sam describes the teaching approaches that he used. These focused on spotting the errors he was making and splitting words into sections, building phonemic awareness.

> It took about a year, but after it was done, he had become a good phonetic reader and a lover of books. So I knew that dyslexia could be cured long before the neuroscientists discovered the plasticity of the brain. It takes time and effort, but it can be done.
>
> Source: Blumenfeld (2012)

ACTIVITY BOX 6.2

Read Focus Box 6.2. The claims made are based on the personal experience of a tutor who saw change in students he worked with. Consider the research presented in this chapter and make a note of key evidence that you might draw on when answering the following questions:

- Sam claims that the 'look–say' method of teaching was at the root of his student's difficulties. What evidence is there that such an ineffective teaching approach can cause dyslexia?
- Sam claims that, after about a year of teaching, his student's dyslexia was cured. What evidence is there from the research reviewed in this chapter for how long it might take to gain effective reading skills, given the right intervention?

What utility does the word 'dyslexia' actually have?

Before concluding the chapter there is one more controversial question to consider. What utility does the word 'dyslexia' actually have? It is evident that for some children to have a name for the difficulties that they experience allows them to understand those difficulties in a different, positive way. A child's difficulty learning literacy is no longer potentially seen as a matter of being 'lazy' or 'stupid'. The child and parents can often feel relieved that the difficulties they have are not their fault and a word for the difficulties can help them be understood by peers as well (Leitão et al., 2017). On the other hand it can disempower teachers and parents who may feel that they won't be able to help (Ross, 2017) and may also have negative effects on a person's sense of identity (Burden, 2005). Compared to those with similar attainments, the academic expectations and aspirations of pupils, their parents and teachers may also be negatively impacted by the label (Knight, 2021).

Beyond these considerations (see Chapter 4 for a discussion about labelling) there are arguments that it is, perhaps, not a meaningful or useful construct.

Firstly, as we have seen, many researchers agree that there is no clear single underlying cause, but a combination of complex interrelated risk factors. This can be seen as meaning that there is no clear profile or set of identifiers that mark dyslexia out as a discreet phenomenon from other reasons why children might find reading difficult. Furthermore, as it is generally conceived of as continuum, and not a discreet condition, the notion of 'diagnosis' becomes a matter of degree of impairment, rather than a clear category or type.

Secondly it might be argued that children with dyslexia respond to the same interventions as other children – there is no special way of teaching that needs to be adopted other than taking a careful and systematic approach, probably focusing on phoneme-level word skills. So using the term does not help teachers or parents do anything differently. Additionally how safe is it to assume that the difficulties experienced are permanent? Effective intervention appears to ameliorate difficulties effectively in many cases.

These and other arguments questioning the utility of the construct are advocated by those seeking to critically assess what we actually know in the field (Elliott & Grigorenko, 2014). After reading this chapter you should be able to form a view about many of these arguments yourself, and consider some of the evidence there might be for or against them. The progress towards ever clearer answers continues.

Summary of the main issues addressed in this chapter

- The definition of dyslexia remains controversial. Central issues are: the use of exclusionary or inclusionary criteria and the use of explanatory as well as descriptive elements.
- The IQ-achievement discrepancy approach to defining dyslexia, which was formerly influential in both research and practice, has been challenged on the grounds of validity, equity and utility. It is now recommended that RTI criteria are used instead in sample selection for research and decisions about eligibility for special provision.
- Theoretically there has been a shift over the last 30 years from single deficit models such as the phonological deficit theory of dyslexia to multiple risk factor models which propose that dyslexia results from complex interactions between biologically based cognitive abilities and environmental demands and supports.
- There are no genes for dyslexia. Epigenetic influences may underlie strong transgenerational inheritance and familial incidence. Environmental influences on the nature of the problems with reading that will be experienced include the language of instruction as well as the nature of the instruction received.
- There has been hot debate over the best method for teaching reading. Psychological theory and research has supported explicit teaching of phonics for all children in the early stages of learning to read. For children at risk of reading failure and those with dyslexia, there is evidence that teaching needs to be more explicit, intensive and supportively structured.
- Intensive phonologically based intervention can produce significant improvements in the reading and related cognitive processes (notably phonological skills) of children with dyslexia. Findings from neuroscientific studies show that differences between the brain function of children with dyslexia and normally developing readers can also be normalised by this kind of educational intervention.

Key concepts and terms

Dyslexia; learning disabilities; IQ-achievement discrepancy; response to intervention (RTI); National Literacy Strategy; phonics: synthetic and analytic; print knowledge; verbal short-term memory; rapid naming; grapheme-phoneme correspondences; logographic; orthographic; phonological; proximal; distal; epigenetics; transparent orthographies.

Recommendations for further reading

Journal articles

Duff, F.J., & Clarke, P. (2011). Practitioner review: Reading disorders: What are the effective interventions and how should they be implemented and evaluated? *Journal of Child Psychology and Psychiatry*, *52*(1), 3–12.

Grigorenko, E., Compton, D., Fuchs, L., Wagner, R., Willcutt, E., & Fletcher, J. (2020). Understanding, educating, and supporting children with specific learning disabilities: 50 years of science and practice. *American Psychologist*, *75*, 37–51. https://doi.org/10.1037/amp0000452

Snowling, M., & Hulme, C. (2021). Annual research review: Reading disorders revisited – The critical importance of oral language. *Journal of Child Psychology and Psychiatry*, *62*(5), 635–653.

Books and book chapters

Breznitz, Z., Rubinsten, O., Molfese, V., & Molfese, D. (2012). *Reading, Writing, Mathematics and the Developing Brain: Listening to Many Voices*. Springer.

Elliott, J., & Grigorenko, E. (2014). *The Dyslexia Debate*. Cambridge University Press.

Snowling, M.J., Hulme, C., & Nation, K. (2022). *The Science of Reading: A Handbook*, 2nd edn. John Wiley.

Sample essay titles

1 Evaluate the strengths and weaknesses of two definitions of dyslexia.
2 Poor reading instruction is the main cause of dyslexia and good reading instruction the most effective cure. Discuss.
3 Evaluate the claim that science has discovered how to overcome dyslexia, and therefore all children should be able to read if taught properly.
4 To what extent can dyslexia be seen as a language difficulty?
5 Discuss to what extent it is possible for children to recover from dyslexia if they have the right help?

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7 Why does mathematics make so many people fearful?

Tony Cline

Chapter summary

Within the school curriculum mathematics presents particular challenges that some people find intimidating. This chapter analyses the concept of maths anxiety, a general construct that may have distinct foci, including anxiety around the task of processing numerical concepts and anxiety about situations involving the execution of maths. Its causes may be identified at the individual level (e.g. neuropsychological vulnerability, cognitive readiness, the management of working memory, personality factors), while its development may be exacerbated by environmental factors (e.g. negative school experiences, teacher anxiety, social and cultural factors). Intervention may take the form of adjusting how the subject is taught or presented as well as strategies to modify an individual's attitudes and perceptions. It is possible for schools to lay the basis for "mathematical resilience" rather than contributing to negative feelings about the subject.

Learning outcomes

When you have studied this chapter you should be able to:

1. Identify key features of mathematics that lead to many people experiencing it as challenging.
2. Evaluate different accounts of how maths anxiety is thought to develop and how it may be addressed.
3. Outline key features of the development of mathematical thinking and mathematical practices during childhood.
4. Explain the significance that children's cultural and language background may have for their learning of mathematics and the development of any anxiety they may feel about mathematics.

Introduction

In this chapter you will consider how mathematics as a subject differs from other subjects in the school curriculum and will reflect on why that makes it intimidating for many students. We will examine the impact of maths anxiety on learning and will outline how mathematical thinking,

DOI: 10.4324/9780429322815-9

mathematical practices and maths anxiety develop through childhood. We will also examine how they are affected by cultural diversity.

The challenges of mathematics

ACTIVITY BOX 7.1

Which of the sentences below best describe school mathematics as you experienced it when you were at school and as you think of it now?

a) You need to learn a set of rules and procedures based on rules.
b) There is a fixed body of knowledge that cannot be questioned.
c) You learn through a variety of lively activities.
d) You sometimes get messy.
e) You are often asked a closed question and need to find the correct answer.
f) You have time to speculate and time to discuss important ideas.
g) It makes you more creative.
h) The teacher often works at a fast pace.
i) It makes you feel that you are being tested and judged.
j) It exercises your imagination.
k) It develops your empathy for other people who are different from yourself.
l) It makes you look around you with fresh eyes.
m) It makes you think logically.
n) There are lots of tricks you have to learn for how to do things.
o) Everyone in the class has an opinion, and every opinion counts.
p) You learn how to ask questions.
q) You learn to look at a situation from different perspectives.
r) It is efficient and requires you to be efficient.

You have to be neat in the way that you work, or you will make mistakes.

Examine the statements in the box that are shown against the letters that are found in the words "mathematics" and "number". These have been identified by Trujillo and Hadfield (1999) and Bibby (2002) as characterising many people's image of maths lessons at school. The statements that are linked to other letters of the alphabet indicate reactions that are less often associated with mathematics in the literature.

Mathematical knowledge and mathematical reasoning are key tools that we use when thinking about how the world around us is organised. A person who is confident in the use of mathematics can deal with questions about quantity, about spatial and structural relationships, and about measurement and time. So mathematical thinking is fundamental to other subjects both in the sciences and the humanities. As a school subject mathematics is important, a "core" subject in the

curriculum. At the same time it relies on the use of abstract concepts and rigorous logical reasoning. Its language is precise and has no redundancy. Each element in mathematical knowledge is related to every other element, and many of those elements can only be understood by following the sequence of assumptions behind them. So mathematics is not only important; it is also difficult. Perhaps that is why many people find it intimidating and some become anxious about mathematics tasks that they associate with school.

The concept of "maths anxiety"

"Maths anxiety" (MA) may involve "a feeling of panic, helplessness, paralysis and mental disorganization that arises among some people when they are required to solve a mathematical problem" and is likely to lead to negative attitudes toward any tasks that require the management of numbers (Núñez-Peña et al., 2013, p. 36).Its long-term impact may be serious. For example, it has been suggested that MA may have a negative effect on the proportion of errors that nurses make when calculating drug dosages (Williams & Davis, 2016).

Self-reports have identified MA as a problem across the age range, including in primary school (Carey et al., 2017), late adolescence (Johnston-Wilder et al., 2014) and adulthood (Hart & Ganley, 2019). It is an international phenomenon (Foley et al., 2017). Does MA affect performance in maths at school and afterwards? Reviews of extensive research suggest that there is a small to moderate negative relationship between the two: children who have higher scores on a measure of maths anxiety tend to have lower scores on tests of maths achievement (Barroso et al., 2021). However, as so often with measures of correlation, it is not clear whether initial maths difficulties cause learners to become anxious about it or early anxiety about the subject causes poor performance in it. Some have argued that there may be a reciprocal relationship in which each feeds the other (Carey et al., 2016). Ramirez, Shaw et al. (2018) suggested that a key factor in whether weak maths performance leads to high MA may be the way in which individuals interpret their experiences of maths. This is based on "appraisal theory" and can be seen as providing a rationale for interventions such as cognitive behaviour therapy to help those with MA. (See also the discussion of "reflected appraisal" in the final chapter of the book.)

It is possible to break down the general construct of maths anxiety into more tightly defined components. For example, Wu et al. (2012) differentiated between a factor related to the task of handling numerical concepts ("Numerical Processing Anxiety") and another related to situations involving the execution of maths ("Situational and Performance Anxiety"). Hunt and Sandhu (2017) showed that performance anxiety can be exacerbated when there are explicit time pressures, e.g. a time limit coupled with a clock on display (Hunt & Sandhu, 2017).

What are the initial causes of these problems? Hypotheses about the causes and development of MA have tended to focus on subject-specific neuropsychological vulnerability, cognitive factors (such as mismatched learning styles), personality factors (such as general self-esteem) and environmental factors (such as negative school experiences). Many adults trace their negative feelings about maths back to their own schooldays. In this context it is salutary to bear in mind that the people studied by Trujillo and Hadfield (1999) and Bibby (2002), whose attributions were paraphrased in the Activity Box at the beginning of the chapter, were primary school teachers or trainee teachers. What kind of messages about mathematics as a school subject will they have communicated to their pupils? It has been suggested that teachers who have negative beliefs about mathematics may lay the foundation for a response of learned helplessness from their pupils

(Ramirez, Hooper et al., 2018). It is necessary at this point to review what is known about some key processes in the development of mathematical thinking and mathematical practices through childhood. We will consider that topic before returning to the question of how people's anxieties and negative beliefs about mathematics can best be addressed.

The development of mathematical thinking, mathematical practices and maths anxiety through childhood

Teaching methods

The language of mathematics involves symbols and diagrams that can be interpreted only by those who understand the conventions that govern them. When the symbols and conventions are fully understood together with the concepts that underpin them, information can be manipulated and communicated in a form that is concise, simple and transparent. All too often, however, pupils learn the symbols that are used in mathematics and the procedures for manipulating them but do not develop an understanding of what the symbols mean or why the procedures work. A child in this position might successfully use a carefully learned "rule" to find the answer (198) to the sum:

$$792 \div 4 = ?$$

But they might complete the sum solely by knowing how to "carry over" the remainder after dividing 7 in the hundreds column by 4 without understanding what transformation occurs when the remainder (3 x 100) is converted to a number (3) in the tens column. The effects of that lack of understanding may be seen in various ways: the child may make uncorrected errors that seem obviously mistaken to anyone who is following the logic of what is being done, and the child may be unable to apply the procedure for dividing large amounts to new numbers or to numbers in a different pattern or to numbers that are embedded in a word problem, such as:

> If a team of four people won £792 in the Lottery and divided it equally amongst them, how much would be given to each person?

Procedural knowledge (knowing *how*) involves knowing the written language of mathematics (the system of symbols used to represent numbers such as "151" and mathematical operations such as "+" or "÷") and also the step-by-step prescriptions for manipulating numbers (such as rules and algorithms for addition and division). Conceptual understanding (knowing *why*) involves such processes as insight, discovery and the integration of different pieces of information (Baroody, 2003, Figure 1.2). This distinction between "procedural knowledge" and "conceptual understanding" has been very influential in mathematics education.

It has gradually become clear that this way of describing forms of mathematical knowledge does not offer a sound foundation for analysing what is known about children's learning processes. First, children often invent their own procedures, and a successful procedure needs at least some conceptual basis or underpinning. Second, some learning of new procedures is not driven by conceptual knowledge alone but instead draws directly on procedural instruction or procedural analogies.

Baroody (2003, p. 26) described a framework comprising four aspects of proficiency in mathematics which is seen as providing a more adequate conceptualisation of what children need to learn:

- *Conceptual understanding*… comprehension of maths concepts, operations and relations.
- *Computational fluency*… skill in computing efficiently (quickly and accurately), appropriately and flexibly.
- *Strategic mathematical thinking*… the ability to formulate, represent and solve mathematical problems ("strategic competence") and the capacity for logical thought, reflection, explanation and justification ("adaptive reasoning").
- *Productive disposition*… a habitual inclination to see mathematics as sensible, useful and worthwhile, coupled with a belief in diligence and one's efficacy.

Baroody argued that all of these elements are required for children to be effective in making use of their mathematical knowledge and to *want* to do so. He emphasised that the definition given here of computational fluency implies an expertise that is adaptive and is not just capable of being applied in a routine way to familiar problems, sometimes termed "procedural flexibility" (Rittle-Johnson, 2017). Those who study statistics as part of a course in psychology may like to reflect on how far their recent experience in this area of applied mathematics confirms or challenges these ideas.

Rittle-Johnson (2017) argued that three powerful learning activities – comparing, self-explaining, and exploring before instruction – can promote both conceptual and procedural knowledge, and one (comparing) can also improve procedural flexibility. However, although there was no encouragement for a narrow and tightly structured approach to mathematics teaching in the National Curriculum that was introduced in England and Wales in 1988, many schools continued to employ such an approach for maths within the framework of that curriculum (Boaler, 1998). If teachers value procedural knowledge above everything else (as they did, for example, in England in the 19th and early 20th centuries), they tend to adopt repetitive drill methods based on behavioural principles such as associative learning. It is assumed that these methods will help students develop a confident grasp of the methods of calculation that they are required to learn. However, working with secondary school pupils aged 13–15, Boaler found that those taught through a repetitive, "drill" strategy disliked the subject more and were less able to apply their procedural knowledge to unfamiliar situations than those taught through what she described as a more open system. Newstead (1998) reported on a similar study with pupils in the final two years of primary school. Focusing more directly on MA she found that those taught through a traditional approach showed significantly higher anxiety overall than those taught through an alternative teaching approach that emphasised problem solving and the discussion of pupils' own informal strategies. These were both small-scale case studies, and Newstead acknowledged that it might be unsafe to generalise her findings to other age groups. Nonetheless, their work suggests that one element in a strategy to reduce the development of MA at school may be to review teaching methods and, in particular, to emphasise a broad range of learning goals in the subject along the lines of Baroody's (2003) framework.

The title of this chapter and a good deal of the content up to this point has been quite negative. We have concentrated on things that go wrong and tried to analyse how that happens. A promising alternative perspective is to study what can go right and focus on the *positive* aspects of psychology. Johnston-Wilder and Lee (2010) came to this view from listening to stories from people who exhibited mathematics phobia and reading the related literature. The more they did so, they wrote, "the more that it appeared to us that the way that mathematics is often taught in English mathematics classrooms is an unwitting form of cognitive abuse" (pp. 2–3). They developed a construct

that they sought to contrast with maths anxiety – the idea of *mathematical resilience*. Working in one school they aimed to develop strategies that would encourage learners to approach mathematics with a positive mindset. Building mathematical resilience, they said, would mean that pupils "will persevere when faced with difficulties, will work collaboratively with their peers, will have the language skills needed to express their understanding or lack of it and will have a growth theory of learning, that is they will know that the more they work at mathematics the more successful they will be" (p. 3). The notion of a growth theory of learning is associated with an influential analysis of learning motivation that discriminates between people who have different mindsets about the learning process. Those with an "incremental theory" mindset tend to believe that their own abilities are malleable and can increase and can be controlled, while those who have an "entity theory" mindset tend to believe that such characteristics in themselves are fixed by their heredity or biology and cannot be changed (Yeager & Dweck, 2012).

In a subsequent paper Lee and Johnston-Wilder (2013) described how they recruited and trained pupils from the full range of maths ability sets in a girls' secondary school to act as "Ambassadors" in their school. The training workshops were designed to introduce the pupils to different ways in which mathematics can be learned and to enable them to become co-researchers in discovering the opinions of their peers concerning learning mathematics. This project was planned, in part, as an exploration of how researchers and teachers can draw on pupil voice in school improvement. It was not thought sufficient simply to ask for pupils' suggestions about how maths might be taught more effectively. For them to develop ideas that would go beyond extensions and elaborations of how they were already being taught, they needed to be exposed to other ways of doing things, to learn the impressions of their fellow pupils and to feel authorised to act in an unfamiliar role. See Activity Box 7.2.

ACTIVITY BOX 7.2

Teaching methods, maths anxiety and maths resilience

The lists of maths learning activities below are taken from Johnston-Wilder and Lee's 2010 and 2013 papers and have been divided into a set which the authors thought to be more likely to generate maths anxiety and a set they appear to have designed to foster mathematical resilience. Can you identify the key features of each activity that might lead a researcher to place them in one category or the other?

Activities thought more likely to generate maths anxiety:

- Perform a task rapidly that requires feats of memory.
- Memorise formulae without understanding what they mean.
- Listen to the teacher explain a single isolated technique of calculation and then complete exercises practising the technique that are designed to help you to remember how and when to use it.

Activities thought more likely to foster maths resilience:

- Use *People Maths* where a group has to represent mathematical ideas using their own bodies, e.g. being asked to envision their shoulders and body as axes and to make straight line graphs using their arms.

- Make a mathematics trail around the school by spotting mathematical ideas in the buildings and writing out a trail for other groups to follow.
- Create a PowerPoint presentation about an aspect of mathematics of their choice that they found difficult.

Cognitive processing and maths anxiety

Cognitive psychology offers a quite different approach to studying MA. Ashcraft et al. (1998) showed that students with high scores for maths anxiety obtained lower scores on a maths achievement test. But when they analysed the results on the achievement test in greater detail, they found that there were no maths-anxiety effects in the easier section of the test that comprised arithmetic problems with whole numbers. Anxiety effects were only found when the items became more difficult (e.g. with mixed fractions such as "ten and a quarter plus seven and two thirds"). In other studies the team highlighted a particular difference between groups with high and low MA: those in the "high" group took a much longer time to complete somewhat difficult arithmetic problems. "Our interpretation was that carrying, or any procedural aspect of arithmetic, might place a heavy demand on working memory, the system for conscious, effortful mental processing" (Ashcraft, 2002, p. 183) Their key theoretical reference point was processing efficiency theory (Eysenck & Calvo, 1992). This states that anxiety disrupts the performance of a task because those who experience it give attention to their intrusive thoughts and feelings rather than to the task they are supposed to be completing. These intrusive thoughts impact on their effectiveness in maths to the degree that the maths task depends on working memory. They concluded that this might explain why participants with high anxiety do as well as less anxious individuals on simple maths tasks but show a marked decrement in performance with more difficult items.

Subsequent research has elaborated this theoretical account further. For example, there is evidence that some children do not show the expected relationship between high maths anxiety and a decrement in performance on the more difficult items on a maths test. Specifically, this applied to those who obtained low scores on tests of working memory. Perhaps they used other strategies such as finger counting when tackling calculation tasks while those with better working memory relied on the direct retrieval of remembered maths facts. It may be that the performance of the latter group is affected because high MA interferes with their working memory so that they cannot draw on their knowledge of those facts so easily. Those with low working memory were already using primitive problem solving strategies and therefore showed no decrement (Ramirez et al., 2016).

Cognitive abilities associated with proficiency in mathematics

In this section we move from analysing the processes that affect a successful outcome in learning to an approach that derives from a quite different tradition of psychological research – the psychometric analysis of cognitive abilities. The key questions that are asked are:

- What cognitive abilities are required for effective mathematical thinking?
- How do these abilities support the performance of mathematical tasks?

(Carroll, 1996)

In Activity Box 7.3 consider which of the abilities listed in the top half of the box are likely to be involved when a person solves the problems that are listed in the bottom half.

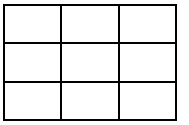
ACTIVITY BOX 7.3

Here is a list of some of the cognitive abilities that have been associated with proficiency in mathematics (Baroody, 2003; Carroll, 1996; Hegarty & Kozhevnikov, 1999):

(a) Oral language comprehension – ability to understand short sentences in real-life contexts.
(b) Pictorial imagery – ability to construct vivid and detailed visual images.
(c) Procedural knowledge relating to the manipulation of numbers.
(d) Reading comprehension – ability to answer questions about the meaning and implications of short pieces of text.
(e) Reading decoding – ability to read aloud short passages of text fluently and accurately.
(f) Schematic imagery – ability to represent the spatial relationships between objects and imagine spatial transformations.
(g) Long-term verbal memory – ability to retain linguistic information over time.

Examine the list of mathematics problems given below, which are all taken from the original framework for the National Numeracy Framework in England where they illustrated the outcomes expected of pupils aged 8–11 (DfEE, 1999). Which of the abilities (a)–(g) do you think is likely to be involved when a person solves each of these problems?

1 he perimeter of a square is 274 cm. What is the length of each side?
2 Every day a machine makes 100,000 paper clips which go into boxes. A full box has 120 paper clips. How many full boxes can be made from 100,000 paper clips?
3 Calculate 24% of 525.
4 Find two consecutive numbers with a product of 182.
(i) Δ (ii) ΔΔΔΔ (iii) ΔΔΔΔΔΔΔ
5 The triangles represent counters which make up a number sequence. Calculate how many counters there will be in the 6th number and in the 20th number, and write a formula for the number of counters in the *n*th number in the sequence.
6 Count all the rectangles in this diagram:



We expect that you will decide, as you examine the question carefully, that most of the skills and abilities that are listed in the top half of the box are required for all of the six tasks to a greater or lesser degree. But there is probably one item that you will have decided is not important for those tasks – pictorial imagery, the ability to construct visual images. Hegarty and

Kozhevnikov (1999) showed that this was used less than schematic imagery by 11–13-year-old boys solving maths problems – a result that was subsequently replicated with a sample of students of the same age in the USA, including a group with learning disabilities (van Garderen & Montague, 2003).

Perhaps one reason why some people do less well in school mathematics and are more anxious about it is that their profile of cognitive abilities has strengths in areas that do not contribute significantly to maths performance and weaknesses in areas that are psychometrically crucial for it. This idea has been used to explain group differences such as those between males and females. It used to be claimed that males do consistently better than females in mathematics, but that is not the case (Lindberg et al., 2010). However, there is strong evidence that there are gender differences in MA and that these differences are more marked in secondary school students and adults than they are in primary school students; consistently girls and women show higher MA than boys and men (Carey et al., 2019). It had been argued that a key factor in these findings might be group differences in spatial ability (Maloney et al., 2012), but a study of undergraduate students by Sokolowski et al. (2019) has suggested that the key factor may be spatial anxiety (i.e. anxiety about situations requiring spatial mental manipulation) rather than spatial ability.

Steele (1997) has argued that another important factor in the attitudes of girls and women to what has been treated by society as a traditionally male domain is "stereotype threat". Where negative stereotypes about a group are widely held, members of the group can fear being reduced to that stereotype. "For those who identify with the domain to which the stereotype is relevant, this predicament can be self-threatening" (Steele, 1997, p. 614) Thus, while most students will experience some anxiety when taking a maths test, those who belong to groups with a negative stereotype will feel that more acutely because they will anticipate the possibility of confirming the negative group stereotype. Steele argued that this could increase their anxiety with the effect of them doing less well than they might otherwise have done.

Other researchers have challenged the assertion that women are more anxious about mathematics than men. For example, Ashcraft (2002) suggested that an artefact may have influenced the survey findings: women are more willing to disclose personal attitudes generally so that men who are equally anxious about the subject may not so readily acknowledge it in a survey. Perhaps too any gender differences in reactions to mathematics reflect more general gender differences in interests in dealing with people and living things (believed to be stronger in women) and interests in dealing with abstractions and non-living things (believed to be stronger in men). (Cf. Baron-Cohen's empathising/systemising theory of autism which is outlined in Chapter 8 on autism.) Jacobs et al. (2005) showed that parental beliefs and attitudes may be a factor in gender differences in interest in mathematics. But is this because the parents are reacting to different interests shown by girls and boys, or are they themselves behaving in a way that leads to these group differences? The data that is reported by that team does not make it possible to decide between these alternative possible explanations. It is clear that the overall picture is very complicated, and a psychometric analysis of group differences in mathematics abilities on its own offers only a partial account of these phenomena. If we are to fully understand maths anxiety, we need to give attention to the ways in which social expectations and conventions influence the perception of maths by different groups in society. At the same time we should also consider it at the "biosystem" level as conceived by Bronfenbrenner (see Chapter 4). That is the subject of the next section.

The neuropsychology of maths anxiety

A start has been made on investigating the neuropsychological footprint of these feelings and perceptions. In a functional MRI study of a group of 7–9-year-old children, Young et al. (2012) showed that MA was associated with hyperactivity in the right amygdala regions of the brain that have a significant role in processing negative emotions. Importantly, they also found that MA was associated with reduced activity in those prefrontal cortical regions that are thought to be involved in mathematical reasoning. A similar fMRI study of undergraduate students by Lyons and Beilock (2012) differentiated brain activity during a period when participants were anticipating a mathematics task from activity during the task itself. They found that students who had scored high on an MA scale showed heightened activity in the expected cortical regions when they received a cue that led them to expect a maths task rather than a language task. This change occurred before they embarked on the task itself.

What are the processes in mathematical thinking that are negatively affected by MA? Pizzie et al. (2020) built on the earlier work on working memory that was outlined in the section "Cognitive processing and maths anxiety" above. They hypothesised that other aspects of executive functioning besides working memory might be relevant to successful arithmetic processing and might be disrupted by a high level of focused anxiety. Specifically, they examined how undergraduate students who had measured low or high on a scale of MA coped with switching between different tasks. When switching from a control task, students with high MA were less engaged with the arithmetic tasks and hurried to complete them. The fMRI data indicated reduced neural activity in regions associated with arithmetic processing. At the neuropsychological level as well as the behavioural level high MA was associated with "disengagement and avoidance" (p. 323).

Mathematics in its cultural context

Mathematics is often seen as a universal language because it follows standard structural rules and refers to universal concepts in abstract terms. But, as we have seen, it is not possible to ignore the fact that mathematics is learned and practised in social settings. The ways in which people represent mathematical problems and the procedures that they use to tackle them will differ from one cultural context to another. These differences will have an impact on their sense of identity of themselves as a learner of mathematics (Abreu & Cline, 2003).

Home mathematics and school mathematics

In a multicultural society many children are likely to be exposed to different versions of mathematics as they move between home and school. How they negotiate the transition from one to another will be influenced by how their parents and teachers represent the value of each version. Thus Abreu and Cline (2003) reported that some immigrant parents taught their children multiplication tables by rote at home at a time when they were not being taught them in this way at school. The parents felt that otherwise their children would not be on the same wavelength as cousins and other members of the extended family "back home". Children may become anxious about school maths when they perceive a large gap between what is represented as maths at home and what they are required to learn at school. Thus in the same study Kashif (aged 7) who was born in the UK to parents who had come here from Pakistan was described by his teacher as lacking confidence in

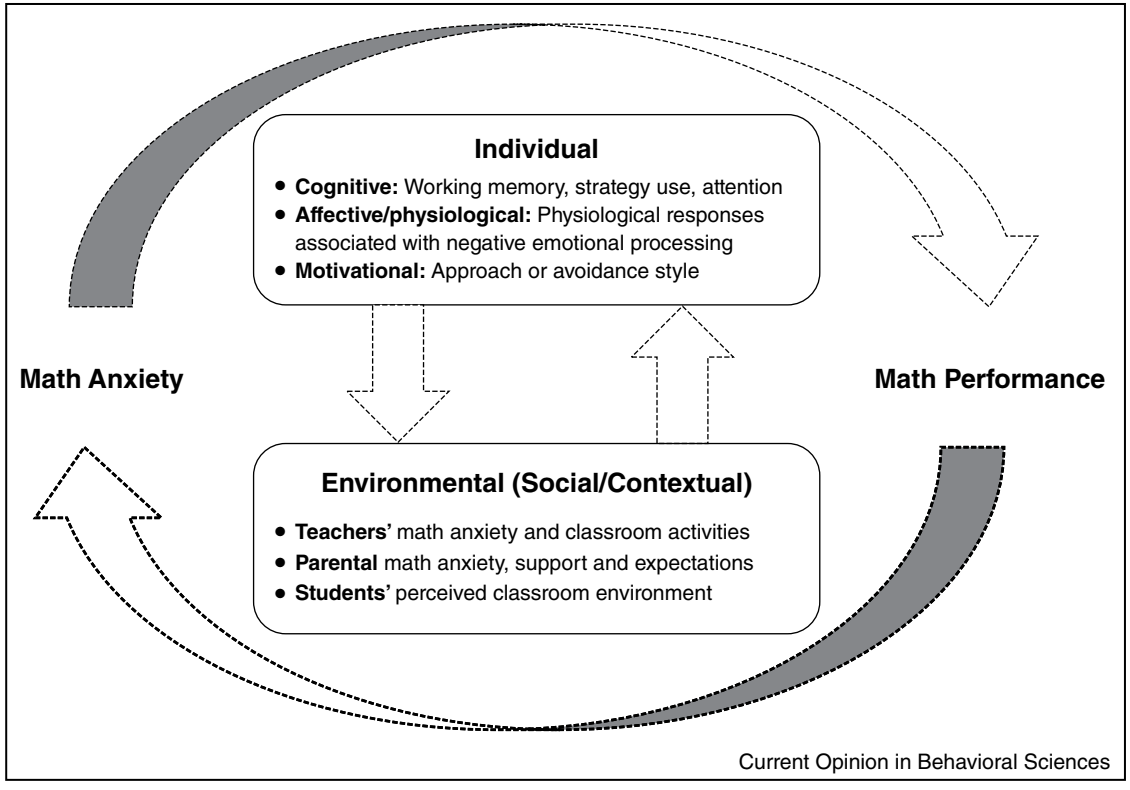
the subject in spite of receiving a good deal of help at home. During an interview with Kashif it became clear that he did not think his mother or sister did maths "properly", i.e. in the same way as the teacher, while an interview with his parents indicated that they did not appreciate that requiring him to learn different procedures for addition and subtraction might cause confusion. Meanwhile his teacher acknowledged that she had not "really met Kashif's mum". The poor communication between the various people in this situation appeared to be a crucial factor in maintaining Kashif's low confidence in maths (Abreu et al., 2002, pp. 135–138: Case Study 1). School inspectors have suggested that family learning initiatives that help parents to understand the culture of the classroom and the way their children are being taught can have a positive impact on performance (Ofsted, 2009), and specific local initiatives of this kind have been developed to meet the needs of parents from minority language communities (Driver, 2010).

Irrespective of cultural factors, another dimension of the support of maths learning at home is the attitudes that parents themselves have about their own understanding of maths. DiStefano et al. (2020) surveyed parents of children in Grades 1–6 across North America and found that those who scored more highly on a measure of anxiety about maths reported feeling a more negative emotional experience of the homework environment when helping their child with maths homework. Schaeffer et al. (2018) tackled this problem using an app on an iPad which presented the parents and children together with a daily maths story problem, such as a question about making whipped cream for a party. "If 1 cup of heavy cream makes 3 cups of whipped cream, how much whipped cream does 6 cups make?" Using a story reading app that had no maths questions as a control, the research team showed that using their *Bedtime Learning Together* app had a lasting impact on the children's maths achievement. They suggested that a key factor in this was a positive shift in the parents' expectations for their children's potential for success in maths and the value they placed on this success.

Comparative studies of mathematics learning across cultures and across languages

A series of international studies of attainment in mathematics have shown substantial differences between the standards achieved by children in different countries with children in some Asian countries (specifically China, Japan and Korea) consistently outperforming children from the USA, the UK and Western Europe (Jerrim & Choi, 2013). There are many possible cultural and social factors in these national differences including, for example, variation in teaching methods and teaching time as well as home-school support. One explanation that stimulated a good deal of research interest in the past focused on differences in the way numbers are expressed in different languages. It was suggested that problems may arise in some Western languages because of the irregular way in which the decimal system is represented in words (e.g. "eleven" and "twelve" in English as compared with what is translated as "ten one" and "ten two" in Chinese and Japanese). However, it is difficult to disentangle this factor from others when comparisons are made between diverse countries such as China and the US.

Dowker et al. (2008) investigated arithmetic performance and the understanding of two digit numbers in primary school children from different home language backgrounds within a single society – children from Welsh and English speaking families in south Wales in the first study and children from Tamil and English speaking families in London and Oxford in the second study. Welsh has a much more regular and consistent way of representing the number system than English, and Tamil is more consistent than English and less consistent than Welsh. Their findings suggested that the counting system can have some influence on arithmetical performance, even



Multiple individual and environmental factors account for the reciprocal relation between math anxiety and math performance.

