Key Issues in Teacher Education

a sourcebook for teacher educators

Janet Stuart Kwame Akyeampong Alison Croft

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Some of the research findings are presented in the book and suggestions for further reading show how to find out more about MUSTER. The authors would like to thank all their colleagues in the project for stimulating conversations and ideas which have contributed to this book, as well as the many tutors and teachers we have worked with in Africa, Asia and Europe. We would particularly like to thank the students we have taught at the University of Sussex on the M.A. in International Education and Development; teaching this programme helped us to develop much of the material in the book and we have learnt a great deal from the students who came with experience of teacher education all over the world. Thanks are also due to DFID for a grant towards the preparation of the manuscript.

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Finally, we thank our families who gave generously of their time so that we could write.

About this book

This book is designed to be a resource for people involved in teacher education. It is not a book for student teachers, but for those teaching or supporting them, such as:

- lecturers and tutors in teacher training colleges, colleges of education and university departments/schools of education
- in-service trainers, advisors and continuing professional development facilitators
- officials in government departments involved in teacher preparation and development
- head teachers interested in staff development
- those working in non-governmental organisations concerned with teacher development.

There may well be other people who find it useful, such as researchers and students of international education.

There are different ways of using such a resource.

Support for self-study: We know that teacher educators are not always given specific professional training for their job. This book could be used as a starting point. For example, someone moving from teaching in school to teaching at college level may want to find out more about the job and how to adapt their teaching. The text, together with suggestions for reflection, discussion and practical activities, is designed to start them off on such a journey of self-development.

Textbook: It could be used to accompany an award-bearing course at a university, such as a Diploma or Masters in Teacher Education. In this case, it would serve as an introduction to some key ideas, which would need to be followed up with further reading. To this end, we have included lists of references and websites.

Handbook for the professional development of teacher educators (training of trainers): It could be used by people involved in continuous professional development (CPD) for teacher educators, both those who work with student teachers and those who themselves provide CPD or in-service education and training (INSET) for working teachers. In this case, the course leader would probably want to select relevant chapters and plan their own programmes around the topics. We have included some practical activities suitable for workshops or short courses which can be adapted to local needs and contexts. Some of these are in the text; longer ones have been placed in an appendix but they also can be used at any relevant point in the programme.

Theory and practice in teacher education

Creating a good balance between learning about theory and learning practical skills is a common problem in teacher education. We met the same problems in writing this book. We believe that practical action and analytical understanding should go hand-in-hand and cross-fertilise each other. Practitioners – both teachers and teacher educators – need a theoretical framework within which to think about their work:

> Without theory, there is no way to distinguish effective teaching procedures from ritual, no way to determine which aspects of a method are helpful and which are not helpful.
> (Krashen 1983:261)

Therefore we have included some summaries of theories we consider useful, as well as some practical suggestions. But in a book of this size we can only give a short description of the main points of theories. We urge readers to consult other writers to gain a fuller understanding. Some useful resources are listed under 'Further Reading'.

Wherever possible we have tried to show where, when and why these theories originated. In the social sciences, such as education, theories are attempts to explain human behaviour and experience. A good theory is 'useful' rather than 'true'. A theory lasts until new research and new evidence provide a more useful theory, one that gives a more comprehensive or efficient explanation.

Theories are often influenced by current beliefs and ideologies. This is shown by some of the theories about human learning (see Chapter 3). Piaget's explanations of how children learn focus on the individual; Vygotsky's explanations stress the social context. Piaget was Swiss working within a Western European tradition of individualism; Vygotsky was Russian working in a society that stressed collectivism at that time. The belief systems of their societies to some extent affected what they investigated, how they went about it, and what they thought they had found.

There can be problems when theories developed in one cultural context, such as the US or Europe, are then applied in another society, such as those in Africa or Asia. Understanding when, where and why a particular theory emerged enables one to look at it more critically. For this reason, we have included, in places, some historical and social background to set the educational theories in context. A major aim of the book is to give teacher educators a broad perspective on how teachers learn. We hope that teacher educators with this perspective will be able to understand the background to changes in teacher education policy and practice, and to be partners in the debate about what is useful for the country or region where they work. There is more on sharing knowledge about teacher education across cultures in Chapter 11.

A guide to the text

The book contains a mixture of types of writing; it includes straightforward text, offering presentation and explanation, summaries of research findings, examples and case studies. It also gives suggestions as to how readers can engage with the ideas, with opportunities to think how the concepts could be applied to their own situation, or to carry out an activity.

Reflections

These mark opportunities to pause and think about what you have just read, to relate it to personal experience, or to look ahead. Often they suggest you apply the ideas to your own context: to find an example, to compare or contrast. The Reflection should not last more than five to ten minutes. Your ideas can be jotted down in note form, or discussed with a partner or small group.

Activities

These mark places where a short task could be carried out related to the ideas just discussed, such as filling in a grid or ranking statements. Some longer and more complex activities have been placed in the Activity Appendix. They are designed to stimulate deeper analysis in some way: by writing or discussing at greater length, or becoming involved in practical action, such as experimental teaching or action research. Some are suitable for course assignments or workshop activities.

Both Reflections and Activities can be adapted. We hope that tutors, leaders, facilitators or trainers will use the ideas as jumping off points for creating their own learning activities.

Case studies and examples

These are intended to illustrate a point in concrete form, and to help the reader to visualise what an idea might look like in practice.

Research summaries

These are like very small windows, through which you can glimpse a part of the education world. They can only give the main points, not a full picture. They aim to:

- provide some evidence to back up points made in the text, to illustrate similarities or differences
- stimulate you to read further
- encourage you where appropriate to carry out similar research in your own context.

Note on the MUSTER Project and its link to this book

The Multi-Site Teacher Education Research (MUSTER) project was carried out between 1997–2001 in Ghana, Lesotho, Malawi, South Africa, and Trinidad and Tobago. It looked at who became a primary teacher and how they experienced their training; at the curriculum, at the training colleges, and at the costs involved. The work was co-ordinated by Sussex University, with the three authors as participants. The key ideas of this book were developed during the MUSTER project and as a result of its findings. Examples from the project have been used to illustrate points in this book.

Glossary and abbreviations

At the back there are explanations of the educational terms highlighted in bold in the text, and a list of abbreviations.

Further reading

This lists a few books and websites that we believe to be particularly useful and reasonably accessible at the time of writing. However, the Internet is a vast and growing resource, and by searching it you may be able to find many more up to date and relevant sources.

We have arranged the chapters in what we think is a logical order, but they do not have to be read in sequence. There are indicators to refer the readers backwards or forwards.

Ways of using the book

Using it on your own for self-study or with a small group

It will be useful to keep a journal or log in which you write down your reactions, questions, comments, ideas that you want to pursue further, etc. This should be kept private, so that you can be completely honest in it; don't write for an audience, write for yourself. However, you can share selected bits of it with colleagues if and when you wish.

Suggested ways of working (but feel free to devise your own):

- Read the chapter through once fairly quickly. Note down points, questions etc. that occur to you and that you wish to return to, but don't stop too long.
- Go back and work through it more slowly. Stop at the Reflections and follow the suggested activity. Write down your ideas but don't take longer than 10 minutes. If working in a group, share your ideas.
- Choose at least one of the longer Activities and carry it out as far as you are able, individually or with others.
- Find and read something more on the topic, for example using the Further Reading section as a guide. If in a group, different members can read different sources, or read the same piece and compare notes.

Even if you are working mostly on your own, it will be much easier if you can arrange to meet from time to time with others who are also using the book, to talk and compare notes. You can then support and challenge each other. It is likely that more ideas will come up from the discussions. If you have access to a computer and email, you can contact your colleagues in this way. For example, you can keep your journal on file, and send selected parts of it to others for their comments and responses.

Using this book as a partial text or resource for a formal academic course

The book is intended to be a source book for new ideas to be tried by teacher educators, perhaps as part of an academic upgrading programme. For example, as a tutor you might:

- Before each seminar, ask the students to read part or all of the selected chapter.
- Use the Reflections to organise the actual seminars and focus debate on the issues they raise. Summarise students' views and understandings, and return to them after further discussions on the material presented in the text. The idea is to foster critical reflection and encourage a re-evaluation of concepts and attitudes in teaching and learning.
- Use the Activities for group work requiring students to work on particular issues or topics.
- Select all or some of the extended activities in the Appendix as assignments. After your students have gone through these tasks, hold general discussions about their findings and explore with them the significance or implications for their professional learning and development.

The ideas and concepts presented should be related to your own experience and situation in your country. Look for examples and evaluate them in the light of the issues raised in the text.

There is also plenty in the book that would be useful as an introduction for Masters level students taking more general courses in education and international development. In this case, some students might not have been teacher educators so the activities would need more adaptation, so as to allow all students to draw on their previous work and learning experiences.

Finally, we hope that this book provides you with the opportunity to debate assumptions about learning to teach, but more importantly, that it offers you the chance to promote critical reflection in teaching among your students.

Using this book as a resource for short courses and other professional development activities for teacher educators

This book can be used to provide readings and activities for short courses or 'workshops' for teacher educators. The participants might be advisors or education officers who run short courses for teachers working in schools or they might be working in initial teacher education as college tutors. Here are a few suggestions for ways of using the material:

- Selected chapters could be used as the basis of an induction course for new teacher educators. For example, Chapters 2–4 are about learning to teach, while Chapter 13 offers a more theoretical perspective on professional knowledge. Practical issues such as pedagogy, teaching practice and assessment are dealt with in Chapters 5–7.
- When teacher education reform is being planned, certain chapters could be used as the basis for preliminary workshops aimed at developing shared understandings of teacher education, debating possible options, and developing new policy (Chapters 8–10). Chapter 11 on cross-cultural sharing of knowledge might be useful background in thinking about how information and advice from other countries will be used.
- When teacher education reform is being implemented some chapters could be the basis of workshops for teacher educators. For example, if there are proposed changes in the way student teachers will work in schools, Chapter 6 on the practicum could be used with tutors to work out how policy change will be implemented in their university or college.

The way in which particular ideas and activities are used will vary with each situation. This source book is intended to be used by creative educators of teacher educators in the same way that a creative cook would use a recipe book. An experienced cook would adapt each recipe according to the ingredients available, the number of people to be fed and the occasion (wedding feast or family supper). In the same way, workshop designers who understand how education professionals learn, can change reflection points into activities, adapt activities to the number of participants and resources available, and change the content of activities according to the needs of a particular situation. For example, a case study might make suitable overnight reading at a weekend workshop.

However you use this book, our aim is that it encourages you to develop your work. This is not about learning the latest educational jargon in order to 'talk the talk'. Rather, we hope that through reading, thinking and discussing, this book will challenge you to change your practice as well as your ideas. Our world has many problems that we are expecting the next generation to face – preparing and developing the teachers who work with the children in our schools is a stimulating and important task.

Chapter 1
Perspectives on teacher education

Overview

This chapter sets out to:

- define the words and phrases we have used in this book to describe different aspects of teacher education
- describe four probable ways in which teachers learn to teach
- offer three different models of teacher education which can be used to analyse different kinds of programmes
- discuss the role of the teacher educators, for whom this book is intended.

Introduction

Some of the broad principles and assumptions underlying this book are introduced in this chapter. It should help you to understand the background to our ideas. We, the authors, want to make clear that we do not know all the answers. We believe that public understanding of education and of teaching is developing and changing all the time. Our own views are limited by our backgrounds, experiences, and cultures. This book was written at a particular time and place, influenced by the current climate of opinions and ideologies. We hope you will challenge what we say in the light of your own knowledge, practical experience and cultural norms. In that way, everyone's understanding will increase and practice will, it is hoped, improve.

Education or training?

Teacher training, teacher education – both phrases are used. We prefer 'teacher education' as a broader general term, but we recognise that 'training' is an important component. The distinction can be made as follows:

> Education helps you to *decide* what to do.
>
> Training helps you to *do* what is necessary more consistently, effectively and efficiently.
>
> (Steadman et al. 1995:67)

In saying 'teacher education', we are emphasising that our aims are to produce teachers who *can make decisions* about their teaching. We hope they will be able to choose sensibly between different approaches, methods, tasks, or priorities. When they have taken these decisions, their training should enable them *to implement the decision* effectively. Mere 'training' can lead to mechanical copying and repetition, and leave teachers unable to cope with changes in schools, pupils or the curriculum. Therefore both aspects must be included.