Current Opinion in Behavioral Sciences 2016, 10:33–38 www.sciencedirect.com

Figure 7.1 A model of individual and environmental factors in maths
Source: Chang and Beilock (2016, p. 34)

when other educational factors are controlled, but its impact is limited to quite specific activities such as reading and comparing two-digit numbers. They concluded that differences in language cannot on their own account for large-scale global cross-national differences in arithmetic.

It can be assumed that the cultural and other factors that affect other aspects of mathematics will also have an influence on MA. For example, substantial differences in mathematical practices between home and school or the relative transparency and consistency of the linguistic system for representing numbers might each be expected to have an impact. The Programme for International Student Assessment (PISA)'s 2012 survey of 15-year-olds in over 60 countries provided preliminary evidence to support this (OECD, 2013). Internationally the problem of MA remains serious as students approach the end of their schooling: 30% reported that they feel helpless when doing mathematics problems (25% of boys and 35% of girls). At the individual student level and at the country level higher scores for MA were correlated with lower scores for maths performance. "On average across OECD countries, greater mathematics anxiety is associated with a decrease in performance of 34 score points – or the equivalent of almost an additional year of school" (p. 94). These stark findings emphasise the need for further research that will enable us to better understand how the processes that influence maths anxiety operate differentially across cultures and languages.

Chang and Beilock (2016) argued convincingly that "to lower math anxiety and reduce its relation to poor math performance, future interventions may benefit from focusing on both math-anxious individuals themselves and those around them" (p. 33). The evidence cited in this section suggests that the environmental factors in their model (see Figure 7.1) might usefully be expanded to include the cultural and societal pressures on the key players they focused on – the teachers, parents and students.

Conclusion: Addressing the problem of maths anxiety

If maths anxiety is understood as a personal phobia, it is likely that the treatment will be a psychologically based intervention with the individual who is anxious, such as systematic desensitisation or cognitive behaviour therapy. But if it is considered that anxieties develop because of the way the subject is taught or because of negative attitudes communicated by others, it seems possible to address the problem not by pathologising the individual learner and intervening with them personally but by adjusting how the subject is taught or presented to them. As in some other chapters in this book, this one has started with a problem that appears to be located at the individual level and has shown how the perspective of educational psychology now broadens out from that level and takes full account of the intellectual, social and cultural context in which the individual encounters mathematics. But a comprehensive account of the problem will not only adopt that broader perspective: it will also focus in on the level of cognitive processing. As we saw in the section "Cognitive processing and maths anxiety", adjusting the burden that a mathematics task places on working memory can reduce the impact of maths anxiety on performance.

Summary of the main issues addressed in this chapter

- Many people find mathematics intimidating at school, and some become anxious about it.
- One element in a strategy to reduce the development of maths anxiety at school may be to review teaching methods.

- There is evidence that anxiety disrupts cognitive processing in more difficult maths tasks more than it does in easier tasks. This may be because intrusive thoughts impact on anxious participants' effectiveness in maths to the degree that the maths task depends on working memory.
- A psychometric analysis of group differences in mathematics abilities on its own offers only a partial account of these differences.
- As the complex relationship between gender and maths anxiety illustrates, a full account of maths anxiety must take account of the influence of social expectations and conventions on the ways in which maths is perceived by different groups in society.
- Mathematics is often seen as a universal language because it follows standard structural rules and refers to universal concepts in abstract terms. But it is important to take account of the different ways in which people represent mathematical problems and the procedures that they use to tackle them in different cultural contexts.
- In a multicultural society some children may be exposed to different versions of mathematics as they move between home and school and may be helped when a deliberate effort is made to reduce that gap.
- Research has not confirmed suggestions that international differences in standards of attainment in maths may be caused by differences in the way that the number system is represented in different languages.
- Thus the perspective of educational psychology on maths anxiety takes account not only of patterns of cognitive processing at the individual level but also of the intellectual, social and cultural contexts in which the individual encounters mathematics.

Key concepts and terms

Maths anxiety; teacher anxiety; conceptual understanding and procedural knowledge in mathematics; traditional and alternative methods of teaching maths; working memory; psychometric analysis; mathematical resilience; negative group stereotype; gender differences; differences between "home maths" and "school maths"; multi-level explanations of maths anxiety.

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Sample essay titles

1 The head of the maths department in a large secondary school has asked your advice as a psychologist on how to reduce the incidence of anxiety in maths lessons. Outline the advice you would give her and explain your reasons for it.
2 What part does anxiety play in gender differences in mathematics attainment at school?
3 What psychological processes appear to be involved when anxiety disrupts mathematics performance?
4 What would you expect to be the implications for educational psychologists of recent research on maths anxiety?

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8 Educating children with autism

What use is psychological theory and research?

Susan Birch and Norah Frederickson

Chapter summary

In this chapter we begin by asking 'what is autism'; discussing terminology, describing and illustrating key characteristics and reflecting on how conceptualisations have changed. We will consider what might cause autism, recognising in particular the role of cognitive-level explanations. Three well-known, cognitive theories of autism are introduced: theory of mind, executive dysfunction and central coherence. The double empathy theory which takes a broader, neurodivergent perspective is also briefly highlighted. Finally, we examine the role that psychological theory and research have played so far in developing approaches to the education of children with autism. Two distinct strands of influence are discussed, one that draws on behavioural psychology and takes no specific account of diagnostic features and one that draws directly on cognitive theories. Examples of approaches to support children with autism are described, together with ethical and methodological issues relating to their aims, implementation and evaluation.

Learning outcomes

When you have studied this chapter you should be able to:

1. Provide an overview of what autism is and understand that there are a range of perspectives.
2. Explain three important cognitive theories of autism and highlight some of the research that has been used to investigate them.
3. Evaluate the theoretical and research bases of examples of educational approaches that might support children with autism.

What is autism?

Autism was first described by Kanner, an American psychiatrist, in 1943, through the presentation of a number of case studies of children who shared certain characteristics: 'autistic aloneness' (p. 242) and 'desire for the maintenance of sameness' (p. 245). In addition, Kanner identified that some of these children had 'islets of ability', such as phenomenal memory for poems or names and precise recall of complex patterns. The difficulties experienced by children with autism were later

DOI: 10.4324/9780429322815-10

investigated by Wing and Gould (1979) who described a 'triad of impairments': in reciprocal social interaction, verbal and non-verbal communication and imagination. The triad was subsequently reflected in major international diagnostic classification systems, the DSM-IV-TR (American Psychiatric Association (APA), 2000) and ICD-10 (World Health Organisation (WHO), 1995).

Criteria were also listed which described Asperger syndrome, a disorder named after the Austrian paediatrician who first described it in 1944. Children diagnosed with Asperger syndrome showed similar difficulties with social interaction and restricted repetitive behaviours but did not have the same difficulties with language and aspects of communication. However, the validity of drawing a categorical distinction between Asperger syndrome and what was known as high functioning autism was questioned as children with these diagnoses become increasingly difficult to distinguish. Accordingly, a dimensional approach involving a continuum of 'autistic propensity' (Rutter, 1999) gained acceptance. In line with this, the latest revisions of the international diagnostic classification systems, DSM-5 (APA, 2013) and ICD 11 (WHO, 2019) moved away from delineating a number of separate disorders and adopted the umbrella term 'autism spectrum disorder', referring to two domains of behaviour: difficulties in social communication and social interaction, and unusually restricted repetitive behaviours and interests.

Here is a summary of the behaviours included in the diagnostic indicators for autism within DSM-5:

A Persistent deficits in social communication and social interaction across multiple contexts: in social-emotional reciprocity, nonverbal communicative behaviors used for social interaction or developing, maintaining, and understanding relationships.

B Restricted, repetitive patterns of behavior, interests, or activities: stereotyped or repetitive motor movements, use of objects, or speech; insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behaviour; highly restricted, fixated interests that are abnormal in intensity or focus and hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment.

ACTIVITY BOX 8.1

Interview with class teacher of Alex, aged 6 years 6 months

Read the following description of Alex and identify which of the indicators of autism are present. Make a note of any other behaviours the class teacher identifies as unusual that are not included in the diagnostic indicators.

> Alex has a wide vocabulary. However, his use of language tends to focus on factual information and areas of special interest, the grammar and syntax being reminiscent of stilted adult language rather than that of a young boy. He does not take turns well in conversation, tending to speak on his own terms about subjects of interest to him, usually dinosaurs or buses – he knows all the bus routes and route numbers in his area. He does not respond well to group directions, he does not understand in the same way as other children, he takes things more literally. For example, if you say 'sit down', he will sit down where he is. You need to say 'go to table 4 and sit down on a chair'.

His social interactions are on his own terms. Sometimes he's oblivious to the other children, and then at other times he wants to have some kind of interaction but the interaction is totally inappropriate, so if he's sitting on the floor he will grab another child and pull the child to him, so that that child is sitting near him because that's the way he sees having a friend sitting by him. He will also grab equipment he wants rather than ask for it. If he wants another child's attention he will grab them and physically try to get them to do as he wants, rather than talk to them. He can become distressed if others do not conform to his expectations or understand what he wants.

Alex finds PE difficult and can become particularly challenging in his behaviour, shrieking and screaming so that he has to be taken out of the hall. In the classroom he will only do a written task if he can do it on a whiteboard, he will not use a pencil and write on paper. He'll start the task and the first sentence will be one that he's been asked to do and then it will deteriorate and he'll just end up writing lists, such as the names of the children in his class, bus numbers or the names of countries. He likes all sorts of lists, particularly the names of people, so he can tell you the full name of every child in the class, and some of the children have got four or five names, and the spelling will be correct – this is really amazing!

(Adapted from Dunsmuir & Frederickson, 2005)

The recognition of autism as a dimensional construct rather than as a discrete phenomenon is key to changes in conceptualising autism. Autistic traits are now understood as being normally distributed in the general population, as illustrated in research using tools such as the Autism Spectrum Quotient (AQ, Baron-Cohen et al., 2001). The term 'Broader Autistic Phenotype' (Sucksmith et al., 2011) has been used to describe a pattern of skills or traits often found in relatives of people with autism, but at a sub-clinical level. These include patterns of social skills, communication traits and personality features. Happé and Frith (2020) state that 'there are many different biological routes to autism, many different aetiologies' (p. 225) and some researchers use the term autistic spectrum conditions (ASCs), to highlight this variability.

Autism is also increasingly being understood as a difference, rather than as a disorder. People with autism and other neurodevelopmental differences may consider themselves neurodivergent, as opposed to being neurotypical. Fletcher-Watson and Happé (2019) refer to these differences as 'present(ing) advantages and disadvantages in relation to neurotypical social norms and expectations' (p. 84). Baron-Cohen (2017) also argues against the use of the term 'disorder', suggesting that 'disability' is preferable in highlighting the disabling impact of society on an individual with autism, designed as it is around the needs of the neurotypical population. He suggests that use of the term also highlights the need for adjustments to be made, in line with the social model of disability (Shakespeare, 2006). As we will see later, how we understand autism has implications for how we think about intervention and even for our understanding of key theories relating to autism.

A number of researchers, both autistic and non-autistic, argue that people with autism should be directly involved in research, as researchers, as participants, and in setting future agendas (Pellicano, 2020; Pellicano & den Houting, 2022). Kenny et al. (2016) reported a participatory study involving the use of a survey to ask autistic adults, parents of autistic children, professionals and friends about the language used to describe autism. The findings highlight that a range of terms are preferred by

different community members. They discuss issues regarding, for example, 'people first' language ('autistic child') and 'disability first' language ('child with autism'). In this chapter we will refer to 'autism' and will primarily retain 'person first language' although acknowledging, respectfully, that for some members of the autistic community, this may not be their preferred terminology.

What does research tell us?

A consistent finding in the research to date is that autism is more common in males, with a ratio of around 4:1 (e.g. see Fombonne et al., 2021). Baron-Cohen et al. (2011) and more recently Hull et al. (2017) explore possible reasons for this, including that autism is more difficult to diagnose in females using current assessment tools and procedures, as females may present with a different or more subtle profile across both social communication and interaction, and restricted and repetitive patterns of behaviour (e.g. see McFayden et al., 2020). Hull et al. also discuss potential biases in assessment whereby females presenting with similar symptoms are less likely to be diagnosed with autism. A behaviour that has been the focus of recent research is 'camouflaging', described by Hull et al. (2017) as 'hiding behaviours associated with their ASC, using explicit techniques to appear socially competent, and finding ways to prevent others from seeing their social difficulties' (pp. 2249–2250). There has been a suggestion that females with autism show more camouflaging or masking behaviours than males with autism (e.g. Hull, Lai et al., 2020), and so their difficulties may not be identified as readily or may be misunderstood and labelled. The need for a 'female autistic phenotype' has been put forward, as discussed by Hull, Petrides et al. (2020), although Fombonne (2020a) questions the need for this. What is clear is that the research focusing on autism in girls has had a significant impact on practice. Schools and EPs are increasingly aware of the need to think carefully with girls and their families when they are experiencing challenges relating to differences in their social behaviours and inclusion, appreciating their importance, particularly in light of research illustrating a detrimental impact for young people's mental health.

Autism: Other difficulties and strengths

Many early studies reported that approximately 75% of children with autism had moderate or severe learning difficulties (defined as IQ scores below 70), as well as autism. However, more recent population studies have reported much lower percentages with only around half of children with autism having this level of learning difficulties. For example, Charman et al. (2011) identified in their sample of 156 children that only 55.2% had an IQ below 70; 25.4% were of average intelligence and 2.7% were of above average intelligence. Given the sampling procedure that was used in this study, the authors suggest that the estimate of 45% of children having an IQ of 70 or above should be viewed as a minimum. More recently, Fombonne et al. (2021) found a median proportion of children with intellectual disability of 46.75% across 141 surveys carried out in 141 countries. The change in the proportion of children found to have significant learning difficulties is thought to be due to the changes in diagnostic criteria as discussed previously.

Particular profiles of performance on cognitive tests have also been suggested. Charman et al. (2011) examined whether children with a diagnosis of autism have a higher Performance IQ (PIQ) than Verbal IQ (VIQ). They examined profiles for a sample of 127 children who were able to complete 10 WISC-III-UK subtests and found that the majority of the children did not show a clinically significant level of discrepancy between PIQ and VIQ. Other specific profiles which have

been explored include high performance on the WISC Block Design with low performance on the Coding task (Takayanagi et al., 2021). However, taking a different perspective, Skuse (2020) highlights the 'unpredictable and highly variable' (p. 723) cognitive profile of many individuals with autism. He therefore argues that the careful assessment of an individual's profile is crucial to ensure progress in education and in everyday life. Most significant perhaps is the finding in Charman et al.'s (2011) study that overall adaptive outcome (as assessed by the Vineland Adaptive Behaviour Scale – a measure of how a child functions in everyday life) was significantly lower than IQ – most notably in the high IQ groups. Children with autism were most behind their same age peers in the area of Daily Living Skills, suggesting that children's 'ability to cope in the everyday world… can be considerably impaired even for the most "high functioning" individual' (p. 625). The IQ-adaptive functioning profiles of typically developing and autistic young people were also explored by McQuaid et al. (2021). Overall, they found a similar profile, and this was consistent across both males and females with autism although they also acknowledge issues relating to sampling which are likely to be applicable to other studies too. For example, in considering the experiences of girls with autism, the diagnostic tools used may have introduced bias through identifying girls who more closely resembled a typical male autistic profile.

Children with autism are more likely than typically developing children to have special talents or 'savant' skills. Meilleur et al. (2015) reported skills in memory, visuo-spatial abilities, calculation, drawing or music. We will consider these special talents in more detail later in the chapter when we review the role of psychological theory.

What causes autism?

Thapar and Rutter (2020) provide a review of genetic advances in understanding autism, concluding that it is one of the most highly heritable disorders. They cite Tick et al. (2016) whose meta-analysis of published twin studies reported a heritability estimate for autism of 64–91%. Fletcher-Watson and Happé (2019) provide a succinct overview of this complex field, highlighting that autism is likely to be 'due to a mixture of common inherited genetic variation across many genes each of small effect and rare mutations of large impact' (p. 53). Rutter (2014) drew attention to the findings of research that suggested that autism is multifactorial in nature and that 'there must be non-genetic risk factors that are causally implicated' (p. 1753). Environmental influences have been identified as being potentially important, possibly acting through an interaction with genetic susceptibility involving several different genes, leading to a complex set of aetiological processes (Ronald & Hoekstra, 2011), triggering autism or affecting the severity of its manifestation. Kim et al. (2019) report an umbrella review which highlights a number of potential environmental risk factors, including maternal age and hypertension. However, commenting on the review, Lord (2019) highlights the need to interpret findings in light of the heterogeneity of autism and the potential risk of publication bias, whereby research reporting correlations is more likely to be published than research reporting nil findings.

If autism is understood as a biologically based disorder that is strongly genetically influenced, one puzzle is the rapid increase in prevalence that has been reported. Fombonne et al. (2021) reviewed 141 published studies carried out across 37 countries (26 high income and 11 middle income) published between 1966 and 2020. They identified a significant increase in the prevalence of autism over time. Fombonne (2020b) highlights that broadening of understanding, changes to diagnostic classifications and increased awareness among practitioners, as well as improved identification and assessment, are all likely to have played a role in the observed increase.

So far, we have considered the behaviours that lead to a diagnosis of autism and have highlighted some possible biological causes. Fletcher-Watson and Happé (2019) highlight that cognitive variables have a crucial explanatory role in understanding autism, mediating between the biological and behavioural levels of explanation. They provide an excellent overview of cognitive theories, structuring the field through considering:

1 earlier primary deficit models in which one factor was sought which was missing for people with autism (e.g. theory of mind, executive functioning)
2 developmental theories whereby small differences and interactions with the environment lead to a different developmental pathway
3 more general information processing theories rather than theories focusing on social cognition (e.g. central coherence, systemising-empathising and Bayesian theories).

Three prominent cognitive theories which have been particularly influential in educational psychology practice, involving theory of mind, executive dysfunction and central coherence, will be discussed here. The first two could be seen to sit within Fletcher-Watson and Happé's description of 'earlier primary deficit (or difference) models' whereas the third could be seen as a more general information-processing theory, fitting with conceptualisations of difference. It is increasingly recognised however, that no one cognitive theory of autism provides adequate explanation of its heterogeneity (Charman et al., 2011).

Theory of mind

Baron-Cohen et al. (1985) suggested that many of the characteristics of autism stem from an impairment in the ability to 'mind-read' or attribute mental states to other people in order to predict their behaviour. This 'mentalising' ability allows immediate implicit attribution of beliefs and motives to others. In order to test children's understanding of others' beliefs about a situation, as distinct from their understanding of the physical situation, Wimmer and Perner (1983) developed a method for inducing false beliefs. In their investigations of the development of theory of mind in young children, they found that from about four years of age children were able to understand that others could have a false belief, and to use that understanding to predict behaviour. Baron-Cohen et al. adapted Wimmer and Perner's method in the Sally-Ann experiment described in the Methods Box 8.1 below.

The interpretation of false belief task failure by children with autism was subjected to considerable investigation. For example, Leslie and Frith (1988) explored whether children with autism who lack age appropriate pretend play, but who do not have intellectual disabilities or learning difficulties, fail the Sally-Ann task when asked to attribute mental states to two plastic dolls, but not when real people were involved. They designed a scenario that involved two adults; one hid a coin and then left the room while the other moved the coin in a conspiratorial manner and hid it elsewhere. In this experiment 70% of the children with autism said that when the first adult returned they would look in the new location for the coin. When asked questions the children with autism incorrectly answered that the first adult would think and know that the coin was in the new location, even though they correctly answered that the first adult had not seen the coin moved.

Subsequent studies confirmed that many children with autism experience disproportionate difficulties with mentalising (see Frith, 2003). However, they can handle false representations of the physical world. When a scene is photographed (e.g. a bedroom where a cat is sitting on a chair) and then re-arranged (the cat is moved from the chair to the bed), children with autism have no relative difficulty in correctly identifying where the cat will be in the photograph (Leslie & Thaiss, 1992).

METHODS BOX 8.1

The Sally-Ann False Belief Task

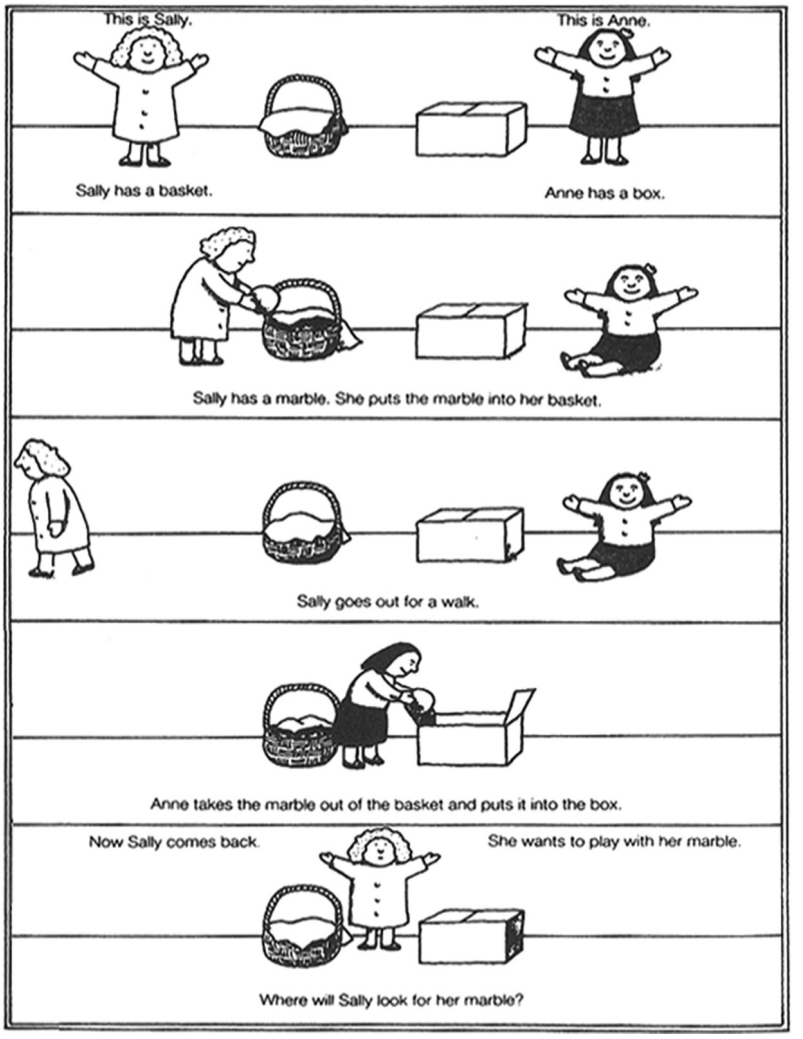

Figure 8.1 The Sally-Ann False Belief Task
Source: Used with permission of John Wiley and sons, from Autism : Explaining the Enigma, Frith, U., 2nd edition, 2003; permission conveyed through Copyright Clearance Center, Inc.

In the Sally-Ann experiment two dolls are used to act out the story shown in Figure 8.1. Children who are able to mentalise will say that when Sally comes back from her walk she will look in the basket for her marble because they will understand that she has not seen Ann

move it and so will still believe that it is there. Children who are unable to understand that others have different beliefs from themselves will say that Sally will look in the box because that is where they know it is.

Three groups of children, all with a mental age above three years, took part in the Baron-Cohen et al. (1985) experiment: children with autism, children with Down syndrome and typically developing children. Most of the children with autism answered incorrectly while most of the children in the other two groups gave the right answer. The inclusion in the study of a group of children with Down syndrome showed that the failure on this task of children with autism could not be attributed to learning difficulties more generally. In addition, all children correctly answered two control questions 'Where is the marble really?' and 'Where was the marble in the beginning?' demonstrating understanding of the change in the physical location of the marble during the story.

Source: Frith (2003)

However, not all children with autism fail theory of mind tests, and their relative difficulties on tasks that involve mentalising tend to diminish with age. Having said that, more complex tasks can continue to present difficulties and brain imaging studies conducted with adults who have autism without learning difficulties indicate differences from neurotypical adults in the pattern of brain activation elicited by tasks involving mentalising. Frith (2012) suggests that many adults with autism can learn strategies to compensate for difficulties in mentalising, e.g. through applying explicit procedures and rules.

Executive dysfunctions

Executive functions refer to the abilities needed to prepare for and carry out complex behaviour, including planning, prioritising, monitoring several tasks and switching between them, inhibiting inappropriate impulsive actions, generating novel approaches to a situation and weighing consequences for alternative courses of action. A common feature of executive function behaviours is the ability to disengage from the immediate environment or external context and direct behaviour instead by mental/internal processes (Shallice, 1998).

Initially, it was proposed that executive functioning difficulties, or executive dysfunction, might explain the repetitive behaviours, activities or interests seen in children with autism (Ozonoff, 1997). Children with autism typically score well below age norms on tests of executive function such as the Wisconsin Card Sorting Test. On this test children are initially asked to sort cards and are given feedback on whether they are sorting correctly according to an undisclosed rule (e.g. number, shape, colour). Once the child has achieved ten correct card sorts the sorting rule is suddenly changed without comment. The number of perseverative responses is noted, that is responses that use the old sorting rule despite feedback that it is wrong.

Hughes (2011) presents a review of the research around the development of executive functions, including in relation to research around autism. She highlights not only the evidence for associations between impaired inhibitory control and high-level repetitive behaviours, but also

that there is evidence suggesting that deficits in pretend play may also link with executive function theories, reflecting an impairment in generativity, rather than necessarily in the ability to understand mental states (Jarrold et al., 2010, cited in Hughes, 2011). She also cites the work of Pellicano (2010), exploring the importance of early executive function skills in the developmental trajectory of theory of mind skills in children with autism.

In considering hypotheses around the 'fractionation of autism', Brunsdon and Happé (2014) highlight that existing evidence appears to suggest 'significant relations' between theory of mind and executive functioning (p. 26) in terms of performance on cognitive tasks. In their review they also consider evidence put forward by White (2013) for the opposite position to that of Pellicano (2010) whereby it is in fact mentalising difficulties that underlie the weaker performance of children with autism on executive function tasks through a difficulty in 'inferring implicit information', for example in respect of having an understanding of an experimenter's expectations about a task.

Both theory of mind and executive functioning have also been suggested as contributing to the strengths or savant skills of some people with autism. Happé (2018) suggests that people with autism, through difficulties mentalising, may be more likely to identify novel and creative perspectives when looking at things. She also suggests that executive dysfunction, through leading to a preference for sameness and repetition, may contribute to a honing of skills and expertise through practice in particular focused areas. However, it was the theory of 'weak central coherence' developed through observations of the superior 'eye for detail' of people with autism which was first seen as key in understanding strengths.

Central coherence

In typically developing individuals there is an in-built propensity to integrate information, form coherence over a wide range of stimuli and to generalise over as wide a range of contexts as possible. People will automatically seek to make 'sense' from perceiving connections and meaningful links from meaningless materials.

Frith (1989) suggested that this capacity for coherence is diminished in children with autism and that this is sometimes relatively advantageous. For example, Shah and Frith (1993) sought to explain why children with autism tend to show relatively better performance on the Block Design subtest of the WISC. This involves assembling four or nine cubes so that the top surfaces match a printed pattern. It was found that segmenting the pattern into single cube components greatly helped both typically developing children and those with learning difficulties. However, the performance of children with autism did not improve, suggesting that they were already well able to overcome the strong drive to cohesion experienced by the other children.

Happé et al. (2001) suggest while mean scores on tests of central coherence will be lower in people with autism than in those without, central coherence may be a cognitive or information-processing style that varies in the typical population and among people with autism. Using laboratory tasks such as the embedded figures task (which involves detecting a hidden figure within a larger meaningful line drawing, see Figure 8.2) they found a higher rate of weak central coherence in parents of boys who have autism than in parents of typically developing boys or of boys with a diagnosis of dyslexia. There were parallel differences in everyday life, for example involving special interests, attention to detail, insistence on routines and intolerance to change (Briskman et al., 2001).

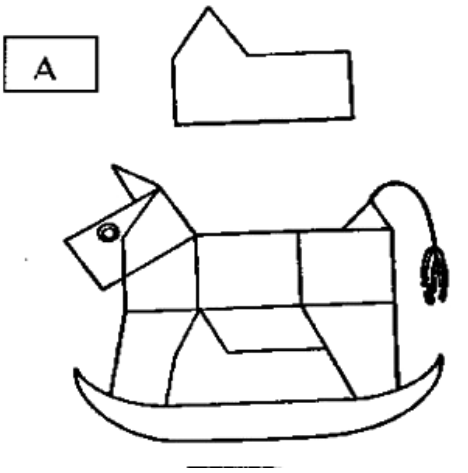

Figure 8.2 Sample item from the Children's Embedded Figures Test (Witkins et al., 1971) – 'house' embedded in 'rocking horse'

Baron-Cohen (2002) reported similar patterns of findings, although the labelling of the hypothesised cognitive styles was slightly different. Baron-Cohen distinguished a *systemising* from an *empathising* information processing style and defined these in terms of orientation to and understanding of physical as opposed to psychological information about the world. Systemising is defined as 'a drive to understand and derive rules about a system' (Grove et al., 2013, p. 601) which is thought to enable individuals to be able to predict how a system may behave and hence to have a sense of control over that system. It has been suggested that people with autism are more likely to be identified as systemisers or hyper-systemisers and that there is also a link between a systemising profile, talent and invention, particularly in fields relating to science, technology, engineering and mathematics (Baron-Cohen, 2020).

Before continuing, it is important to highlight a critique of cognitive theories of autism and a theory put forward by Damian Milton called the 'double empathy problem' (Milton, 2012). Milton discusses that the challenges autistic people face socially within society should not be understood as being caused solely by within-person factors arising, for example, due to a deficit in theory of mind. Milton suggests that the 'social deficits' of autism are due to a lack of insight and understanding on the part of non-autistic individuals. They arise due to a problem within the social interaction between two different groups of people. 'Autistic people often lack insight about non-AS perceptions and culture, yet it is equally the case that non-AS people lack insight into the minds and culture of "autistic people"' (p. 886). This theory could have implications for how previous research has been conducted (for example, how tests and assessments have been designed) and how findings might be understood, as well as for intervention recommendations. More recently, Holt et al. (2022) have suggested that the 'theory of mind deficit' perspective of autism can be harmful to autistic people through reinforcing stereotypes and acting to further exclude and discriminate against them. The involvement of autistic people in research aims to ensure that work carried out includes their perspectives and has direct benefit for the community and for wider society; for example, promoting research relating to education, services and support (Pellicano & den Houting, 2022).

How has psychology informed educational approaches?

Psychological theory and research have had a significant impact on the education of children with autism and on the work of EPs using a problem analysis model, as outlined in Chapter 1. Here an understanding of psychological theory helps guide appropriate assessment, case formulation, and the design of interventions for individual children. Similarly, theory and research are valuable for EPs providing advice to settings or local authorities about the potential effectiveness of approaches for improving the educational experiences of children with autism. A number of systematic reviews, meta-analyses and umbrella reviews have been published which provide detailed analyses regarding the current evidence base (e.g. Hume et al., 2021; Sandbank et al., 2020; Trembath et al., 2021) which may prove helpful for this purpose.

However, we also need to consider how shifts in our understanding of autism have impacted our thinking around intervention. When autism was conceptualised as a disorder and key theories focused on deficits, intervention attempted to solve or cure autism, to make people with autism more like neurotypical people. The emphasis now, however, is on helping autistic people to improve and strengthen their skills to support their functioning in society and to adapt the environment, including social and physical features, to ensure they are autism friendly, for example through increasing awareness and understanding of autism. The emphasis has therefore shifted and a more nuanced approach is needed, taking on board the views of the clients and, where relevant, their families. Milton (2017), for example, drew attention to feedback regarding autistic children's concerns. Being bullied (see Chapter 11) and challenges managing school environments 'such as navigating crowds and having sufficient personal space' were both highlighted as key.

In the section that follows, two distinct strands of theoretical influence are discussed. The first strand draws on behavioural psychology and takes no account of characteristic features of autism. By contrast, the second draws directly on cognitive theories of autism.

What does behavioural psychology contribute?

Developed by Lovaas in the 1960s, the applied behavioural analysis (ABA) approach, a form of early intensive behavioural intervention, was successful in producing empirically validated improvements in language, learning and social behaviour of children with autism, where previous approaches had failed. The approach involved highly structured operant learning techniques such as discrete trial training and task analysis. Task analysis was used to develop a sequence of discrete responses that could be trained through a series of drills. A drill typically consisted of a trainer-provided antecedent (e.g. the instruction 'sit down'), a response from the child and a consequence rewarding a correct response (tangible reinforcers such as small bites of food or play with a favourite toy were often used initially, but paired with verbal praise so that the tangible reward could gradually be faded). Emphasis was placed on providing physical or verbal prompts to maximise successful performance and on shaping desired behaviour through rewarding successive approximations. An incorrect response might be ignored, or the child might be told 'no'.

Designed for children aged 2–4 years, ABA programmes were carried out at home on a 1:1 basis with the child by trained parents or other personnel. Because of their understanding of

behavioural principles, psychology students were often encouraged to apply for training and part-time positions as ABA therapists. The programmes were intensive. Initial studies indicated 40 hours per week as desirable, while later studies reported 27 hours per week over a period of three years together with planned integration experiences in a nursery school in the second and third year where taught skills could be generalised. Although criticised for placing unrealistic demands on parents, initial efficacy research highlighted the importance of programme intensity. Lovaas (1987) reported that children with autism who received ABA for 40 hours a week achieved significantly better outcomes than either those who received 10 hours a week or those who received a different, non-specified treatment. A follow-up study suggested that there was good maintenance of treatment effects (McEachin et al., 1993).

However, a number of controversies have surrounded the Lovaas approach and its evaluation. One, relating to the use of punishment when the approach was first introduced, is considered in Ethics Box 8.1. The other that will be considered here is the strong claim by Lovaas that some 40% of children achieve normal functioning as a result of the programme and that this 'recovery' from autism calls into question the existence of autism. Before we consider methodological challenges to this position, it is worth reflecting again on how the changes discussed above in the conceptualisation of autism relate here. ABA approaches focused on trying to make children with autism more like their neurotypical peers, i.e. taking a deficit approach, rather than appreciating their individual strengths and differences. (See Sandoval-Norton & Shkedy, 2019, for a discussion.)

A number of methodological critiques of the evaluative research by Lovaas and his colleagues have been published (Gresham & MacMillan, 1997b; Rutter, 1996). Gresham and MacMillan (1997a) challenged the criteria used to judge typical functioning (IQ and educational placement) on the basis that these are gross measures that do not necessarily reflect improvements in the characteristic areas of difficulty in autism. In addition, they may reflect the operation of other, uncontrolled factors, for example, educational placement will be heavily influenced by the policy of individual school districts. Gresham and MacMillan (1997a) also raised concerns about participant selection and representativeness, substantial differences across groups in the time periods between assessments, the matching of the groups and the absence of random assignment. Lack of randomisation and small sample size continue to limit the quality of the evidence base in this area, with a Cochrane systematic review (Reichow et al., 2018) concluding that the evidence for early intensive behavioural intervention being an effective behavioural treatment for some children with autism is weak.

ETHICS BOX 8.1

When first introduced, aversive consequences were employed in the ABA programmes pioneered by Lovaas with children who have autism. These generally consisted of a shouted 'No!' or a slap on the leg. It appears that the aversives that were advocated were considered to have an important effect in achieving desired outcomes for the children. 'Introduction of contingent aversives resulted in a sudden and stable reduction in the inappropriate behaviors and a sudden and stable increase in appropriate behaviors' (Lovaas, 1987, p. 7).

Aversives are no longer used in ABA programmes because of changes in ethical and legal frameworks, illustrated by the following extracts from professional guidelines for EPs. Read these and consider whether the use of physical punishment could ever be justified. What arguments could be made, both for and against? Is there additional research evidence you would want to have in making your decision? Do you consider research evidence relevant in resolving ethical dilemmas?

British Psychological Society *Code of Ethics and Conduct*

Standard of responsibility

> Psychologists value their responsibilities to persons and peoples, to the general public, and to the profession and science of Psychology, including the avoidance of harm and the prevention of misuse or abuse of their contribution to society. In applying these values, psychologists should consider: (i) Professional accountability; (ii) Responsible use of their knowledge and skills; (iii) Respect for the welfare of human, non-humans and the living world; (iv) Potentially competing duties.
>
> (British Psychological Society, 2021, p. 7)

The Health and Care Professions Council: Standards of conduct, performance and ethics

> 1.1 You must treat service users and carers as individuals, respecting their privacy and dignity.
>
> 6.1 You must take all reasonable steps to reduce the risk of harm to service users, carers and colleagues as far as possible.
>
> 6.2 You must not do anything, or allow someone else to do anything, which could put the health or safety of a service user, carer or colleague at unacceptable risk.
>
> (Health and Care Professions Council, 2016)

Schreibman et al. (2015) describe how newer approaches drawing on behavioural psychology began to take account of developmental and cognitive psychology. They discussed Naturalistic Developmental Behavioural Interventions (NDBIs), which take place in a child's everyday context, where they are actively engaged in the learning process, and where skills identified as relevant to social competence and communication are targeted in a developmental sequence using natural and child-preferred rewards within a context of rich social interaction. A systematic review and meta-analysis carried out by Sandbank et al. (2020) highlighted the effectiveness of NDBIs, as well as the possibility that they may be preferred by families. In a subsequent discussion paper, Sandbank et al. (2021) also questioned previous positions regarding the need for more intensive and higher doses of intervention for increased effectiveness, suggesting that interventions should be tailored based on the identified needs of the children and families' preferences.

One of the interventions reviewed by Sandbank et al. (2021), widely used in supporting children and young people with autism, is the TEACCH approach (Treatment and Education of Autistic and Communication Handicapped Children; Schopler & Mesibov, 1995). Originally developed in 1972, TEACCH uses a highly structured, visually based approach in organising the classroom environment and learning materials. Although derived from a study of the behaviour of children with autism in different types of environments, rather than directly from cognitive theories of autism, the approach is thought to be of help to people with executive dysfunctions or weak central coherence (Tutt et al., 2006). Key features of the approach include: explicit prompts, signals to initiate as well as to finish activities, reminder notes, a transparently structured environment, use of visual timetables setting out sequences of activities across a whole day or week and advance preparation for any changes in routine. TEACCH strategies have been used not only in home and school-based settings, but they have also been adapted for use in a range of other settings, including in early intervention programmes, residential programmes, social groups, individual and group counselling sessions, medical, dental, and therapy appointments and sheltered employment sites (Mesibov & Shea, 2011). Although, as above, elements of the approach are widely used in educational settings, the evidence for its effectiveness is not strong (Trembath et al., 2021).

What has cognitive psychology specifically contributed?

The second strand of psychological theory and research that has been influential in the education of children with autism is that relating to cognitive theories of autism. Historically, research around theory of mind and the implications of difficulties with mentalisation changed practitioners' perspectives on the social problems experienced by children with autism and led to the development of new intervention approaches. A number of programmes were developed to teach perspective taking or 'mind-reading' skills. Hadwin et al. (1996, 1997) focused on the teaching of important general principles, for example perception causes knowledge: a person will know x if they saw or heard about it – Little Red Riding Hood doesn't know the wolf is in her grandmother's house because she didn't see him go there. Thirty children with autism aged 4–13 years received intensive training involving many examples and different approaches (e.g. picture stories, puppet stories, role play). The results showed that it was possible to teach children with autism to pass tasks that assess mental state understanding. However, there was no evidence of positive effects on spontaneous pretend play or conversational skills, leading the authors to conclude that the children appeared to be passing tasks by learning specific rules to apply, rather than developing any genuine understanding of the concepts involved.

Hoddenbach et al. (2012) provide an overview of more recent studies exploring the effectiveness of social skills interventions focusing specifically on theory of mind (e.g. Begeer et al., 2011). In line with the findings above, they suggest that although interventions appear to have an impact on theory of mind understanding, there appears to be little impact on aspects of everyday functioning relating to social behaviours, as assessed by teachers or parents. de Veld et al. (2021) considered whether having siblings and/or an older sibling might impact on a theory of mind intervention. They suggested that although having siblings did not lead to an improvement in outcomes relating to theory of mind knowledge or autistic traits, improvements in social cognition and behaviour were identified, which were hypothesised to be linked to opportunities to practice. This is potentially an interesting finding when considering the importance of the peer group, as well as sibling relationships.

In contrast to attempts to teach theory of mind abilities, the Social Stories™ approach, developed by Carol Gray (Gray, 1998; Howley & Arnold, 2005) draws on psychological theory and research related to both theory of mind and central coherence in providing compensatory information to assist individuals with autism to make sense of specific social situations. Specially constructed short, personalised stories, usually written by teachers, speech therapists and parents are used to teach children with autism how to manage their own behaviour during a social situation that they may find challenging or confusing. The stories are designed to provide 'missing information' about the perspectives of others, relevant social cues and expected social behaviour in a clear description of where the activity will take place, when it will occur, who will be participating and what will happen.

Reviews of research on the effectiveness of Social Stories (Ali & Frederickson, 2006; Qi et al., 2018) have concluded that the approach shows promise. However, a number of methodological issues have been raised, including inadequate participant description, the relatively modest extent of some of the changes in targeted behaviours, the frequent use of other interventions alongside Social Stories and the predominant use of single case experimental designs (e.g. see Camilleri et al., 2021). Single case experimental designs (as reviewed in Chapter 2) have particular strengths, particularly in research areas where there is substantial participant heterogeneity. However, they also have weaknesses in terms of the adequacy of controls available for threats to internal validity such as maturation, placebo effects or experimenter artifacts (Rosnow & Rosenthal, 2005). Karkhaneh et al. (2010) carried out a systematic review which aimed to build on previous reviews through focusing on randomised controlled trials or controlled clinical trials evaluating Social Story interventions versus any other intervention for individuals with autism. Six studies were identified (all dissertations carried out in the US between 2002 and 2006), with participants aged between 4 and 14 years. They targeted game-playing skills, prosocial behaviours, emotion recognition and social skills. Although they noted small sample sizes and poor methodological quality of the included studies, they concluded that Social Stories interventions appeared to support short-term improvements in social functioning among school-aged more able children with autism. Five of the studies showed benefits across a range of outcomes, including social interaction, story comprehension, generalised social comprehension, facial emotion learning and labelling, social skills, aggressive behaviour and communication skills. A more recent development in this area is the use of virtual reality programmes which can provide controlled but dynamic environments in which children can practise their skills, drawing on their visual strengths to support generalisation to new environments and situations (e.g. see Ghanouni et al., 2019).

In light of the challenge of supporting children with autism to generalise their learning from clinic-based interventions to real-life contexts, some programmes have been developed specifically for delivery in school settings, for example the Social Skills Agency programme (Beaumont & Sofronoff, 2008). This programme is based around a detective training game and draws on children's visual strengths. It is carefully designed to support emotion recognition and regulation skills before targeting skills for social interaction. Einfeld et al. (2018) found that the intervention led to improvements which were still apparent at 12 month follow-up. Another study exploring online, remote delivery of the programme through parents, found improvements in social skills and problem behaviours compared with children in an active control condition (Beaumont et al., 2021). The authors tentatively suggest that online, home-based delivery of a social skills intervention *may* generalise into other settings. The development also illustrates how autism intervention research is

constantly evolving in response to psychological theory and to societal changes; in this case, the context of remote learning and Covid-19.

Finally, autism intervention and research has increasingly recognised the role of the adult in supporting the child. A number of approaches have been developed which reflect this. One example used by EPs, video interaction guidance (VIG), helps parents to explore how they interact with their child through analysing video clips (e.g. Gibson, 2014; www.videointeractionguidance.net/). The clips are selected by a VIG guider using principles of attuned interaction. Parents are shown the clips and guided to see times when their own communication and interaction skills enable their child to engage. The approach has been used by EPs and other professionals, with parents and in preschool settings. A second approach, SCERTS (Prizant et al., 2007; Yi et al., 2022) consists of a multi-professional assessment framework where targets are set and interventions selected to support children in developing their social communication and emotional regulation skills. The 'TS' part of the acronym stands for 'transactional support' – the support provided by the adult to the child, signifying the importance of this element. Returning to our consideration of approaches which recognise autism in terms of difference rather than disorder, it could be argued that these latter approaches reflect a desire to change the system around the child, rather than the child themselves. In taking a neurodivergent perspective, as Milton (2014) advocates, we should be seeking interventions which, rather than focusing on a deficit-based approach, centre 'an understanding of differing dispositions, a building of relationships in a respectful manner, engaging with an individual's abilities and interests and not just what they find difficult' (p. 11). Perhaps what is needed next is more high-quality research that involves children with autism and their families, as participants and researchers as well as autistic adults, in determining what they think might help.

Summary of the main issues addressed in this chapter

- Autism is increasingly understood to be dimensional; there is no one autism. Autism is now understood as a difference rather than a disorder, in line with a neurodivergent perspective. Everyone with autism is different and when working with individuals, we must listen to their views and aim to use the language that they choose to describe their identity.
- The key behavioural features of autism can be conceptualised as differences or difficulties in social communication and social interaction across multiple contexts and restricted, repetitive patterns of behaviour, interests or activities.
- Children with autism may have learning difficulties and hyper or hypo sensitivity to sensory stimuli. However relative strengths in visuo-spatial processing and reasoning skills may also be apparent and some have special talents or 'savant' skills.
- More boys are currently diagnosed with autism than girls. A range of factors have been suggested as contributing to this, including biased diagnostic processes, inappropriate criteria and that girls with autism are more likely to camouflage their difficulties.
- Autism has a biological basis in which genetic factors are strongly implicated. Increases in prevalence rates appear primarily attributable to diagnostic practices.
- Three well-known cognitive theories of autism relate to:
    - Theory of mind, which proposes difficulties in the ability to 'mind-read' or attribute mental states to other people.

    - Executive functions, needed to prepare for and carry out complex behaviours such as planning, prioritising, switching between tasks, inhibiting inappropriate impulsive actions and generating novel approaches.
    - Weak central coherence, a reduced drive to make meaning and an increased focus on parts rather than wholes.

More recently, the double empathy theory has been put forward. This theory reflects a neurodivergent perspective on how we think about autism.

- Psychological theory and research have had a significant impact on the education of children with autism:
    - Through the application of ABA in programmes such as that developed by Lovaas, and more recently contextually relevant NDBIs.
    - Through the application of cognitive theories of autism where programmes have been developed to teach mind-reading, social skills and to enhance children's understanding of their environment.
- More recent approaches target adaptations to the environment, focusing, for example, on how adults understand and provide support for a child with autism.
- Participatory research is needed to ensure that the voices of the autistic community are heard.

Key concepts and terms

Autism; autistic; autism spectrum conditions (ASCs); neurodiversity; prevalence; theory of mind; mentalising; false belief task; executive dysfunction; central coherence; double empathy theory; applied behavioural analysis (ABA); TEACCH; Social Stories; single case experimental designs, participatory approaches.

Recommendations for further reading

Journal articles

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Happé, F., & Frith, U. (2020). Annual research review: Looking back to look forward – Changes in the concept of autism and implications for future research. *Journal of Child Psychology and Psychiatry*, *61*(3), 218–232.

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Pellicano, E., & den Houting, J. (2022). Annual research review: Shifting from 'normal science' to neurodiversity in autism science. *Journal of Child Psychology and Psychiatry*, *63*(4), 381–396.

Books

Fletcher-Watson, S., & Happé, F. (2019). *Autism: A New Introduction to Psychological Theory and Current Debate*. Routledge.

Frith, U. (2003). *Autism: Explaining the Enigma*, 2nd edn. Blackwell.

Steward, R., Cockburn, L., Crane, L., … & Barry, O.R. (2022). *Educational Psychology Perspectives on Supporting Young Autistic People: Insights from Experience, Practice and Research*. Jessica Kingsley Publishers.

Sample essay titles

1 Design an evidence-based intervention programme for Alex (Activity Box 8.1), justifying the approaches you decide to include with reference to relevant literature.
2 Evaluate the strengths and weaknesses of research evidence on the use of Social Stories with children who have autism.
3 You have been asked to give a talk to A Level psychology students on 'Supporting children with autism in school: Key insights from psychology'. Explain what you will include in your talk and why.

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PART 3

Social, emotional and mental health issues in school

9 Educational psychology and mental health in schools

A new or an old role?

Susan Birch and Anthea Gulliford

Chapter summary

In this chapter, we argue that educational psychologists (EPs) have always played a role in supporting the mental health and wellbeing of children and young people in schools although there have been variations in how this has been conceptualised and recognised by others. In the 1990s, for example, children's mental health was primarily seen as being the remit of specialist child and adolescent mental health services (CAMHS), whereas EPs were positioned within education, with a role primarily focused on the assessment of special educational needs and disability (SEND). More encouragingly, recent policy initiatives promoting mental health in schools have provided a context for a clearer recognition of the many and varied forms of educational psychology practice which support children's mental health, both new and old.

To begin with, the chapter will review the terms and definitions used to describe mental health and wellbeing, before considering the prevalence of various kinds of mental health need. After framing wider policy developments relating to the provision of mental health support for children and young people, we examine specifically *how* EPs make a unique contribution to this agenda through working with schools and educational settings.

Learning outcomes

When you have studied this chapter you will be able to:

1. Define what is meant by mental health and wellbeing and what factors are seen to contribute to positive mental health, as well as to difficulties.
2. Understand the role that policy expects schools to play in promoting positive mental health.
3. Outline the role that EPs can play in supporting schools: through individual-level consultation and assessment, through various types of group work and through training and multi-agency teamwork.

DOI: 10.4324/9780429322815-12

Mental health concerns in schools: Definitions and prevalence

There is widespread recognition of the need to promote positive mental health among children and young people, and schools have been identified as key sites for this work (Weeks et al., 2017). Beginning with definitions, the Mental Health Foundation provides the following explanation: 'we all have mental health, just as we all have physical health. Our mental health is how we're feeling inside, or how we are emotionally. It's a bit like internal weather' (The Mental Health Foundation, 2022). Whilst at times we may have positive mental health, at other times, depending on what happens to us and the support we have available, we may need help and may experience mental health difficulties. A national mental health charity, MIND, takes a straightforward approach to describing mental health problems: 'A mental health problem is when the way you're thinking, feeling or acting becomes difficult for you to cope with' (MIND, 2022). The World Health Organisation (WHO)'s often-cited definition (2022) is as follows:

> Mental health is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. It is an integral component of health and well-being that underpins our individual and collective abilities to make decisions, build relationships and shape the world we live in. Mental health is a basic human right. And it is crucial to personal, community and socio-economic development.
>
> Mental health is more than the absence of mental disorders. It exists on a complex continuum, which is experienced differently from one person to the next, with varying degrees of difficulty and distress and potentially very different social and clinical outcomes.
>
> Mental health conditions include mental disorders and psychosocial disabilities as well as other mental states associated with significant distress, impairment in functioning, or risk of self-harm. People with mental health conditions are more likely to experience lower levels of mental well-being, but this is not always or necessarily the case.

The terms mental health and wellbeing are often used interchangeably, although, as can be seen from the definition above, they relate to slightly different constructs (DoH, 2015). Wellbeing itself is often considered to hold two dimensions: *subjective* wellbeing, comprised of positive emotions, the absence of negative emotions and life satisfaction; and *eudaimonic* wellbeing, focusing on 'individuals' personal development, sense of purpose and fulfilment in life' (Clarke & Hoskin, 2022, p. 318). Dodge et al. (2012) outline one simplified definition, which considers wellbeing as a state of equilibrium between psychological, social and physical *resources* on one hand and psychological, social and physical *challenges* on the other.

Although the WHO definition of mental health refers to a 'continuum', it also mentions categorical terms such as *conditions*, *disorders* and *psychosocial disabilities*. Medical professionals may adopt more categorical terms, in contrast to the 'difficulties, needs or problems' that educational professionals tend to refer to. Two manuals are used by specialist mental health professionals for diagnostic purposes, namely the Diagnostic and Statistical Manual 5 (DSM-5; APA, 2013) and the International Classification of Diseases-11 (ICD-11; WHO, 2019). Significantly, the most recent ICD manual aims for a more dimensional approach to classifying disorders, with a focus on facilitating recovery, rather than the provision of a permanent diagnosis or label (Reed, 2021). For service users, diagnosis can be a double-edged sword. The process can bring relief and access to resources, but may also induce stigma and altered responses from others, potentially impacting

self-concept and sense of identity (Skovdal & Pereira, 2022). Atkinson et al. (2019) reported a student-led mental health initiative in one secondary school, noting how student participation in mental health initiatives may help to overcome the stigma many young people experience seeking help (Barrow & Thomas, 2022).

An increase in levels of mental health need has been identified in recent large-scale studies. Whilst in 2004 Green et al. found that one in ten young people had a 'mental problem', more recently Sadler et al. (2018) and Deighton et al. (2019) report around one in eight young people having mental health needs. NHS statistics report higher levels still, with 16.7% of 7–16 year olds (one in six) and 25.7% of 17–19 year olds (one in four) being identified with a probable 'mental disorder' (Newlove-Delgado et al., 2022). Sadler et al.'s (2018) findings suggested an increase in emotional disorders[1] (e.g. anxiety, depression). Similar findings were reported in a study of secondary-aged pupils in the northwest of England (Waite et al., 2022). They also found that young people reported decreasing rates of feeling that their needs were being met, which brings into focus the issue of access to support services. It has been found that one in four young people with a mental disorder had not accessed support from specialist services, teachers or informal support from family or friends (Sadler et al., 2018).

Deighton et al. (2019) consider whether, rather than reflecting a *rise* per se, higher prevalence levels capture a more accurate picture of need. The authors suggest further research is required, to explore wider, societal factors associated with mental health needs, for example austerity or academic pressures. Given that having SENDs or receiving free school meals appears to increase the odds of having mental health difficulties (Deighton et al., 2019), the importance of considering complex, contextual influences is indicated. Differences in mental health identified across students from different minority ethnic groups also highlights potential sociocultural variables. Patalay and Fitzsimmons (2016) found that students from Black, Asian or other ethnic minority backgrounds reported fewer mental health symptoms than their white counterparts (measured using the SDQ, Goodman et al., 1998). International research exploring the promotive effect of positive ethnic-racial identity for young people of colour in the context of discrimination and systemic racism may be of relevance in understanding these findings (e.g., Umaña-Taylor & Rivas-Drake, 2021) alongside research around different aspects of parental cultural socialisation practices. 'Pride and heritage socialisation', in particular, has been linked with positive outcomes. This includes teaching children about their culture and customs (Huguley et al., 2019). Finally, in relation to complexity, consideration also needs to be given to how risk factors such as low socioeconomic status (SES) interact with other facets of identity, through mechanisms we explore within an intersectionality framework (Rosenthal, 2016).

Sadler et al. (2018) highlighted the higher rate of mental health needs in older age groups with the growth in girls' needs primarily accounting for this (see Table 9.1). In their study, emotional disorders were more frequent among older age groups, particularly for girls, whereas behavioural disorders were higher for younger children (and more so for boys). Also, in relation to internalising difficulties, Creswell et al. (2020) noted that levels of anxiety disorders are high and increasing, although they are not always identified or responded to through the provision of support. Similarly, there is significant concern regarding growth in rates and patterns of self-harming behaviour (Witt et al., 2021).

Concerns were raised regarding children and young people's mental health during the Covid-19 pandemic, particularly related to the potential impact of lockdowns, and restrictions to onsite schooling (Creswell, 2022). Benefits were reported by some children and young people, such as

Table 9.1 Prevalence of mental health disorders in school-aged children

Age range (years)	*% survey participants identified with a mental health disorder*	
	Boys	*Girls*
5–10	12.2	6.6
11–16	14.3	14.4
17–19	10.3	23.9

Source: Based on Sadler et al. (2018)

more time spent with family, or on hobbies, and access to outdoor spaces. For others, experiences were less positive with reductions in social contact with peers, in physical activity, lack of access to outdoor space and an increase in safeguarding risks. *Overall* patterns therefore mask considerable inter-individual variation (Branquinho et al., 2020), and the periods of lockdown appear to have heightened risks for those already more vulnerable (Creswell, 2022). Causal explanations of the impact of events such as lockdowns can only be drawn through controlled experimental conditions. However, Mansfield et al. (2022) were partway through two randomised cluster trials when the pandemic happened, facilitating the occurrence of a 'natural experiment'. In some study schools, all data (both 'pre' and 'post') was collected before the pandemic, whereas in other schools the 'post' data was collected after the lockdowns. Participants in the second set of schools had been 'exposed' to the pandemic. The authors concluded that overall, the pandemic had led to an increase in depressive symptoms and a decrease in life satisfaction for CYP, illustrating the impact of a significant environmental challenge on the mental health of a population.

Finally, it is important to note cautions expressed by some mental health commentators. Foulkes and Andrews (2022) invite us to reflect that whilst enhanced awareness and attunement to issues of mental health are positive, there are potential consequences of this sensitisation, both for the estimation of prevalence of need (likely to be increased), and for the categorisation of relatively common degrees of stress in everyday life, as problematic (again, likely to increase) particularly where supports are not easily available.

Children and young people's mental health: Risk and resilience

Decades' long research has examined factors which are likely to constitute potential risk factors to mental health, and those likely to contribute to positive outcomes. An important overarching point is that these factors combine in uniquely distinct ways for every individual through their life experience, signalling that it is critically important not to treat research evidence from population studies deterministically. This notion around individual risk and resilience developed in the early field of developmental psychopathology (Masten et al., 2021), with resilience being defined as the process of positive adaptation in the face of adversity. It finds expression currently in multisystem models that capture the unique interaction between what an individual may bring in terms of their individual constitution, and interactions with immediate (e.g. familial) and more distal (e.g. SES) influences (Devenish et al., 2017).

Risks to mental health may hold their roots in early experience, with secure adaptive early attachments, for example, being key to later mental health and wellbeing (Oldfield et al., 2018) (see Chapter 10 for further explanation on attachment theory). Loss or bereavement, through the

mechanism of broken attachments, may contribute to risk, depending on how those losses are perceived, and on subsequent experiences. Experiences of traumatic events can also lead to negative mental health outcomes. We saw above how adolescence is a period when greater mental health needs are likely to emerge. Andrews et al. (2021) highlight the likelihood of peer influence playing an increased role at this time, potentially leading to risk-taking that may in the long term contribute to negative outcomes, such as substance abuse. Commentators have also noted that high pressures associated with the policy agenda to drive up attainments in schools impacts young people at a time of psychosocial vulnerability, leading some to call for significant adaptation of existing assessments for this age group. Whilst social media is often raised as a concern in respect of negative mental health outcomes, its influence continues to be investigated. Orben (2020), noting the methodological challenges in this field, identifies only a negligible role in outcomes, suggesting social media may not play a simple direct role per se in lower mental health outcomes.

Modelling mental health risks highlights their cumulative nature, with exposure to one set of risk factors potentially increasing further the impact of others (Masten & Cicchetti, 2016). There is evidence of the impact of structural risks for mental health outcomes, that is, particular populations may be exposed to greater risk. Low SES is for example consistently associated with higher risk (Devenish et al., 2017). Illustrating the complex interweaving of risk factors, these authors identify the relative contribution of a number of family factors, such as chaos in the home and parental depression, to the significant effect of living in low SES conditions. Persistently lower mental health and wellbeing outcomes have been consistently reported for lesbian, gay, bisexual, transgender and queer young people (Fish, 2020) and it is perhaps unsurprising that care-experienced young people are at a far higher risk of mental health needs than their peers (Sadler et al., 2018).

As might be expected, protective factors for mental health, those that support resiliency processes, include factors that fall in the category of relationships and social support. Masten (2001) used the term 'ordinary magic' to describe resiliency-promotive processes, for example the social and nurturing processes that family and community can provide. The presence of key adults, able to provide consistency of care or insight for a young person, is important, for example through caring figures, role models or mentors. Sadler et al.'s (2018) data captured that around half of those young people with an identified mental health disorder accessed informal sources of support, amongst which around 45% drew on the support of family or friends. Typically, too, good self-regulation skills provide protective effects, as can cognition or attainments. Targeted interventions to reduce risk or promote protective processes might include parent-focused interventions for those at-risk from the stressors associated with low SES family environments (Devenish et al., 2017); for example, substance abuse education in communities where this is a risk factor; or individualised learning interventions to support achievement and engagement. These are examples of interventions arising from a multi-systemic social ecological understanding of resilience as outlined by Ungar et al. (2013), whereby intervention can be put into place across a number of levels in order to improve child outcomes.

The need to model unique individual pathways through risk and protective factors indicates the significant difficulties with the use of the ACEs ('adverse childhood experiences') model (Felitti et al., 1998), widely cited in an overly deterministic manner in education contexts. The authors modelled data at a population level to capture degrees of risk of adverse outcomes in adulthood; altogether a step away from the multi-pathway models indicated by researchers in childhood psychopathology. If used clumsily to support education staff's insight, the use of the ACEs model can become oppressive (Kelly-Irving & Delpierre, 2019).

Mental health in schools: The policy context

Governmental initiatives to support mental health in schools have been informed by wider societal concerns regarding wellbeing; by the increase in mental health needs in children and young people with limited access to support services; and by the acknowledgment of the long-standing evidence on the association between mental health and achievement. In terms of policy development, the advent of the 'Every Child Matters' agenda (*DfES*, 2004) provided a gateway to a more holistic view of young people's needs. The 'Targeted Mental Health in Schools' initiative (DCSF, 2008; DfE, 2011) sought to enable innovative approaches in local authorities (LAs) to meet mental health needs in schools and EPs were active as part of this, developing and implementing a range of interventions (see Chapter 1) including working alongside colleagues from local CAMHS clinics.

Reviews of mental health services for children and young people since this time have continued to develop policy and practice. The most recent review (DfE & DoH, 2017) which focused on mental health support in schools was criticised by many EPs as imposing a medicalised view of mental health (Boyle & Shield, 2018) and not recognising the work of EPs already in place in educational settings (Zafeiriou & Gulliford, 2020). This was despite clear evidence that EPs are the profession most widely cited by teachers as providing specialist support for pupils with mental health needs (81% – Sharpe et al., 2016). The review was also described as lacking in ambition and scope, being unlikely to provide for many children in need and being under-resourced (House of Commons, 2018). It did, however, provide a focus for development work and funding in this area (see below).

Studies have identified the contribution schools make to children's mental health, through examining school-level factors (e.g. 'climate') and child-level factors (including the child's rating of the school climate) (Patalay et al., 2020). Drawing on this body of research, Public Health England (PHE, 2014) provided schools with clear guidance for prioritising wellbeing (including physical activity, and social and emotional competences), citing the positive association between health and wellbeing and academic achievement as the rationale for focusing on a school's culture, ethos and environment. PHE's guidance encouraged a whole-school approach as part of school improvement work and introduced a framework consisting of eight principles (PHE & DfE, 2021), see Figure 9.1. The guidance chimed with the decades-long focus in educational psychology on the promotion of 'whole school approaches' (Weare & Nind, 2011) based on evidence for the influence of school ethos on pupil wellbeing.

The 2017 review of mental health in schools launched a number of developments. Responding to findings relating to children and young people's hesitancy to come out of schools to access services in unfamiliar, clinic-based settings, the lack of communication between health and education regarding advice for schools, and the challenge of waiting lists and delays to the provision of care, a plan to establish provision within schools was developed. Mental health support teams (MHSTs) were introduced, providing a workforce of education mental health practitioners (EMHPs) offering a range of short-term interventions for individual learners who need mental health support, but do not meet criteria for a referral to CAMHS. Schools must now also: identify a senior mental health lead; ensure all staff access training in Psychological First Aid and teach students about mental health and wellbeing as part of the statutory relationships, sex, and health education (RSHE) curriculum (DfE, 2022a). Providing a supportive and safe school climate that supports CYP's mental health and wellbeing is also part of the guidance on behaviour and safeguarding in schools (DfE, 2022b, 2022c). Whilst these developments are generally welcomed,

Figure 9.1 Eight principles for promoting a whole-school approach to mental health and wellbeing
Source: PHE and DfE (2021)

Foulkes (2021) highlights the need to focus on evidence regarding what helps, citing research that suggests that teaching all young people mental health 'skills' (e.g. derived from mindfulness techniques or CBT) may be of little benefit and may even be harmful for some young people. She advocates for a focus on preventive efforts with individualised support for students who need it.

Educational psychologists' historical contribution

When considering how EPs have supported mental health over the years, it is important to understand how the terminology around the topic has evolved. Historically in education, terms such as 'maladjustment' were used to signal difficulties in emotional or behavioural regulation. Subsequently, the phrase 'Social Emotional and Behavioural Difficulties' became enshrined in the SEN Code of Practice (1994); until it was replaced by 'Social, Emotional and Mental Health' (SEMH) needs in the 2015 SEND reforms. These terms signalled shifts away from focusing only on behaviour towards understanding the internal life of an individual, exploring what might underlie children's behaviour. EPs have always been intensely involved in work in schools around behaviour perceived as difficult (see Chapter 10), but a paradigm shift in psychology, and in legislation and guidance to schools, has supported the orientation of this work towards the domain of mental health.

Equally important in this evolution is the conception of the EP role discussed in Chapter 1. Since the 1960s, the profession's orientation has been underpinned by a focus on the influence of contexts – whether home, school or community – on a child's needs (Fallon et al., 2010). This

contextual focus provides an important rationale for the distinct relativist (rather than categorical) approach EPs adopt, in addressing SEMH in schools. For example, an EP might work with a young person who has no diagnosis of a mental health 'disorder' but whose functional day-to-day difficulties are significant: the focus of the work being to support their engagement in the learning environment, irrespective of diagnosis.

Some practical shifts in the educational landscape have influenced EPs' service delivery, too. As we saw in Chapter 1, early EPs were placed in child guidance clinics run by health and led by psychiatrists, rather than in education departments. However, by the late 1980s EP services sat within LAs, with a clear distinction drawn between school-focused consultation services offered by EPs, and child and adolescent mental health services (CAMHSs) provided by health, the latter including clinical psychologists. Health services were thus seen as the key providers of mental health services for young people, whereas EPs were often assumed to focus on learning or behaviour often as part of an assessment of SEND (Atkinson et al., 2014). Parallel to this, the ever-growing pressure within schools from the achievement agenda rendered it arguably harder for school staff to focus on the holistic needs of children and young people. Again, this picture has now evolved, with a wide range of school-based work undertaken by EPs recognised under the heading of SEMH.

Mental health in schools today: How do EPs contribute?

In the domain of health-based services, a tiered approach for mental health services indicates that *universal* provision might be offered within or by community or education settings (primary services); whereas targeted (secondary) or specialist (tertiary) services might be required for higher needs, typically offered by mental health professionals. The significance of this model lies in the notion that universal services have a preventive function, in identifying and supporting young people's needs either through early intervention, or through processes that are universally promotive of good wellbeing for all. In any case, evidence of the challenges of remediating established problems provides a rationale for such early intervention approaches. This tiered framework is reflected in the current guidance to schools, which should offer *prevention*, *identification*, *early support* and access to *specialist support* (DfE, 2018, p. 6).

EPs have a role in each of these tiers. They are trained in developmental psychology, and thus understand typical and atypical development. They are also trained and skilled in therapeutic interventions and behaviour change, in working with schools as organisations, in multi-agency working and in work in community contexts. Mental health work in schools can be delivered by EPs through any of the five core functions of the role discussed in Chapter 1 (Scottish Executive, 2002) and at the three levels of individual, group and system within schools (Dunsmuir & Cobbald, 2017). This latter taxonomy is particularly helpful, and enables the profession to identify its contribution coherently (Greig et al., 2019). As we show below, however, the levels of work are closely interconnected, with work commencing at the individual level often leading to group or systems-level work and vice versa.

Individual-focused work

The work of the EP is built on the use of executive frameworks and problem-solving models (see Chapter 1) which incorporate insights into contextual influences, and hypotheses drawn from psychological research and theory. Since mental health is intimately connected to all other aspects of

functioning, EPs will always consider a young person's mental health and wellbeing, whether working directly with the young person or providing consultation to school staff and/or to parents or carers. Even if the initial request for EP involvement were to focus on, for example, concerns about numeracy skills, the EP will hypothesise about a range of factors, including the young person's emotional wellbeing. As we saw in Chapter 7, how CYP feel about maths can play a role within a negative cycle of fear and avoidance, affecting progress, aside from any cognitive or neurological factors. Any concerns raised about a child must pay attention to how experience is impacted by and contributes to the feelings the young person may have about themselves, their learning environment and others.

Accordingly, then, formulation around a young person's needs will consider ecological factors, including those related to:

- the home environment (e.g., who lives at home, family language and culture, the quality of relationships and resources available, in terms of family or community support)
- any negative or adverse childhood experiences (e.g., having a parent who has significant mental health challenges; having been abused, witnessed domestic violence or parental conflict; having experienced multiple or traumatic bereavements)
- the school environment (e.g., whether they have friends and feel included, any bullying, whether work is differentiated) etc.

Alongside these ecological factors, the EP will consider whether there are any more 'within-child' aspects, for example whether there is a family history of any mental health needs, whether a young person has been diagnosed with a neurodevelopmental difference which might make them more likely to experience anxiety or low mood (such as autism; Mingins et al., 2021).

EPs will gather information and review potential hypotheses relating to possible factors through consultatively gathering the views of school staff and family members, or undertaking observations. The views of the young person themselves are central to any work. In identifying individual mental health needs in schools, EPs may use standardised measures, or adopt a profile of needs approach to understanding, for example, anxiety or resilience (Dunsmuir & Frederickson, 2009). An EP might also guide staff in the use of approaches or measures which *they* might use to assess the mental health and wellbeing of their students (e.g. using the toolkit for schools from PHE and the Anna Freud Centre; Deighton et al., 2016). A review of the extent to which school staff are able to identify mental health needs among the pupil population was undertaken by Mathews et al. (2021). They found that the most significant mental health needs of young people *might* be noted by staff, although with only moderate reliability, indicating that staff should triangulate their information for a young person with others, such as parents and carers, in order to determine a young person's needs.

Casework may lead to the collaborative development of an intervention plan based on a problem analysis of the situation: with targets and strategies involving adaptations to the child or young person's classroom, how the teacher interacts with them, and so forth. There are also a number of recognised interventions which schools can deliver for individual children to support dimensions of mental health. The emotional literacy support assistant (ELSA) intervention for example, was developed by EPs in the UK (Burton, 2008). ELSAs are trained to work with individual children through a tailored intervention based on the child's identified emotional needs. The EP might be involved in training and supporting the ongoing delivery of the programme through providing supervision (France & Billington, 2020). With their training in research and

evaluation skills, EPs are also well-placed to advise schools about evaluating such approaches, e.g. using a range of quantitative and qualitative measures to explore outcomes.