For the same reason, we refer to 'students' or 'student teachers' rather than 'trainees' or 'trainee teachers'. On in-service courses, the 'students' are serving teachers. We refer to 'teacher educators' to mean anyone involved in initial teaching education, or in-service education. When talking about the staff of colleges or university departments of education, we use the term 'tutor' to mean lecturer or supervisor.

To avoid confusion, we refer to children in school as 'pupils' rather than students.

Teacher development: ITE, CPD and INSET

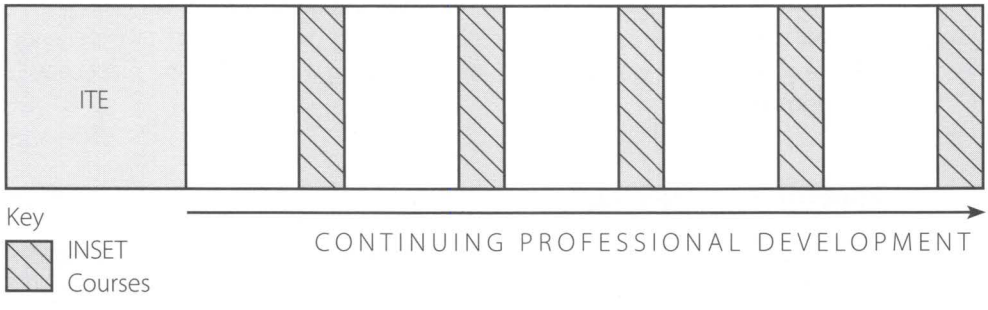
Initial teacher education (ITE) refers to the first stage of formal education and training, which should be offered to all who enter the teaching profession before they start full time work in classrooms. It is sometimes called 'pre-service training'.

In-service education and training (INSET) usually refers to specific courses organised for serving teachers. They can be short or long, general or focused on specific needs. Sometimes unqualified teachers are given their initial professional education or training through 'in-service' courses.

Continuing professional development (CPD) means providing all teachers with regular opportunities for professional growth, ranging from working with colleagues through short INSET courses, to gaining further qualifications. The term is also used in many other professions.

Teacher development is a similar term used to imply career-long learning for teachers.

Figure 1.1 Teacher development



In the 21st century, CPD is becoming increasingly important for many reasons. It makes little sense to try to put all the knowledge teachers will ever need into a two or three year course at the start of their career. It may well be more effective to offer a short initial programme followed by regular in-service courses tailored to the teachers' developing needs. It might well be cheaper too. However, it is often more difficult to organise.

An important study from the World Bank, entitled *Teacher Development: Making an Impact* (Craig et al. 1998), looked at examples of good practice in teacher education around the world and came up with some wide ranging policy suggestions. Those relevant to this book are summarised below.

Good practice in teacher education

Some of the main issues highlighted are:

- Teacher education programmes *can* make a difference to pupil achievement, though this depends firstly on the type of programme and secondly on the support the teacher gets once they are in the classroom.
- Teacher development is a process not an event. It happens in stages, over many years. Teachers need pre-service training, but also continuing professional development. The latter should include improving both their subject matter knowledge, and their skills in teaching, observing, assessing and reflecting. 'They need other teachers and supervisors to help them solve problems and support each other through discussion, modelling and **coaching'**.
- There are many different ways to prepare and support teachers in a variety of environments. Initial teacher education (ITE) courses can be as short as 15 days or as long as five years. The shorter the initial training, the more need for follow-up support in the school or through in-service courses.
- Practical training, based on the realities of the classroom and ongoing on-the-job support, is the critical factor in any successful teacher education programme.
- Distance education programmes, if carefully designed, are sometimes cheaper and can be effective if good local support is available.

Some specific recommendations of the report:

Early years of teaching

- Provide focused instruction for new teachers. Beginning teachers need initial preparation in their subject matter, fluency in the language of instruction, knowledge of how to use instructional materials, and some basic classroom management and reflection skills. Most of these skills are best learnt through on-the-job practice with coaching, which can be done through a traditional pre-service programme with substantial supervised practice teaching, or with close supervision and ongoing in-service training while on the job.
- Consider a range of alternative teacher preparation programmes suitable for or adapted to local needs and constraints. Programmes such as shorter school-based initiatives with ongoing mentoring and support should be considered.
- Require teacher educators to be active in classroom and school research, model good practices in their own teaching, impart clear subject pedagogies, have a clear concept of how adults and children learn, and take time to reflect with students about teaching practice.
- Establish **induction** programmes. These are essential to guide and support beginning teachers, help develop sound teaching practices, and retain teachers in schools.

Ongoing professional development

- Broaden the concept of in-service programmes and support to mean a growth **continuum** of ongoing, participatory learning that is closely tied to the realities of classroom needs.
- Focus in-service programmes on specific training for subject knowledge, pedagogy and classroom management that is appropriate to the teacher's current needs.

(Teacher Development: Making an Impact, H.J. Craig, R.J. Kraft, J. du Plessis, World Bank 1998. Adapted from pp. xi–xiv)

REFLECTION

1. Look at the issues above under 'good practice'. Which two would you agree with most? Are there any you disagree with, or have doubts about? Why?
2. Look at the recommendations. Which of these have been implemented in your country or region? Which have not been implemented, or only partially? Are any of them impractical in your context? Are there any that look particularly useful?

Do people have to be taught how to teach?

To some extent, we are all teachers by nature, and those who educate teachers can build on these capacities. Throughout human history adults have guided children: they have 'taught' them the ways of life of the society, how to get food and build houses, how to fight and to farm, how to behave towards others. And the youngsters have learnt.

As societies grew more complex, schools were set up to train members of the elite, often linked to mosque, temple or church, with priests as teachers. But as mass schooling developed in the 19th and 20th centuries, specialists were needed who could handle and educate children of different ages and abilities. Teachers themselves wanted to be recognised – and paid – as 'professionals' who had undergone an appropriate training. So colleges were opened to provide a recognised form of professional education, certified by exams.

Since around 1900, the teaching of children has been much theorised and discussed. Less work has been done on the teaching of (young) adults such as student teachers. But in recent years researchers have begun to look at how professionals like teachers acquire the knowledge, values and skills to practise their profession.

How people learn to teach

In the present state of understanding, it seems that teachers learn in a mixture of ways. Some important ones are:

Observation

New teachers learn from watching and imitating others. Their first models are their own teachers when they were pupils. Sometimes the imitation is deliberate, but often it is sub-conscious. Teachers acquire more or less explicit images of what it means to be a teacher, and they use these as guidelines for their own actions, often without realising where the images come from (see Chapter 2).

At a later stage teachers can learn by deliberately observing tutors or colleagues.

Practice

Teachers learn to teach by the experience of teaching. Students usually claim their 'teaching practice' was the most useful part of their training course (Chapter 6 looks in more detail at the **practicum**). Newly qualified teachers absorb a great deal in their first year at work. Many 'untrained' teachers have become quite effective just by doing the job.

Acquiring knowledge

Teachers take new ideas and new understandings from many sources: lectures, books, workshops, peers, and even pupils. Some of these remain as ideas, which can be talked about but which are not implemented. Others are assimilated and become part of their practice and **repertoire**. (We return in Chapter 13 to a discussion of professional knowledge.)

Reflecting on experience

Good teachers think through what they know, or what they have seen or done, and act on it. They deliberately analyse and evaluate examples of teaching, their own or others', with a view to understanding it better and improving their practice. This process can be done with varying degrees of formality and rigour, ranging from a quick mental review of one's last lesson, through to workshops or **action research**. Reflection can be done on one's own or with a group of peers, or under the guidance of a tutor. (Chapter 12 focuses on this.)

REFLECTION

Think back on your own experience as a teacher and/or as a teacher educator.

1. Note down the different ways that you learnt to teach. Was it by observing and imitating others? Was it through listening to lectures and reading books? Or by trial and error? Or a mixture of these? If possible, compare your answers with those of a colleague.
2. How did you learn to teach teachers? Make similar notes, and if possible compare them with others'.

The environment

Learning to teach does not happen in isolation. Many aspects of the teaching situation are also very important, as they can hinder or help the process of learning to teach. For example:

- The school environment is important. There should be basic resources, such as teaching and learning materials.
- A new teacher needs goodwill and support from the head teacher and colleagues in the school.
- Conditions of service and the local education administration can affect the morale of both new and serving teachers for good or ill.

REFLECTION

Are there any other factors, in your experience, that help or hinder new teachers?

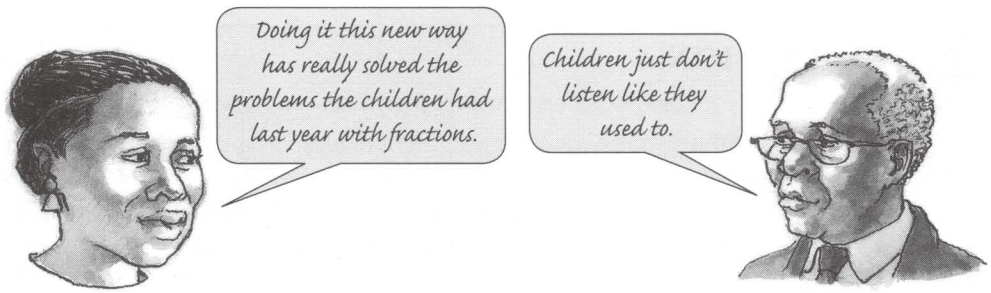
An ideal of life-long learning

Good teachers never stop learning. Learning to teach should to be seen in the context of the teacher's whole career, as a continuum of learning, with teachers located at various places along the continuum.

Figure 1.2 Possible stages in a teacher's career

STUDENT TEACHER	NQT	Teacher improves with help of INSET	Teacher gains insights by being a mentor	Teacher learns new skills as head or manager

There are bursts of learning activity in the early years, during formal training, and in the first year on the job. During such periods the new teachers are thinking deeply about and developing their understanding of their practices. Later on, in quieter periods, if teachers talk about and reflect on their work, they may continue to gain new insights and to improve their skills. This is where a programme of continuous professional development is so important. In-service courses should challenge teachers to improve, and give them time, space and support to rethink both theory and practice in response to changes in schools. Otherwise teachers may never change the habits they developed in their first years on the job.



She has 20 years experience.

He has one year of experience repeated 19 times – he didn't learn much after the first year.

Different models of teacher education

The theory and practice of educating teachers has changed over the last hundred years and continues to change. However, traditional ideas still exist alongside newer ones. We find it helpful to distinguish three strands or models of teacher education, which have developed in sequence. This provides a conceptual framework for comparing different types of teacher education programmes.

Such models appear under different names and slightly different descriptions in the literature. Following Wallace (1991) we shall call them:

- The Craft model
- The Applied Science model
- The Reflective Practitioner model

One key difference between these models is that they are built on different basic ideas about how people learn to teach: that is, how new teachers acquire the necessary knowledge,

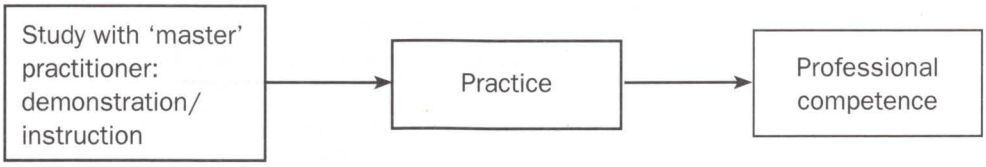
skills and values, and how they learn to use these 'competently' in the classroom. Another difference is whether the models give more importance to theory or to practice. Furthermore, the model chosen affects how much time students spend in school learning on the job, and how long they are taught in a college or university. These models draw on the four different ways in which teachers learn to teach described above, but in different proportions.

It is important to realise that these models are abstractions, or 'ideal types'. They are there to stimulate thought and to offer directions for practice. No teacher education programme will be exactly like any of the descriptions below. Many programmes will probably be mixtures of these ideas.

The Craft model

This model assumes that teaching is largely a matter of acquiring practical skills and that these are best learnt on the job. It is sometimes called the 'apprentice' model, because the new teacher learns by observing and imitating a more experienced 'master teacher'. The latter may also demonstrate techniques, instruct or give advice. In this perspective, teaching is seen as a craft, rather like carpentry or building. A programme based on this model may well include some college-based training, but the student teacher would spend most time in a school 'learning by doing'. More emphasis is placed on gaining practical experiential knowledge than on learning to understand theories of education.

Figure 1.3 The Craft model



This is how many people have learnt to teach in the past, and still learn today. Experienced teachers have a wealth of knowledge, and novices can indeed pick up from them many good practical skills and useful insights into children's learning. Teaching is a very complex skill, and a good teacher, like an artist, can use others' ideas and techniques to create a style uniquely their own. The personal, emotional side of teaching is often learnt best in this way; older and more mature colleagues can often demonstrate important skills about working with and counselling children.

However, this model can sometimes be rather conservative. It works well when schools remain the same from generation to generation, but in a swiftly changing society teachers need new skills and new ideas to match the changing demands of pupils and their parents. Copying older teachers is unlikely to produce the necessary innovations in methods or curriculum – unless of course these older teachers can also show how to respond to change.

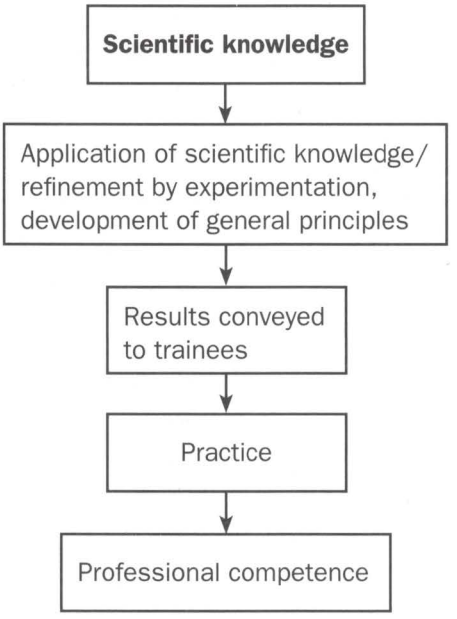
This model respects teachers' knowledge – often called 'craft knowledge' – and values their contribution to preparing the next generation of teachers. Indeed, that is why **mentors** are now often used to help prepare young teachers. However, good mentors are trained not only to pass on knowledge and skills, but to encourage new teachers to ask questions and innovate.

The Applied Science model

This model developed later, with the growth of the social sciences such as economics, psychology and sociology. Researchers began studying people's behaviour, using methods similar to those used in the natural sciences like chemistry and physics. In education, they believed that it would be possible to discover 'universal principles' about how children learn, how pupils respond to classroom discipline techniques, and so on. They thought that just as engineers build bridges using the laws of maths and physics, so teachers could best help children learn by using the findings of psychology and sociology.

The applied science model assumes that if teachers first learn about such 'principles', then they will be able to apply them in their classrooms. So a programme based on this model usually puts the student teachers first into a college or university and then sends them out for 'teaching practice' at a later stage. The emphasis is on acquiring theoretical knowledge which is to be applied later, rather than classroom skills. The personal, emotional aspects of teaching are often given less attention, although students may be given courses on 'professional ethics'.

Figure 1.4 The Applied Science model



This model is very widespread in the world today. Research has undoubtedly provided many insights into how people learn and what kinds of teaching may be effective in certain circumstances. It is certainly useful for new teachers to have some knowledge and understanding of theoretical frameworks within which to think about their teaching. But such **received knowledge**, based on generalisations, is not enough; a teacher has to develop an understanding of particular children, in a particular class, before she or he can know how to deal with their specific learning needs. This requires the kind of **situational knowledge** that comes with experience, together with many skills which are learnt through practice.

The applied science perspective led to a separation of theory and practice. The researchers produced the theory and presented it to the teachers to put into practice. If the theory

did not produce the right results, the teachers did not know why. So they often went back to what they had seen or done in the past, relying on observation or trial and error. In a sense, although this model offers teachers the high status knowledge said to be needed by 'professionals', it can also disempower them, because it does not build on and develop teachers' own experience and wisdom.

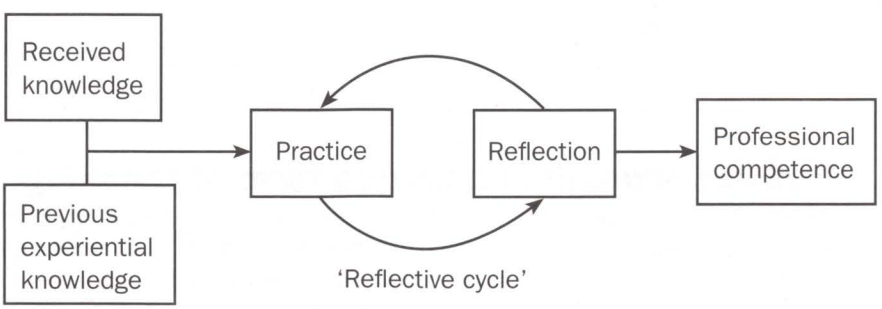
Disappointment with the results of 'scientific' social science theories led to another change of perspective. Educationists, along with other social scientists, no longer tried to model themselves on engineers and physicists. Instead of seeking universal laws about human behaviour, many researchers set themselves the more modest aims of understanding what was going on in particular social contexts, such as specific schools or classrooms. Such studies can lead to insights which can be useful to other teachers, even if they do not lead to generalisations about all pupils in all schools.

Among others, the influential American writer Donald Schon (1983) criticised the applied science model – which he termed the **technical rationality** model of professional education – and developed instead the idea of the 'reflective practitioner'.

The Reflective Practitioner model

This model assumes that the kinds of knowledge that teachers need come broadly from two different sources. The first is from experience, which includes one's own life history, observation, and learning by doing. The second is from **received knowledge** (also known as public **propositional knowledge**), or systematic knowledge, which comes from outside sources such as books, lectures, TV and other media. Most importantly, the teachers themselves have to bring these two together, and to do so must 'reflect' or think about their own practical experience in the light of received knowledge, and vice versa. A teacher development programme based on these ideas tries to offer plenty of practice alongside, or integrated with, studying in college or university.

Figure 1.5 The Reflective Practitioner model



(Adapted from Wallace 1991)

This model has received a lot of attention and many programmes now aim to incorporate the idea of 'reflection' into their training. It certainly brings together theory and practice and can be a powerful tool for change. By focusing on the efforts of the new teacher to develop their own ideas, it is empowering and encourages many aspects of professional behaviour.

However, it is not easy to put into practice. It involves considerable efforts from both tutors and student teachers. It takes time for students to develop enough confidence to experiment

with their own ways of teaching and to gain enough experience to evaluate their own practice sensibly (see Chapter 12).

We believe that the 'reflective practitioner' model is the best one around at the present time to challenge and inspire us. That is why we have included Reflections at different points in this book. However, this will not be the end of the story. Doubtless teachers and teacher educators, along with researchers and theorists, will continue to develop new ideas and deeper insights into the process of teacher education which will help future generations to do the task better.

REFLECTION

Think of the teacher education programme you work in, or one with which you are familiar. Which of the three models is it closest to? Or does it include elements from more than one? What do you like about this programme? Are there aspects of it you would like to change and why?

ACTIVITY

Compare the three models on pp. 6–9 with the four ways that teachers learn to teach, outlined on pp. 4–5. In the table below, fill in the model that fits the description best.

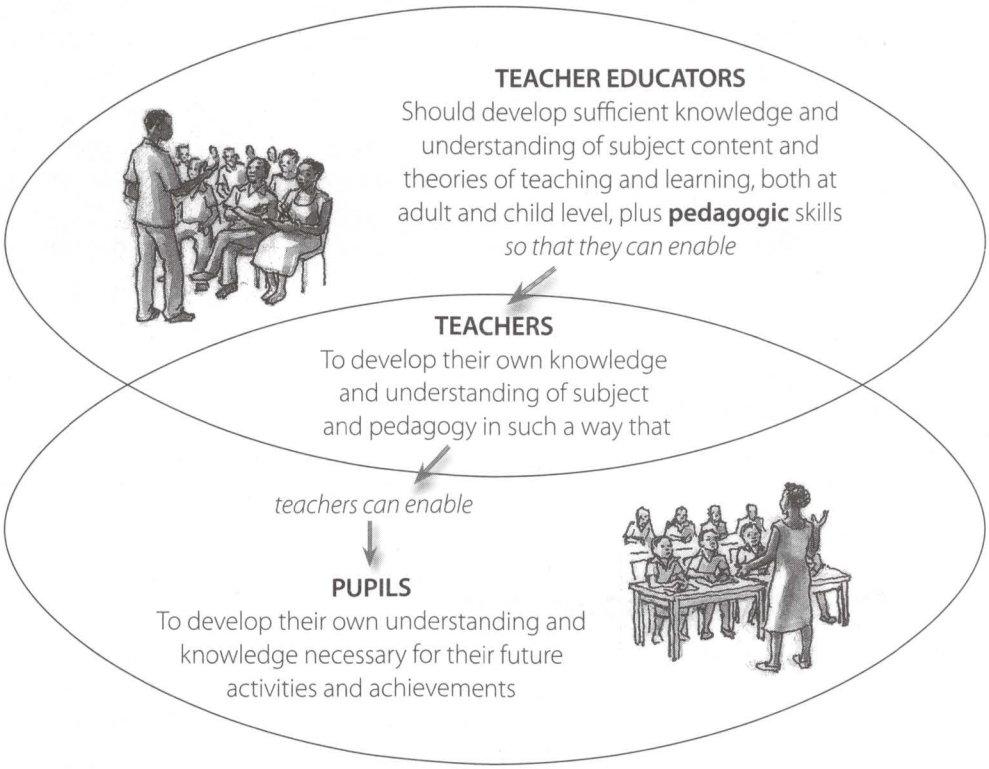
Ways of learning to teach that are most emphasised in the model	**Which model fits the description best – craft, applied science, reflective practitioner?**
Practice, reflecting, acquiring knowledge	
Observation, practice	
Acquiring knowledge	

Teacher education: a unique form of teaching

Teacher educators – those who try to help teachers develop at any stage of their career – are a much-neglected group. Little research has been done on their roles or their needs. Yet they have a difficult task. Most teachers can remember the first time they stood up in front of a class and how hard that was! It is even more daunting to face a room full of student teachers and inspire them about teaching. Still more challenging is to lead a workshop of serving teachers, many with years of experience, and to help them to develop fresh ideas and perhaps change long-established practice.

We suggest that teaching teachers is a particular kind of teaching. Teacher educators have to think always on two levels: they are teaching with two kinds of aims in mind. They want their student teachers to learn, but they also want them, when they graduate, to be able to help their pupils to learn. Thus teacher educators need to develop the kinds of knowledge and skills that enable them to work on both levels at the same time.

Figure 1.6 Teacher educators work on two levels



This means that as a teacher educator I do not teach my students the same material in exactly the same ways as I expect them to teach it to pupils. Three points can be made here:

- Students teachers are adults and learn somewhat differently from children.
- They need to learn the content in such a way that they can explain it to pupils. The student teachers have to understand the topic themselves in depth; they also have to know how to present key ideas simply to pupils at different ages, which examples and illustrations will catch the pupils' interest and be remembered most easily, and so on.
- However, the underlying principles of teaching and learning that I use in my class should be consistent with those I expect the student teachers to use later on. (Chapter 5 discusses this.)

Subject-based example

I am teaching the student teachers Environmental Studies, and the topic is Global Warming. I want them to know some key facts, and understand the main trends, causes and consequences. At the same time, I want them to learn how to teach this topic to their pupils at the appropriate level for the youngsters to understand what is happening and how it affects their own country or continent. This means student teachers have to understand the topic at several levels.

Educational studies example

I teach my students about child development. I have two objectives. Firstly, they should be able to write an essay showing the differences between the ideas of Piaget and those of Vygotsky. Secondly, they should be able, in the classroom, to use some of these ideas to match their teaching to the needs of their pupils, and to help the children to move onwards.