Although any child may experience mental health needs, there are groups of children who, based on large-scale studies, are known to be more likely to need support, as we saw in relation to 'risk factors' above. Children who are care-experienced, or children known to social care through being on the children protection register, are at higher risk. In many contexts, children in these groups will be prioritised for EP involvement due to a recognition of the challenges they face, in the system as well as from before care, and the fact that LAs have a corporate parenting responsibility for them. EPs will work in a multi-agency team with staff from the Virtual School for Looked After Children, with social workers, the LA designated nurse for Looked After Children, with foster carers and with relevant school-based staff, contributing to Personal Education Plans and to statutory review processes.

ACTIVITY BOX 9.1

Case Study 'Macy'

Macy has just joined her mainstream primary school. She is in reception. Macy is looked after by the LA as her birth family were not able to keep her safe. She was removed from her parents when she was 16 months old due to concerns about domestic violence and substance abuse within the home. Macy's mother admitted that she was unable to look after Macy, needing to focus on her own mental health needs. Macy had been looked after within numerous foster placements before being placed with her current foster carers, Kim and Tai Reynolds. Despite several moves of educational setting (related to changes in her care placement), Macy was making pleasing progress with her early academic skills. However, she was struggling to make friends in school and was clingy with adults. Kim and Tai were finding it difficult to leave her at the classroom door in the morning and she struggled being left with any adults other than them. She would become very distressed and curl up in a foetal position. Macy was also regressing in some areas, for example she would only eat one or two types of food and was finding toileting difficult. The designated teacher for looked after children and the school special educational needs coordinator (SENCo) spoke to their link EP at a planning meeting.

Having spoken to Macy's social worker and key worker from the Virtual School, and having spoken to Kim and Tai, the EP visited Macy in school to see how she could contribute to plans to support her. She observed Kim and Tai dropping Macy off in the morning (exploring hypotheses relating to what might be positively and negatively reinforcing Macy's behaviour) and also observed Macy interacting with her teacher, teaching assistant and her peers in class. The EP spent time exploring different influencing factors, particularly Macy's past history and the changes and losses she had experienced. The EP then met with the school and carers to develop a plan.

Thinking about the classroom, the EP thought whole class approaches might help Macy feel more included. She also advised playground activities based around Macy's interests which might provide an environment where she could begin to establish more equal peer relationships. She wondered if Macy might benefit from accessing the school's nurture group

to support the development of her sense of security in the school and relationships with a small number of staff. The teaching assistant in her classroom was one of the nurture group practitioners (see below) and so could be a consistent adult for Macy across these two settings. The focus on early learning experiences in the nurture group was seen as being important for Macy: allowing her to explore her environment safely through play, whilst also undertaking structured learning in small steps.

The school's SENCo asked the EP to provide training for the whole school about nurturing approaches, aiming to impact the culture of the school through supporting class teachers in using the nurture principles within their classrooms and helping children to generalise their learning from the nurture group into their mainstream classrooms.

Kim and Tai said that they had asked for some support from the designated nurse for Looked After Children for advice regarding toileting. The school asked the EP to contribute to Macy's upcoming Personal Education Plan Review in school, so that targets might be included which could feed into her Care Plan.

Activity

Reflecting back on the problem analysis approach introduced in Chapter 1, note down how psychological theory informed the EP's work: the initial guiding hypotheses about Macy and the intervention approaches selected.

Educational psychologists and therapeutic interventions

At the individual level, much has changed in the past few decades. Previously, individually-focused therapeutic interventions were less common (Gulliford, 1999). However, Atkinson et al. (2014) suggest that a change in the zeitgeist, together with growth in psychological paradigms and applied skills (supported by the inception of doctoral training in 2006), led to a considerable increase in the skills available in the profession to develop individual therapeutic work in schools. Of interest, given the earlier discussion of the prevalence of MH at different ages, Purewal (2020) found in a doctoral study that individual-level involvements were primarily with older primary and younger secondary school aged pupils (i.e. around 9–14 years of age). This suggests that EP involvement was taking place prior to the peak of adolescent mental health needs, potentially indicating a preventive focus within the work. EPs are trained to deliver a wide range of therapeutic approaches, including cognitive-behavioural therapy (CBT; Fuggle & Dunsmuir, 2013); motivational interviewing (MI; Miller & Rollnick, 2013; Thomas et al., 2019); solution-focused approaches (Ajmal & Ratner, 2019); and narrative approaches, including Therapeutic Story Writing (Waters, 2008) and Tree of Life (e.g. see Lock, 2016, for a review). Behavioural psychology may also be important within brief behavioural activation approaches which can be helpful in reducing adolescent depressive symptoms (Pass et al., 2018). This approach involves a therapist working with the young person to identify their values and then to plan activities based around these, with the aim of increasing the positive reinforcement of non-depressed behaviour and increasing the young person's engagement in intrinsically rewarding activities, hence enhancing mood.

Group work

Group work delivered by EPs, too, has grown and an established literature documents work with young people and with staff, in respect of mental health needs. For both individual and group work, the focus may involve targeted or specialist needs, and a range of foci and therapeutic modalities (Simpson & Atkinson, 2021). Yeager and Walton (2011) make a point that interventions must be developmentally informed, that is, adjusted according to the evolving needs of adolescents in particular, and the developmental knowledge of EPs is important in this respect. Group work may be universal and preventative in focus (e.g. working with class groups), or may target particular children who are at risk or who are showing signs of difficulties, e.g. with anger management or peer interaction difficulties. EPs may contribute to the delivery of these programmes, although it is more usual for them to be involved through training and supervising school staff to deliver and evaluate, promoting ownership by the school (e.g. Ruttledge et al., 2016). One specific approach developed by EPs and highlighted in Activity Box 9.1 is the nurture group approach (Bennathan & Boxall, 2013). Underpinned by attachment theory (see Chapter 10), nurture groups aim to support children with the highest regulation and attachment needs through supporting staff to understand children's emotional development.

With staff, group work plays a highly significant role in 'prevention', building confidence and capacity to support young people with various needs, and thus by implication, building capacity within the school system. This could therefore also be described as systemic work (see below). The work may fall under the umbrella term 'supervision' where, through using group processes, staff are supported to understand (and undertake) work around learners' SEMH needs with better insight, skill and knowledge (e.g. see Turner & Gulliford, 2020). Approaches such as group consultation might be used, where for example, the EP facilitates discussion with a group of staff on a regular basis, supporting their capacity for problem-solving tailored to their own school context, and providing peer supervision among staff. These approaches can also play a critical role in supporting teacher wellbeing: an important dimension of EPs' SEMH work in schools. Teacher wellbeing is fundamental to promoting mental health in schools, given teachers are responsible for a school's curriculum, processes and ethos (Glazzard & Rose, 2019).

Systems work

Systems work by EPs has a long history, underpinned by a number of theoretical drivers. EPs are trained in organisational theory (BPS, 2022) and thus understand some of the complex interactions that help, or hinder, implementation of school-based interventions (Chidley & Stringer, 2021). Furthermore, intervening with organisational developments through change processes is a domain of expertise for EPs. The need to undertake systems work is informed by ethics, too. When seeking to effect change in a vulnerable young person's thinking or behaviour, the system around them may often be amenable to small adjustments that can lead to positive impact for SEMH. Whilst therapeutic intervention may support the young person to develop more positive mindsets or behaviours, it is often essential that the system around them also changes, through multi-component interventions. As we saw above, school ethos plays a key role in wellbeing in schools (DfE, 2018). Finally, 'whole-school approaches' are informed by evidence that wholesale implementation of interventions, at all levels of the organisation, are fundamental to ensuring effectiveness

and consistency, a necessity identified many years ago; a recent example being the implementation of anti-bullying interventions (Valle et al., 2020).

Systems work might, for example, be requested where a specific focus is identified by a setting, such as high levels of social anxiety in Key Stage 3 students, or exam anxiety in Year 11 students. Initially, the EP might work with key staff to identify what factors might be contributing to the problem focus (which could include eliciting the views of a range of stakeholders and developing a 'Rich Picture' as described in Chapter 13, or collecting data to identify, for example, whether bullying-victimisation is a concern in a school). The EP might provide psychoeducation and training to staff and work with the senior leadership team to support the design, development and delivery of alternative approaches. Another example comes through the renewed focus in schools on the influence of early experience on children and young people's SEMH. Systems work is currently delivered by many EPs around the notion of trauma-informed practice which aims to support universal mental health and wellbeing, as well as the higher (targeted or specialist) level of needs of young people who may have experienced trauma through difficult events, loss, or broken attachments. While a number of reviews have been published, the need for further research examining the effectiveness of systemic trauma-informed approaches is recognised (Berger, 2019; Maynard et al., 2019). Whole-school approaches derived from attachment theory may also be supported by EPs, for example, whole-school nurture (Nolan et al., 2021), attachment aware schools (Dingwall & Sebba, 2018), and emotion coaching (Gus et al., 2015). These approaches aim to develop attachment-informed and relational-based strategies within schools. Finally, one innovative model for whole-school development is 'Routes to Inclusion' which evidence indicates can build staff capacity to understand and respond to the SEMH needs of young people through a carefully graduated assessment and intervention model, cascaded throughout the school, with coaching, to support longer-term change by staff (Gulliford, 2022).

MHSTs, identified above as part of the current provision to support schools, also support the development of whole-school approaches. Given their skills and knowledge, of child and adolescent mental health and development, and importantly, of school cultures and systems (see Chapter 13), EPs are increasingly contributing to these teams through, for example, providing management and supervision for EMHPs. The MHSTs may also provide local foci for EPs and clinical psychologists to work together more closely, enabling the strengths of both to be harnessed in working to support this vital agenda.

ACTIVITY BOX 9.2

As discussed at the start of the chapter, we all have mental health and may need additional support at any time. A key protective factor for mental health and wellbeing is social support. Consider who or what might be available to help you if you needed additional support for your mental health or wellbeing: individuals, groups and organisations. Would the same be available to children and young people in schools?

If you think that you might need additional support, please ensure that you talk to someone. There are organisations who can help, for example the Samaritans (www.samaritans.org/how-we-can-help/contact-samaritan). MIND provides a signposting and advice service (www.mind.org.uk/information-support/helplines) or you can contact your GP for advice.

Conclusion

Since the mental health and wellbeing of young people is such an important priority, the current policy focus is welcome. This chapter can only provide an introduction to an issue which is critical to the lives of children and young people and to future generations. We have endeavoured to illustrate a range of EP practice supporting mental health and wellbeing in schools, encompassing a range of needs, types of work and theoretical underpinnings. We hope that you will gain further insights into EPs' work in the area as you read the following and subsequent chapters.

Summary of the main issues addressed in this chapter

- Mental health may fluctuate in our lives according to how circumstances vary.
- The mental health needs of children and young people appear to have increased in recent years; with internalising symptoms being significantly higher, particularly among older females. Certain populations are at greater risk of lower mental health.
- A recent policy focus on mental health in schools has sought to help address this through ensuring support is available in universal settings, both at preventive and targeted levels.
- EPs have supported mental health needs in schools in various forms for many years. In policy terms, historically, this has often been labelled as work focused on understanding and supporting challenging 'behaviour'.
- EPs support mental health in schools at the individual, group and systems level: through consultation and assessment, therapeutic work, group work, and whole-school interventions.
- EPs are increasingly involved with the new EMHPs working within MHSTs to support schools. This recent development holds promise in providing a context for improved multi-agency working, between education and health services (and specifically, educational and clinical psychologists), to improve children and young people's mental health.

Key concepts and terms

Mental health; wellbeing; schools; risk and resilience; protective factors; attachment; trauma; universal, targeted, specialist; consultation; problem-solving; systems work; training and supervision; evaluation; therapeutic work.

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Sample essay titles

1 The mental health of children and young people should be the concern of clinical psychologists only. Discuss.

2 What factors may have heightened the recorded levels of mental health needs in children and young people in recent times?
3 How can schools play a role in promoting positive mental health and wellbeing in children and young people?

Note

1 Clinical terms used by the authors are reported here, although they may not be the terms that would be used by education professionals. Emotional disorders are associated with internalising symptoms (e.g. withdrawal, low mood and anxiety) as opposed to behavioural disorders which would be associated with externalising symptoms.

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10 Managing classroom behaviour

Can psychology help?

Anthea Gulliford and Andy Miller

Chapter summary

In this chapter we explore a number of psychological perspectives upon classroom behaviour – including behavioural, cognitive and psychodynamic – and how they can help EPs understand behaviour that is perceived to be difficult, informing interventions aimed at achieving calm, well-regulated, and positive learning environments. Ecological systems theories are noted to help in guiding individual, group, and whole school approaches, and a distinction is drawn between reactive and preventive approaches.

Since behavioural psychology principles have become predominant in some quarters, how applied behaviour analysis (ABA) aids understanding behaviour will be considered first. Turning to cognitive approaches, the differing causal attributions of teachers, parents and pupils about behaviour will be reviewed. Finally, insights from psychodynamic perspectives that have increasingly informed classroom behaviour interventions are considered. The importance of problem-formulation by psychologists when supporting school staff is highlighted.

Learning outcomes

When you have studied this chapter you should be able to:

1 Identify key perspectives for understanding and intervening with classroom and school behaviour, and the levels for intervention.
2 Explain the key principles of ABA and the issues associated with the application of behavioural psychology in schools.
3 Explain what ABA has taught us about preventive, class and whole school approaches to behaviour management.
4 Explain causal attributions and their relevance to understanding behaviour in schools.
5 Understand how cognitive approaches can support psychologists working with difficult behaviour.
6 Understand how psychodynamic informed models, such as attachment theory, can contribute to the development of positive school climates.

DOI: 10.4324/9780429322815-13

Introduction

Managing everyday classroom behaviour can undoubtedly be a challenge for teachers. Since well-ordered classrooms are an essential part of a young person's learning environment, the focus falls from all quarters (politicians, policy makers, parents, teachers and young people themselves) on the question of how best to promote and maintain good order. It is our view that applied psychology provides a range of valuable evidence on this question.

Difficult behaviour[1] in schools is by no means a new phenomenon. However despite frequent speculation on the worsening of behaviour in schools, general standards of classroom behaviour appear largely stable (Moore Benham-Clarke et al., 2019). The *most* difficult aspect of classroom behaviour is consistently reported as that of persistent low-level disruption, such as talking out of turn and hindering the learning of other children (DfES, 1989).

Responding to the issue of behaviour

The terminology used to describe behaviour in school has evolved. Terms such as emotional and behavioural difficulties (EBD) or social and emotional behaviour difficulties (SEBD) have now been replaced by 'social emotional and mental health' (SEMH) (Children and Familes Act 2014), signalling that behaviour is increasingly understood to relate to the internal life of a child. Behaviour, and its management, can be perceived very differently by all parties concerned, leading to divergent assumptions in the course of managing it. It is fundamental to understand these issues of perspective when supporting behaviour in school.

Many policy responses associated with managing difficult behaviour in schools are formulated in terms of a language of *discipline and control*. In contrast, psychology – whilst holding the same goal of achieving good order and behavioural containment for all – offers a different terminology. Applied psychology aims to identify fruitful pathways through which to promote positive learning environments for all. It does this through offering a range of perspectives, and theoretical and practical evidence, to guide and inform interventions, and their evaluations. These seek to understand and intervene with difficult behaviour, whilst optimising behavioural environments and instruction.

Difficult classroom behaviour is rarely a discrete concern in its own right. The interplay of factors, and perceptions of those involved, is complex, and among these, the role of adults in the classroom in promoting positive behaviour is key. Furthermore, young people who show difficult behaviour in school are often those who also experience some form of other need, such as in learning, or communication skills (Obsuth et al., 2017). A meta-analysis by Kulkarni et al. (2020) found academic achievement is a risk factor for difficult behaviour at the pupil level; and worryingly, Graham et al. (2019) capture how having special educational needs or disabilities (SEND) is a high risk factor for school exclusion.

In addition to the problem-solving frameworks considered in Chapter 1, ecological systems theories help to address such complexities. Bronfenbrenner's model (Bronfenbrenner & Morris, 2006; see Chapters 1 and 11) delineates the interactions and systems in a young person's life, allowing us to capture multiple influences. Further, a systems view of behaviour interventions allows us to distinguish between interventions focused towards the *individual* child, or *groups* (classes), or the *whole school*. This in turn draws us towards another important distinction, that of *reactive* versus *preventive* approaches. The former, sometimes called *tertiary*, responding to established

problems, can be seen as less effective or efficient in terms of support time and demands, but the preventive, or *primary*, approaches may feel challenging for school staff, who have many other demands to focus on. This contrast is exemplified in the distinction between so-called zero-tolerance school behaviour policies (*reactive*), on the one hand, and restorative or relational approaches (characterised as *preventive*) on the other (Spielman, 2019). The psychological evidence considered below seeks to illustrate how psychologists are informed by theory, as they pick their way through this difficult territory.

Behavioural perspectives

In the chronology of approaches to understanding classroom behaviour, behavioural approaches, founded on the work of Skinner (1953), were pivotal. Behavioural psychology focuses on the contingencies between behaviour and its environment, leading to an analysis of context and interactions – of *antecedents and consequences* – and potentially therefore to carefully designed interventions. This paradigm assumed theoretical prominence during the first half of the 20th century, but by the mid-1960s, and in the light of cognitive psychology's emergence, its predominance within psychology was on the wane. Despite this many behavioural procedures developed in the 1960s, notably ABA, were characterised by a focus on repeated assessment of observable behaviours, to understand functional relationships between variables. ABA aims to systematically intervene with those relationships, for socially important behaviours (Landrum & Kauffman, 2006).

ABA draws on three key principles from operant conditioning, focusing on:

- clearly defined, observable behaviour, avoiding assumed characteristics or motivations
- careful collection and analysis of data
- the settings for any behaviour, and its antecedents (triggers) and consequences.

Seminally, Madsen et al. (1968) investigated the effects of teachers using a) praise, b) ignoring, and c) the explaining of rules. For the first intervention phase the teachers aimed for at least four to six repetitions of the *rules* each day at times other than when somebody had misbehaved, with a few short, focused rules, framed in a positive rather than a negative form (for example, 'Make sure you sit quietly' rather than 'Don't talk').

The second phase saw teachers *ignoring inappropriate behaviour* (where safe), to test whether that inappropriate behaviour might be reinforced by the attention paid to it, even when attention was intended as a punishment. The teachers in the study found this strategy difficult to implement and sustain as an intervention. Finally, the *praise* condition was framed as 'catching the child being good'. Teachers gave praise or positive attention when the pupil complied. Teachers thus 'shaped by successive approximation', with praise or attention at the first signs of appropriate behaviour. Emphasis was placed on positive and helpful social behaviours and following group rules.

The rules and the ignoring phases alone produced little change from the baseline condition, but the *combination* of rules, praise and ignoring, proved highly effective. This pioneering study illustrates some of the fundamental and successful features of the use of ABA approaches in classroom settings. Zoder-Martell et al. (2019) highlight the preventive function of behaviour-specific praise: that is, serving as an 'antecedent intervention' to prevent problems occurring, supporting the good engagement of pupils, reducing the likelihood of disruption (see 'preventive approaches' below).

ABA strategies

LaVigna and Donnellan (1986) highlight three key ABA strategies:

- *Differential reinforcement of alternative response* (DRA) – rewarding a student for an alternative response (behaviourally defined).
- *Differential reinforcement of the omission of a response* (DRO) – rewarding a student for the absence of specified misbehaviour. Note that because of its negative formulation (the omission of something) this should always be accompanied by a direct teaching programme for positive alternatives to the behaviour in question.
- *Differential reinforcement of lower rates of responding* – rewarding the student for manifesting the difficult behaviour increasingly less often.

There is evidence for the value of both DRO and DRA (LeGray et al. (2010) in classrooms, and the key may lie in the adaptation of each approach in the specific context (McLeod et al., 2017).

Validity

Questions were raised early on regarding the ecological validity of some uses of behaviourism in schools. Winett and Winkler (1972) saw early behavioural approaches as encouraging docility rather than learning, and McNamara and Harrop (1981) argued for more socially useful outcomes from ABA through better *social validity* of the target behaviour for a child, that is, its *utility* and *relevance*. For example, for a young person with social skill difficulties, being rewarded for sitting quietly may not address the *key* need. Behavioural psychology has had to defend itself against the charge of reductionism in this focus on specific behaviours, in specific contexts (Brown & Gillard, 2015). Fundamentally, it risks appearing to focus on the *external* life of the individual, at the expense of other relevant factors for behaviour change, such as consideration of a young person's self-concept or motivations. These issues remain pivotal to how behavioural principles can operate in schools.

A word about 'rewards'

Positive reinforcement in the form of praise was a distinctive feature of the Madsen et al. study (1968) and rewards of various types have been incorporated into interventions ever since. However, Goodwin and Coates (1976) provided a useful corrective to the uncritical application of rewards, pointing out that the goal of any intervention in an educational setting should be for the young person to experience the particular behaviours as *intrinsically motivating* in themselves. This point often becomes lost in the rush to provide 'rewarding' environments in school.

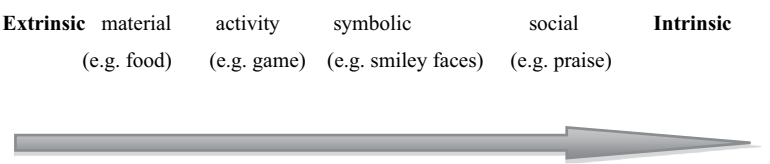

Figure 10.1 The spectrum of classroom-based *reinforcers*
Source: Adapted from Goodwin and Coates (1976)

Social reinforcement, such as teacher praise, should only be necessary where the student's skill level is not high enough for this to yet be a reinforcer *in itself* (Goodwin & Coates, 1976). Thus interventions should employ further reinforcers only where praise alone is not powerful enough (see Figure 10.1). Extrinsic motivators should only be used where necessary for *increasing* a desired behaviour; always pairing material or symbolic reinforcements with praise and intrinsically motivating tasks; and planning progression towards the *intrinsic* point of the scale, phasing out explicit reinforcers.

Praise has differential effects, for example focusing on performance (e.g. academic achievements) or behaviour (e.g. behavioural compliance) (Moore, Maggin et al., 2019). Henderlong and Lepper (2002) conclude that praise may undermine, enhance, or even have no effect on children's motivation, noting the perceived sincerity of praise as particularly significant for intrinsic motivation. The authors also single out other features strongly contributing to positive effects of praise, namely attribution to controllable causes, the promotion of autonomy and the avoidance of over-reliance on social comparisons. A further concern with the application of rewards systems in school can be the lack of meaningful contingency between their behaviour and the reward (Corcoran & Edward Thomas, 2021). Many classrooms contain clearly visible reward charts, where pupils can compare and compete, but the positive effects of these are likely to be minimal. Their effects may even be adverse, if stars appear on the chart some time after the positive behaviour, and they are likely to undermine a pupil's intrinsic sense of worth and value relative to peers.

It is helpful, here, to consider self-determination theory (SDT) which proposes the significance of individuals' intrinsic motivation (Vansteenkiste et al., 2018). Fulfilment of needs in *autonomy*, *competence*, and *relatedness* bring greatest self-determination, or self-efficacy. Praise could demotivate, through undermining *intrinsic* motivation, and leaving the learner externally manipulated (Deci et al., 2001). In particular, where staff are hoping for changes in behavioural regulation, *autonomy supportive* interventions can be helpful. These involve exploring a young person's goals and aspirations, guiding interventions in ways that are likely to build or sustain their motivation. Wisniewski et al. (2020), in a meta-analysis on the effects of feedback, identify that it is *uninformative* feedback that has low or even negative effects.

A word about 'punishments'

Sanctions or punishments, although not present in the original studies of Madsen et al., soon became associated with the practice of 'behaviour modification', and a routine feature of school life. Punishment in behavioural theory is described by Sprague (2018) as a systematic process that should ensure *learning* on the part of the individual and extinguish unwanted behaviour. The implementation of school sanctions is not always consistent with evidence, however, and without these underpinnings, can serve as simple retribution, with little learning involved for the pupil to support their future internal regulation of behaviour.

In behavioural psychology, *punishment* can be problematic for a number of reasons, risking *reinforcing* the specific behaviour it aims to eliminate (for example through inadvertently rewarding it, by increased teacher attention). Punishment risks merely *suppressing behaviours* (failing to generate new, more adaptive ones) and being *overly specific* and having effects on the behaviour only in the presence of the aversive consequences (Kearney, 2015). Consider, for example, a young person persistently calling out in class being either sent out of class (*inadvertent reward*), or perhaps given a detention when in fact the behaviour was driven by work-related anxiety (*supressing*

behaviour), or dealt with by reprimands from a passing senior manager in the school, but continues with the behaviour once the class teacher resumes control (*temporary suppression*). Punishment, in these examples, risks teaching the young person a yet more complex and subtle set of difficult-to-manage behaviours, doing little or nothing to support long-term behaviour change. Principles from behavioural psychology highlight the need for a highly discriminating application of sanctions if they are to create effective *contingencies* between antecedents and behaviour, and behaviour and consequence, to engender behavioural learning on the part of the young person.

There is also an evidence base that shows the deleterious effects of a negative, sanctions-based approach in schools. For example, nagging repetition and threats are likely to have no effect (Caldarella et al., 2021) or to escalate the behaviours they aim to reduce, particularly for those young people with greater behavioural needs (Downs et al., 2019). All of this points to the importance of preventive approaches, where behaviours are taught, good behaviour is effectively reinforced, and sanctions are applied in the context of systems that can enable careful contingency between unwanted behaviour and consequence in ways that support, rather than damage, individual learning. See Focus Box 10.1 for further consideration of the growing rationale for this.

FOCUS BOX 10.1

Sanctions, school exclusion and equity

Although management of persistent low-level behaviours is the predominant concern for staff, where things escalate a school may decide that a young person's behaviour or needs can no longer be managed: exclusion, fixed term or permanent, may follow. Exclusion is an extreme form of sanction in the education system, involving the removal of a young person from the classroom (internal exclusion), or from the educational site (school exclusion), temporarily on a fixed-term basis or permanently. Troublingly, evidence consistently shows how exclusion can be applied without prior recourse to positive interventions, informed by multi-agency work (Cole et al., 2019).

Exclusion from school increased by 60% between the years 2013 and 2018, leading to a governmental review of the issues (Graham et al., 2019). Permanent exclusion constitutes a qualitative change in experience for a young person, correlating with significant detriments to life chances (Arnez & Condry, 2021), and there is a particular disquiet regarding the overrepresentation of certain groups in exclusion data (Gazeley et al., 2015; Demie, 2021). When other factors are controlled for, Black Caribbean boys, children and young people who are from Gypsy Roma and Traveller communities, those in receipt of Free School Meals, and young people identified with SENDs are more likely to experience exclusion in the UK (McCluskey et al., 2015). Children in public care also face greater risk of exclusion (Turner & Gulliford, 2020). The intersectional nature of children and young people's experiences is also noted by Graham et al. (2019). These disparities continue to threaten the equality of opportunity provided by the education system and highlight the need for proactive interventions within schools, guided by evidence-based preventive approaches to behaviour management in schools. As we have seen, 'one size fits all' is not always helpful. Rigidity in sanctions can be seen to place further risk knowingly on some populations of young people, whose

educational trajectory in terms of achievement is already in peril. With no clear behavioural or educational gain for the individual, use of exclusions brings accusations of systemic oppression, and racism (Johnson & Bornstein, 2021).

Where school sanction systems incorporate activities that are likely to be detrimental to a child's behavioural learning, there are further ethical concerns. Some manifestations of this include 'Isolation Booths' in secondary schools. If a student spends long periods without communication with others or access to the full curriculum, becoming frustrated or even distressed (Sealy et al., 2021), the key function of education, namely learning through communication, is removed – and further risks are potentially created for dysregulated students. The association between internal exclusion and permanent exclusion is high (Strand & Fletcher, 2014), illustrating that the use of this sanction is not preventive, but one that may at best mask, or at worst exacerbate, any behavioural needs.

Valdebenito et al. (2018) identified few interventions at the pupil level with clear positive effects, which points towards the significance of organisational, *ecological*, responses to exclusion prevention. Furthermore, Obsuth et al. (2017) even found iatrogenic consequences of a pupil-focused intervention, that is, unintended negative effects of the intervention itself. A systems-based graduated response to behaviour has been found to be more likely to be attuned to developmental needs (APA Zero Tolerance Task Force, 2008), and to support the educational placements of those at risk of exclusion, particularly where staff are helped to deal with the challenges they face in supporting difficult behaviour (Jones et al., 2015). Additionally, educational psychology draws on social psychology, to support organisational insights into the effects of implicit bias or to highlight the voice and the experience of the child or young person (Demie, 2021).

The domain of school exclusion, or of inclusion, is an illustration of how psychology and social policy holds a unique interface; psychology has a role to play in the promotion of equality and of environments that can reduce vulnerability, and in supporting all children in attaining their potential.

From consequences to antecedents: A focus on the environment

Behaviourism has offered cumulative insights into evidence-based strategies for effective *classroom management*. Early on, it was noted that the classroom curriculum should be adapted to support the pupil's engagement, before embarking on a pupil-focused behavioural intervention (Harrop & McNamara, 1979).

Naturalistic studies of classroom interactions, drawing on observational methods, have yielded fruitful insights, for example investigating the relationship between teacher positive feedback and rates of on-task behaviour. A large-scale UK study by Apter et al. (2010) noted positive correlations between teachers' positive academic comments and on-task behaviour in primary schools. More recently Gage et al. (2018) found a positive relationship between teacher use of management strategies and elementary (primary) school student on-task behaviour, although not with disruptive behaviours. The need for teachers to be supported in their understanding of such findings and in the use of behaviour-specific praise is highlighted by Floress et al. (2022): supporting such skills is one role for EPs.

Behavioural psychology's potential contribution to class behaviour management has also been examined though intervention studies. For example Williams (2012) illustrated the positive effects of a DRA behaviour strategy, 'Fair Pairs', where three-part praise (*pupil name*; *clear praise*; *statement of specific behaviour*) is delivered to differentially reinforce the desired behaviour. Reviewing the evidence for ABA, Gable et al. (2009) highlight the following, amongst other features, in good classroom management:

- The use of a limited number of classroom rules, with specific, brief, clear teacher instruction on these.
- Enforcing rules through 'precision requests' – which can be helpful since compliance with rules, and disruption, co-vary: *'Daniel, we have to close our books, now. You do it too please' [teacher waits]*.
- Rules should aim to build positive expectations in a classroom, with a positive cohesion function: '*We are all working well: everyone carry on to breaktime and there can be 5 minutes extra play'*.
- Praise should be contingent and behaviour specific: *'Jo, I like the way you are waiting quietly'*.
- Planned (safe) ignoring of undesirable behaviour, within reason.

Extending behavioural approaches in school provision, policy, and legislation

Developments in behavioural psychology, particularly in the USA, have continued. For some it has evolved as 'positive behaviour support', reflecting a greater breadth of focus than simply on the extinction of undesirable behaviours, or on behavioural contingencies or the promotion of positive behaviours (LaVigna & Willis, 2012), aiming for a more holistic view of the young person's development in the overall context of behavioural management by the wider school. The broader term aims to understand behaviour in the more holistic context of an individual's life, and to ensure ecological and social validity, seeing the broader endpoint of intervention as positive social functioning, rather than simply compliance with small behavioural targets. Professionals should aim to enhance the pro-social strengths of the individual as they naturally occur in the social context, and support environmental adaptations to reduce negative behaviours.

'Positive behaviour intervention support' (PBIS) (Horner & Sugai, 2018) has been widely implemented in the USA and Australia, aiming to enhance the school environment itself through school-wide adoption of positive behavioural management principles. Strategies are conceived of as serving at the three levels of intervention: primary (preventive), secondary (focused), and tertiary (targeted, or reactive). There is good evidence for the efficacy of PBIS, its implementation correlating with reduced sanctions, and enhanced academic achievement (Horner & Sugai, 2015). A critique has been offered, that PBIS allows school policies to essentially repackage approaches to behaviour management in ways that continue to disadvantage young people from minoritised communities (Bornstein, 2017). Nevertheless, McIntosh et al. (2018) present good examples of how PBIS can ensure good support of those groups of young people most at risk of behavioural infringement, facilitating more effective teaching and use of behavioural principles.

In the UK, blunt versions of behaviourism, in the form of targets, rewards, sanctions and rules, can be found in a range of educational policy and legislation (Law & Woods, 2018). However, as we have seen, a unilateral 'one size fits all' approach cannot succeed. A phenomenon familiar to

many practitioner psychologists, nevertheless, is that of encountering traces of behavioural psychology in various diluted incarnations in classrooms, accompanied by lack of apparent effect at best, or at worst, achieving the opposite of the intended effects. Activity Box 10.1 considers some such examples.

ACTIVITY BOX 10.1

This box offers some examples of school-based practices. Note down your comments on the extent to which they meet the key principles of behavioural psychology as set out above.

Red class, Year 3 pupils	*Identify a) any footprints of behavioural psychology, and b) any amendments if needed.*
Pupil names are listed on a chart at the front of the class, and stars are given by the teacher during the course of the week.	
Pupils in the class have a shared reward system, whereby they can earn marbles in a jar during the course of the week for 'being good'.	
If sufficient marbles are earned, such that the jar becomes full, pupils can earn 'golden time' on Friday afternoon.	
If the jar is not filled by Friday afternoon, the teacher empties it, and begins the exercise again on Monday morning the following week.	
Pupils have home school diaries, and at the front of these is written a clear message for them and their parents: *If you are trying your best, you are doing well* ☺	
A passing visitor to the school during the week hears the teacher state the following: *James, I like the way you are helping Zoe*.	
The Headteacher, passing in the corridor, later in the day hears the teacher say: *How many times do I have to tell you? Stop behaving in this silly way!*	

Behaviour function

A widely accepted premise is that a behaviour's function (that is, how the behaviour serves the individual, or leads to a consequence) should be observed and analysed when developing behavioural programmes. In this respect, general school behaviour polices can be considered an imprecise tool, since they typically outline a unitary model of rewards and sanctions. To address behaviour change at an *individual* level more focused insights regarding the 'function' of a behaviour for an individual pupil are needed (Horner & Sugai, 2018).

The term functional behaviour analysis (FBA) captures the methods through which applied psychologists can employ behavioural psychology to analyse the *function* and *features* of behaviour, in order to plan interventions (Oakes et al., 2017). Lloyd et al. (2016) highlight the significance of functional analyses in their systematic examination of the effects of *environmental*

manipulations on behaviour. The practical and conceptual complexities of administering robust FBA are now better understood, as are the wider issues in school-based implementation of PBIS more generally (Sugai & Horner, 2020). Despite the strong evidence for its utility and effectiveness, FBA may remain underused in schools (Strickland-Cohen et al., 2016) and efforts to widen its application may be a valuable next step. In the UK FBA retains a profile of use in the casework practice of educational psychologists (see Eccles & Pitchford, 1997 for example), and it certainly has a strong resonance with the ethical and ecological underpinnings to the professional practice of educational psychology.