In this case I teach them as adults, building on their own experiences of family and of their own growing up. But I try constantly to relate the theoretical ideas from research findings to the real situations that they will encounter in the classroom. I am not teaching theory for theory's sake, but so that the student teachers have some kind of framework within which to think about their own practice.

REFLECTION

From your own subject perspective, find an example where you try to teach on two levels: thinking of the student teachers as learners, and at the same time preparing them to help pupils learn.

Concluding comments

Teacher development is a very complex process. We do not yet fully understand how teachers learn to teach. There seems to be no one best way of preparing teachers for their job; ideas about good practice change over time and with different circumstances. But generations of teachers *have* acquired at least some of the necessary knowledge and skills, and generations of tutors *have* helped and supported them in doing so. In this chapter we offered some starting points for those involved in teacher education to analyse the process of learning to teach and to clarify the role of the tutor.

We emphasise throughout that the book will not give 'right answers' about the best way to teach, but will set out issues and options for reflection and discussion. The next five chapters look in more detail at how teachers might be helped to develop the knowledge. skills and values they need.

Chapter 2
What student teachers bring with them

Overview

This chapter falls into three parts:

- Firstly it looks at the entering students: who they are, and what kinds of values and experiences they may bring with them.
- It then summarises some pieces of international research on the problems of challenging students' existing views on teaching and learning.
- Finally, a practical section outlines some ways of bringing out students' ideas, and suggestions for helping them to build on these.

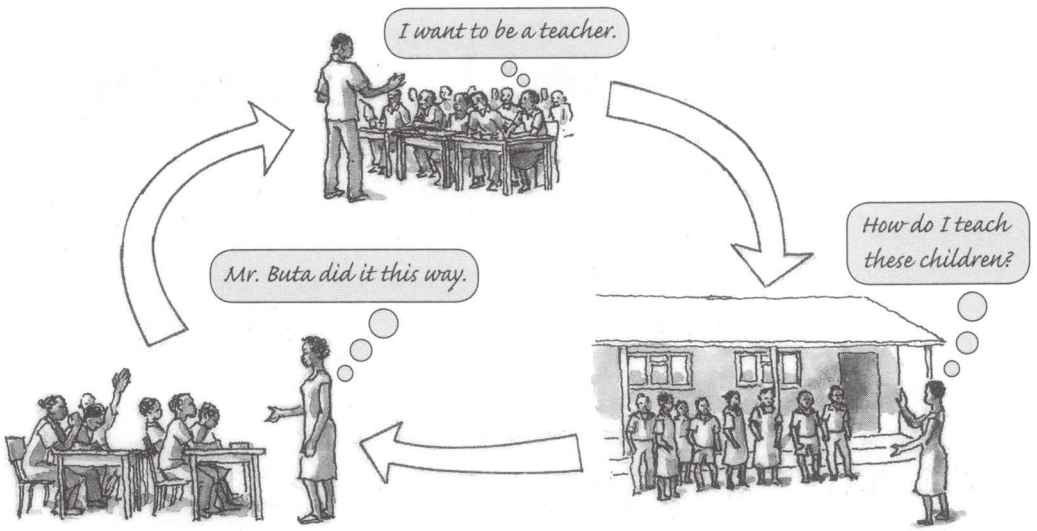
Introduction

Student teachers do not enter college as 'empty containers' ready to receive the wisdom that will be poured into them. They come bringing with them:

- images of teachers and the teaching role
- a limited understanding of what a good teacher actually does, because they mainly have seen teachers only from the pupil perspective
- memories of their own schooling, both positive and negative
- attitudes towards children, from their own experience as sibling or parent, from their communities, and perhaps from previous work experience
- their own personality – charisma, confidence, temper, response to authority etc.

So they often come with quite firm ideas – attitudes, assumptions, preconceptions – about what teaching is and what 'good teachers' do. These ideas are usually rooted in their society's views of education, but also derive from their own personal experiences of schooling. Some students may have taught as unqualified teachers. It is virtually certain that if someone enters a classroom with little or no training, they will call up memories of their own school days and start teaching in a similar way. Evidence from all over the world shows the difficulty of helping students to go beyond their existing views. But this is essential if they are to develop as flexible and responsive teachers.

Figure 2.1 The cycle of traditional teaching



Indeed, research shows that training programmes often have little effect on these memories and all the attitudes, assumptions and preconceptions they include, unless the students are deliberately challenged to reflect on them. If we want to produce a more flexible kind of teacher, we have first to find out what the students think and believe, help them to recognise there are other ways of looking at teaching, and then support them in developing their views.

What student teachers bring with them

Images of the teacher

People often think they 'know' what a teacher does, because everyone who has been a pupil has experienced teachers at work. If you complete high school, you have spent thousands of hours in a classroom. Of course this familiarity is useful for student teachers, but it is not enough. The 'pupil's eye view' recognises teachers' kindness and patience – or their opposites – but it does not give enough insight into how teachers think, how they make decisions, or how they enable learning to take place.

Images of the teacher also exist in the society, as folk lore or as prescriptions for what a teacher should do. For example, in the MUSTER research, we found people variously describing a teacher as a 'role model', a 'good instructor', an 'expert on everything', or a 'wise counsellor'. Alternatively, some saw teachers as 'dictators', or pitied them because of their low pay. Stories in books and in the media contribute to such images, which do change over time, but only slowly.

REFLECTION

What are the common images of a primary teacher in your society? Are there stories, proverbs, radio or TV programmes that include teachers? Are the images of primary teachers mostly male or mostly female? Why do you think this is so?

Memories of their own schooling

In addition to societal images, student teachers bring individual memories, which often carry strong emotions, both positive and negative. Positive ones may include academic success, friendship, enjoyment of sports and extra-curricular activities. Negative ones usually focus on failure, on rejection or bullying, on the fear and pain of punishment, or simply boredom. Students remember some teachers very clearly, both good and bad. Such memories may be part of the motivation to teach: to copy an admired teacher, or to help children do better. Some memories may have been repressed, especially if they were painful, and yet these can still affect people's behaviour, perhaps in unexpected ways.

REFLECTION

What are your memories of your own schooling? Which teachers do you remember, and why?

Experiences of dealing with children

Entrants to teacher education in many countries may well be 'mature' students, in their 20s or older. Serving teachers on INSET courses certainly are. They may have children of their own, or have brought up younger siblings; they may have much classroom experience; they may have helped out in church, mosque or temple, or worked in youth organisations. These experiences need to be taken into account and valued. For example, a tutor in a college in Malawi asked student teachers to share songs that they had found useful in their work as untrained teachers.

REFLECTION

What experiences did you have of children before you became a teacher (for example, within the family, as an untrained teacher, or through voluntary work with youth)?

Motivations: hopes, fears and ambitions

Students' motivations vary. Many come for personal reasons – they feel at home with children and have a real desire to teach – or for idealistic ones, such as wanting to improve society. Others train for more practical reasons, such as needing a steady job; or valuing the long holidays. Some may be committed to staying in primary teaching while others have their eyes on secondary schools or college jobs. A few come as a last resort: they failed to get into university or another form of training.

REFLECTION

Why did you want to become a teacher? And why a teacher educator? Do you think student teachers today have similar motivations and experiences, or are they different from yours?

Their own personality

We recognise that some students come with the confidence, charisma, or intuitive response to children that enable them to manage a class easily, while others are shy and need help

to develop a classroom presence. Some significant characteristics are: attitudes towards authority, patience, determination, empathy and so on. Helping students to develop their own 'teaching personality' is an important part of the curriculum.

REFLECTION

What personal characteristics did you bring to your teaching? What aspects of yourself do you think you have developed through your career?

So nature and nurture – how we are born, together with our life experiences – combine to produce certain attitudes towards teachers and children, preconceptions about the teacher's role, and assumptions about what a good teacher does.

Opening up debates on students' views

Some of what student teachers bring with them will help them become a good teacher. Some of it may not. There are big gaps in their understanding of the teacher's role. The important tasks for teacher educators are: to help student teachers firstly to become more aware of their attitudes and beliefs, and secondly to recognise there are alternative ways of thinking and acting. Then the students can, with support, discuss and think through their own attitudes and beliefs and analyse them critically in the light of both theory and practice. It is hoped the new teachers will be ready to develop a more reflective approach to their own teaching, based on well thought out personal theories rather than on prejudice and hearsay, and to construct a positive role identity as a teacher.

REFLECTION

How far did your own views about teaching change during your training?

Who are the students?

It is important for the tutors to have some knowledge of their students' backgrounds. As an example, the following summary highlights some characteristics of entering student teachers in four of the MUSTER project countries in 1999–2001 (Lewin and Stuart 2003). See page vii for information on the MUSTER project.

Age

In Ghana and Lesotho student teachers were recruited soon after leaving high school, aged between 20 and 22; some might have taught for a year or two. In Malawi and Trinidad and Tobago all had taught for at least two years and were in their mid-20s.

Such age and/or experience gaps may be significant for the students' attitudes, expectations and achievements.

REFLECTION

What important differences might there be between student teachers who enter as school leavers and those who come as mature students?

Gender

Primary student teachers were predominantly male in Ghana and Malawi, and predominantly female in Lesotho and Trinidad and Tobago.

Worldwide, the trend has been for primary teaching to become largely feminised. In some countries, the number of women in secondary teaching is also increasing.

REFLECTION

In your country, are primary teachers mostly male or mostly female? What might be the implications of this a) for pupils and b) for teachers' careers?

Different backgrounds

In multi-ethnic and multi-lingual societies, student teachers came from different ethnic groups, speaking different mother-tongues, which did not always match those of the children they taught.

In addition, there were sometimes cultural differences, or urban–rural differences, in their expectations of the children.

REFLECTION

In your country, what significant differences might there be between student teachers and the pupils they will teach in language, ethnic identity, rural versus urban backgrounds, or religious beliefs? How might these differences affect teaching and learning? How can teacher educators respond to such issues?

Academic standards

Typically student teachers had left school with relatively low academic grades, compared to university students, including poor achievement in English.

The autobiographies show that many went to teacher training college because they were academically rejected for university. They remembered finding some lessons quite hard. This should enable them to sympathise with slow learners and, once they have the skills, to help them. But the college curriculum has to take this into account, including the need in some cases to master the language of instruction.

REFLECTION

In your teacher education programme, what support is available for under-qualified students or those who struggle academically? Could it do more? How?

Socio-economic status

Family background data suggested that the majority of student teachers were upwardly mobile, often being the first generation to enter post-secondary education. In Africa, many of the parents worked outside the modern sector, for example in farming. A substantial minority, however, had parents and other family members who were teachers.

Some students therefore have personal knowledge of teachers and consequently have strong role models. For others, the college may offer a new and unfamiliar cultural environment which they find difficult to cope with.

MUSTER research also suggests that:

- Students have powerful memories of their own schooling. Positive aspects include academic success, sports and friendships, as well as teachers who helped them. Negative memories overwhelmingly focus on corporal punishment, especially caning.
- Teachers are usually described in terms of personal characteristics, often using images of parent or counsellor, rather than in terms of cognitive or pedagogic skills.
- Trainees are ready to model themselves on memories of their own teachers, without being able to analyse clearly what made their methods successful.
- Societies hold views about the role of the teacher, which students may incorporate into their self-image, such as having to work very hard, or being considered a poor marriage prospect.

So far we have looked at what kinds of memories, images and beliefs student teachers may bring with them, and at some of the background characteristics which might affect their attitude towards becoming a teacher. We have discussed this in the context of initial teacher education, but it is equally important for tutors and trainers to be aware of the backgrounds of serving teachers on INSET courses, which can be very varied.

The next section reviews some research done in different countries to illustrate how attitudes and beliefs change – or don't change – during training.

How to develop students' views: some findings from international research

Research from the USA

Wideen et al. (1998) reviewed nearly a hundred research-based studies on learning to teach. They found that many traditional programmes of teacher education have little effect upon the firmly held beliefs of the beginning teachers. Those programmes that are successful in changing attitudes do so by building upon the beliefs of student teachers and giving them systematic and consistent long-term support, such as working closely with a **mentor** or other experienced colleague as they teach,

Analysis of research on learning to teach

According to the researchers, the beliefs of would-be teachers are liberal and humanistic. They believe that a 'really good teacher' is caring, understanding, warm and relates well to children. Some student teachers have a desire to improve society. It is interesting to note that teaching itself is seen by beginning teachers as the simple and rather mechanical transfer of information. Prospective teachers often view schooling as something in which teachers hand out knowledge that students memorise. One study examined drawings made by 64 beginning and practising teachers; the prevalent image was of a nurturing female in front of the class instructing in a typically teacher-centred manner. Another study found that students believe a 'teaching personality' is more important than cognitive skills or pedagogical or subject-matter knowledge; this is in line with what many people believe: that 'teachers are born, not made'.

The article also reviews studies exploring how far attitudes and beliefs change during the pre-service programmes. The conclusion is that simply providing 'information' to students has little effect. Instead, it is important, as a first step, to have beginning teachers examine their own beliefs. The most successful programmes used a 'constructivist approach' (see Chapter 3), which resulted in significant developments both in understanding and in beliefs. The processes usually involved students working in small groups, guided by tutors with whom they had formed good relationships, over a period of time. Such processes enabled them to reflect on, comment on, and analyse their own personal experience or situations they had observed in schools. For this reason, it was also important that periods of school experience alternated with college-based work.

Wideen M., J. Mayer-Smith, B. Moon (1998)

Research from Africa

The MUSTER team attempted to measure students' attitudes and views by means of surveys administered to samples of students at three different stages: as they entered college, as they finished their training, and as newly qualified teachers (NQTs), in Ghana, Lesotho and Malawi.

The results suggest that the teacher education programmes in those countries at that time did not have a great impact on student views. While there was some change, it was not always in the hoped-for direction. The most detailed study was in Ghana (Akyeampong and Lewin 2002) with a total of 834 students, and the results are summarised below:

Ghana research results

- Attitudes to teaching as a profession deteriorated over the programme, for while a majority of student teachers held a positive view, the majority of NQTs did not. Whether this was due to peer influence, to disappointment with training, or to classroom experience, is unclear.
- Their views on corporal punishment became more authoritarian; it may be that although the college preached against the cane, trainees were not given alternative strategies of classroom management.
- Those with more training and experience were more likely to believe that teachers are born and not made, and they also tended to agree more strongly that teaching is more difficult than many other jobs. This suggests they did not hold training in great esteem.

On the more positive side:

- All the groups indicated a sense of personal power, in that they felt they could improve the performance of slow learners, and bring about changes in schools.
- In the area of pedagogy, all the groups strongly supported group work, and their enthusiasm for 'teaching facts' diminished with time and training.

The conclusions seem to be that training does not seem to change attitudes, as expressed in answers to these items, by very much. Those changes that do show up are not very encouraging: that they are less positive about teaching as a profession, that they find it

> more difficult, and that good teachers have to be born that way. Their sense of personal effectiveness, and their use of modern educational terms seem to predate the training, and not to translate into practice; if they revert to using the cane this shows the effects of training may be cancelled out by other factors. Classroom observations did not confirm the apparent trends towards more learner-centred pedagogy, and it may be an example of learning 'to talk the talk' rather than a fundamental shift in belief.
>
> (Lewin and Stuart 2003:112)

These results are a challenge to teacher educators to find ways of making more impact on their students.

REFLECTION

Do you have any evidence from your own experience similar to the research findings above? If so, note briefly what happened. If possible, discuss your findings with a colleague.

Some conclusions from the research

The research findings all show that it is quite hard work to develop student teachers' beliefs, attitudes and preconceptions about teaching. However, it is possible! Three elements are involved in the process:

- Clarifying beliefs: finding out more about what students are bringing with them and helping them examine their own attitudes and beliefs.
- Debating and challenging these ideas: helping students to analyse their own ideas more critically and offering alternative perspectives.
- Trying out new practices: supporting the students in their classrooms to refine their existing practices and to experiment with new behaviour and new methods.

Ways of collecting data and using it with students

This final section suggests ways in which tutors can find out what their students think and use the data in the classroom to challenge their views, while still working within the normal curriculum. These 'research exercises' are just as suitable for in-service courses as for ITE programmes. In fact, you are likely to get fuller and more exciting data from experienced teachers, who will probably be able to articulate their views more clearly.

When asking student teachers to do these exercises, it is important to make it clear to them that there are no 'right' or 'wrong' answers, and also that you will not criticise individual responses. No one need put their name on their paper. Students need to know that you are only interested in their ideas to understand their current views of teaching, as a group. In this way you can be a role model of a teacher who builds on learners' current understanding.

Five methods are described: educational autobiographies, questionnaires, attitude scales, ranking exercises, and drawings. Some of the methods described in Chapter 5 on Pedagogy can also be used, such as role play.

Educational autobiographies

Ask students to write about their own schooling. This is a useful way of raising awareness about their beliefs and preconceptions. It is best done at the start of the course, whether ITE or INSET. The exercise takes time but is valuable for both tutors and students.

Guidelines such as the following can be given:

1. Write about your childhood. Where did you go to school? What memories do you have of primary schooling? Write about the good things and the bad things which you remember during your school days. Was it a happy experience?
2. Describe your 'best' and your 'worst' teachers and what they did. Describe the kind of teacher you would like to be.
3. Write about your future career. What are your ambitions? What do you think you will be doing in five years' time?

Memories of schooling

Here are some examples written by student teachers in the MUSTER project from Malawi on 'good and bad memories of schooling':

The most good thing I can remember in my life under primary school time are the weekly assessment whereby all the failures were not allowed to sit on desks. This helped me to put much effort in my studies.

Our class teacher was an industrious teacher. He prepared weekly tests which encouraged pupils to work in a competitive way.

In most of the classes teachers used to say that we girls were not bright compared to boys who were doing well. Happy days came when I was in Standard 8. My teacher was a female teacher. She used to advise us that we were equal to boys. She said that we had to work very hard to prove that we were equal to boys in class work. Lucky enough, that year ten girls and six boys were selected for secondary school. I was one .... Because of her advice and good methods of teaching I decided to join teaching after my school.

The bad thing I remember is the punishment which were too harsh, being whipped and having to pick up rubbish.

One of my bad teacher was Mr. B. … he encouraged me to left school and marry with him before my secondary education.

Best and worst teachers were clearly recalled. Good teachers typically explained things clearly, were patient, and showed concern for their students:

The way she taught was amazing. Even if you don't have sharp brains you will understand the subject clearly. (Ghana)

The teacher knew very well how to convey the subject she taught; in addition she never beat a kid for not understanding the concepts. (Lesotho)

He did not only deal thoroughly with the curriculum but he also helped us with general problems and guided us to face life in the future.(Trinidad and Tobago)

Bad teachers showed the opposite characteristics:

In class she could not explain, pupils made unnecessary mistakes. (Lesotho)

Students also remembered bad teachers in terms of their personal behaviour, such as laziness, drunkenness or lateness.

The teacher I'd like to be

Many autobiographies, directly or indirectly, tapped into students' ideals. This is one of the longest and most detailed descriptions, which captures many of the elements found in others.

I would like to be a quality teacher, one who can keep teacher–pupil relationships in good terms. I would like to be a very patient teacher ... one who is respectful, careful, thoughtful and very well-behaved. I would like to be dedicated and devoted to my work; to be able to learn and understand each individual in my class and to be charismatic like my former lady teacher – a kind of teacher who knows what learning and teaching are, why, how and under what conditions they take place; to be able to meet the requirements of each pupil in my class, and to be a very good example of what kind of life people should lead; to be a fair judge and a good decision-maker, to be parental and lively in all aspects .... (Lesotho)

REFLECTION

Study the extracts from the students' autobiographies. What issues would you want to pick up and discuss? What gaps do you find in their accounts of 'good teachers'? How could you challenge these ideas in your work with students?

Questionnaires

Similar data, though less detailed, can be elicited by short questionnaires. These may be easier for the students to write, and are easier to analyse than essays.

Open questions are the most productive, for example:

What was the best thing about your school days?

.....

.....

How did your best teacher teach you?

.....

.....

Sentence completion can also be used, for example:

I think the best methods for Grade 1 pupils are .....

.....

I am studying to be a teacher because .....

.....

Closed questions If **closed questions** are used, there should also be space for adding the student's own ideas, for example:

Do you think corporal punishment should be allowed in primary schools? YES NO

Give reasons for your answer.

.....

.....

Attitude scales Create between six and ten statements about teaching and learning and ask students to mark them on the scale: Strongly agree, Agree, Disagree, Strongly disagree. Some should be controversial. For example:

1. The most important thing a teacher can do is to teach pupils facts that they need to know.
2. Corporal punishment in schools is outdated and should be abolished.
3. Teachers cannot do much to improve the academic performance of less able pupils.
4. Teachers are born not made.
5. Children need to be taught in ability groups in order to do well.
6. Children's personal development is more important than their academic achievement.

Figure 2.2 An example of an attitude scale

Teachers are born not made.

STRONGLY AGREE ☐ AGREE ☐ DISAGREE ☐ STRONGLY DISAGREE ☐

Students do the exercise individually first, then work in pairs or small groups to share their views and come up with a group position. At this point they must provide reasons for their answers.

The reasons students give for agreeing or disagreeing often show up how students are thinking, as the following example shows:

Children-centred teaching tends to lower educational standards.

Those who agreed (over three-quarters of the trainees) said:

- *Not every child is ready to learn on their own, 90 per cent might be stubborn and naughty and therefore teachers have to ensure class control*
- *Pupils would not learn well and they would think that they know everything.*

Comments from those (24 per cent,) that disagreed include:

- *Children learn more by doing than by listening*
- *It helps them do things themselves and sometimes creates pride for having discovered something good.*

(Example taken from a MUSTER survey)

The tutor can make use of the answers at several levels:

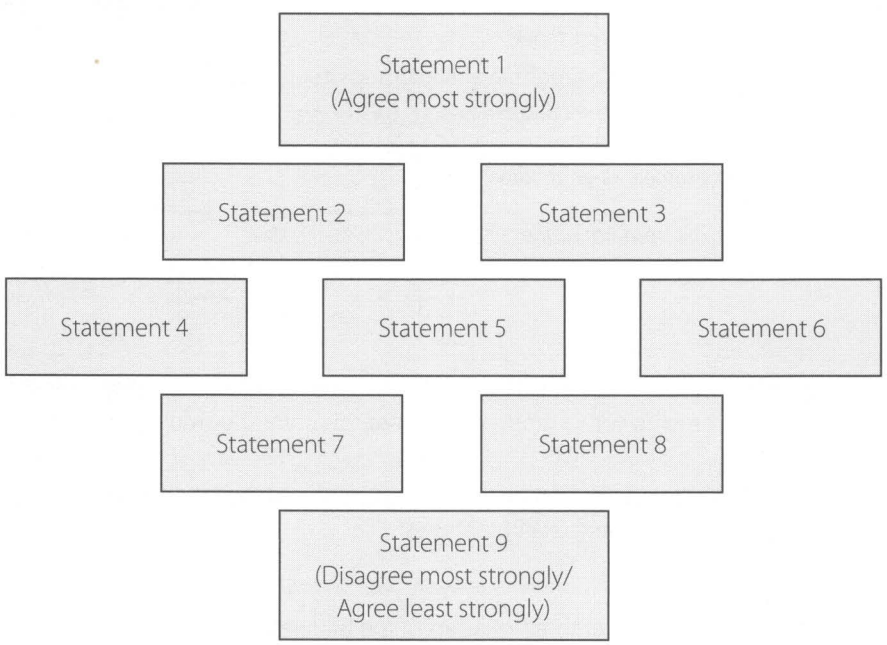
- They can study the original individual scores, or ranking, which gives some insight into the students' attitudes and beliefs.
- The discussions in pairs/groups will enable students to articulate, clarify and possibly change their views.
- The reasons given should provide starting points for the tutor to work with students to develop deeper understanding. For example, the tutor could design a seminar on children-centred teaching focused on the perceived strengths and weaknesses, using examples from local schools.

Ranking exercises

Give the students nine statements and ask them to rank them according to how far they agree with them. The statements can be about teaching and learning generally, or can focus more narrowly on one or two topics, such as the teaching of a particular subject, the treatment of children with special needs, or even used to discover the professional development needs of participants at a workshop.

The ranking can be done as a list or in a diamond pattern.