Preventative approaches

Clunies-Ross et al. (2008) observed that *reactive* strategies for behaviour management in the classroom (that is, responding to already occurring behaviour) can be associated with elevated teacher stress. Teacher stress, or burnout, is a significant concern in the management of behaviour (Wang et al., 2015). There is also now plentiful evidence that *preventive* programmes are likely to correlate with increased pro-social behavioural skills in students (Chaffee et al., 2019). This highlights the importance of initiatives to support teachers through training and school policy development (Moore, Benham-Clarke et al., 2019). There is common agreement that effective positive universal behaviour environments require the involvement of all staff – *whole school approaches* – led by senior leadership teams, and a high degree of consistency (Sugai & Horner, 2020). The key is to support whole school implementation, whilst maintaining the theoretical strength of the core intervention principles (Corcoran & Edward Thomas, 2021). Psychologists are widely involved in supporting whole school developments. Formerly, much of this work was driven by behavioural psychology, but increasingly it is informed by other paradigms (see the section on 'psychodynamic influences' below).

From a focus on observable behaviour to the consideration of cognition and affect

A theoretical challenge to the behavioural paradigm came from early studies of self-monitoring by students, in relation to a pre-agreed contract or behaviour. In a meta-analysis of single-case experimental evidence, Bowman-Perrott et al. (2015) identify that such approaches can be seen to be successful in inhibiting unwanted behaviours, although to a greater degree than promoting desired behaviours.

Developments in ethical principles, too, fed this evolution, with increased recognition of the importance of the voice of young people themselves, throughout policy and practice (Cosma & Soni, 2019). This indicated the need to consider the perceptions of the learner when intervening with behaviour; in other words, to acknowledge the role of cognition.

Cognitive perspectives and their applications with young people

Cognitive perspectives identify behaviour as the external manifestation of internal processes. Thus, behaviour experienced by teachers as difficult may be driven by maladaptive cognitions, or by cognitions that have adapted to difficult psycho-social circumstances for that young person, but which do not easily allow for further adaptation in the classroom. Interventions, often conceived

of as experiments in *doing* and/or *construing* things differently, are drawn up to address unhelpful thoughts and beliefs (Fuggle et al., 2012) with a young person. Cognitive behaviour therapy (CBT) is particularly concerned with thoughts implicated in selective attention and in irrational beliefs in the form of negative automatic thoughts. Various studies indicate the good utility of cognitive-behavioural ideas for group-based work in schools (e.g. Ruttledge et al., 2016).

A number of cognitive theories are relevant to the question of intervening with difficult behaviour. Early on, Crick and Dodge (1994) explained how an individual may perceive threats in others' behaviours that are not intended to be so (see Chapter 11). Martinelli et al. (2018), in a meta-analysis, identify a significant association between children's hostile attribution of intent towards peers and their own aggressive behaviour, and in particular the association of hostile attribution with reactive (so called hot-headed) rather than proactive (cool, premeditated) aggression. Such insights can support psychological exploration with individual young people or inform classroom or group interventions. Van Bockstaele et al. (2020) found that training to modify hostile attributions led to a reduction both in relational and physical attributions, and in reactive aggression; and Cole and Treadwell (2013) noted the importance of aiming to *increase self-regulation* in children through CB work, valuable because self-regulation in childhood has been shown to correlate with various longitudinal positive outcomes, specifically achievement, interpersonal skills, mental health, and healthy lifestyles (Robson et al., 2020).

When considering such individual work it is important, ethically speaking, to also address features of the school system, to optimise the young person's experience through adaptations to the school's ecology. Pupil voice work by a psychologist, for example, might reveal the influences or pressures that a young person may experience in their peer group, something that staff may not always have insight into; or the pressures a young person feels in certain lessons. For many young people, change is possible where they experience differing types of support, or minor adjustments to their environment or curriculum, without which their efforts towards self-directed change may be thwarted.

Personal construct psychology

As we saw above, ensuring that 'pupil voice' contributes to the formulations and interventions a young person experiencing difficulties in school is key, and cognitive paradigms lend themselves to this work.

For many EPs personal construct psychology (PCP) (Fransella, 2003) has been influential. Devised by George Kelly (Kelly, 1963), PCP is a theory of personal construing, interested in the unique patterns of construing for each individual (Bannister & Fransella, 1986). Our constructs relating to the world around us, the theory goes, are underpinned by our experiences, and in turn help us to predict and perceive our worlds. The language an individual might use to describe something of significance is key, since it reveals something of the individual's unique meaning-making, and therefore illuminates their behaviour. Kelly stressed the bonded nature of emotion to cognition, which can be help a practitioner to understand the holistic worldview of an individual. Many psychologists employ PCP to gain the views of young people experiencing behavioural difficulties in school: Beaver (2011) offers a helpful practical guide to this process. Case Study Box 10.1 offers an example of individual practitioner work drawing on PCP, to support a case of challenging behaviour.

CASE STUDY BOX 10.1

A young person attending a pupil referral unit

Austin is 15 years and 6 months old, in Year 11. Permanently excluded from mainstream school, he now attends an alternative educational provision, and receives instruction on core subjects and technology. He hopes to gain an apprenticeship and become a mechanic in future.

His attendance has fallen off since Year 10, confusing his mentor as to why this is. Austin's previously positive relationships with his peers contrast now with frequent difficulties and instances of challenging behaviour.

In discussion with Austin, an EP notes the following:

- He has been spending time at home with his older brother, who is not in employment.
- Austin's mother and brother both drink during the evenings, and Austin has begun to join them.
- Austin says that he does want to become a mechanic.

Austin talked to the EP about his wider family members and identified who he most hoped to be like in a few years' time. Eliciting his 'constructions' relating to his family and school experiences brought the following bipolar constructs.

Lazy _____ A vision in life/has money
Drinks _____ Does sport
Unfit _____ Plays football

The EP used these bipolarities to explore where Austin would place himself within these. Austin saw the qualities on the right as his preferred poles. He discussed his aspirations for, hypothetically, a good day in his life, next week, and next year. He described the person he most wants to be like, and on a scale of 1–10 rated his *desire* to reach those qualities himself, his *ability* to reach them, and his next step towards this.

A week later they met again, to review the work that was done in the first week. Austin said he did not know this much about himself before. They explored ways of dealing with those peers he found threatening and frustrating, guided by his desire to reach his goals.

Another week later his mentor reports that Austin has begun attending again, and has been cooperating well with his instructors and his peers. A month later, and three months later, the news is still good, and Austin progresses through his end of year assessments successfully. Discussion identified that Austin is more 'centred'. He seemed more confident of himself and mindful of his aspirations.

The key to this small-scale intervention was exploration of Austin's worldview, bringing his *core construing* to the fore, allowing him to become aware of aspects of this, and to review it and develop new behaviours.

Attribution theory

Above all, behaviour is a form of social action, and cognitive approaches allow us greater exploration of the meaning of that behaviour for the individuals involved. The idea that any behaviour is subject to the perceptions and interpretations of others leads us to a rich seam of investigation that aims to understand differing attributions regarding difficult behaviour in the classroom.

Attribution theory is concerned with how individuals invoke causes and explanations for various phenomena, and the effects of these cognitions on their behaviour. The *fundamental attribution error* (Ross, 2018) suggests that people tend to make self-serving judgments, through appraisals that are favourable to themselves. They also over-attribute to others on the basis of superficial features, for example, others' roles. A key figure in the study of causal attribution in education, both in terms of the nature of attributions in themselves and in their links to behaviour such as blaming and help-giving, has been Bernard Weiner (see Focus Box 10.2).

FOCUS BOX 10.2

The contribution of Bernard Weiner

Weiner's major contribution has been to relate attribution theory to school learning. Weiner (e.g. 2001) identified three dimensions along which most attributions for successes and failures were found to lie:

1 Locus (whether the cause was internal or external to the person).
2 Stability (whether the cause is fixed or can vary).
3 Controllability (whether the person is able to control the cause).

For example, if a student attributed some success or failure to luck this would be an external, unstable, and uncontrollable cause. On the other hand, an attribution of effort could be categorised as internal, stable, and controllable.

Weiner found a relationship between causal attribution and help giving, and that teachers were more likely to feel sympathy and be willing to help (rather than punish) a student if they attributed the misbehaviour to causes outside the student's control, thus not to lack of effort (Woolfolk-Hoy & Weinstein, 2006).

Causal attribution and managing behaviour

Attribution theory has been applied to a variety of practical problems, and research offers insight into the different antecedent conditions for causal attributions made by teachers, students, and parents for difficult behaviour in schools, and the consequences of such attributions (Wang & Hall, 2018). The focus becomes a search to uncover obstacles to interventions for management of behaviour, in the form of blaming, and to identify ways forward where often the parties involved may be attributing differently.

Teachers' attributions for challenging behaviour

Some studies have suggested that teachers tend to view parents and home circumstances as mostly to blame for difficult pupil behaviour in schools (Miller, 1995). Gibbs and Gardiner (2008), however, found contradictory evidence, implying some malleability in such patterns. Wang et al. (2015) also found the *stability* dimension of teacher causal attributions varies according to which dimension of school life the attributions pertain.

Kunesh and Noltemeyer (2019) found a greater tendency on the part of pre-service teachers in the USA to make internal and stable predictive attributions for Black or ethnic minority students. Since we saw above that there is an elevated risk of school exclusion for children and young people from minoritised groups in the UK it is pertinent to understand whether there are implicit teacher attributional patterns that may be less favourable to some groups. Qualitative researchers have found that young people may perceive teacher attributions regarding difficult incidents failing to correspond with their own perceptions, and that when they seek support from the system may find their perceptions denied (Mngaza, 2020). Helpfully, Kunemund et al. (2020), working in the US context, notes that teacher self-efficacy can positively mediate teacher–child mismatch (by race or ethnic identity) and conflict (for example, classroom clashes), for children who were at risk of showing difficult behaviour. This indicates the importance of working with staff to support their self-efficacy in attributing differently around difficult behaviour.

Students' attributions for 'challenging' behaviour

Contrastingly, the causal attributions made by students for the behaviour of their peers place teacher fairness and pupil vulnerability as more significant contributors to pupil misbehaviour than 'adverse family circumstances' and 'strictness of classroom regime' (Miller et al., 2000). Lambert and Miller (2010), investigating the stability and predictive validity of pupil causal attributions in secondary schools, found temporal stability for 'culture of misbehaviour', the thrill of misbehaviour in classroom for pupils. They also report this factor correlated positively with judgements of behaviour standards by their teachers. In a qualitative investigation, Sheffield and Morgan (2017) identify that young people with a 'label' of SEBD may have some awareness of some possibility of change on their part requiring a shift towards *internal attributions* of responsibility. For many, however, their sense was also of unfair responses by teachers, affecting their relationships. Understanding attributional patterns for groups of young people, and for individuals, can be significant in informing whole school interventions by psychologists.

Parents' attributions for challenging behaviour

Parent attributions for child behaviour appear almost in diametric opposition to those of teachers. Cornah (2001) examined mothers' attributions towards the difficult behaviour of their and other people's children. Mothers explained their own child's behaviour as being caused by factors that were less stable and less global than when explaining similar behaviours in other children. Cornah saw this as an extension of the self-serving attributional bias by mothers into a child-serving bias. Examination by Miller et al. (2002) of the factor structure of parents' attributions for challenging behaviour in schools indicated that parents' attributions were best represented by three factors – *fairness of teacher's actions*, *pupil vulnerability to peer influences and adverse family*

circumstances, and to a degree, *differentiation of classroom demands and expectations*. However, Shapiro et al. (2013) failed to confirm this finding, suggesting this may be due to their collection of qualitative data, and their examination of parental attributions specifically among those whose children had experienced academic or conduct difficulties. For parents who had experienced difficulties linked to behaviour, there were no self-serving ('hedonic') attributions, and in fact parents made attributions to the controllability on the part of the child. Significantly, where they did so, parents were more likely to consider punishment for their child. This study therefore holds important implications for how schools and other services work with children, and parents, when forming home-school links to support remediation of behaviour difficulties, knowing that over-punitive environments, or ineffectual sanctions, create risks for children's social and emotional development.

Generalisability of attributional patterns

These studies must be interpreted carefully in the light of research that highlights the unique influences on each context in question in teacher casual attributions for student behaviour (Wang & Hall, 2018). In a comparison of British and Irish teacher attributions, Gibbs and Gardiner (2008) found Irish teachers more likely to attribute to the controllability of behaviour through child factors. Furthermore, attributions of causality appear to vary by gender, whereby teachers may attribute more to internal and uncontrollable factors for females, but for males towards controllable and unintentional factors (Savina et al., 2014).

Finally, there is some evidence to suggest that the general patterning of attributional norms identified in previous research may not pertain when parties are making judgements about particular *individual* cases. Brank et al. (2006), for example, in the context of juvenile justice found that attributions by professionals may become less fixed when dealing with specific cases; less blame is found. Further, a vignette-based study of parent, teacher, and pupil responses to a hypothetical scenario of a pupil assaulting a teacher generated differential patterns, according to whether the teacher had undertaken a physical intervention with the pupil prior to the event. The concordance between parents and teachers here suggested that situation-specific features, that is events which precede judgements, may influence the patterns of attribution (Lawrence et al., 2010).

So, whilst attribution research identifies some patterns, whereby attributional patterns may exacerbate tensions and difficult relationships, it is important to be aware of the possibilities of cultural, organisational, and individual variance.

Attributions and educational inclusion

The EP should be alert to subtle factors of identity, culture, and gender, informing *situation-specific attributions*. Attribution retraining involves strategies that aim to help an individual make different types of causal attributions for their own behaviour, usually away from external and uncontrollable attributions. As noted, cognitive approaches such as CBT or PCP can be helpful with a young person, focusing on the attributions they may hold regarding peers or teachers (Ruttledge & Petrides, 2012).

Attribution retraining may also take place in work with adults, although this may be a difficult enterprise with teaching staff where long-term socio-cultural influences may be in play. Although parenting programmes often include an element of attribution re-training, the work of EPs has

not tended to explicitly focus on this domain with education staff (Wiley et al., 2012) Nevertheless, for many EPs, informal attributional work can be fundamental to their work in schools. An understanding of attributions can support the EP to support teachers managing difficult behaviour, and to promote inclusion. In a grounded theory study of EP practice with staff supporting young people's SEMH needs, Zafeiriou and Gulliford (2020) report attributional work by EPs, describing the process that evolved staff responses to the young people as 'reconstruction'.

Various approaches to school-based consultation also specifically aim towards the reconciliation of the diverse perspectives of home and school, sometimes informed by attributions. Joint systems consultation (Dowling & Osborne, 2002) or ecosystemic consultation (Miller, 2003) are versions of collaborative consultation involving adults from the home and school environments, to open and explore perspectives, establish common ground, and develop solutions.

It is worth noting that such work is undertaken in the context of the wider ecology of the school's culture towards the management of behaviour difficulties. In their study of the relationship of teacher self-efficacy to their sense of responsibility for intervening with behaviour, Gibbs and Powell (2012) reflect on the apparent influence of teachers' *collective self-efficacy* to intervene with factors deemed by them to be external influences on pupil behaviour. The finding, that collective self-efficacy may negatively correlate with rates of pupil exclusion from school, is grounds for their commentary that it is important to promote whole school approaches to interventions for behaviour, and to see individually focused work as part of a wider staff ecology in attributions towards managing behaviour.

As an example of such work, many psychologists employ collaborative group problem-solving approaches to support the development of understanding among staff of pupil need, particularly before those at risk of school exclusion. Massé et al. (2013) compared the effects of individual and group consultation on teacher perceptions of pupil need and inclusion. Whilst both were successful, group approaches induced greater staff adherence to the support for young people. A group problem-solving intervention, Circle of Adults, implemented to support Looked After Children at risk of exclusion (Turner & Gulliford, 2020), found evidence in the qualitative data for a shift in staff self-efficacy and causal attributions. Overall, the need for attribution work is clear, if larger-scale whole school policies are to achieve buy-in from individual staff.

Psychodynamic influences in managing behaviour schools

Providing a counterbalance to cognitive perspectives on difficult behaviour, psychodynamic, humanistic, and person-centred approaches offer explanations that similarly focus on the internal life of the individual but give rise to consideration of mental health and wellbeing. Chapter 9 explored how schools have increasingly become responsible for supporting positive wellbeing for all.

Linked to this, a set of approaches focuses on the significance of early experience for an individual's functioning. This framing draws attention to the developmental underpinnings of behaviours and presses for adults to view difficult behaviour in the context of how unmet needs, or even trauma, may surface in a child's lack of internal regulation or pro-social skills. In other words, the developmental history of a child influences how they may experience the demands of school life. Although school demands appear to fall within the 'typical' and 'usual' to the vast majority of children, for some, the expectations of them may fall beyond their capacity to respond at any moment in time: they may be struggling to meet other basic needs of their own (for example,

hearing an adult raise their voice triggers anxiety, based on prior experiences, such as verbal or physical altercations in the home). A variety of approaches address this broader perspective.

Attachment theory

Attachment theory (Bowlby, 1969) is rooted, broadly speaking, in psychodynamic perspectives, and has increasingly played a role in offering explanations of behaviour in school. Positing the importance of the early care-giving and care-seeking processes between care-giver and child, attachment theory proposes that this early relationship supports the development of a notional 'internal working model', enabling us to process our social and emotional experience of the world. Early relationships and subsequent experiences, then, are seen as contributing to the development of an attachment 'pattern'. Patterns have been conceived of as either *secure* or *insecure*, the latter being primarily *anxious*, *avoidant*, *ambivalent*, or even *disorganised* patterns. 'Insecure' patterns are considered to be found where the adult care-giving is not able to generate responses in either a sufficiently consistent or appropriate manner to allow the infant or child to develop confidence or sense of self with which to explore the world.

Various psychologists have explored the contribution of attachment theory to pupil and school functioning (Rose et al., 2019), and the theory has held two key lines of influence in explanations of school behaviour. Firstly, a student's early experience of attachment processes, and their current familial relationship patterns, can be considered to influence their relating to adults and peers in school and therefore to potentially constitute an influence on their behavioural responses. Secondly, these concepts can be translated into the school environment, and 'security' argued to be a developmental need for all children, highlighting the responsibility of teaching staff to provide a positive and secure social environment. Although primarily informed by the instructional nature of the environment, relationships should reflect a student's need for strong positive connections in school (Stanforth & Rose, 2020). This notion is most developed in the notion of attachment aware schools (Rose et al., 2019) discussed further in Chapter 9.

This propels us towards micro-analysis of teacher–pupil dynamics and how these may build a pupil's positive and trusting relationships with adults in schools (Quinn et al., 2021). Swinson and Knight (2007) illustrated the good effects of positive verbal teacher feedback even for those pupils showing more significantly difficult behaviour. Pupils themselves report the significance of positive adult relationships in school (Cosma & Soni, 2019), and this can contribute to their sense of engagement, and correlate with achievement (Wang et al., 2015). Korthagen et al. (2014) examined 'teacher contact', where small verbal contacts through the school day are seen as distinct from teacher–pupil *relationships*. Such contacts or check-ins form the substrate for the relationships referred to in the literature (Kearns & Hart, 2017), and they also represent the type of contact often described in the ABA literature: brief contacts, issuing of instructions, verbal guidance, which together constitute the positive moulding of behaviour. Clunies-Ross et al. (2008) therefore put forward the double value of preventive approaches to classroom management in promoting both positive behaviour and relationships. In contrast, reactive approaches contain stress-risks for the adult, and, for pupils, are an ineffective approach to shaping behaviour and, of course, relationships.

Evans et al. (2019) found that teachers' mental representations of their relationships with pupils (whether they perceived them as likely to contain conflict or not) could influence how teachers responded to students showing challenging behaviour. Relational conflict (i.e. between student

and teacher) was also a mediator between difficult student behaviour and the teachers' affective responses, and importantly *relational closeness* reduced the strength of the pathway between student behaviour and teacher response. The authors thus highlight that a positive relational environment in schools benefits not only students, but the wellbeing of staff themselves. Increasingly, attention has been focused on the need to support staff wellbeing, reducing teacher stress (Turner & Gulliford, 2020). Supporting the adults, then, is crucial to good relationships in school, and behavioural interactions.

Attachment to school has become an area of theoretical interest too. Korpershoek et al. (2020) suggest school belonging can help to promote positive engagement. Importantly, belonging to school correlates positively with student wellbeing as well as with academic achievement (Panayiotou et al., 2019). In addition to specific curriculum activities to support this, a sense of connectedness within the school community again comes through how staff relate to pupils, supporting a sense of safety, psychological as well as physical. Allen et al. (2018), in a meta-analysis, identify the most significant factors in the promotion of school belonging as 'teacher support and personal characteristics'. In this way, differing lines of research converge on the same theme: the importance of relationships.

Despite attachment theorising having been argued to risk a deterministic or within person view of a child's functioning (see Slater, 2007) its potential contribution to understanding difficult behaviour in schools is significant. This is particularly so for those who experience significantly inconsistent care early in life, or disrupted attachments. Attachment theory underpins Nurture Groups, and the work to promote explicit attachment informed approaches and relational-based strategies, for example through 'emotion coaching', an intervention to support staff in understanding children's emotional needs (Rose et al., 2019). The renewed focus in schools on the influence of early experience on children and young people's later SEMH also includes work developed around the conception of ACEs ('adverse childhood experiences') and trauma informed practice (Nolan et al., 2021) (see further discussion in Chapter 9). Given the strong evidence on the positive effects of teacher–pupil relating, schools can use this to inform their universal practice, to enhance the sense of interpersonal security of all their pupils.

Social-emotional learning

The development of pro-social skills, of emotion regulation and problem-solving, and of empathy are all significant in the psycho-social functioning of the child, and their promotion constitutes a 'preventive' approach to behaviour difficulties in schools (McLeod et al., 2017). Social and emotional learning (SEL) has been associated with positive long-term personal and social outcomes (Taylor et al., 2017) including those that benefit the individual lifelong. Some evidence also suggests a positive relationship between SEL and academic outcomes (Mahoney et al., 2018). Panayiotou et al. (2019) suggest that social-emotional competence may buffer the adverse effects of any mental health challenges: in their model, greater social-emotional competence was associated with fewer mental health difficulties, and this predicted later higher academic attainment. In a detailed review, Wigelsworth et al. (2020) identify the positive effects of interventions at various levels, including multi-component interventions, supporting a whole school as well as class and group focus. They note programmes' success may vary, dependent on multiple factors, including aspects of school environment, indicating the importance of supporting school staff to make

programme adaptations according to the relevant features of their school context. This again highlights the importance of a bespoke approach for each school, when developing whole school interventions.

Conclusions

We have reviewed the various guises through which psychology offers a theoretical and applied contribution to understanding difficult behaviour in schools. The field is broad, and the overview here is necessarily cut to scale. It has not been possible to explore in depth the influences of the systems approaches or systemic theories to behaviour difficulties and change which interest many educational psychologists, nor review in detail the *methods* and *means* through which educational psychology aim to bring about change in school, such as consultation. That, in short, is another story: that of the process of supporting behaviour change among adults in school and the community. Here, we have primarily reviewed the contribution of behavioural approaches; the influences of cognitive theories on psychological practice and in particular the area of attribution theory; and one set of psychodynamic insights on practice. As we have seen, there are multiple possible influences that can be brought to bear to explore, understand, and intervene with difficult classroom behaviour. The domain is one where theoretical psychology has prospered, creating many conduits to interventions: evidence informed practice.

Summary of the main issues addressed in this chapter

- There are three main types of ABA strategy: DRA – differential reinforcement of alternative response; DRO – differential reinforcement of the omission of a response; and differential reinforcement of lower rates of responding. DRA or DRO can be effective for classroom settings, but both need to be accompanied by a programme that also teaches positive behaviours.
- There is a spectrum of possible classroom reinforcers, but strategies should always aim towards children being able to find experiences intrinsically motivating.
- Young children's classroom behaviour can be influenced by teachers employing the use of praise, ignoring, and clear statements of classroom rules.
- Sanctions and punishments have become widely associated with behavioural approaches, but in schools can often be ineffective or even problematic when trying to achieve behaviour change, particularly for the most vulnerable learners.
- Practice in ABA has seen an evolution from a focus on 'on-task' behaviour encouraged by changed consequences to a concern with more socially valid and academically useful behaviour and a greater focus on environmental antecedents, and on positive behaviour supports.
- FBA is useful when supporting individual cases of difficult behaviour in schools.
- Cognitive approaches have been found to play a helpful role in supporting individual change, and group-based interventions, to support social and behavioural development in children.
- PCP has also helped practitioners gain insight into the cognitions of those involved in situations of difficult behaviour.
- Attribution theories are concerned with the antecedent conditions to causal attributions, and consider the psychological consequences of these.

- There is a significant association between children's 'hostile attribution of intent' towards peers and their aggressive behaviour.
- Causal attributions can vary across three dimensions: locus, stability, and controllability. Teachers appear more willing to help students whose misbehaviour they attribute as beyond the students' control.
- Teachers, students and parents may make different causal attributions for the causes of difficult behaviour in schools. Students are more likely to attribute difficult behaviour to teacher unfairness, although parent attributions may vary. Teachers and students, however, agree that 'pupil vulnerability' is a major cause. While teachers and parents both identify 'adverse home circumstances' as a major cause, students do not.
- Ecosystemic consultation by psychologists can bring different parties together, to include exploration of the implications of differing attributions.
- Psychodynamic approaches have been influential recently, informed for example by attachment theories (see Chapter 9).

Key concepts and terms

Ecological systems theories; applied behavioural analysis; classroom management; social reinforcement; rules, praise, and ignoring; antecedents; consequences; differential reinforcement; reinforcers; sanctions cognitive behavioural approaches; causal attributions; attachment theory; preventive reactive approaches.

Recommendations for further reading

Cole, T., McCluskey, G., Daniels, H., Thompson, I., & Tawell, A. (2019). Factors associated with high and low levels of school exclusions: Comparing the English and wider UK experience. *Emotional and Behavioural Difficulties*, *24*(4), 374–390.

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Sample essay titles

1 What are the possible advantages of using the principles of applied behaviour analysis in educational settings?
2 Applied behaviour analysis is, in essence, an elaborate system of 'carrots and sticks'. Discuss.
3 How might educational psychologists use attribution theory to help them in their work around difficult behaviour in schools?
4 In what ways do teacher–pupil relationships matter to behaviour in schools?

Note

1 'Difficult behaviour' is adopted here as a short-hand term, carrying the implication that perceptions of behaviour are subjective, and relative.

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11 School bullies

Are they also victims?

Susan Birch and Norah Frederickson

Chapter summary

Surveys consistently identify bullying as an important issue for the wellbeing of children and young people. With the growth of accessible technology, cyberbullying is a method of bullying which is providing new challenges for society. School bullies have historically been portrayed as large, physically stronger individuals, and victims of bullying as weak, sensitive and timid individuals. However, psychological research relating to both traditional and cyberbullying suggests that these stereotypes are oversimplifications. Some students identified as bullies are also victimised. Also, the incidence of negative outcomes associated with bullying and cyberbullying is high for all involved, not just for pupils who are victimised. Increasingly, it is recognised that a focus on within-child factors alone is unhelpful in developing understanding of bullying situations, given that bullying is a complex social phenomenon. Theories of bullying range across explanations at the levels of the individual, family, peer group, school system, as well as wider socio-cultural perspectives. A range of interventions have been developed, although there can be disagreement over intervention principles for children identified as engaging in bullying behaviour, and it is here that the overlap between bullying behaviour and victimisation has particular implications. A systemic perspective leads to a need to explore a broad range of foci for interventions and there is growing evidence for the effectiveness of multi-level approaches. In addition, calls for schools to consider their own culture and ethos in order to promote respect and inclusion for all are warranted.

Learning outcomes

When you have studied this chapter you should be able to:

1 Describe the principal theories of bullying and the research evidence relating to them.
2 Critically evaluate the main assessment and intervention approaches used in relation to bullying behaviour in schools.
3 Outline the evidence for different intervention approaches used in schools, both preventive and reactive.
4 Relate the above to the phenomenon of cyberbullying.

DOI: 10.4324/9780429322815-14

Bullying: An introduction

While the extent to which bullying plays a part in our society is difficult to quantify, the need to tackle bullying in relation to its impact on children and young people's mental health and wellbeing is well-recognised. For example, the percentage of students experiencing bullying is included as a specific target within UNESCO's Education 2030 Framework for Action (UNESCO, 2016).

In relation to prevalence, Ditch the Label's (2020) annual bullying survey found that 25% of 12–18-year-olds in their UK sample said that they had been bullied in the last year. UNESCO (2019) carried out an international survey across 144 countries and territories and reported a higher figure (32%) of students reporting having been bullied at school 'on one or more days in the past month'. This illustrates a key point which needs to be considered in bullying prevalence research, that prevalence is influenced by how bullying is defined, including the context ('at school'), the frequency level (once a month) and the timeframe (in the last month) (Monks et al., 2009). Gaffney, Ttofi and Farrington (2019c) also highlight the need to consider whether 'bullying' as a construct is understood similarly across cultures and if not, that differences in understanding might also impact prevalence estimates. Livingstone and Smith (2014) and Olweus and Limber (2018) highlight similar and arguably more significant issues around definition and measurement in relation to cyberbullying. They report that where cyberbullying is researched within the context of traditional bullying, then prevalence estimates for cyberbullying are much lower than for traditional bullying, (4.5% of survey participants, compared with 17.3% for traditional verbal bullying), a finding also identified by Cosma et al. (2020) in relation to experiences of victimisation and cybervictimisation.

Whilst media reports have tended to suggest that the incidence of bullying is increasing, Smith (2018) outlines evidence to suggest that this is not the case and that the prevalence of traditional bullying in fact appears to be reducing. A similar pattern was found in an international study of trends in victimisation and cybervictimisation (Cosma et al., 2020). Significant decreases in victimisation were reported in 21 out of 37 countries and regions for boys between 2002 and 2014, and in 12 countries and regions for girls; surprising findings, given increases in the availability of technology over the study's timescale.

What is indicated by the above is that traditional bullying and cyberbullying are widespread and frequently occurring. Having been bullied has been shown to be related to elevated risks of childhood and young adult psychiatric disorders (Arseneault, 2018; Morin et al., 2018) and even having been part of a peer group characterised by bullying and/or victimisation has been shown to be related to significant negative outcomes such as poorer levels of wellbeing, behaviour and academic achievement (Gutman & Brown, 2008), psychological and somatic symptoms, and low life satisfaction (Callaghan et al., 2019).

What is bullying?

While there is no universally agreed definition of traditional bullying, most authors agree on its key features, described as the 'double IR' (Orpinas & Horne, 2006):

I – Imbalance of power
I – Intentional
R – Repeated over time

The imbalance of power is described by Juvonen and Graham (2004) as the single most critical characteristic of a bullying relationship, whereby the victim is unable to prevent or stop the aversive behaviour. Power in children's groups is not only based on differences in physical size and strength and associated access to resources, it may also be based on social attention-holding ability and success in forming affiliative relationships (Hawker & Boulton, 2001). For traditional bullying, the type of power that is being abused is often used to describe the type of bullying occurring. Overall, the following different types of bullying may be distinguished:

- Physical – hitting, kicking, taking belongings (resource-holding potential).
- Verbal – name calling, insulting, making offensive remarks (social attention-holding power).
- Relational – spreading nasty stories about someone, excluding them from social groups, being made the subject of malicious rumours (affiliative relationships/sense of belonging).
- Cyberbullying (social attention-holding, affiliative and technological power).

Cyberbullying is now generally understood as a subtype of traditional bullying with many children and young people who report having been bullied also reporting experiences of cybervictimisation (e.g., Campbell & Bauman, 2018; Olweus & Limber, 2018). Smith et al. (2008) defined cyberbullying as 'an aggressive intentional act carried out by a group of individuals using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself' (p. 376). DCSF cyberbullying guidance published in 2007 helpfully highlights the following as being important factors which need to be considered in understanding cyberbullying specifically:

- The anonymity of the cyberbully compared with a 'traditional' bully.
- A lack of immediate feedback from the victim – providing less opportunity for either party to resolve the misunderstanding.
- It is more likely to take place across different age groups, e.g. school children targeting a teacher.
- There may be a far larger number of potential bystanders and it is easier for bystanders to become perpetrators, by passing on or showing others.
- Omnipresent – nowhere is safe and children can't get away.
- Time – it can be difficult to stop and difficult to control.

Another subtype of bullying which may cut across the above categorisation is prejudicial, bias-based, or stigma-based bullying, i.e., bullying which is motivated by prejudice or stigma. Earnshaw et al. (2018) frame this type of bullying as representing 'the overlap between bullying and discrimination' (p. 179). In a recent interview study, participants gave examples of bullying due to perceived differences relating to: race and ethnicity, class, language, religion, ability, appearance and sexual orientation (Mishna et al., 2020). In addition, Russell et al. (2012) suggested that young people who had experienced bias-based bullying were more likely to report negative outcomes, including substance use, truancy and mental health needs when compared with students who had experienced non-bias-based or no harassment. Further examples of studies exploring the experiences of different groups of students include: students with special educational needs and disabilities (Malecki et al., 2020; Mulvey et al., 2020; Rose et al., 2011); students who self-identify as lesbian, gay, bisexual, transgender or gender questioning (e.g. Espelage et al., 2019; Sterzing et al., 2018), and students bullied due to their race or ethnicity (Xu et al., 2020).

Clear gender distinctions are sometimes claimed in relation to types of bullying behaviour – for example relational bullying has been branded 'girls' bullying'. However, Smith et al. (2019) suggest that there are likely to be complex interactions between pupil characteristics and type of bullying and they encourage consideration of cultural and historical perspectives (e.g. gender role expectations and differences in cultural understanding of bullying), alongside issues with assessment (as discussed earlier).

Who are the bullies?

Which pupils are identified as bullies depends to some extent on the assessment method used. Four main methods for identifying bullying behaviour can be described, as shown in Methods Box 11.1 (see Crothers & Levinson, 2004).

METHODS BOX 11.1

Self-reports

Children are typically presented with a definition of *bullying* and asked to rate the frequency with which they have been involved over a specified period in either bullying or being bullied. Questionnaires are usually anonymous to encourage honesty. Even then there may be effects of social desirability biases as pupils may resist endorsing responses that involve admitting to an unfavourable self-presentation.

The Peer Relations Questionnaire (Rigby & Slee, 1998) contains a six-item bully scale and a five-item victim scale. Items such as 'I am part of a group that goes around teasing others' and 'I get picked on by others' are rated on a four-point scale ranging from 'never' to 'very often'. The Bullying Behaviour and Experiences Scale (BBES; Fink et al., 2015) is a scale developed to explore the perspectives of children and young people with SEND. There are also a number of specific scales to explore students' experiences of cyberbullying, e.g. the Online Victimisation Scale for Adolescents (Tynes et al., 2010) and the Cyberbullying Test (Garaigordobil, 2017).

Peer assessments

These methods involve surveying a classroom of pupils, asking each to identify classmates who meet behavioural descriptions characteristic of bullies and victims. Peer assessment methodologies are well established in the literature on social competence and in some cases existing instruments have been extended to collect data on bullying. For example, Nabuzoka and Smith (1993) extended the 'Guess Who' peer assessment method developed by Coie et al. (1982), adding:

- a bully – someone who often picks on other children or hits them, or teases them or does other nasty things to them for no good reason
- a bullying victim – someone who often gets picked on or hit or teased or has nasty things done to them by other children for no good reason.