Figure 2.3 Diamond ranking



Diamond ranking is best done in pairs or small groups. Each group then records its 'answers' and their reasons, and shares them with the rest of the class.

Drawing

Ask students to draw their image of a teacher. Then let them discuss the drawings first in pairs, then in fours, then in eights (this is known as **snowballing**). Each time the group notes the common themes, and also any unusual aspects. They then report their conclusions to the **plenary discussion**.

The facilitator then leads a discussion in which the findings are debated, analysed and evaluated in terms of both theory and practice, for example:

- Is this the image the students, and the tutor, wish to show the world? If not, why not?
- What does it tell us about the pupils' expectations?
- What does it say about society's expectations?

Using such data to work with student teachers

The data do not tell us precisely what the students think. There are all sorts of reasons why respondents in research studies do not tell the whole truth. They may not wish to reveal all their thoughts; they may write what they think the researcher or tutor wants to hear. But students can only write down ideas which, at some level, they are aware of, and are thinking about. At the very least, the data provide the tutor with starting points for discussion and for raising important issues. For example, the tutor might use some of the experiences mentioned in the autobiographies (without giving names or details, of course) to develop themes such as:

- ***Motivation*** – use of different sorts of rewards and punishments in teaching, including the debated issue of corporal punishment.
- ***Teaching and learning*** – how exactly does a good teacher 'help a child to learn'? What elements can be retrieved from their own memories, and what do the theorists say? Do the two match?
- ***Groups*** – what can groups be used for? What are the positive and negative aspects of dividing children up?
- ***Low achievers*** – what does it mean to a child to 'fail' in different ways at school? How can such children be supported?
- ***Gender*** – what particular problems do girls, or boys, face in schools?
- ***Role models*** – students typically mention many positive images on which to build a sense of professionalism. How do they intend to develop these traits themselves within the teacher education programme and afterwards?

Ethical considerations

We would argue that small-scale informal research studies of this kind can be done by any tutor(s) with their class(es). However, great care must be taken to ensure that the data is also

kept anonymous (students should not put their names on the work) and seen only by the tutor(s) concerned. Students must be able to trust the tutors – and the college – that they will in no way be disadvantaged or embarrassed by what they have written or said.

REFLECTION

How might such data be kept confidential in your work setting?

Helping students to develop beliefs and behaviour

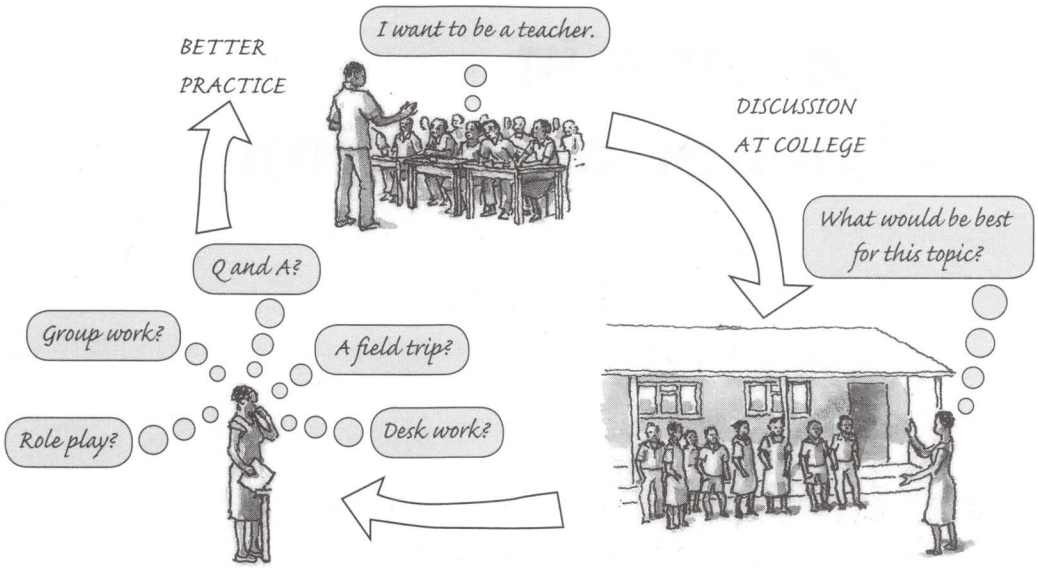
Changing deeply held beliefs is painful, and changing a familiar teaching style is difficult and risky. A student teacher might be worried about failing if they try a new method, and therefore in need of much more support.

There are no simple strategies. Change will seldom happen quickly, and the whole programme will need to be geared towards this aim. The following steps may provide a guide.

- The starting point is to get students to talk about what they know and believe, what they have experienced as pupils, and what they imagine themselves to be doing as teachers. Many of their views are held sub-consciously as students have never actually spoken about them.
- The next step is to explore these more fully, and challenge them where necessary. This will include debates about ideas, values and assumptions, and discussions – or even demonstrations – of the weaknesses of the concepts and methods which might be discarded. Students may see that what worked for them does not work for everyone. They may look for ways to avoid behaving like that old teacher they disliked. They may understand how taken-for-granted teacher behaviour – like caning – can work against their desire to help children learn and see the need to broaden their range of teaching strategies.
- Then students need to see and understand alternative methods and concepts demonstrated – ideally in real life situations. Videos, if available, local classroom observation, or role play, can also be used.
- None of the above will actually change anything unless the student teachers have opportunities to practise new teaching techniques and ways of behaving in real classrooms, with support from tutors and **mentors** to help them succeed. The **practicum** should create the opportunities for this. They will need a lot of support, and should be allowed to fail and try again, until they can make their own sense of it, and find their own ways using the best of the old and the best of the new.

So what would a cycle of improving teaching be like?

Figure 2.4 A cycle of improving teaching



REFLECTION

How does this cycle differ from the one at the start of this chapter?

Concluding comments

This chapter has stressed that student teachers, or serving teachers attending courses, are not 'empty containers' to be filled but are already full of ideas and memories. Some of these are useful and can be built on; others may interfere with new learning. The tutor has the difficult but interesting task of exploring the learners' ideas and using these constructively in the teacher education programme. Research shows this is difficult and challenging but also rewarding for both tutors and students.

We have suggested that tutors should ask students to articulate ideas and feelings which perhaps they have never spoken about. The aim is to help students themselves to find out what knowledge they have and what opinions they actually hold. Such knowledge and beliefs can then be brought 'under conscious critical control' (Eraut 1994). That is, this enables the students to analyse their own ideas and compare them with other people's, and with those in books. This makes it much easier to build on the strengths and challenge the weaknesses of their ideas.

We believe that when students are invited to contribute in this way, they find it motivating and empowering. If they feel their ideas are valued, this lays a foundation for independent learning. It also helps them take the first steps towards developing their own judgements about teaching and becoming reflective practitioners.

Chapter 3
Learning in teacher education

Overview

This chapter will discuss some of the theoretical frameworks that throw light on children's learning:

- behaviourism
- the ideas of the **cognitive** and constructivist theorists
- social **constructivism**.

For each, it focuses on:

- what influence they have had, or might have, on the education of teachers
- how far they help us understand how people learn to teach.

It then looks at humanist learning theories and their relevance for teaching adults.

Introduction

A We tell our students what to do, let them practise it, and they should be able to do it. (A teacher educator)

B *Teachers are born not made. (A traditional saying)*

C The only bit of my course that was useful was teaching practice. (A student)

D *There is not usually a huge difference between trained and untrained teachers. Sometimes the untrained teachers work harder and are just as good. (Head teacher, MUSTER project)*

E Learning how to teach is difficult and challenging for many student teachers because it requires learning processes that are different from those that students have experienced before. (Calderhead and Shorrock 1997:186)

F We know now that 'teaching as assisting performance' and the arts of the 'instructional conversation' can be taught. (Tharp and Gallimore 1988:265)

G *When I was an unqualified teacher, it was difficult for me to teach, but after going to the college, that's where we get more skills and knowledge. (Primary teacher in Malawi)*

REFLECTION

Rank the above statements according to whether you agree or disagree, starting with those you agree with most strongly. Give reasons for the selection of your top two.

There seems little agreement on how teachers learn to teach. We know it is a complex process. Only since the 1970s have researchers been studying systematically how teachers acquire the professional knowledge, skills and values (or personal qualities) that they need to work successfully in the classroom. Chapter 1 pointed out that teachers probably learn in four different ways:

- ***Observation:*** watching and imitating others.
- ***Practice:*** by the experience of teaching.
- ***Acquiring knowledge:*** taking new ideas and new understandings from many sources.
- ***Reflecting on experience:*** thinking through what they know and have seen or done.

However, so far there is no one single framework that can help us understand how these ways of learning work together. This chapter will look at some of the theories and models developed about learning in general, and how they might be applied in teacher education.

Theories of learning

Although many philosophers have discussed human learning in the past, theories relevant to school learning mostly emerged in the 20th century. Here we shall focus on only the best known and most important ones. These theories and models are designed to help us understand the processes of teaching and learning. Each has contributed to our understanding, each throws light on certain aspects of learning, but none provides a complete picture. All theories build on what went before and all can be improved further.

Behaviourism

Psychologists in the early 20th century were trying to study human behaviour 'scientifically' – that is, using methods copied from the natural sciences like physics and hoping to formulate similar 'laws' that would enable them to predict and control behaviour. This movement was particularly strong in the USA.

According to behaviourist theory, learning takes place in fairly simple ways, for example:

- Through the '*law of effect*': If the effect of doing something is pleasurable, we tend to repeat the action; if it leads to unpleasant effects, we are likely to stop doing it. We learn to eat a banana because it is sweet and satisfying; touching fire hurts, and we learn to avoid it.

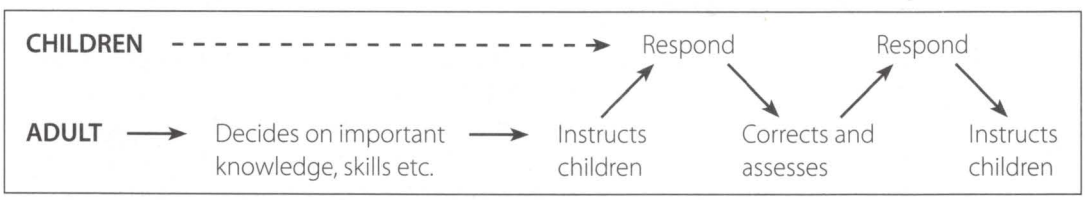
- Through the '*law of exercise*': The more often we do something in a given situation, the more likely we are to do it again until it becomes a habit. For example, we learn the way to a particular place and then walk or drive there so often that we come to take that way automatically.
- Through *stimulus, response and reinforcement*: For example, a child learns to associate the written letter A (response) with the relevant sound (stimulus), because the teacher rewards the child in some way (reinforcement). This is known as 'conditioning', where external stimuli can lead to learned responses.

These theories had a great influence in the first half of the 20th century which is still felt today. It was thought they had laid the foundation for a 'science of teaching'. Classroom approaches based on these ideas were largely **didactic**, with all children being taught the same thing at the same time. The 'law of effect' was reflected in the ways teachers rewarded correct responses and punished wrong ones. The 'law of exercise' was reflected in an emphasis on practice and drills.

Behaviourist theory is concerned with external and observable aspects of learning, such as disciplined behaviour and producing the 'correct reply'. Little attention is paid to what is going on in the child's mind, for example *why* a 'wrong' answer was given. The learner has a relatively passive, or inactive, role. The teacher decides what is going to be learnt, when and how.

Such theories do explain some aspects of learning: the beginnings of writing, memorising multiplication tables or history dates, and learning new languages, for example. However, the theory ignores how such learning links – or fails to link – to the existing understanding of the individual child. Children may be able to memorise and repeat information, but unless it has real meaning for them the learners may not be able to use it, for example to solve problems in their daily life.

Figure 3.1 A behaviourist model of roles in the teaching–learning process

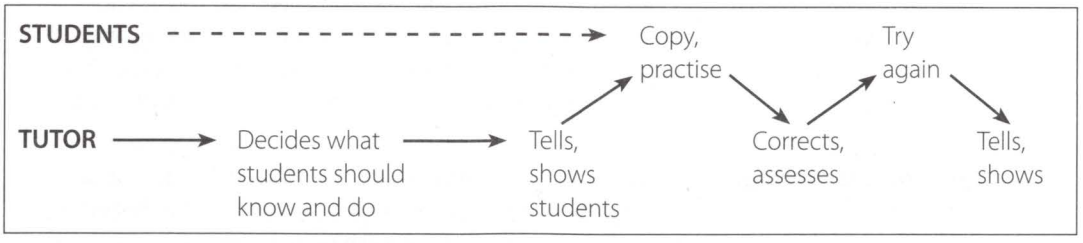


Behaviourism in teacher education

For many years, particularly in the USA, teacher training programmes were built on behaviourist theories. Such programmes, as might be expected, focus on the outward and visible aspects of teaching: on teacher behaviour rather than on teacher thinking. This led to an emphasis on skills, such as: managing the class, writing lesson plans to a particular design, styles of questioning pupils, chalkboard writing, giving praise, and so on. **Micro-teaching** was developed as an appropriate learning and assessment tool.

Such a type of teacher training (here the word training is appropriate!) is not much concerned with how student teachers understand their tasks, or how they are making sense of teaching. Assessment of practical teaching focuses on the teacher's classroom behaviour, rather than on the reasoning behind it. Student teachers' thinking, or what their experiences actually mean for them, is often disregarded.

Figure 3.2 A behaviourist model of learning to teach



In a micro-teaching session, the tutor explains the skill, and the student teachers all try to produce the right responses, their practice being shaped by the tutor's praise or criticism.

A behaviourist programme can offer beginning teachers some techniques and routines to help them start, but it is insufficient as a basis for professional education as it does not deal with student teachers' thinking, nor with the personal development aspect of learning to teach.

REFLECTION

How far is the programme you teach (or the one you were trained in) based on behaviourist ideas?

Cognitive and constructivist models of learning

There are a number of different theories under these labels. What they have in common is a concern with the internal thinking processes – the aspects of learning that can't be seen directly by the teacher. In different ways all these theories suggest that people learn through the interaction between thought and experience: that both *doing* and *thinking* are essential for learning.

Cognitive development A highly influential theorist was Jean Piaget, from Switzerland. Essentially, he suggested that people have an innate, or inborn, drive to understand the world. Children begin from an early age to construct sets of ideas about objects or events around them. These include concepts and mental strategies for organising our experience. Using these strategies, learners construct and reconstruct ever more complex, detailed, and useful ways of thinking about the world. (See, for example, Piaget, 1926, Sutherland 1992)

Piaget thought that with children this process happened in different ways at different stages which are more or less fixed by age – sensori-motor, pre-operational, concrete and formal. For the first three, the person needs concrete, direct experience in order to learn. Finally, at the 'formal' stage, they can reason abstractly. For example, in mathematics young children would need to use counters for addition, as physical or 'concrete' objects. When they reach the formal stage they can think abstractly by holding the idea of numbers in their minds.

Piaget's ideas had a significant influence on education and contributed to various forms of 'child-centred' and 'discovery' methods. Here teachers provide opportunities for children to investigate and experiment for themselves. Through such experiences, they will construct new understandings of the world. However, according to this theory teachers have to wait until the child has reached the appropriate stage before they are ready to learn something.

Piaget, in his time, moved people's thinking forwards, but later work has modified his ideas considerably. In particular, psychologists came to question the four developmental stages,

saying that they underestimate the capacities of children and can limit learning. In situations that are meaningful to them, children have shown far greater intellectual progress (for example Donaldson 1978). Piaget's work was also criticised for its emphasis on the individual and for ignoring the social context of learning. A further point is that even adults don't always operate at the 'formal level'. Anyone studying a new subject needs to start with concrete examples and direct experience.

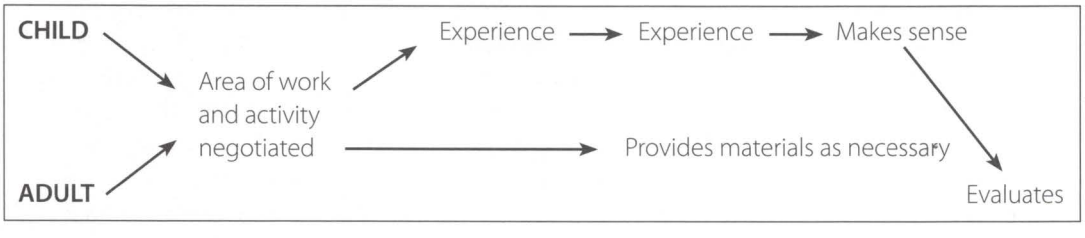
Cognitive psychology Building on Piaget, the emphasis on thinking and mental structures has produced useful insights into learning. A key point is that learning must be meaningful: learners remember new material best when it means something to them; that is, when they can connect it to some idea which they already understand. This contrasts with the rote learning stressed by behaviourism, where the association between two things is learnt by habit rather than by understanding.

Constructivism This is related to the above theories. The key idea of **constructivism** is that each individual constructs their own knowledge in a unique way. For example a concept like 'family' can never be directly communicated; even though we write down definitions, everyone will understand 'family' in their own way, drawing on their personal experience of their own family and of typical families in their society. We all continually reconstruct our understanding in the light of new information and of experience. This means our knowledge is not fixed, but fluid and expanding. For example, in our own lives as we learn to garden, drive cars or raise children, our knowledge of plants, types of cars, and child development changes and increases in scope.

Constructivism has been particularly influential in science teaching. Researchers discovered that children often form their own understanding about the world based on 'common sense'. Sometimes this gets in the way of understanding scientific principles. Teachers therefore have to create situations – experiments or experiences – in which children can see how these **misconceptions** are false. Only then can the learners gain a deeper understanding of science. For example, a child might think that small objects float and big ones sink. The teacher lets them put a large piece of light wood and small stones into water, to help them develop a more accurate understanding.

Teachers who base their methods on Piagetian or constructivist learning theories try to give individual pupils a considerable amount of freedom to learn in their own way and at their own speed. Rote learning is replaced by an emphasis on learning concepts and skills, perhaps through individual or group project work. One interpretation leads to 'discovery learning', where pupils are expected to find out things for themselves, with minimum guidance. Another interpretation is that the teacher constructs learning situations for the pupils which will challenge their thinking and lead them to new theories. One problem with such methods is that where the pupils expect the teacher to know everything, asking pupils to find their own answers might look like teacher ignorance!

Figure 3.3 A constructivist model of roles in the teaching–learning process



Cognitive and constructivist models in teacher education

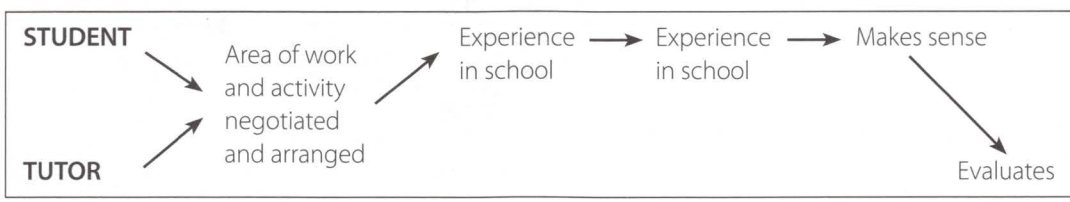
Following Piaget, we might assume that student teachers were all operating at the stage of 'formal operations'. But many of the topics, particularly in psychology and child development, are new, and they need to approach them through concrete examples linked to their experience. Insights from other **cognitive** psychologists would lead to similar advice. Tutors need to ask themselves:

- What kinds of mental frameworks do students already have about teaching and learning?
- How are they adapting these in their own minds as we teach them about learning theory, children's behaviour, and **pedagogic** principles?
- How are these ideas going to affect their actual teaching?
- If student teachers have misconceptions i.e. unhelpful ideas about how children learn, how can we provide experiences through which they can develop better understandings?

The word **constructivism** has become popular among teacher educators in both North and South America. There it is used in a very general sense to indicate a contrast to 'behaviourism'. That is, it implies that teachers will build or 'construct' their own ideas about teaching through thought and action. To do so, they draw on a wide variety of knowledge and experience. Some of this comes from their own personal life-histories, some from formal training courses, some from the schools they teach in, and some from the wider social and cultural context in which they live.

In this view, the task of tutors is to help them to develop more knowledge about their work, to make sense of what they are doing, and to evaluate their own practice. Thus in constructivist teacher education programmes there is less emphasis on skills and more on personal knowledge and on thinking. Assessment is likely to focus less on the teachers' classroom behaviour itself, and more on the planning, reasoning and reflection that underlies such behaviour.

Figure 3.4 A constructivist model of learning to teach



The diagram shows what is, perhaps, quite a common situation. Unqualified applicants are given a brief **induction** at the start and then have to 'discover' how to teach. Or during a long **internship**, with little supervision, the student will be trying to make sense of their teaching experience. The dangers, of course, are that they may draw misleading conclusions about what they are doing, or develop misunderstandings about children.

In the UK, which never embraced behaviourism so strongly, the phrase 'constructivist teacher education' is less common; teacher educators talk about 'reflective practice' instead. This implies similar processes of gaining understanding through experience and then thinking about it. Teachers are said to develop 'personal theories' which are 'ways in which people interpret and define their environment... and use such interpretations to guide their actions.'

(Calderhead 1987:6) However, such theories usually remain sub-conscious. The teacher educator must encourage student teachers first to think through and express their own ideas of teaching. Then the tutor helps them to compare their own personal theories with those from books and research, and perhaps change or refine them. Finally the students must test out their ideas in practice, and see how they can be improved.

REFLECTION

In what ways do you use constructivist ideas in your own teaching? How would you deal with students who say: 'You are the teacher, you should give us the answer'?

Social constructivist models

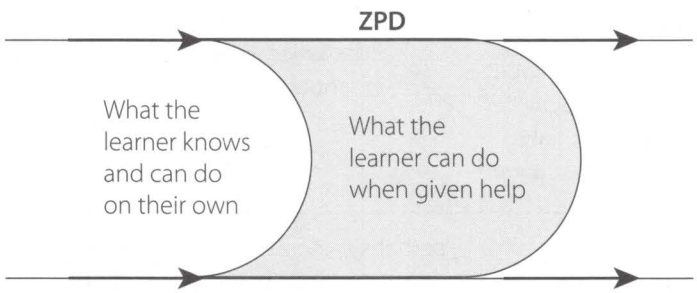
While the Western world was working with behaviourist and individualist cognitive models, Russian educationists were developing theories that paid more attention to the social context. The most important was Vygotsky, who published his books in the 1930s. However, they were not translated into English until much later, and only began to be known in the West in the 1960s. The American psychologist Jerome Bruner did much to adapt Vygotsky's ideas for the English-speaking world (Bruner 1966, 1986).

Although Vygotsky also took a developmental view of learning, he did not believe one had to wait until a child was ready to learn. In contrast to Piaget, he thought that appropriate teaching could speed up development. Two key ideas are the **Zone of Proximal Development (ZPD)** and the importance of the socio-cultural context of learning.

Vygotsky defines the ZPD as:

> The distance between the actual developmental level (of the child) as determined through problem solving (on their own) and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers.
> (Vygotsky 1978:86)

Figure 3.5 The Zone of Proximal Development

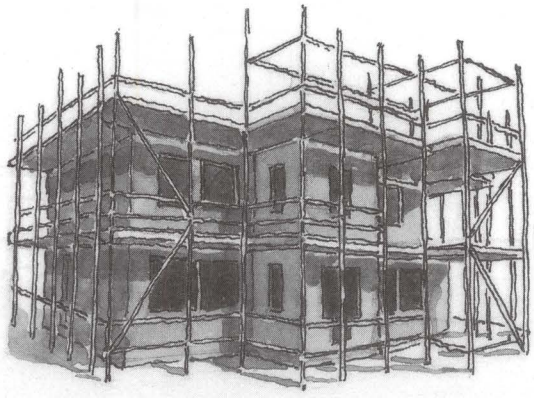


The ZPD concerns each child's potential to 'make sense' of the world. The question for teachers is: starting from the child's present state of understanding, what developments can occur if the child is given some help? If the support is appropriate and meaningful, Vygotsky argues that the child's understanding can be extended far beyond that which they could reach alone.