Salmivalli (1999) developed a set of scales (The Participant Role Scales) which collect information on the roles children may play in bullying incidents from the children themselves and from their peers. The roles include:

- Bully (5 items): active, initiative taking, leader-like behaviour.
- Assistant (2 items): active, but more follower than leader-like.
- Reinforcer (4 items): inciting the bully, providing an audience etc.
- Defender (6 items): sticking up for or consoling the victim.
- Outsider (4 items): doing nothing in bullying situations, staying away.
- Victim (1 item): 'gets bullied', needs to be nominated by 30% of same sex classmates to be classified as a victim.

Teacher questionnaires

Smith (2004) points out that these are generally considered less reliable than self- or peer-reports, as teachers are often unaware of bullying, for example in the playground. However, at younger ages, for example in early years settings, teacher reports may be preferable, both because child reports may be less reliable and because younger children are more closely supervised, so teachers are likely to be better informed. This may also be the case for children with SEND. The Wider Outcome Survey for Teachers is an example of a measure developed specifically for this purpose (Wigelsworth et al., 2015).

Observation

This method is primarily used with pre-school or primary-aged children, although rarely, as data collection and analysis are very time consuming (for examples, see Black & Jackson, 2007). It is rarely used with older children as they may cover a much wider geographical area during break times when observations are typically conducted, making data collection difficult. Also, relational bullying may be difficult to observe, while the presence of an adult observer is likely to decrease the incidence of physical or verbal bullying.

Contrasting different methods, Branson and Cornell (2009) found low to moderate correlations between peer- and self-reports of bullying and of victimisation in middle school students, with more than twice as many students identified as bullies using peer nomination than using self-report. They suggest that both should be considered by researchers exploring the prevalence of bullying in this age group. Juvonen et al. (2001) found that compared to peer assessments, self-report measures of victimisation better predicted psychological adjustment problems (depressive symptoms and low self-worth), whereas peer assessments better predicted low social acceptance. They argue that the most appropriate assessment technique will depend on the goal of an investigation – 'to understand peer harassment as a social problem, as a personal predicament, or both' (p. 120). In relation to teacher reports, Rigby (2020) explored teachers' and students' views of the overall prevalence of bullying in their school and found that teachers provided higher estimates than students. Rigby suggests that assertions regarding increases in bullying in the media may have contributed to this.

Are some bullies also victims of bullying at school?

Of direct relevance to the question asked in the title of this chapter is the consistent finding that a proportion of the children identified as bullies are also identified as victims. Solberg et al. (2007) reported data from over 18,000 Norwegian pupils aged 11–15 years who completed a self-report measure. They were given a definition of bullying and were asked how often they had been bullied or had taken part in bullying in the previous 2–3 months in school. Response options were:

- Option 1 – I haven't
- Option 2 – only once or twice
- Option 3 – two or three times a month
- Option 4 – once a week
- Option 5 – several times a week

Table 11.1 shows how cut-off scores on this measure were used to classify pupils. Across the whole sample 9.5% were classified as victims, 4.6% as bullies and 1.9% as bully-victims. Hence close to 30% of bullies were also victims.

Copeland et al. (2013) looked at the categorisation of bullying behaviour in a population-based sample of 1420 children, assessed annually between the ages of 9 and 16 years. They reported that 21.6% of participants were victims only, 5% were bullies only and 4.5% were bully-victims (68.9% were neither). Hence, approximately 50% of bullies were also victims. In this study, both the child and primary caregiver were asked whether the child had been bullied or teased or had bullied others in the previous three months as part of a wider assessment, and either being bullied or bullying was counted if either the child or parent reported this at any assessment. Hence levels may be higher than in the previous study where self-report alone and a more structured approach appears to have been used.

Bully-victims have been recognised in the research as a particularly vulnerable group, exhibiting a range of social, emotional and behavioural difficulties. Indeed Copeland et al. describe bully/victims as 'the most troubled children' (p. 424). They have consistently been described as anxious, irritable, hot-tempered, prone to start fights and to exhibit retaliatory, or reactive, aggression (Olweus, 1978; Schwartz et al., 1997).

The picture for cyberbullying appears to be different. Mishna et al. (2012) reported that around 25% of their sample reported being cybervictimised, 8% reported cyberbullying others, and one in four students (25.7%) responded that they had been involved in both roles during the previous three months. Hence the bully-victim profile in cyberbullying may be much more common, suggesting a different profile to bully-victims in traditional bullying. In addition, Mishna et al. found that more girls identified themselves as cyberbully-victims than boys, again suggesting a difference from traditional bullying.

Table 11.1 Categories of Bully, Victim and Bully-Victim as defined by Solberg et al. (2007)

		Had taken part in bullying	
		Options 3, 4 & 5	*Options 1 & 2*
Had been bullied	*Options 3, 4 & 5*	Bully-Victim	Victim
	Options 1 & 2	Bully	Not involved

Why does bullying occur?

A wide variety of different theories have been advanced to explain bullying behaviour. However, it is now widely recognised that bullying can only be adequately understood by means of a multi-level analysis. 'In a nutshell, bullying does not occur in isolation. Young people involved in bullying in school often experience multiple problems and bullying is encouraged or inhibited as the result of complex relationships between the individual, family, peer group, school, community, and culture' (Swearer & Espelage, 2004, p. 3). In this section we will begin by introducing an example of a multi-level framework before going on to consider socio-cognitive deficit theories (relating to within-child perspectives); ecological theories relating to school and classroom variables and to the influence of parenting and the family; and group process theories. Finally, the importance of factors within the macrosystem will be highlighted.

An ecological-systems theory

Hong and Espelage (2012) present an ecological systems analysis of risk factors associated with bullying and victimisation in school, using Bronfenbrenner's ecological-systems theory (Bronfenbrenner & Ceci, 1994). This theory conceptualises an individual's social environment as five interrelated systems:

- *A microsystem* is a pattern of activities, roles and interpersonal relationships experienced by a child in a particular setting where they are directly involved. The classroom, home and playground are three examples of settings where the child regularly interacts with others.
- *A mesosystem* describes the relationships between two or more settings in which the child actively participates. Disagreement between a child's teacher and their parents about how to deal with bullying in the playground would be an example at this level.
- *An exosystem* is a setting where the child is not directly involved, but it affects or is affected by what happens in settings that do involve the child. A local authority's policy on bullying would be an influence on schools in the area and would be influenced by events in schools such as high-profile media reports on instances of bullying.
- *The macrosystem* refers to the influence of cultural and sub-cultural mores and belief systems. Societal attitudes to bullying and common features of its representation in the media would be factors at this level.
- *The chronosystem*, which Hong and Espelage (2012) refer to as the consistency or change of the individual and the environment over the life course, is particularly discussed in relation to family structures and how these may adversely affect children in terms of the development of problematic behaviours, including bullying.

Hong and Espelage (2012) go on to discuss a range of risk factors for bullying behaviours at each level, as illustrated in Figure 11.1.

Socio-cognitive deficit theories

Theories focusing on socio-cognitive deficits have drawn on models used to account for aggressive behaviour more generally. They aim to explain how within-child factors may influence the development of bullying behaviours through affecting the child's interactions with others within their microsystem. The most influential of these theories is the social information processing (SIP) model described by Crick and Dodge (1994) which is shown in Figure 11.2.

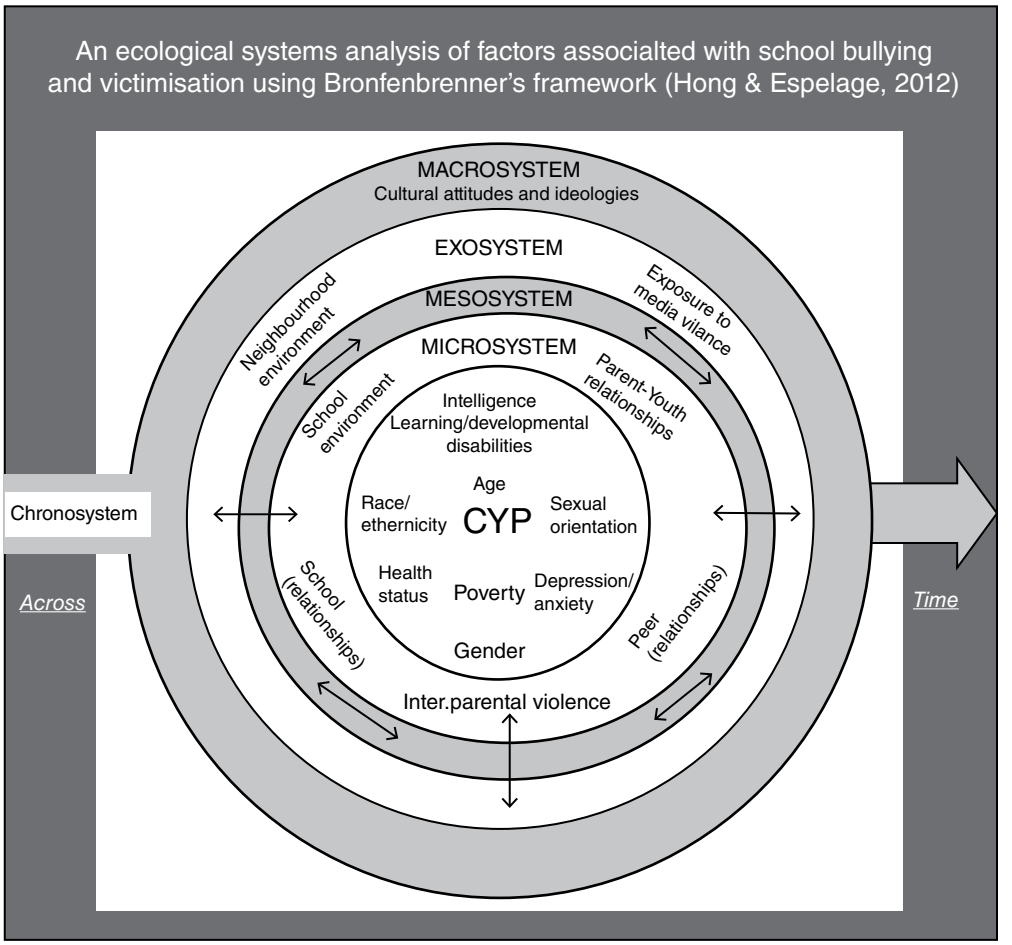

Figure 11.1 Ecological systems analysis of factors associated with bullying and victimisation in school
Source: Based on Hong and Espelage (2012)

ACTIVITY BOX 11.1

It is a busy playtime on a primary school playground. An eight-year-old child is involved in a game of 'tag' with a group of friends. They are weaving in and out of their peers who are playing a range of games, football, skipping etc. One of the children bumps into another as they run to get away from 'the chaser' and the football the second child is holding is knocked from their hands…

What happens next… The first child calls back 'sorry', the second child shrugs it off, smiles and retrieves their football. Both games continue.

OR… the child who has lost the football shouts angrily, runs after the first child, grabs them by their jumper and flings them to the ground.

Think what might have been going on for the two children at each stage of Crick and Dodge's model in each scenario.

Can you relate this model to a scenario from your own recent experience?

A wide range of evidence supports the view that skilful processing at each of the six steps included within the model (see Figure 11.2) is associated with social competence, while biased processing can lead to aggression and social problems (Crick & Dodge, 1996; Zelli et al., 1999). At *step 1*, aggressive as opposed to non-aggressive children are found to encode fewer benign social cues, attending preferentially to hostile cues. At *step 2* there is a bias towards making more hostile attributions of intentions and at *step 3* to select instrumental goals (achieving desired outcomes for themselves) rather than relational goals (maintaining positive relationships with others). In the earlier example where a child was bumped into by a peer in the playground, an aggressive child would

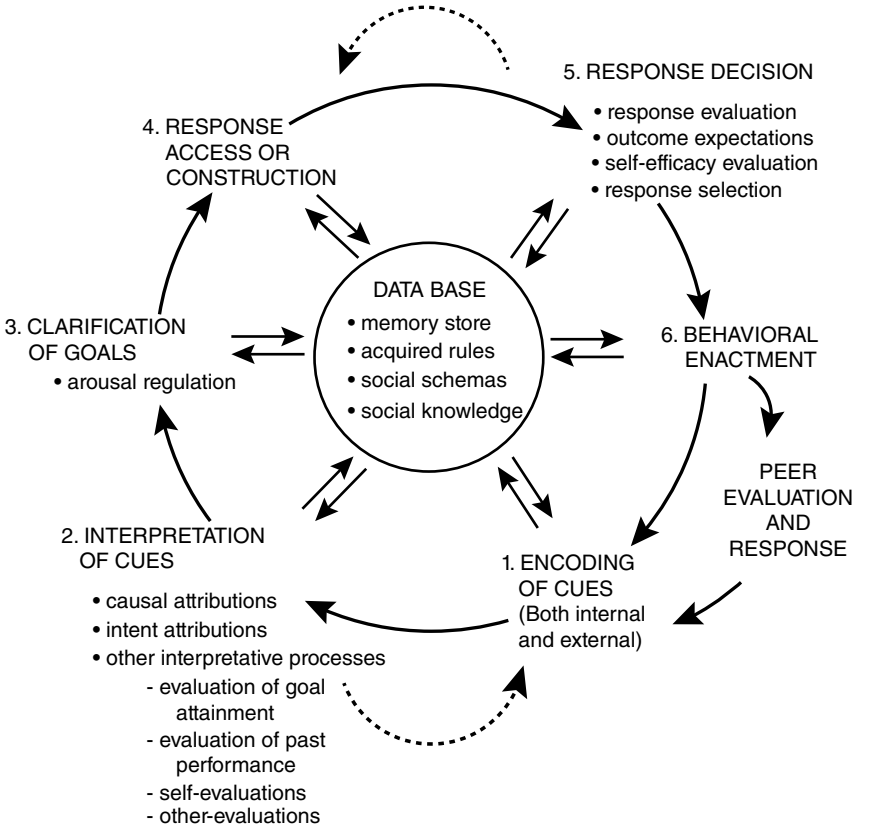

Figure 11.2 Social information processing model

be significantly more likely to conclude that the peer had knocked into them on purpose, intending to hurt them or make them lose their ball, and would be more likely to select the goal of hurting the other child. Aggressive children generate fewer prosocial responses at *step 4*, and at *step 5* they evaluate aggressive responses more favourably, expecting that positive outcomes will result. They also feel more self-confident in their ability to enact the aggressive behaviour successfully at *step 6*.

It is disputed whether bullying, as distinct from other forms of aggression, is caused by socio-cognitive deficits in processes such as those depicted in the model. While various authors (e.g. Arsenio & Lemerise, 2001; Sutton et al., 1999b; Sutton et al., 2001) debated whether bullies should be regarded as socially competent or not, the need to consider different groups of bullies and the potential explanatory value of the SIP model in relation to each was a shared focus. Sutton et al. (1999a) suggested 'it may be the aggressive, hot headed reactive bully-victims who fit the traditional picture of the social skills deficient bully, while proactive aggressors may be more cold and calculating, actually possessing rather good social cognition' (p. 123).

More recently, van Dijk et al. (2017) highlight the mixed empirical evidence for differences in the socio-cognitive profiles of children involved in bullying. Their study explored whether the psychological processes underlying bullying behaviour in bullies and bully-victims were similar or distinct. They analysed a number of variables in their sample of children aged four to nine years in the Netherlands including: theory of mind (the ability to attribute mental states, such as beliefs, desires and intentions, to others and to predict behaviour accordingly), hostile attribution bias and proactive or reactive motives for aggression. While they did not find differences in theory of mind scores, even between pure bullies and non-involved children, their data provided support for a 'shared process' hypothesis, i.e., children who engage in bullying behaviour show similar profiles in relation to psychological processes (whether pure bullies or bully-victims), but these are distinct from the processes for children who are not involved in bullying. They consider whether 'success' in previous aggressive acts could underpin differences in social position for bullies and bully-victims, whereby children who use aggression unsuccessfully are then victimised, hence 'gaining' their bully-victim status.

Arsenio and Lemerise (2001) suggested that attention to goals and emotional processing is warranted in considering different groups of bullies and that proactively aggressive bullies may be characterised by a focus on instrumental goals rather than relational goals and that a lack of empathy may explain why they are undeterred by others' distress in their pursuit of instrumental goals. Parallels are drawn with research by Blair showing that children who are rated by their teachers as high on callous/unemotional behaviour are less able than peers to recognise specific emotions in others, namely sadness and fear, but not, for example, happiness. Sadness and fear are the very emotions, mediated by brain activity in the amygdala, whose recognition is thought to play a central role in inhibiting aggression (see Blair et al., 2006, for a review of work in this area). Hence deficient emotional, rather than cognitive, processing may be implicated in some bullying behaviour. Zych, Ttofi et al. (2019) carried out a systematic review and meta-analysis of 49 studies, exploring empathy and callous unemotional (CU) traits of children involved in bullying as bullies, bully-victims, victims and also defenders (bystanders who stand up for and/or support the victim). They excluded studies relating to special school populations or focusing on cyberbullying. Their findings indicated that bullying behaviour is associated with low empathy and high CU traits for both bullies and bully-victims, while defenders were found to score highly for empathy, which would be expected given their motivation to help children who are victimised. A need for further research is highlighted to explore possible mediating variables and questions of causality, for example whether a lack of empathy or high CU traits cause bullying or whether bullying experiences block the development of empathy.

Ecological theories

In this section, we will first briefly consider theories relating to the influence of families before considering research carried out around the contribution of the school and classroom environment.

Theories of family influence

Social learning theory holds that bullying behaviour is acquired through modelling and reinforcement of behaviour and that early experience is particularly influential. A range of evidence suggests higher levels of bullying in families where there is domestic violence or interparental conflict, high levels of aggression and parental mental health problems (Nocentini et al., 2019). Punitive discipline, as employed within authoritarian parenting, has been found to increase the risk of adolescents' involvement in bullying, whereas authoritative parenting (more democratic parenting approaches: high demand and high responsiveness), was negatively associated with involvement (Charalampous et al., 2018). This was also found to be true for cyberbullying and victimisation, and Charalampous et al. cite Valcke et al. (2010) when stating 'authoritative parents set limits in internet usage and timing but at the same time expect their children to behave in a self-regulated manner' (p. 118). This contrasts with research relating to the parenting style of victims' mothers, which is described as overinvolved and overprotective (Bowers et al., 1994; Olweus, 1994). Lereya et al. (2013) carried out a meta-analysis of 70 studies and explored evidence for associations between categories of parenting behaviour and identification as a victim or bully-victim. They concluded that children who were identified as either victims or bully-victims were less likely to live in a family with positive parenting. In contrast, higher parental involvement and warm and affectionate relationships were identified as the factors most likely to protect against peer victimisation, followed by good family communication and supervision.

Attachment theory (Bowlby, 1969) posits that early caregiver–child interactions lead to the development of an 'internal working model' which is used to guide future relationships. A number of different types of caregiver–child interaction patterns, or attachment styles, have been described. They have been typically identified through the Strange Situation Procedure (Ainsworth et al., 1978) in which a 10- to 24-month-old infant is briefly separated from their parent in an unfamiliar setting and then reunited with them. Three patterns of behaviour were originally identified, indicative of different attachment styles:

- *Secure* – these infants were happy to see the parent when reunited. If they had been distressed when the parent had left they settled on the parent's re-appearance and re-engaged in absorbed play or exploration.
- *Insecure-avoidant* – these infants typically showed little distress on separation and when the parent re-appeared they moved or turned away, engaging in play and ignoring the parent.
- *Insecure-resistant/ambivalent* – these infants were very distressed on separation and when the parent returned they tended both to seek contact and reject it when offered.

A fourth category has also been recognised, disorganised attachment, shown by 10% of infants as they try and fail to develop an organised pattern of behaviour in response to a highly dysfunctional parenting style or care environment, instead exhibiting a variety of unusual and contradictory responses. Strong associations are reported between disorganised attachment, problems in regulating emotions, behaviour problems in school and psychopathology in adolescence (Green &

Goldwyn, 2002). This suggests that further investigation of how disorganised attachment may relate to involvement in bullying, over and above other family demographic and environmental variables, would be valuable. Murphy et al.'s (2017) study of 148 adolescents found that greater attachment security with parents was associated with lower levels of involvement in bullying, and with increased likelihood of children acting as a defender. Interestingly, for males with lower parental attachment security, greater peer attachment predicted less bullying, highlighting the importance of consideration of peer attachment in understanding the impact of the family environment, particularly for adolescents when peer relationships become more important.

Theories relating to the impact of educational settings

Theories to be considered here may relate to the contribution of whole school environments – drawing, for example – on research relating to school ethos or culture (e.g. Bradshaw et al., 2021; Wang et al., 2013), or to classroom-level factors. In this section, we will primarily focus on research exploring factors at the level of the classroom.

Doll et al. (2004) reviewed the associations between two sets of classroom-level variables and lower levels of bullying:

- The quality of social relationships (including pupil–pupil, pupil–teacher and teacher–parent).
- Individual pupil responsibility in the classroom (including support for pupil self-control, self-efficacy and self-determination).

Similarly, Thornberg et al. (2018) explored teacher–student and student–student relationships in primary school classrooms in Sweden. They also explored class moral disengagement (the moral climate of the classroom). Path analysis was used to explore associations between the different factors, with the final model suggesting that positive student–teacher relationships were associated with positive student–student relationships, which in turn were linked with lower levels of class moral disengagement and lower levels of victimisation in classes. The importance of teachers being role models, morally and in facilitating caring relationships within classes, was emphasised. The impact of classroom climate, specifically classroom cohesion, was explored in a study in 24 schools in Germany (Wachs et al., 2018). This research aimed to add to evidence relating to how bystanders can be empowered to support their peers in bullying situations. They found that classroom cohesion and student self-efficacy were related to students' willingness to intervene.

Payne and Gottfriedson (2004) summarised research on a range of school factors found to be related to bullying, in particular teacher interest and responsiveness, and pupil attitude, cooperativeness and alienation. Lower levels of bullying were found in schools where teachers were likely to discuss bullying with pupils, recognise bullying behaviour, show interest in stopping bullying and actually intervene in bullying incidents. More negative pupil attitudes to bullying were associated with lower levels of the behaviour. Pupil cooperativeness was negatively correlated with bullying and victimisation while pupil alienation and low levels of involvement in school increased the likelihood of involvement in bullying.

Group process theories

Rather than regarding bullying as something that is performed by individuals, Maunder and Crafter (2018) highlight research that explores bullying as something which happens in groups, as 'part of a continuum of interpersonal relationships… where individuals may assume different roles at

different times' (p. 16). They highlight the participant roles identified by Salmivalli and colleagues (1996; Salmivalli, 1999) and explore how peer groups develop their own sets of norms and values, with group members taking on particular roles, which in turn feed into their own identities.

Group process theories seek to identify the functions that may be served by bullying in social groups. Social dominance theory will be considered as one example. Nishina (2004) suggests that bullying behaviour could serve particular social functions that may have been adaptive in evolutionary terms. It is argued that groups with clearly established dominance hierarchies are likely to be more successful both because within group conflict will be minimised and because good organisation will lead to higher levels of success in between-group conflicts. While it is possible to establish one's social dominance by pro-social as well as coercive means, Nishina suggests that 'bistrategic controllers' who use both strategies may be the most successful and admired by others.

Research with primates suggests that within stable group hierarchies there is little need for within-group aggression and the relative disadvantages of being low ranking (in terms, for example, of access to resources) are attenuated. On this analysis bully-victims are children who refuse to 'accept their place' in a group and challenge higher as well as lower status individuals. It is suggested that it is the group-destabilising potential of this behaviour and the group discomfort generated as a result that leads to their being disliked and rejected by peers. It is also suggested that involvement in bullying of someone outside a group can create feelings of belonging within the group which represent a strong motivational force.

Nishina stresses that this kind of analysis should not be used to excuse bullying as a part of human nature. Rather, it may be helpful in explaining why the behaviour appears pervasive and difficult to eradicate. It may also suggest ways in which the school environment can impact on the incidence of bullying. For example, the ways in which adults in the school establish their dominance over the children might be expected to influence how dominance hierarchies among children are established, both directly through the systems of rules and sanctions in place and indirectly through modelling. It suggests that action against bullies is unlikely to be effective if it does not address the role others play in the bullying, or are perceived to play (Rigby, 2005), in particular in providing social reinforcement to the bully, perhaps acting as assistants or reinforcers, or in acting as defenders of children who are victimised.

In relation to processes within a group, Thornberg (2018) carried out an ethnographic field study, completing informal observations and having conversations with children in seven primary classrooms in Sweden. The grounded theory analysis identified core themes around fitting (having friends and belonging) and misfitting in the peer group. Intersectionality was identified as a construct to be considered, for example, in understanding why two girls both suffered long-term bullying for being obese, whilst 'Pete', also obese, was not bullied. It was theorised that his gender and other attributes (e.g. him being seen as 'tough') enabled him to 'fit in' with a high-status group of boys in his class, providing protection (p. 151). Thornberg identified discourses around normality and deviance and discussed the interplay between factors within the classroom and children's microsystems and wider society (i.e., the macrosystem). He argues that a focus on within-child discourses may lead to a lack of consideration of oppressions and discrimination operating within a peer group, e.g., in relation to appearance, ability, gender, sexuality and race and ethnicity, which, in turn may redirect the focus of intervention onto individual children, and away from interventions at a systemic level, including around promoting social justice and valuing diversity.

Which school bullying interventions are effective?

Thompson and Smith (2011) categorise anti-bullying interventions into proactive strategies (designed to prevent bullying happening through contributing to an anti-bullying school ethos), and reactive strategies (those employed to respond directly to bullying when it happens).

In relation to proactive strategies, in order to reduce levels of conflict and aggression in the school more generally, schools may focus on their overall ethos in relation to diversity and inclusion. They may implement relational and/or restorative approaches (e.g., Drewery, 2016; Smit & Scherman, 2016), as well as approaches that promote teacher–student relationships (e.g. Cook et al., 2018) and student–student relationships, and develop the social and emotional competence of all students (e.g. Domino, 2013).

It is typically recommended that schools wanting to develop anti-bullying approaches should consider consistent implementation of both proactive and reactive interventions, through a multi-level approach, with a range of strategies at organisational, group and individual levels (Sharp, 1999, p. 5):

- Staff and students working together to develop a clear set of guidelines for everybody which specify what bullying is and what they should do when they know or suspect it is going on.
- Long-term curriculum work about bullying and other forms of antisocial behaviour, including teaching students how to manage personal relationships assertively and constructively.
- Peer-led approaches, such as peer counselling and buddying, to offer support to pupils who are new to the school or who are feeling lonely, rejected or victimised.
- Direct intervention strategies when bullying has occurred or is suspected of occurring. Problem-solving approaches which involve all students, including those who have been indirectly involved, are most effective. Early involvement of parents is recommended. Follow-up over time is always needed to check that the bullying has not resumed.

A number of multi-level programmes have been rigorously evaluated, for example the Olweus Bullying Prevention Programme developed in Norway (Olweus, 1993), and the Kiva approach developed in Finland (Salmivalli et al., 2011). The latter focuses in particular on the role of bystanders and defenders in the classroom in supporting victims (see Gaffney, Farrington & Ttofi, 2019b, for a comparative review of the interventions and evidence of their impact in different international contexts).

Gaffney, Ttofi and Farrington (2019c) present the findings of a systematic review and meta-analysis of 100 programme evaluations where both bullying and victimisation were measured and where an experimental or quasi-experimental design had been used (designs judged to be most suited to providing stronger evidence of intervention effectiveness (see Chapter 2). They report decreases in bullying perpetration of 19–20% and decreases in victimisation of 15–16%, as well as highlighting the range in effectiveness found across different studies. In a subsequent review, Gaffney et al. (2021) went on to analyse the effectiveness of intervention components, mapped against Bronfenbrenner's ecological systems theory, highlighted earlier in the chapter. They also coded specific intervention components, e.g. whether there was a focus on social and emotional learning, on mental health or cognitive behavioural techniques, and whether punitive or non-punitive methods were used. Finally, programmes were categorised as either environmentally focused or individual child focused. They found that the following were elements associated with

a decrease in bullying: a whole school approach, anti-bullying policies, information for parents, classroom rules, informal peer involvement (naturally occurring, in-class or group-based discussion as part of the intervention), work with victims, cooperative group work and mental health approaches. In relation to reducing victimisation, the strongest evidence was found for informal peer involvement and information for parents. The number of elements included in a programme was not found to be important which is encouraging for schools wanting to introduce a tailored approach. Overall, approaches that encouraged collective efficacy across all members of the school community were judged to have the strongest evidence.

In terms of the accessibility of interventions to schools, the effectiveness of informal peer involvement, 'where bullying experiences, attitudes, and behaviours were discussed within the peer group, thus promoting an appropriate classroom and school ethos' (p. 49), seems particularly important. In these discussions, all children are included, rather than only children identified in specific bullying roles. Of interest to EPs are the findings that interventions which include encouraging bystanders appeared to be less effective at reducing victimisation than those that did not and that there was no evidence found for the effectiveness of formal peer support, e.g. peer mentoring or buddying schemes. Finally, and perhaps surprisingly, there was evidence for the effectiveness of formal punitive sanctions in reducing bullying behaviour, but not non-punitive methods (including restorative approaches and the 'No Blame' approach).

Effectiveness findings aside, taking a problem-solving approach rather than punishing students involved in bullying has proved controversial (Smith, 2001). For example, in 2006, the then Prime Minister Tony Blair commented that bullying should be punished so that the children can be 'made to learn the harm that they are doing' (Guardian Unlimited, 2006). Given the earlier discussion of the specific subgroup of students who may be involved as bullies, yet who have also experienced victimisation (bully-victims), use of the imbalance of power that exists between teachers and pupils to punish bully-victims might be predicted to risk reinforcing counterproductive messages. Even proactively aggressive bullies who are not also victims may have been exposed to aggressive models at home. It is difficult to see how a punitive approach might be expected to have a positive effect.

EPs are likely to advocate for an approach that makes clear what behaviour is expected, puts in place a system of rewards and sanctions and works with the wider peer group and school system to ensure that congruent consequences are operating at the group and organisational levels. EPs will be collecting information about the type of bullying behaviour that is occurring and drawing on psychological theory and research to generate and test hypotheses about the causes of bullying within the particular class and school situation, using their problem-solving model (see Chapter 1). The results of this assessment will inform the selection of appropriate recommendations for interventions and further collection of data in order that the interventions implemented can be evaluated.

In light of the broader social cultural perspective discussed by Maunder and Crafter (2018) and Bronfenbrenner's ecological systems theory, attention should also be given to exploring the wider exo- and macrosystems surrounding schools and other educational settings. EPs will consider national and local policy and guidance, their local knowledge of the community, and cultural factors that may be of relevance. They may work with school leadership teams to consider any triggers for bullying in their particular school community, to explore wider interventions, perhaps focusing on aspects of diversity and inclusion and using systemic work to explore, for example, the

school ethos through using the Teaching Tolerance 'Social Justice Standards' (Learning for Justice, 2022) with the whole school community, while working with a local authority to engage with issues at a higher level.

And for cyberbullying?

Cyberbullying research has increased exponentially in recent years. Here we will briefly consider the implications of recent research for advice that EPs might give to schools and to parents, particularly pertinent given experiences of school lockdowns with students having to learn, as well as socialise, online. One question raised by Smith (2018) is the question of whether specialised interventions are needed or whether more generalised anti-bullying interventions can be effective. A review and meta-analysis by Polanin et al. (2020) suggested that specific approaches are needed; approaches which target and are effective in reducing traditional bullying did not appear to be effective in reducing cyberbullying.

ACTIVITY BOX 11.2

The deputy headteacher at one of your secondary schools contacts you as the link EP to ask your advice, as a number of parents of students in Year 8 have been in contact with concerns about conversations their children have been having on a social media platform. Issues highlighted include students posting unpleasant comments about particular members of their class, taking and uploading photos and videos of those students in unfortunate situations (e.g. when one of them fell over in PE) and setting up online groups, excluding particular peers.

What advice might you give? To what extent might approaches you'd advise a school (and parents) to use to intervene with traditional bullying apply?

Gaffney, Farrington, Espelage and Ttofi (2019a) completed a meta-analytical review of 24 articles exploring the effectiveness of interventions for cyberbullying. The results suggested that programmes can reduce cyberbullying by approximately 10–15% and cybervictimisation by approximately 14%. However it is not clear that the interventions used in these studies were specifically targeting cyberbullying, rather than traditional bullying or other foci. For example, Williford et al. (2013) used the KiVA programme and Palladino et al. (2016) NoTrap (traditional and cyberbullying).

Finally, a body of research explores factors that could protect children and young people from involvement in bullying and cyberbullying, either as a perpetrator or as a victim. Zych, Farrington et al. (2019) report a systematic review of meta-analyses of factors which could provide a framework for schools and EPs to consider when working preventatively to reduce bullying and to improve the effectiveness of multi-level approaches. Factors include a positive school climate, positive peer interactions, self- and other-orientated personal competencies, positive parenting and, for involvement in cyberbullying or cybervictimisation, low technology use. Restricting children's internet use may be problematic in relation to reducing opportunities. However, educating children about online risks and how to be resilient in an online world is suggested (e.g. see Livingstone & Byrne, 2018), with 'digital resilience' approaches being put forward to support children and young people in making positive choices online, as well as offline.

Summary of the main issues addressed in the chapter

- Bullying and cyberbullying are a significant cause for concern both in education and within society as a whole. Recent reports and research link both bullying and cyberbullying with a range of outcomes, including mental health difficulties.
- The central characteristic in definitions of bullying is an imbalance of power which makes it very difficult for the target of aversive behaviour to prevent or stop it.
- Cyberbullying is now understood to be a subtype of bullying, although there is still debate in the literature around definitions of cyberbullying, for example how power and repetition may be understood.
- Self and peer reports of bullying and victimisation are the most frequently used methods of identification and assessment. The preferred method will depend on the purpose of the assessment.
- Findings from large national samples of school pupils indicate that approximately one-third of those who bully are also bullied. These 'bully-victims' may represent a population at particularly high risk of negative emotional and social outcomes.
- Among the theories advanced to explain bullying, ecological systems theories are the most influential. A multi-level analysis of bullying is therefore seen to be essential, where sociocultural factors, whole school ethos and classroom variables interact with individual-level variables to determine whether bullying will occur. In addition, the following theories have been widely researched:
  - Socio-cognitive deficit theories. Different types of bullies may be characterised by different types of problems with cognitive and/or emotional processing.
  - Social learning theory and attachment theory explore family influence on bullying. Parenting style has also been found to be influential.
  - Group process theories consider how peer interactions may influence the incidence of bullying behaviour, particularly in school contexts.
  - Preventative programmes in schools draw largely on well-researched, moderately effective multi-level approaches. However, there remains controversy about the most effective direct intervention strategies to employ when bullying has occurred. Politicians 'talking tough' advocate punishment and meta-analyses to some extent support this position. However, psychological theory suggests that punishment may be unsuccessful or counterproductive with particular groups of pupils.
  - Research into the effectiveness of interventions to prevent cyberbullying is at an earlier stage, although there are promising indications relating to the use of school-based intervention programmes, particularly those focusing specifically on cyberbullying.
  - A need for further research on which bullying interventions work, for whom, under what circumstances is warranted, alongside consideration of how the research translates into advice and recommendations for schools and families when bullying is identified.

Key concepts and terms

Bullying; cyberbullying; victimisation; cybervictimisation; power imbalance; bully-victim; social information processing model; socio-cognitive deficit; social learning theory; theory of mind; attachment; social dominance theory; ecological systems theory; multi-level approaches.

Recommendations for further reading

Journal articles

Gaffney, H., Ttofi, M.M., & Farrington, D.P. (2021). What works in anti-bullying programs? Analysis of effective intervention components. *Journal of School Psychology*, *85*, 37–56.

Hong, J.S., & Espelage, D.L. (2012). A review of research on bullying and peer victimization in school: An ecological system analysis. *Aggression and Violent Behavior*, *17*(4), 311–322.

Rigby, K. (2020). Do teachers really underestimate the prevalence of bullying in schools? *Social Psychology of Education*, *23*, 963–978.

Books

Smith, P. (2014). *Understanding School Bullying: Its Nature and Prevention Strategies*. Sage.

Smith, P.K. (Ed.) (2019). *Making an Impact on School Bullying: Interventions and Recommendations*. Routledge.

Sample essay titles

1 Are traditional bullies skilled manipulators or social inadequates?
2 Compare and contrast the success of different theories in explaining bullying behaviour.
3 Should bullies be punished? What can psychology contribute to this debate?
4 Is cyberbullying just another 'type' of bullying?

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12 Coping with life by coping with school? School non-attendance in young people

Anthea Gulliford and Andy Miller

Chapter summary

Young people who feel unable to attend school have always been a concern, and the incidence of this concern has heightened since the Covid-19 pandemic. In this chapter we explore psychological explanations for what may be happening when a young person avoids attending school. We begin by considering various terms that have been adopted in relation to explaining extended school non-attendance. The particular focus here is the form of school non-attendance that is often known as school refusal, or by practitioners as extended or emotionally based non-attendance. Considering a range of theoretical formulations for persistent non-attendance will lead us to understand how these may in turn influence interventions. The literature guides us to a particular focus on the role of anxiety, and this is reflected in interventions, which are recommended to be optimal when multi-component. We shall see the influence of contexts upon a young person refusing to attend for education, for example family and school, and explore what this may imply for the work of a practitioner. Throughout, the individual and varying nature of the problem for young people with extended school non-attendance will be acknowledged.

Learning outcomes

When you have studied this chapter you should be able to:

1. Describe the key theoretical formulations that help us understand extended school non-attendance.
2. Explain how these link to various intervention approaches.
3. Understand the risk factors that may contribute to likelihood of non-attendance.
4. Know what features may contribute to effective intervention plans.

Definitions: How do we describe school attendance problems?

When a young person resists attending school it can be a challenging phenomenon for professionals to intervene with, and upsetting for all concerned. Typically, a situation involving a young person who will not attend school is complex, with many features or layers of the scenario to attend to (Kearney, 2008a). This complexity is mirrored in the definitions used to describe such

DOI: 10.4324/9780429322815-15

behaviours, and exploring these is a starting point. The terms *school refusal*, *school phobia*, *school non-attendance*, and *truancy* can all appear to represent similar elements of differing phenomena. Heyne et al. (2019) identify 60 terms used in the literature that capture forms of school refusal, school withdrawal, or both, and therefore suggest the overarching term 'school attendance problems'. Many authors remind us of the heterogeneity of each case involving a young person refusing to attend school, and for some practitioners definitions and distinctions within the terms used may appear over-categorical.

A useful starting point is to distinguish between *problematic* and *non-problematic* attendance, with the implication that short-lived or even pre-arranged non-attendance, for example through illness, does not require our focus in the same way. We should be mindful, however, of the risks of pathways that may swiftly lead towards problematic non-attendance once a young person has even temporarily ceased attending school. Maeda and Heyne (2019) therefore suggest responding early, as soon as a young person does not attend, rather than waiting for a problem to become established; although Heyne et al. (2019) point out that it becomes difficult to operationally define such distinctions, for example when identifying how many days of excused absence constitute non-problematic attendance.

Another conceptual distinction can be drawn. Some young people choose not to attend school through various kinds of disaffection, typically without the knowledge of their parents or carers, behaviour often described as *truancy* or school withdrawal. Kearney et al. (2020) refer to this in its extreme form as 'dropout', although in the UK a common term is 'disengagement', indicating that a young person has not been able or willing to engage with the educational provision offered. This implies a continuum, from loss of interest to loss of attendance, and also that the educational system has failed to 'engage' the young person.

Other young people, on the other hand, may refuse to attend, with the awareness of their parents or carers (Ingul et al., 2019),[1] for reasons related to possible generalised or social anxieties or emotional distress regarding a feature of the school environment. This is often described as *school refusal* or sometimes *school phobia*. School phobia has been described as distinct from school refusal as a matter of degree or alternatively as a discrete phenomenon, where, aligned to the literature on phobias, a child is considered to hold a specific fear regarding something, perhaps an activity or a part of the building, within the school setting (Elliott & Place, 2019). Torrens et al. (2011) consider whether behaviours can in fact be easily distinguished by school staff as either anxious or fearful, thus whether this distinction should even be given legitimacy. By and large, the term *school phobia* has less currency with practitioners where it may be seen as outdated and potentially overly specific (Havik & Ingul, 2021). There is caution around the term 'school refusal', too, which describes a behaviour, but can all too quickly become an unhelpful label for the young person, one which conflates the behaviour with their identity, as a 'school refuser', tending to 'pathologise' the young person, and insufficiently signalling the need to consider the role of the school system with which the young person is finding it difficult to engage.

Kearney et al. (2019) argue that different sets of professionals are often not 'on the same page' when addressing school refusal, partly through the disparity that exists in terms of fundamental concepts such as definition, assessment and treatment: the terms – and perhaps approaches – adopted often depend upon a professional's identity and perspective (Kearney & Graczyk, 2014). Despite several decades of research, theorists continue to note that in order to help policy makers respond effectively to those at risk, clearer definitions are needed (Elliott & Place, 2019). Among educational psychologists (EPs), terminology tends towards reflecting the functional or emotional

aspects. For example, *emotionally based school avoidance* (EBSA) (West Sussex EP Service, 2022), and *anxiety related non-attendance* (ARNA) (Nottinghamshire EP Service, 2015) have been used. The terms intend to draw attention to the inner life of the young person, but some practitioners are cautious about using labels that appear to draw assumptions about the nature of the difficulties experienced by a young person, as well as being keen to identify how the school system may support changes in the situation. Thus, Coventry City Council (2022) more simply uses *extended non-attendance in school*, which signals no reasons for the behaviour, only its manifestation.

Prevalence and policy

Studies yield varying incidence rates for persistent non-attendance, depending on the definition of school non-attendance used. The Department for Education (DfE, 2022a) defines persistent absence as a pupil missing more than 10% of the possible scheduled sessions. Figures have increased in recent years (Lissack & Boyle, 2022) with the Covid-19 period making reporting more complex. Overall, there is significant concern about persistent absenteeism, reported as 12.1% of the school population for the 2020–21 period (excluding Covid-related absence). Previously, using the more focused term *school refusal*, prevalence rates of around 1–2% of the UK school aged population were identified but with incidence higher among older pupils and certain populations (Attwood & Croll, 2014). Adolescence is a period for heightened risk of school refusal, with this developmental period marked by the processes of flux and growth in personal identity, separation from parents/carers, and a greater identification with peers (Blakemore, 2018). Peer relationships in adolescence are an important aspect of social development, but can also simultaneously create pressures, for example those linked to the peer hierarchy in school (Yeager et al., 2018). Kearney et al. (2019) also note the significantly higher figures for young people out of school worldwide, a reminder of the multiple systemic threats to education experienced by youth internationally, particularly in the Global South.

For practitioners, the policy context in the UK has, in recent years, included a requirement to issue fines for extended non-attendance, although there are current revisions to approaches to be used by schools and local authorities (LAs). The DfE (2022b) places responsibilities upon schools and LAs to ensure that they have robust plans to support these young people.

Consequences of non-attendance

The consequences of extended school non-attendance vary, depending on a range of factors, including whether interventions have been offered or taken up, the nature or effectiveness of those interventions, and also of course upon the particular characteristics of the young people involved such as any preceding identified mental health needs or academic difficulties. There are obvious educational correlates through the missed curriculum, such as lowered learning and attainment, reduced performance at public examinations and, consequently, the potential for reduced career options (Elliott & Place, 2019). Studies have identified school non-attendance as a risk factor for self-harm and other behaviours associated with adolescence, for example risky sexual behaviour, or substance use (Kearney, 2008b). Although difficult to control for in longitudinal studies, patterns of school refusal appear to correlate with long-term problems in adulthood, including increased risk of marital, occupational and economic difficulties, anxiety disorders, depression, alcoholism and antisocial behaviour (Kearney et al., 2019).

Understanding extended school non-attendance

Key perspectives: Behaviour function

An accepted and helpful delineation of school refusal is to consider two constituent components, the *emotional* and *behavioural* aspects (Thambirajah et al., 2007). This may guide practitioners to understand and intervene with distinct facets of each non-attendance concern. Adopting a behavioural paradigm, Kearney and Silverman (1990) proposed an influential functional model (considering the functions of a pupil not attending school), which they suggested would be more useful than a system based on categorisation through symptoms, as follows:

- *Avoidance of negative affect*. Specific features of the school day may be causing anxiety or fear, for example toilets, corridors, assessments, or specific lessons.
- *Escape from social and/or evaluative situations*, for example problems with peers at school, bullying or social isolation, or problems with individual teachers (e.g. being humiliated by a teacher in front of classmates).
- *Pursuit of attention, or reduction of separation anxiety*. (The authors combine these different concepts, arguing that functionally they are equivalent.) The young person receives positive reinforcement for non-attendance through attention at home. The model does not anticipate the reasons *why* a young person may seek attention. For psychologists, a need for reassurance may be related to anxieties or insecurities, to their own or others' relationships, or experiences in the home. Developmental experiences, for example witnessing domestic violence, can have a significant impact on the young person.
- *Pursuit of tangible reinforcement*. This might include watching television, playing computer games, or associating with friends (potentially leading to risky involvements). This category therefore includes – but is not limited to – those young people referred to as truanting.

This use of a functional analysis continues to be helpful in supporting classification of attendance problems (Tonge & Silverman, 2019). Kearney (2007), for example, found that 'behaviour function' was a better determinant of degree of school absenteeism than 'behaviour form'. Gonzálvez et al. (2018) investigated whether differing types of emotional presentation underpinned the four-function model, and found, in an Ecuadorian population, that depression, anxiety, and stress were differentially related to behaviour function. Among three different profiles of non-attendance the authors identify a profile described as *school refusal behaviour by multiple reinforcements* as holding the highest scores in anxiety and depression. It is worth noting, however, that the notion of separation anxiety in Kearney and Silverman's (1990) model has been critiqued, not least because it does not straightforwardly explain the increase in attendance difficulties in early adolescence, nor that a young person who struggles to attend school may nevertheless often willingly do so in order to connect with their peer group (Elliott & Place, 2019).

Key perspectives: The ecology of family and the school

Examining behaviour *function* guides us to attend to the familial and social context for that behaviour, and towards the ecological perspectives encountered elsewhere in this volume (Bronfenbrenner & Morris, 2007). Kearney (2008a) notes the potential for deep complexity in problematic school non-attendance and suggests a five-level model, to allow professionals to explore what proximal

and distal factors – including *child* and *family*, *school* and *community* factors – might be involved in maintaining school refusal (see below).

Theorists have explored the question of family dynamics and how these might imperceptibly or more directly contribute to non-attendance in differing models of school refusal behaviours (Heyne et al., 2019). Here, links with a wider literature exploring parent–child interactions, information processing biases and parenting practices are helpful. Theories of family relating often draw upon systemic theories, which emphasise the recursive and hidden patterns of interaction within family dynamics (Dallos & Draper, 2015). Such reciprocal and repeated patterns in communication may underpin the difficulty felt by parents in encouraging their child to school. Consider for example Activity Box 12.1, which illustrates a typical case from EP casework.

Research has noted that for families of a young person not attending school there may be increased risk of conflict, through seeking to assert boundaries with a young person. Theorists have also noted the potential for 'over-involvement' or how enmeshed familial relationships may contribute to sustaining the non-attendance, or to undermining professionals' work to evolve solutions for it (Ingul et al., 2019). Studies of factors associated with school refusal have noted familial relationships as a potential area for assessment and intervention, within risk factors for school refusal such as marital discord or disproportionate rule setting within the family (Heyne & Sauter, 2011). In a systematic review of parent factors associated with school refusal, parent psychopathology, mental health (including depressive or anxiety symptoms), family functioning, and maternal overprotection were associated with school refusal, with weak or inconsistent associations with other factors including affection, and parental self-efficacy (Chockalingam et al., 2022).

For their part, parents themselves have reported feeling blamed for their child's absence by school staff (Lissack & Boyle, 2022), and there is evidence suggesting that education staff may be likely to identify home factors as playing a role in non-attendance (Finning et al., 2019). (See Chapter 10, this volume, for discussion of causal attributions.) Studies highlight that the family may, contrastingly, identify school-based problems as contributing to the maintenance of the difficulty, and that where they do, families may struggle to communicate these to education staff. Cultural variations in how non-attendance is perceived are highlighted by Lau (2021) in a study of narrative family therapy in Hong Kong. Investigations of the viewpoints of young people or parents and carers (Dannow et al., 2020) also illuminate the complex and highly individualised pathways to non-attendance, whilst also capturing the sense of challenge in communicating with others, and indeed to understand the young person's own complex narrative. Kljakovic et al. (2021), investigating young people's own views, found social anxiety to be prominent, and interestingly, young people noted the protective function of social media in maintaining peer relationships when not in school. In addition, sleep, health, and family factors were identified by young people as having a bearing on attendance.

Baker and Bishop (2015) used interpretive phenomenological analysis to explore how long-term non-attenders made sense of their experiences. These young people carried a sense of discord around how a school may have responded to their needs. For example, it was questioned whether staff understood anxiety, or illness, and whether behavioural sanctions, seeking to control attendance, are reasonable. This study indicates the significance of carefully developed school-based responses in supporting a young person to return to or remain in school, such as responsive curricula structures and social processes, alongside teaching approaches that are likely to prevent the development of anxieties, as well as those that accommodate specific emergent anxieties or needs. Small pedagogical adjustments can support an anxious young person, and this awareness has

particularly grown in respect of young people with autism (Tonge & Silverman, 2019). It is well-known, for example, that young people can find being selected at random by the teacher to give an answer highly stressful or aversive, involving loss of face among the peer group through not knowing an answer, or knowing too much, or simply the stress of 'performing' in public, both potential stressors which are significant in adolescence.

One study highlighted how parents of school refusers particularly identify the vulnerable young person's need for two significant features in school: predictability in their environment and teacher support (Havik et al., 2013). The significance of teacher–pupil relationships to a young person's sense of personal wellbeing and belonging in school is widely cited (see Chapter 10). Peer group relationships may contribute to a reduced sense of school belonging. For example, Carroll (2011) identified lower peer nominations in friendship preferences by peers for low attenders. Furthermore, concerns regarding bullying in school, or perhaps cyberbullying, are often expressed by parents (Ingul et al., 2019). There is, then, the potential for cumulative vulnerabilities for a young person, who may not have the social support to buffer their experience.

Key perspectives: Anxiety

Over time, prominence has been given to explanations that address the *emotional component* of refusing to attend school, linking the phenomenon to the increased incidence of anxiety in childhood and adolescence (Caldwell et al., 2019). Initially three types of explanation were offered for school refusal linked to anxiety: separation anxiety, anxiety about aspects of schooling, and social anxieties. Early explanations in terms of separation anxiety derived from psychoanalytic thinking, where school refusal was seen as a product of an unresolved dependency relationship between mother (or parent/carer) and child, with an excessively strong attachment resulting in a reluctance on the part of a child to leave the home. Although these formulations have now been largely accepted as outdated (Elliott & Place, 2019), the role of maternal overprotection continues to be found relevant (Chockalingam et al., 2022). A contemporary and useful lens on these issues suggests a focus on family dynamics models, helping parents or carers to reflect on how rules and boundaries are asserted, that is, parental self-efficacy (Chockalingam et al. 2022).

Another early view, deriving from a behavioural viewpoint, specifically from classical conditioning, was that of *school-focused anxiety*, noted above as *school phobia*, in which some particular features of school environments become the source of fear and anxiety. In the classic 'clinical presentation' of school phobia put forward by Hersov (1977), he noted the overt signs of anxiety or panic, despite encouragement by parents, with the young person unable to complete the journey to school, or perhaps even unable to leave the home. Blagg (1987) also noted the potential presence of various somatic complaints, aches or pains, or nausea, for example, which might dissipate once the need to attend school was lifted.

Social anxiety has been posited as a more specific form of school-based anxiety centring specifically on interactions with others, particularly peers, and incorporating fears of being rejected, isolated, or bullied, and an inability to make friends (Heyne, 2022). A sense of psychological safety is important for children and young people, and there is evidence that social anxiety can play a significant role in the development and maintenance of school refusal behaviours for some young people. Adams (2022) has highlighted this issue in relation to problematic absenteeism amongst children and young people with autism. An increasingly common diagnosis among those

experiencing emotional difficulties, or disorders, is that of post-traumatic stress disorder, which is likely to be considered where a young person experiences anxiety linked to significant bullying, rather than linked to generalised social anxieties (Elliott & Place, 2019).

Consider the brief case study presented in Activity Box 12.1.

ACTIVITY BOX 12.1

Case study – Part 1

The initial presentation

Martin was a young person in Year 3, aged 7 years 6 months, whose non-attendance at school was a great concern to his class teacher and head teacher. Martin had, for around the past four months, gradually reduced his attendance at school, and by the end of the Spring Term had moved from being a sporadic attender to not attending school at all. The head teacher had recently called a meeting between Martin's parents and an education welfare officer who had advised the parents that Martin really must attend school or face strong consequences.

Martin's mother noted that he had had a bout of flu in the Autumn Term. She stated that she felt it would be difficult for Martin to attend school now, because, although he was generally well again, he often reported strong feelings of nausea in the morning which began when brushing his teeth.

When Martin was brought into the school playground by his mother the morning following the meeting, he cried and clung to his mother, refusing to leave her. Eventually they left to return home. After a telephone call between his mother and the head teacher later that day, it was agreed that Martin's mother would try once again, the following morning, but this time with the class teacher present to coax Martin into school.

The next day the same thing happened, with Martin refusing this time to even enter the school playground, and attempting to kick a teaching assistant who hoped to prise him away from his mother. These visits left his mother emotionally drained, and Martin appeared distressed. Teaching staff were concerned about the effect on other pupils.

The head teacher sought the advice of the educational psychologist, asking what kind of emotional distress could be causing Martin to refuse to enter school, and how to help with this problem.

A summary of information from the school included the following further details:

- Martin was young for his year group, having an August birthday.
- His father has lost his job the previous summer and was now at home during the day with Martin's mother, who was a homemaker.
- Martin was the youngest of three children. His older sister and brother, 15 and 17 years respectively, were living at home, his brother attending college, and his sister attending school.
- His parents were very anxious that, since there was no wage earner in the home, they should not be prosecuted for failing to bring their son to school.

Activity

Consider your initial response to the following questions:

1 What hypotheses might plausibly explain Martin's behaviour?
2 Why might it be desirable for Martin to return to school?
3 Why might it be undesirable for Martin to return to school?

Some aspects of Martin's case seem key: the persistent and apparently unexplained nature of his absence, the somatic complaints in the early morning, and his intense fearfulness when the possibility of a return to school was discussed.

Approaches to intervention

As for any mental health needs, promoting preventive environments is preferable to responding to established problems. Kearney & Graczyk (2014) therefore argue for a tiered response to problems of school attendance, which distinguishes between provision that is universal (preventative), targeted (identifying and working with those at risk) or specialist (reacting to those already displaying a problem). Promoting engagement is the flip side of the coin when aiming to reduce absenteeism, and Ingul et al. (2019) suggest an approach to prevention that involves identifying early risks and warning signs. Tonge and Silverman (2019) note the difficulties with preventive approaches, however, given the heterogeneity of contributory factors and individual presentation, hampering targeted programmes.

The concerns for learners such as Martin may challenge practitioners. School staff may feel concern about missed lessons, and about their inability to 'get to the bottom of the problem', or experience challenged relationships with the family. They may feel disappointment when a student promises to begin attending again on a certain date and then fails to do so, or may even doubt the reality of the underlying anxieties (Torrens et al., 2011). The role of the EP in relation to individual young people can be to support those concerned – family, staff, and other professionals – through reframing and problem-solving, using psychologically informed models (see Chapters 1 and 10). For the EP a holistic assessment of the wider needs and circumstances of the young person is essential (Elliott & Place, 2019) to ensure that any contributory issues that maintain the non-attendance have been identified (for example, health or learning needs, or family factors). As the issues seen in relation to school attendance may be manifest in other aspects of the young person's life (Gallé-Tessonneau & Heyne, 2020), EPs may take a broad orientation in their assessment, exploring the function of behaviours across contexts.

The EP may also play a key role in strategic plans developed across agencies within an LA, to support planning for LA responses to extended non-attendance. These are particularly important as it is commonly accepted that there is no single answer to school refusal, and thus multi-component interventions are key (Heyne, 2022), informed by theory and evidence, aiming to support the young person, the family, and the school, often through multi-agency support.

ACTIVITY BOX 12.2

Case study – Part 2

Further assessment information and the initial formulation

A meeting was convened between the psychologist, Martin's parents and the school's special needs co-ordinator (SENCo), to discuss Martin's situation.

Following a broad ranging discussion with Martin's parents, the educational psychologist explored a number of questions with them. This revealed:

- Martin had been unwell in October, and his attendance had fallen from 93% in September to 43% by December.
- During January and February Martin's attendance dropped significantly. By March he was refusing to enter school.
- Martin's parents had felt concerned when he entered Year 3 that he would not be able to keep up with the academic pace expected, where they perceived the work as more formal and demanding.
- Martin's academic attainments were at the lower end of the range of his class.
- Martin, his parents felt, was an easy child, and good company at home. Martin's sister, they noted, was very helpful around the home, helping with Martin's needs. After two older children, Martin had been a much-longed-for third child.
- Martin's father stated that although the loss of his job was upsetting, the family kept him busy at home.
- Martin's nausea in the mornings led his mother to take him to the family doctor, who felt that there was no underlying cause. His mother said that once Martin had had a snack mid-morning, he seemed to recover. She felt that it was important, if he were to attend school, to make sure that someone could offer him this same support at break times.
- The school noted that Martin did not seem to have many friendships. He seemed not to enjoy outdoor play, and lunchtimes often saw him seeking to help out in the classroom.

Activity

Identify the theoretical explanations of school refusal behaviour that might hold relevance as explanations of Martin's behaviour.

From the information given so far, generate a number of exploratory hypotheses for Martin's behaviour and order them in terms of their likelihood.

Individual-focused interventions

In terms of individual interventions, many have emphasised the need for a rapid return to school wherever possible (Maeda & Heyne, 2019), although there is a need to also ensure longer-term maintenance and follow-up support. Swift response is desirable, but it is also known that around 25% of cases will resolve seemingly spontaneously. A return is often arranged alongside the

possibility of individual therapy or support to explore more persistent issues or anxieties. Such psychosocial interventions have included a range of approaches, although Maynard et al. (2018) note the difficulties in securing high-quality evidence on effectiveness. In a systematic review of controlled intervention studies these authors found only eight studies that met the inclusion criteria. Whilst they identified some positive effects on attendance, the effects on anxiety were not uniform, with the processes and measurement involved in effective interventions continuing to require considerable attention (Heyne et al., 2019).

Key to many interventions is the notion that anxiety, in various forms, may play a critical role in non-attendance. In order to address anxiety cognitive behavioural therapy (CBT) has been widely implemented and researched, although Heyne et al. (2015) note that the positive effects of CBT for internalising disorders may not translate straightforwardly to school refusers. CBT uses cognitive restructuring and behavioural tasks to intervene with automatic thoughts and maladaptive behaviours, highlighting the relationship between behaviour and the environment in developing new behavioural repertoires. CBT's distinctive component, the *cognitive* aspect, is deemed valuable because events may be processed in a distorted manner by emotionally distressed school refusers. Studies investigating CBT with anxious school refusers now include greater focus upon its mechanisms and on considering which groups it may be most appropriate for (Maynard et al., 2018). It is a consistent finding, for example, that older pupils, including school refusers, respond less well to CBT (Heyne et al., 2013). The suggestion is that the entrenchment of the issues is more marked by later adolescence, though other influential factors have also been proposed to explain this finding, for example the capacity of adolescents to resist parental pressure to conform (Heyne & Sauter, 2011). A further point noted in the literature is the need to understand the impact of CBT interventions on both anxiety *and* attendance. Since so many cases of non-attendance are marked by high anxiety, interventions that seek to increase attendance may also increase anxiety through increasing contact with the anxiety-provoking stimuli, for example the school building, lesson, peers (Maynard et al., 2018). Follow-up investigations are therefore needed, as well as well-controlled studies.

Heyne (2022), considering the variable and often modest effects of CBT-based programmes, proposes clear research-based guidance on how programmes may be enhanced, as part of a multi-component intervention – with some dimensions varying by the age of the young person. He notes the frequency and duration of individual therapy as significant, with some studies indicating low impact of shorter packages, and the significance of support at follow-up in maintaining gains. The value of communicating plans to parents following therapy is also highlighted. The paper also identifies the differentiation in provision needed for those with social anxieties, a group who are less likely to respond well to CBT, who instead should have support for the promotion of positive peer group interactions (Carroll, 2011). Similarly, consideration of how a programme supports young people who are depressed is needed, and emotional regulation is found to be a valuable focus, in particular through dialectical behaviour therapy (Heyne, 2022). Overall, CBT appears to offer a promising mechanism through which to intervene with young people, but, again, more work is needed on how specific groups of school refusers are likely to respond (Kearney & Graczyk, 2014).

Historically, behavioural psychology played a role in the development of interventions, and, used with care and caution, may contribute elements of intervention programmes. Through classical conditioning, for example, practitioners may undertake systematic desensitisation approaches. These might attempt to help the young person overcome anxieties by reciprocal inhibition (Wolpe,

1954), that is, the teaching of behaviours antagonistic to the anxiety, such as controlled breathing or imagining pleasant activities. These activities could take place in therapy, or *in vivo*, for example in the presence of the anxiety-producing stimuli, perhaps in the early morning before school departure or even in school. Desensitisation involves graduated exposure, something that is often employed in interventions, with the young person attending for a partial timetable: although how this impacts upon their self-concept and sense of school belonging, as well as their sense of their capacity to engage in lessons, must be monitored.

From an operant conditioning stance, approaches have sought to alter contingencies for attending by creating positive, reinforcing experiences within the school. Conversely, attention has been paid to avoiding positive reinforcement for school refusal, such as activities of choice being pursued by a young person. Approaches within this paradigm have noted, too, the need to decrease negative reinforcement – avoidance of unpleasant stimuli for the child (Havik & Ingul, 2021). In more lay terms, practitioners often find it helpful to talk about the 'push and pull' factors for the child.

Elliott and Place (2019) suggest that large-scale RCTs are needed in order to offer insights into which combinations of which programmes' elements work for which young people. The controlled evaluation of any school refusal intervention presents challenges, however, such as the varying approaches to measurement of attendance or anxiety (Heyne, 2022), whilst Maynard et al.'s (2018) systematic review found risk of bias to be high through performance bias (challenges in the blinding of participants and personnel) and detection bias (blinding of outcomes assessment). The sampling and recruitment for studies is of course potentially complex, not least because it is known that the longer the school refusal has persisted, the more entrenched and resistant it becomes.

Family interventions

Parent involvement in multi-modal interventions has mixed evidence (Heyne, 2022). Parent interventions have often addressed the contingencies (e.g. rewards) for non-attendance, and thus on the conditions that can promote attendance (Heyne & Sauter, 2011). It may be helpful to support parents to problem-solve with their child and to support the child to learn resolution skills and the associated emotional regulation. It is only more recently that the outcomes of family therapy have been investigated, with some evidence of its probable efficacy (Carr, 2009). Maynard et al. (2018) cite the need for understanding dosage, the degree of parental involvement, and the need for replication studies, before we can be confident of key components for parent interventions. Chockalingam et al.'s (2022) review of modifiable parent factors echoes this, highlighting the literature as both sparse and dated.

A 'school-focused' approach

In contrast, many authors, drawing on ecological perspectives (Pellegrini, 2007), guide the practitioner to explore adaptations to the school environment. Kearney (2019) suggests a multi-systemic tiered model of intervention involving combinations of *child*, *parent and family*, *peer and school*, and *community* levels of intervention, where, for example, focus upon the scholastic and wellbeing needs of the pupil should be accompanied by consideration of more distal factors. The aim for multi-systemic interventions is to focus on various dimensions at a number of levels of the problem.

It can be challenging for schools to adapt the prosocial and learning environment in support of a single individual. Nevertheless, the rationale for considering indicated adaptations to the school's psychosocial environment is robust. A positive school climate can positively correlate with attainment and outcome for students (Tomaszewski et al., 2020). For the vulnerable young person who is fearful or anxious regarding school the further help of a relationship with a key staff member, or a mentor, in school can support the young person's sense of security there (Torrens et al., 2011).

Where more significant interventions are needed, educational adaptations may include off-site alternative educational provision (Brouwer-Borghuis et al., 2019), for example adaptable bespoke mental health orientated multi-component provision, focusing on reintegration to mainstream school (McKay-Brown et al., 2019). Partnership between school and home is emphasised in such models, and elsewhere there is evidence that support from various agencies can be needed. The intensity and cost of such programmes, in terms of human resources, should not be overlooked, and the responsibilities upon school staff can be considerable.

ACTIVITY BOX 12.3

Case study – Part 3

The intervention

The EP undertook a number of further steps, drawing together elements of an ecologically informed programme.

- In a second meeting with Martin's parents the EP explored the current situation at home. Martin's mother began to notice that nausea only occurred on days when he believed he was going to school and came to understand that this might be a symptom of anxiety.
- In a cognitive-behavioural focused session, Martin revealed his worries about isolation at school.
- His father was determined that Martin should now start catching up on his work and told Martin that any time at home in the week would be spent working on school tasks, rather than watching television. Since Martin had real strengths in art and design, his father agreed to offer Martin the chance to earn some model-building time at home at weekends, with him. Finally, both parents saw that Martin needed to show more age-appropriate independence in the home, and his sister was to be helped to see the need to do less for her sibling.
- The EP worked with Martin himself, where he talked about disliking playtimes. His talk showed that he felt vulnerable to other pupils, and what he called name calling, and being left out. He also worried about his work in class and said he could not understand what he needed to do when the teacher had explained things to the class. Although he was adamant that he did not wish to return to school, exploring Martin's construing of the world levered open dissonances, where it became evident that he wanted to be someone who was well-liked, with many friends. He also wanted to become good at art.
- Following this, an in-depth consultation took place with the class teacher and the school SENCo, to ensure that the a) academic and b) social environment of the classroom and school were ones which Martin could access. A personalised learning plan was drawn up

to address his needs as a learner returning to the classroom. This drew on his interest in construction and art, and considered how adult supports could be made available to reassure him, without this becoming too evident to his peers. Martin was to use a traffic light system to indicate to the teacher if he felt things were too tricky for him, and he required additional explanation. At break times, similarly, a teaching assistant on general duties would provide a 'mentor' role for Martin, to enable him to talk with them, or help out with tasks within school.

- Discussing how to make the transition into the school building easier for Martin, it was agreed that if he entered the building before other children arrived, he would find this easier, avoiding the hurly-burly of the cloakroom. This was arranged with school staff, using the pretext that Martin had additional 'monitor' responsibilities to catch up on since his absence.
- Only through consultation did the staff become aware of the extent of Martin's social isolation from his immediate peer group. It was agreed that a focus upon his 'social inclusion' in school was appropriate, aiming to support his development of peer relationships, and foster a greater social identity within the class group, as well as enhancing his own sense of self-efficacy within school. The range of activities included buddying systems for break times, structured choice activities led by Martin, co-operative learning tasks within the classroom, and peer tutoring for younger children. Opportunities for Martin to take responsibilities within the school day were identified, and a review of the class-based reward system ensured that it aimed to build Martin's intrinsic motivation to attend school, rather than reinforcement through external rewards.

Activity

1 Identify sources within the literature reviewed in this chapter for as many elements in the intervention plan as you can.
2 Identify which aspects of the plan seem most 'theory-driven' and which might be more concerned with (probably very necessary) practical arrangements and the efficient use of resources.
3 Decide also upon other aspects of interventions described in this chapter that might have been helpfully incorporated into the plan.

ACTIVITY BOX 12.4

Case study – Part 4

The outcome

- The following week, Martin attended school for four full days, and a pattern of attendance swiftly returned. He continued to have a high number of absences throughout that year, some through small ailments, and one week away from school for the death of a grandparent. However, in Year 4, Martin achieved attendance of over 90%.

- A series of review dates were set, to allow all involved to share relevant information on Martin's attendance progress and make any indicated adaptations to his programme. It was noted by the EP that despite good success with this programme, some real care should be taken on Martin's transition to secondary school, aged 11.

Coping with life by *coping* with school?

Coping with adverse life events or pressures ultimately supports adaptive functioning and has been recognised, together with the presence of protective factors, as contributing to reduced risk of future mental health problems and enhanced resilience (Masten et al., 2021). Coping successfully with one situation hypothetically strengthens an individual's ability to cope in the future. A failure to cope with a complex setting such as school may therefore have potentially serious long-term correlates, as we have seen (Kearney et al., 2019). Overall, it is of great importance that children and young people are supported to develop the complex social and organisational skills required to negotiate educational environments.

Summary of the main issues addressed in this chapter

- Terms for school non-attendance behaviour vary, with dimensions such as parental awareness, and emotional problems, being key to these.
- Incidence rates vary depending on the stringency of the definition adopted.
- Early theoretical formulations were developed within psychodynamic thinking utilising the concept of separation anxiety and within behavioural psychology addressing school-focused and other more social anxieties formed through classical and operant conditioning.
- A functional analysis of school refusal behaviour has been a useful way of understanding, assessing, and intervening.
- Family dynamics are seen as important to explore, linked to the question of separation anxiety, potentially, or to issues of the functional effects of school refusal.
- To address anxiety, many interventions include CBT which has modest efficacy for school refusers. Further information is needed about how this works for specific groups of young people.
- Multi-component responses allow attention to differing features of the child's ecology – family, school, and community.
- A rapid return to school where at all possible is indicated as a priority.
- There is some evidence that the long-term outcomes of school refusal may include mental health, employment, or relationship difficulties.
- The ability to cope with complex social situations such as school may serve to strengthen an individual's ability to cope with other testing life circumstances.

Key concepts and terms

Non-attendance; school phobia; school refusal; truancy; separation anxiety; school-focused anxiety; social anxiety; functional analysis; operant and classical conditioning; cognitive behaviour therapy; rapid response; long-term outcomes of school refusal; coping; protective factors.

Recommendations for further reading

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Sample essay titles

1 'School non-attendance is best captured by a single definition'. Discuss this statement, explaining your view.
2 What should inform intervention approaches to support school non-attenders?
3 A teacher, feeling frustrated by a pupil's repeated failure to keep promises to attend, consults an EP about the pupil who has begun to refuse to attend school. Explain how the EP might help the teacher understand this behaviour.

Note

1 Whilst the difficulty of parents or carers in asserting influence over a *truant* child is sometimes noted, this has also been seen as a feature of school refusal.

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13 School ethos and student identity

When is wearing a uniform a badge of honour?

Tony Cline

Chapter summary

In this chapter we examine different ways of describing a school's ethos and culture and different ways of investigating them. We reflect on how the ethos of a school is expressed in its day-to-day life. A school exists for its pupils. The chapter also examines how an institution's ethos may impinge on the experiences of its students and the development of their identities as academic learners.

Learning outcomes

When you have studied this chapter you should be able to:

1. Explain and evaluate different strategies for investigating a school's ethos.
2. Analyse how a school's ethos may influence the development of its students' identities as academic learners.
3. Describe how educational psychologists can work to ameliorate the impact of school ethos on students in difficult situations.

FOCUS BOX 13.1

Newspaper report: School uniform in Scotland

In February 2005 Scotland's First Minister, Jack McConnell, made an outspoken attack on what he saw as the damage caused by liberal values in education. Among other things, he said, a large number of Scottish schools had got rid of school uniform over the years. On 2nd March the *Scotsman* newspaper invited two public figures to debate the issue.

John Wilson, Education Director in East Renfrewshire, "Scotland's most successful education authority", wrote in support:

> Uniform is important in East Renfrewshire, and we encourage schools to promote it as part of our approach to an education based firmly on attainment, achievement and

DOI: 10.4324/9780429322815-16

> inclusion. Uniform helps promote the unity and ethos of a school and that, in turn, promotes the learning within. Security is boosted by making strangers not in uniform easier to spot. We've always said that we would meet private sector schools on their own ground. Part of the attraction they have for parents is their emphasis on uniform, so, as part of our strategy of encouraging our local children to go to their local schools at the heart of our communities, we do promote uniform.

Judith Gillespie, Convener of the Scottish Parent Teacher Council, opposed school uniforms:

> School uniform "means what it says on the tin" – everyone looks the same. This denial of difference is nothing new. When I moved to a secondary school in the 50s, … it didn't take me long to identify their hypocrisy over school uniform. The adult argument that school uniform ended competition and meant you couldn't tell the rich from the poor was rubbish. Rich kids had uniform that looked smart and fitted, while those of us with less money made do with second-hand stuff or, worse, home-made gear that never fitted properly. As for competition, that just moved to areas that escaped adult attention… Where's the chance to express individualism that's so beloved of the new drive to create a more enterprising culture? Where's the chance to experiment with clothes and work out individual identity?

Defining school ethos

The tension between individuality and uniformity in schools is fundamental to their function in society: their task of preparing children for adulthood can only be achieved if they are successful simultaneously in managing large groups and responding to individual needs. In the 1960s and 70s the fashionable view among psychologists (reflected in the Plowden Report on primary education – Plowden Committee, 1967) was that schools made little difference. It was thought that home factors exerted much more influence on children's achievements at school than school factors did. In sociology too the influence of schools was played down. Sociologists tended to locate the causes of unequal educational outcomes in basic inequities in the structure of society. A research team led by Michael Rutter, who presented that outline of earlier thinking (Rutter et al., 1979, pp. 1–2), sought to challenge it. They gave their book the title *Fifteen Thousand Hours* to reflect the fact that between the age of 5 and 16, young people spend that amount of time in school. Does it make a difference which school it is? Clearly John Wilson of East Renfrewshire thought it does and thought that school uniform can help each school to impress its ethos on its students. Did the findings obtained by Rutter's team support him?

In what has become a classic study they collected performance data for 12 Inner London secondary schools and undertook extensive observations and interviews in each school. Mostly they concentrated on specific events and behaviours, although there were some interview questions on more general attitudes and values (see Methods Box 13.1). They suggested that in many cases individual actions by members of staff may have been less important in their own right than "in

the part they play in contributing to a broader school ethos or climate of expectations and modes of behaving". Their defence of the focus on specific actions was that they hoped to identify what sorts of actions teachers and pupils could take to establish an improved ethos if needed (Rutter et al., 1979, pp. 55–56). Here are some of their findings:

- The schools differed markedly in the behaviour and attainments shown by their pupils.
- Although the schools differed in the proportion of children with difficult behaviour or low attainments whom they admitted, these differences did not wholly account for the variations between schools in their pupils' later behaviour and attainment.
- The variations between schools in different forms of outcome for their pupils were reasonably stable over periods of at least four or five years.
- In general, though with some exceptions, schools' overall performance was at a fairly similar level across the various measures of outcome. For example, schools which did better than average in terms of the children's behaviour in school tended also to do better than average in terms of examination success and low rates of delinquency.
- The differences in outcome between schools were not due to such physical factors as the size of the school, the age of the buildings or the space available; nor were they due to broad differences in administrative status or organisation. Some schools obtained good outcomes despite what seemed to be poor premises, and successful schools had a range of types of administrative arrangements.
- Some of the factors that had an influence on pupil outcomes were open to modification by the staff, rather than fixed by external constraints. Examples included the degree of academic emphasis, teacher actions in lessons, the availability of incentives and rewards, and the extent to which children were able to take responsibility within the classroom.
- Other factors that were shown to have an influence on pupil outcomes were outside teachers' immediate control. The most important factor of this kind was the academic balance of the schools' intakes.
- A crucial finding for the purposes of this chapter was that:

> the association between the *combined* measure of overall process and each of the measures of outcome was much stronger than any of the associations with individual process variables. This suggests that the cumulative effect of these various social factors was considerably greater than the effect of any of the individual factors on their own. The implication is that the individual actions or measures combine to create a particular *ethos*, or set of values, attitudes and behaviours which will become characteristic of the school as a whole.
>
> (Rutter et al., 1979, p. 177)

Controversially they argued that, although their data had been collected at one point in time, "the total pattern of findings indicates the strong probability that the associations between school process and outcome reflect in part a causal process. In other words, to an appreciable extent children's behaviour and attitudes are shaped and influenced by their experiences at school and, in particular, by the qualities of the school as a social institution" (p. 179). They concluded that a measure was required of how a school functions as a whole as a social organisation. This process is discussed in Methods Box 13.1.

METHODS BOX 13.1

Treating behavioural process variables as a means of measuring school ethos

Rutter et al. (1979) did not set out with a theoretical model of school ethos. Noting that they had not found a suitable instrument for their purposes in the earlier research literature, they developed a list of diverse school process variables that "seemed potentially relevant to the pupils' progress". They emphasised those variables that applied to the pupils as a whole group rather than those which applied only to smaller subgroups with special needs or special problems. The following list shows a small sample of items in the schedule of 46 process measures that they eventually used:

- *Work on walls*: Each room that they visited was assessed on a five point scale: 0 = nothing on walls, to 4 = all possible areas covered.
- *Teachers' interventions in third year classrooms*: Percentage of teacher observation periods when teachers were dealing with pupils' behaviour, e.g. curbing unacceptable behaviour.
- *Pupils caring for resources*: Observations during third year lessons as to whether pupils brought and took away resources for learning such as books, folders and exercise books.
- *Staff's late arrival at school*: An item in the questionnaire for teachers asking whether anyone else was aware if staff arrive late for school.

As noted above, the research team argued that items of this kind did not affect pupil outcomes directly but through their combination in an overall impact through an institutional ethos. They showed that the schools' overall scores for school process variables correlated highly with pupil behaviour scores ($r = 0.92$) and showed substantial, though slightly less strong, correlations with academic attainment ($r = 0.76$), overall attendance ($r = 65$) and recorded delinquency ($r = -0.68$).

The report by Rutter and his colleagues attracted a great deal of interest when it was published. There were critical reviews both of its statistical analyses (e.g. Goldstein, 1980) and of its "managerial" focus (Burgess, 1980). For example, the team's conclusions about the management of pupils were described as being "grounded in the worst traditions of behaviouristic experimental social psychology" (Pateman, 1980). Nonetheless, the study had a seminal influence on educational research and its main findings were confirmed in later studies of other types of schools (e.g. Mortimore et al., 1988 on primary schools). A major tradition of research on *school effectiveness* grew from the interest generated by the London study and others at that time together with a parallel tradition of professional work on *school improvement* (Reynolds et al., 2014).

For our purposes in this chapter the most serious weakness of the study was its pragmatic collation of unrelated variables to create a measure of "school ethos". The implicit assumption was made that there will be a consistent relationship in any organisation between inputs and outputs and that this relationship can be discovered through correlating a wide range of input and output measures and identifying the most significant connections. There was no attempt to develop a coherent theoretical account of how that relationship operated in the schools that were studied,

a task that was left to future researchers (Scheerens, 2013). Later studies in Sweden suggested that school ethos can be treated as one factor in overall school effectiveness and that it contributes significantly to pupils' perceptions of teachers' care for them (Ramberg et al., 2019). A particular strength of the approach adopted by Rutter's team was the breadth of its scope. Others have focused more closely on relationship patterns within a school as emblematic of its ethos or culture. Examples include the application of ideas from developmental psychology to the analysis of whole school functioning such as attachment theory (Rose et al., 2019) and nurture group theory (Coleman, 2020). This tighter focus makes it possible to develop a theoretical model of the functioning of a school's ethos and to propose targeted interventions to improve it.

Critics have argued that there are complex forces in play in the life of an organisation such as a school and that the full picture cannot be adequately captured by a "reductionist" strategy of measuring factors like those listed in Methods Box 13.1. In a complex human system what matters is not just what happens but how participants interpret what happens – what shared ideas they apply to the routines and events that characterise the institution, what "culture" dominates it, and whether some of those who are involved resist the dominant culture. Subsequent research has usually measured "school ethos" by investigating the perceptions of key stakeholders, including pupils (e.g. Banerjee et al., 2014), teachers (e.g. Ramberg et al., 2019) and/or school leaders and parents in some combination (e.g. Warin, 2017). The quantitative analysis of survey data has enabled researchers to show that school ethos may predict the effective adoption of school-wide initiatives in such areas as health promotion (Penney et al., 2018). However, some have argued that, while questionnaire-based survey research of that kind can demonstrate that overall school ethos plays a role in major outcomes of that kind, it cannot identify the causal mechanisms and processes involved (Wrigley, 2004). Later we will examine a qualitative approach to investigating the culture or ethos of a school. But first we need to consider the other construct that appears in the title of the chapter.

The development of identity as a student

Infants in the first few months of life do not appear to be self-conscious, but by the age of two they develop a sense of themselves as a person, and in their third year they begin to be able to draw on the standards and rules that prevail in their society in order to evaluate their own behaviour. They may show embarrassment when they see a gap between what they are doing and what is expected of them, and they begin to experience further emotions such as pride, shame and guilt (Lewis, 2016). As they start to move more and more outside the immediate ambit of their home, they are exposed to a wider range of people and need to develop a sense of their own social identity as distinct from that of others. Questions such as "Who am I?" are answered, in part, by categorising themselves as members of groups with which they can identify. Their perception of themselves is influenced by comparing themselves to the increasing range of people around them and by evaluating those comparisons in the light of how they see the others judging them (Erikson, 1968). For most children school is a key arena for important developments in identity formation. In that context Schachter and Rich (2011) adopted the following definition for the concept of "identity":

> the individual's dynamic self-understandings and self-definitions used to structure, direct, give meaning to and present the self, that are negotiated intra- and interpersonally across the lifespan within sociocultural contexts, along with the psychosocial processes, meaning-systems, practices and structures that regulate their continued development.
>
> (p. 223)

Children develop various social identities as they move into school and middle childhood, e.g. in relation to gender. However, they do not simply opt to be in one differentiated group or another (e.g. "the boys" or "the girls"). The process is more complex than that, as they learn about the various definitions of gender that are available and position themselves in relation to these possibilities within their groups. Lloyd and Duveen (1992) proposed that, as children encounter new social representations of gender after starting school, they re-construct the social gender identities which they had developed during the preschool years. The researchers observed children in reception classes in four schools over an extended period. For our purposes an important finding in their ethnographic study of four schools was that the way reception class teachers organised their classrooms constrained the ways in which gender identities were expressed there. It might be expected that traditionally minded teachers would encourage their pupils to adopt traditional sex roles in their play in the classroom, e.g. by giving boys "male" toys to play with. This is not what happened. The process did not involve teachers imposing their vision of sex roles on the young pupils in their charge. It was rather that patterns of play and gender role affiliation were influenced by the way that the classrooms were run. Gender differentiation appeared to be most marked in those classrooms where the teacher allowed more time for peer-organised activities. For example, that allowed a small group of girls in one school to define their femininity through the exclusion of boys from their play. Classroom organisation and ethos had a paradoxical impact: the regime imposed by the more "progressive" teachers allowed more scope for the expression of traditional gender identities than the regime of the more "conservative" teachers. If we are looking for the effects of school ethos on student identity, we should not expect a simple imposition of the one on the other.

Internalised expectations

A key stage in this process, according to Duveen, is that children first learn how others see them and then gradually internalise these expectations and take a position in relation to them (Duveen, 2001). In a series of studies employing a quite different type of methodology, Bennett and Sani (2011) investigated how the process of internalisation may occur. They sought to show that the development of social identities does not just involve learning to categorise oneself in terms of group membership but also includes subjectively identifying with the group. One key process appears to be *self-stereotyping* (i.e. thinking of oneself as a person who shows the stereotypical features of members of the group in question). As students progress through their years of schooling, those who succeed academically are more likely to show a strong identification with their school and a fuller sense of belonging to the student group there. Reynolds et al. (2017) showed that this sense of "school identification" may mediate the positive impact of "school climate" on student achievement.

Of course, school-related factors do not operate alone. For example, a case study of a seven-year-old girl who thought of herself as good at maths suggested that she based this not only on what her teacher had written in a report, but also on what her father had said about her and on comparisons that had been made at home with one of her sisters (Abreu & Cline, 2003, pp. 24–25). The key psychological construct in this process has sometimes been termed "reflected appraisal", children's beliefs about what their parents, teachers, and peers think about them with respect to school achievement. Survey evidence, as well as case study evidence, has indicated that reflected appraisals predict what children themselves will see as their own level of academic ability in each subject area. The evidence also suggests that these mechanisms continue to operate into adolescence (Bouchey & Harter, 2005).

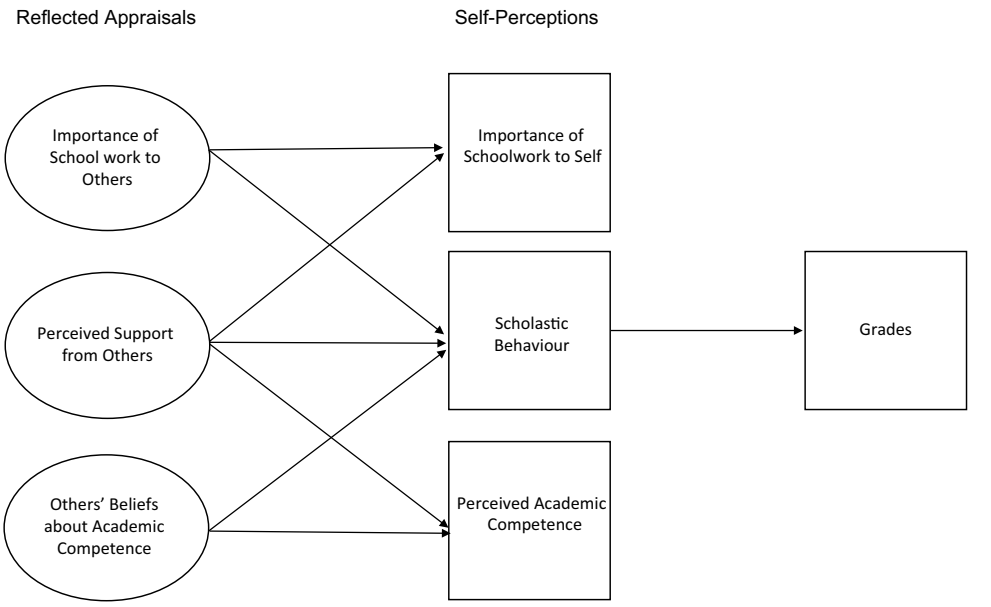

Figure 13.1 Model proposed by Bouchey and Harter (2005) to describe the processes underlying maths/science achievement. ("Others" includes mothers, fathers, teachers and classmates)

Abreu (1995) has used the concept of "valorisation" to describe the process by which some kinds of activity are given high status within the school curriculum while others are not. She studied illiterate farmers in a sugar-cane farming community in North-East Brazil and showed how they employed sophisticated traditional methods of calculation to work out acreage and crop yield in their irregularly shaped fields. However, neither they nor their children treated these low status calculations as "real" mathematics, a term they reserved for the mathematics taught at school. The internalisation of reflected appraisals in school depends, in part, on the "valorisation" of the sources of these appraisals (Abreu & Cline, 2003). The ways in which that process operates in a school will no doubt be influenced by its ethos.

Influence of school ethos

In the decades since the publication of *Fifteen Thousand Hours* more evidence has accumulated showing that the ethos and culture of a school have a significant impact on a range of aspects of student identity and behaviour independently of such variables as the composition of the student population. For example, Bradshaw et al. (2021) demonstrated the relationship between measures of "school climate" and the incidence of reported bullying. (Cf. Chapter 11).

In this context other researchers have highlighted the role that a school's ethos can play in promoting a "sense of belonging" among pupils in a mainstream secondary school. A review of the literature on adolescents' experiences of school belonging led Craggs and Kelly (2018) to suggest that its impact may be best understood in terms of "a higher order concept… (which) suggests that the experience of school belonging for adolescents is associated with being in an environment

in which positive social relationships can be forged and sustained, in which individual identities are known, understood and accepted, in which young people feel safe and secure, and in which there is the opportunity to experience group membership" (p. 1423). Exploring the relationship between school ethos and pupils' sense of belonging further looks likely to be a fruitful vein of research in this field.

Some research has focused on the differences in ethos between mainstream schools and various types of independent establishment. For example, Rivers and Soutter (1996) found that children who had been the victims of bullying in mainstream schools left the status of victim behind after moving to a Rudolph Steiner school with a non-competitive, group-centred ethos. Creese et al. (2006) found that Gujarati-speaking children had been enabled to negotiate new identities as learners in complementary schools run by the Gujarati community in their town. In these part-time schools, which the children attended once a week, their linguistic repertoire as bilingual speakers was seen as important in a way that it was not in the mainstream schools that they attended full-time through the week.

In the UK there are a wide range of complementary schools serving multiple new communities in this increasingly diverse and multilingual society. Prokopiou and Cline (2010) reflected on Prokopiou's research on two contrasting complementary schools that served different communities. The distinctive ethos in each school had evolved to serve a perceived community need. The priority envisaged by those involved in the Pakistani school related to issues of racism and religious discrimination faced by the community. In this context, the Pakistani school aimed mainly to increase self-confidence and strengthen the students' sense of minority cultural identity, especially the religious aspect of it. In contrast, the school serving the Greek and Greek-Cypriot communities aimed mainly to preserve those communities' cultural identity which was felt to be threatened by assimilation. In both community schools, the ethos endorsed a strong academic identity which supported students in the mainstream schools they also attended as well as fostering knowledge and skills relevant to their identities as members of their minority communities.

Burden (2005) studied the learning careers of boys with dyslexia at a specialist boarding school and found that many who had had a sense of failure and embarrassment in their mainstream schools had developed what Burden called "dyslexic pride" in that school. In part, the boys had been encouraged by the easy availability of help that was geared to meet their particular needs. But there appeared to be more to it than that. There was a sense of *belonging*, of feeling part of a group of people in the same situation. Keith (aged 12) said:

> I liked that people listened to you and understand how you feel and everyone was the same. We looked at the usual comprehensive school but I didn't want to go there 'cos I'd be different and have to go out of class for extra help.
>
> (p. 54)

The impact of school ethos on the development of students' identities as learners is often indirect: it gives a message about the kind of person who is valued in this community and facilitates a process by which students come to think that they are that kind of person.

It is no accident that some of the most persuasive research on the impact of school ethos on student identity has focused on small schools with an unusual and well-defined purpose. In the most effective of the schools the teachers shared common goals and benefited from a strong consensus about the methods employed in the school to pursue those goals (Rivers & Soutter, 1996;

Creese et al., 2006). In many large mainstream schools those conditions may not apply. The institution is a highly complex organisation with diverse and sometimes competing subcultures. Groups of teachers and groups of pupils find themselves isolated from one another. Pupils develop their identities as learners across disparate departments and subcultures, finding those identities affirmed in some settings and challenged or undermined in others. Such schools can be fragile organisations that lack the cohesion and strength to support their members – staff or pupils. In the next section we will examine how educational psychologists can contribute when a school's ethos has many negative features.

Can a school's educational psychologist influence its ethos?

It has long been argued that to have the greatest impact EPs should place more emphasis on work aimed at the organisation, policy and structure of schools than on work with individual pupils (Gillham, 1978). Sometimes this arises as a result of a direct request for intervention at the school level. When environmental improvements are planned, this may take the form of commissioning action research with pupils to help inform the plans, e.g. for changes in playground design (Pearson & Howe, 2017). Or the intervention may take the form of staff training initiatives, particularly in areas with which educational psychologists are traditionally associated such as special educational needs and behaviour management. There is a risk, however, that training sessions may be enjoyed and positively valued but not actually be effective in changing practice. Chidley and Stringer (2020) have proposed an "implementation framework" to monitor and improve how change is facilitated at group and organisational levels.

In an earlier paper Bettle et al. (2001) described the support provided to a school that was in difficulties by a team from the local authority (LA)'s Educational Psychology Service. The school, which was in a socially deprived area in Buckinghamshire, a relatively prosperous shire county, provided for children aged 7–11 years of age. After an official inspection it had been placed in "Special Measures". This was a category used by Ofsted inspectors when "a school is failing or is likely to fail to give its pupils an acceptable standard of education". After being placed in this category the school was required to produce an Action Plan setting out a proposed response to the inspection report (Department for Education, 1993). In addition, at that time the LA had to produce a commentary on the school's plan and a statement of the action that it proposed to take to support the school. In this case the school's educational psychologist, as a member of the LA staff, was asked by its new head teacher to give them extra time in order to process a higher number of formal assessments of special educational needs (50% of the pupils in the school were on the Special Educational Needs register).

> The Chief Psychologist discussed this with the Headteacher and consequently they agreed that, given the key issues identified in the Action Plan, the Service should support specific initiatives relating to improving behaviour management or learning across the school. The time for this would best be accommodated… from time earmarked by the Service for project work with schools, and a joint planning meeting was therefore held in order to discuss possible pieces of work.
>
> (Bettle et al., 2001, p. 56)

The schools' link educational psychologist also participated in a task force that gave attention to special educational needs in the school, but this account will focus on the project initiative.

In an initial discussion the head teacher highlighted what he called "ethos in the school" as a key area for work, specifically a high level of conflict and hostility between pupils. It was agreed that this should be the focus of the educational psychologist and her colleagues who would support the school to develop a more supportive and caring ethos among students. "The Headteacher felt that many of the pupils needed to learn fundamental skills for getting along with others, valuing others as well as themselves, and feeling secure and cared for in their school environment" (p. 57). The educational psychologists' contributions included investigating staff and pupil perceptions, feedback to staff, training and evaluation. The key point of interest here is the focus of their initial data collection. They did not attempt direct observations but focused instead on learning how the situation in the school was perceived by different groups of participants. Their strategy was guided by soft systems methodology (SSM), an approach to the analysis of ill-structured problem situations of this kind that was developed on the basis of action research (Frederickson, 1993; Checkland & Poulter, 2010). This initial phase of the team's work is summarised in Methods Box 13.2.

METHODS BOX 13.2

Investigating stakeholders' perceptions as a means of measuring school ethos

Two educational psychologists spent half a day in the school, administering the questionnaires with classes of pupils and interviewing the staff. The staff interviews explored such questions as how they felt the children got along with each other in their individual classes and in the school. Staff were asked what had been tried before and what kinds of support they felt would be most useful in the future. Pupils in each year group completed two questionnaires – the *My Class Inventory, Short Form* (which surveys perceptions of the classroom learning environment resulting in scores for constructs such as group cohesiveness and group friction) and the *Life in Schools Checklist* (which surveys perceptions of positive and negative events in school and results in scores such as a bullying index and a general aggression index). The educational psychology team aimed to assist the staff group to "unfreeze", i.e. identify and accept the reasons for organisational change in the school. They kickstarted the process by feeding back the data from this initial investigation at a staff meeting in the form of a "rich picture" (see Figure 13.2).

Sometimes the need for a psychologist's intervention across a school as a whole emerges from observation during the course of individual work rather than a result of an explicit request. This is illustrated in Case Study Box 13.1 below.

Conclusion

The concept of a school's "ethos" refers to something vague and ill-defined – its "feeling" or "character" as an organisation. It is possible to draw on analyses of organisational culture to clarify the concept. A school's culture encompasses the norms, values and expectations shared by

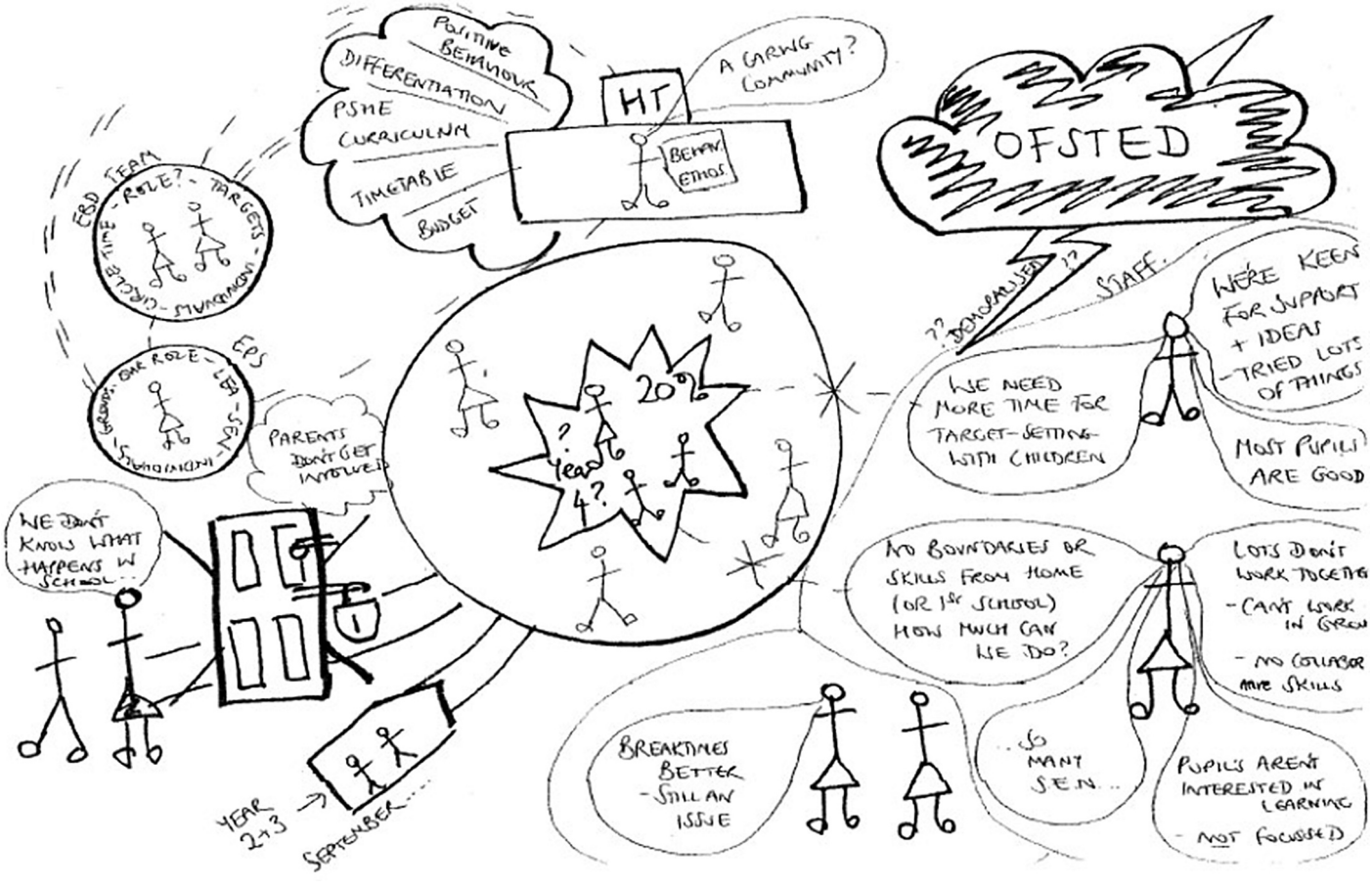

Figure 13.2 A "rich picture" of the school situation that emerged from the educational psychologists' consultations there
Source: Bettle et al. (2001)

ACTIVITY BOX 13.1

- Discuss what assumptions are made in the portrayal of the school's "behaviour ethos" that is conveyed in that picture.
- In the light of the limited information that is given here can you suggest an operational definition of "school ethos" that might have been employed by the educational psychology team?

Some researchers (e.g. Bood et al., 2021) have argued that it can be helpful to develop a "rich picture" of a situation even if not pursuing the full soft systems intervention. Examine the "rich picture" of perceptions of the school situation that the educational psychologists presented to the school staff and compare it to more conventional formats used for modelling in psychology such as the approach illustrated in Figure 13.1. What advantages and disadvantages do you see in the SSM approach?

CASE STUDY BOX 13.1

Change in Newbridge School

A day special school in a metropolitan area, which we will call Newbridge School, faced multiple challenges with a falling roll, changing patterns of admission, pupils with increasingly complex needs that were not always well understood by staff who had served in the school for many years, low staff confidence and frequent expressions of parental concern. A "wellbeing" survey of staff showed low staff morale, divided staff teams and little team ethos. They reported little sense of control and a culture where there was little support – either formally or informally. There was mistrust between staff groups and a general feeling that they did not all pull together under pressure. After consultation with a new head teacher and senior management team, the school's educational psychologist agreed to meet with each class teacher and carry out a class observation to provide positive feedback and agree next steps to develop their practice. Recurring themes emerged from discussions and observations, and a series of whole staff training sessions were delivered to target areas for development. Feedback was also given to the senior management team so that key issues that emerged could be addressed. Links were made with the speech and language therapists and observations were shared so that consistent messages could be given to class teams. Workshops were arranged for parents, and team problem-solving sessions were designed to create support plans for specific pupils who were causing concern.

At the end of the year when this intervention took place, the annual staff survey was repeated. Previously the results had placed the school in the very lowest category when compared to other special schools for school ethos, including staff morale, with all scores well below average. A year later, when the survey was repeated, all scores were in the "strength" range (over 3.5 on a 5 point scale) with many in the "excellent" range (over 4). In feedback to the Educational Psychology Service at the end of the year, the head teacher commented that

the psychologist had "played a very active role in the process of school improvement, supporting teachers through lesson observations, training, consultation and work with parents". The head teacher also commented that "as a special school, the educational psychologist has had to work with class teams and at a whole school level, so her influence has been widespread throughout the school".

staff and pupils, alongside the traditions and routines of the establishment that express those values. It can be thought of as operating at different levels of visibility – overt behaviour, structures and processes ("artefacts"), explicit ideals, goals and aspirations ("espoused beliefs and values") and basic underlying assumptions that determine perceptions, thoughts, feelings and behaviour (Schein, 2010). The school's overall ethos is the result of all this – "the ambience that is felt at a school as a result of its cultural history; past, present and ever changing" (Solvason, 2005, p. 86). As we noted above, there may be distinct subcultures and microcultures in different parts of a complex institution such as a school. These may cohere within a strong, cohesive organisational culture with clear leadership and a set of shared goals and values across the school, or differing subcultures may co-exist with varying degrees of harmony and tension (Martin, 1992). The way in which the ethos of a particular establishment is experienced by its staff and pupils will depend on many factors, including the size and type of school and perhaps its history and functions.

Within the framework of educational psychology a school cannot be understood by focusing solely on a single level, whether that is the whole school or the communal context, group settings such as classrooms, the family or the individual. Schools exist for the sake of their pupils and to serve a community by preparing its youngest members for their roles in adult society. There is a need to operate at multiple levels. The greatest challenge appears to lie in learning how factors at different levels interact. How do elements of a school's ethos and culture influence the personal development of its students? In his article for *The Scotsman* with which this chapter began, John Wilson saw the relationship as simple: symbols such as a uniform will help to "promote the unity and ethos of a school and that, in turn, promotes the learning within".

Once the complexity of the relationship between school ethos and student identities is fully understood, it becomes difficult to predict when wearing a uniform will be a badge of honour for students. In her article for *The Scotsman* Judith Gillespie recalled a school prize-giving she had recently attended. She had been "impressed at the inventiveness of some youngsters in managing to turn an ordinary shirt and tie into a fashion statement". Those individuals chose to flaunt an alternative identity on an occasion when their academic identity was supposed to be on show. No doubt their satisfaction in doing so will have been enhanced because they were able to transform the "official" uniform for that purpose. This reinforces the interactive analysis which considers both the institutional ethos and the individual as an active participant in construing it. Students' identities are developed not by adopting their school's ethos as it is presented to them but by trying out various ways of positioning themselves in relation to it.

Summary of the main issues addressed in this chapter

- Schools differ markedly in the outcomes they achieve with their pupils, even when variations in pupil intake are taken into account.

- These differences between schools have been attributed to their overall ethos or culture rather than to specific policies or individual staff actions.
- In the classic study which yielded those findings (Rutter et al., 1979), behavioural process variables were treated as a means of measuring school ethos.
- That approach has been criticised as reductionist on the grounds that the complex forces that are in play in the life of an organisation such as a school cannot be adequately captured by such measures.
- The development of social identities is stimulated when children move more and more outside the immediate ambit of their home and are exposed to a wider range of people.
- The reflected appraisals of others such as teachers and parents influence children's own academic self-perceptions in the subject areas to which they relate, but that influence does not have a uniformly decisive impact on individuals' self-definition.
- The evidence for a powerful impact of school ethos on the development of students' identities as learners is strongest in small schools that have a well-defined mission and values that are widely shared among members of the school community.
- In a range of situations practising educational psychologists have given attention to school ethos as a factor in some children's difficulties.
- Interventions in schools with serious problems have included projects based on "soft systems methodology". The analysis of school ethos in this strategy focuses on the perceptions of stakeholders and aims to influence their behaviour by changing the way that they view the situation.
- Other strategies that focus on staff development have also been employed by educational psychologists in this context.
- If research and professional practice in educational psychology are to be effective, a multi-level focus is required that gives attention not only to psychological processes at the communal, small group, family and individual levels but also to the ethos and culture of a school as a whole.

Key concepts and terms

School ethos; school culture; behavioural process variables; reductionist; social identity; internalisation; reflected appraisal; valorisation; academic identities; school in special measures; soft systems methodology; rich picture; staff development; multi-level focus of educational psychology.

Recommendations for further reading

Journal articles

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Sample essay titles

1 Can school ethos be measured?
2 Assess the nature of the relationship between a school's ethos and its students' self-image.
3 You are the educational psychologist serving a large secondary school that has decided to liberalise its rules about school uniform. Drawing on what you know of psychological research in this area, design a research study to investigate the impact of this change on the development of student identities.

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