Such help in learning can come in many ways. It could be explanation or discussion with the teacher; it might come from a debate among a group of children engaged in doing

a task or solving a problem; it could happen by talking with parents or even watching a particular TV programme. In each case, the intervention acts to support or 'scaffold' the child's understanding across the ZPD for that particular issue. The analogy is from building a house: scaffolding is needed to support the walls as they are being built up, but when they are finished and secure, the scaffolding can be removed. The building – the child's understanding – will stand independently.

Figure 3.6 Scaffolding



The concept of scaffolding leads on to the second key insight from Vygotsky's work. This concerns the role of the culture and the wider social context of the learner in influencing his or her understanding. This influence starts in informal ways from birth, as infants and young children interact with their parents and family. The youngsters, through experiencing the language and forms of behaviour of their culture, acquire particular cognitive skills, strategies, knowledge and understanding. **Cognition**, language and forms of thought are thus 'scaffolded' by the culture and social history of the learner as well as by direct teaching. This influence of culture on learning continues throughout life. The local ideas, language and concepts, which are derived from interaction with others, will structure, challenge, enhance or limit thinking. Thus learning is social as well as individual, and the school context is an important factor.

The role of language is particularly important. Language is seen as central to the development of thinking, and therefore talk is a tool for learning. Through talk, we clarify our own ideas and receive feedback from others. Interaction with an adult or expert can help widen and deepen thinking, but interaction with peers is also useful.

These ideas have had much influence in education in the West since the early 1980s. In this model, learning is seen as 'assisted performance'; the role of the teacher is to identify the ZPD, help the learners to do what they cannot do on their own, and support them until they can do it independently. Pupils can also 'scaffold' each others' thinking, but the teacher has the important role of challenging and extending their understanding in ways appropriate to their level. Therefore the teacher must understand both the subject matter and the way children's understanding typically develops in a particular culture at that time.

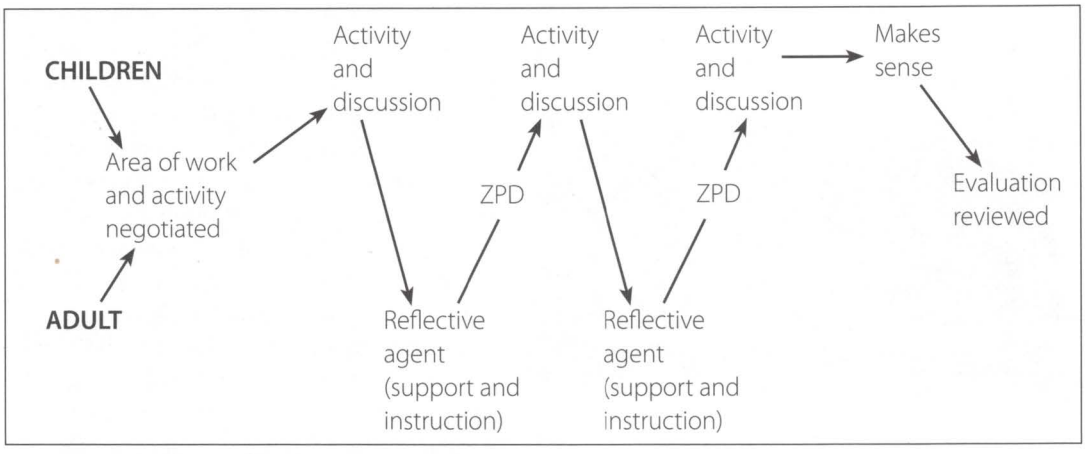
REFLECTION

Scaffolding learning for a class of pupils with varying ZPDs is challenging, yet many teachers do this without knowing Vygotsky's name or theory. Suggest ways in which a teacher might find ways of working with individuals and small groups so that each is helped to move forward in line with their own understanding.

Methods derived from this theory make great demands on the teacher and the way the classroom is organised. For example, the children may work in small groups for collaborative investigation and problem-solving in maths and science, but the teacher has to supervise

them closely to challenge their thinking and lead them towards the mental strategies required. In language classes, children draft and redraft their work in collaboration with peers and with the teacher's guidance. In whole class teaching, teachers have to carefully phrase questions to individual pupils, or groups of pupils, so that the questions give a stimulating level of challenge.

Figure 3.7 A social constructivist model of roles in the teaching–learning process



In their book *Rousing Minds to Life*, Tharp and Gallimore (1988) who call themselves 'neo-Vygotskians', (neo=new), bring together ideas from behaviourism, cognitive psychology and social constructivism, along with insights from anthropology, to create an effective approach to teaching. The means they suggest for 'assisting the learners' performance' are:

> Demonstrating, praising, feeding back, instructing, questioning and cognitive structuring.

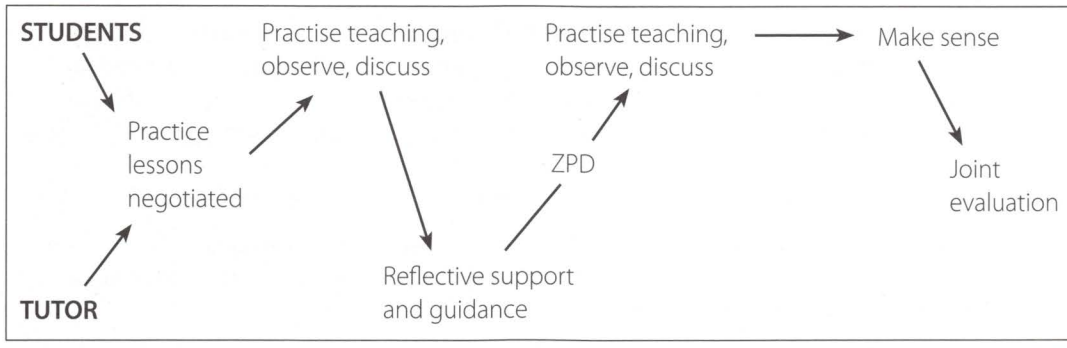
They highlight the importance of seeing teaching as a social activity and the need to be sensitive to the cultural and social context of the learners. Their book discusses and illustrates all this with many examples.

Social constructivism and teacher education

The ideas underlying social constructivism seem to have great potential for helping teachers learn to teach. Tutors have to assess where is the ZPD for their students for both knowledge and skills and then 'scaffold' their understanding of teaching and learning. For example, a **mentor** or **co-operating teacher** can first observe a student teacher's performance in the classroom, and see what they can already do and what they are finding difficult. The mentor can then model alternate teaching techniques, explaining them and giving feedback when the student tries them out. In this way, the new teacher is helped through the ZPD to the point where they can practise on their own. Sometimes the mentor can help the student teacher develop their own problem-solving abilities rather than providing exact teaching strategies. Team teaching with an experienced colleague might serve a similar purpose in CPD.

The emphasis on culture is also relevant. Cultures of teaching and learning vary greatly between societies, and even between different kinds of school. Student teachers have grown up and been educated within certain kinds of schools, and much of their thinking and their practice has been shaped by these (see Chapters 2 and 11). Teacher education has to be sensitive to such cultures, and work with them.

Figure 3.8 A social constructivist model of learning to teach



In this model of 'assisted performance', a small group of student teachers are placed together in a practice school. They can observe and help each other. The mentor or supervisor meets regularly with the group to give feedback and guidance.

These ideas have not yet been explicitly incorporated into many initial teacher education programmes. However, similar techniques are sometimes used with serving teachers. Joyce and Showers' **coaching** model teaches skills within the teachers' ZPD and provides much scaffolding through demonstration and feedback.

Joyce and Showers' model

The Americans Joyce and Showers designed a training process for teachers wanting to learn new teaching skills. This looks in some ways like a behaviourist model because it focuses on skills. However, it also insists the teachers must *understand* why and how the new methods improve pupils' learning. The coach is working within the teachers' ZPD, helping them to achieve something new. The model's main feature is the amount of support and feedback the teachers get, which scaffolds their learning – with such help, they can do things they would not have been able to do on their own.

Stage 1: Tutor describes the skills (presentation or lecture), why they are useful, and when to use them.

Stage 2: Tutor models the skills either live or using pre-recorded video.

Stage 3: Teachers practise the skills in simulated settings (as in **micro-teaching**).

Stage 4: Tutor gives feedback.

Stage 5: Tutor or other supporting person coaches the teacher on the job, back in their own classroom, until they can do it successfully.

This gives teachers knowledge and understanding of the new skills, opportunities to try them out first in a safe setting, with feedback, and finally on-going help (which can include more modelling, practice and feedback) in their own situation.

(Joyce, B.R. and Showers, B., 'Improving in-service training: the messages of research' in *Educational Leadership* 1980, pp. 379–85)

The Joyce and Showers scheme is based on behaviourist principles, but can also be seen as using the principles of the ZPD. This is a good example of how in real life these models are not rigidly separate from each other. Most teacher education programmes will draw on more than one set of ideas.

REFLECTION

What experiences do you have of **scaffolding learning** being used in teacher education, either as a tutor or as a student? For example: a student teacher is diagnosed as needing help on some particular aspect of teaching and the tutor demonstrates, and talks him or her through the problem, until the student understands and has found a strategy that solves the problem.

Tharp and Gallimore (1988), whose work was mentioned above, have applied their ideas to teacher education. The case study below reports an apparently successful application of their methods with new teachers in Hawaii.

Case Study:

Tharp and Gallimore (1988), 'Assisting Teacher Performance through the ZPD: a case study', in *Rousing Minds to Life* (Chapter 10)

This describes how a primary NQT called Grace was helped to conduct comprehension lessons as part of the teaching of reading in Grade 1. The sources of help were:

- a consultant who observed eight of Grace's lessons, and discussed them with her at length, using a video-tape recording of the lessons
- a colleague who provided a model for Grace by allowing her to observe one of the colleague's lessons
- a supervising teacher who offered praise and encouragement
- Grace herself as she became more self-aware, internalised the principles, and began to be able to reflect accurately on her own successes and mistakes.

The aim of the lessons was to use pupils' personal experiences to help them come to a deeper understanding of the ideas in the stories they were reading. The teacher was told to use the method of 'instructional conversation', in which the teacher gets the children to talk about their experiences and then helps them to relate these to the text they are reading. The account clearly shows the two levels at which teacher educators work (see Chapter 1). The consultant was helping the teacher to learn and the teacher was helping the pupils to learn. The young teacher was learning how to support her pupils in their ZPD while the consultant was helping Grace through her own ZPDs in the field of teacher knowledge and teacher performance. Here is a summary:

Observation 1: Grace asks the class questions and draws out children's ideas but does not know how to use these answers to help the pupils understand the themes of the story. The consultant praises her responses and then guides her to realise she needs a deeper understanding of the text.

Observation 2: Grace elicits more ideas from the pupils but still can't use them fully. She realises this, however, and begins to reflect on her own performance. The consultant says she should use more open questions and then build on whatever answers the children give, to bring them across their ZPD.

Observation 3: Grace is asking too many Yes/No questions and is talking much more than the pupils. The consultant tries to explain some of the theory behind the 'instructional conversation' and 'scaffolding', but Grace is not quite ready to implement it. So they agreed that Grace should work on reducing the amount of 'teacher talk.'

Colleague observation: At this point Grace watches an experienced colleague. This gives her an image of what 'instructional conversation' really is, and how a teacher can draw out pupils' experiences to help them construct new concepts.

Observation 4: Grace thought she now understood what she should do, but watching the video she herself realises she still hasn't managed to put it into practice – she was still 'telling' the pupils what to think. She gets discouraged. The consultant tells her everyone goes through difficulties like this.

A supervising teacher watches a lesson and praises her improvement.

Observation 5: In this lesson, Grace manages to stop herself talking so much, and asks the right kinds of questions which 'scaffold' the pupils' understanding and allows them to construct the ideas for themselves. The tape shows how she is beginning to regulate her own behaviour.

In discussion, Grace shows that now she both understands the theory and can implement it. From now on, she can advise herself, with occasional outside support.

Such intensive training is time-consuming. However, it can be done during any kind of teaching practice or school experience if there is a skilled **mentor** or **co-operating teacher** with time to observe (a video is not necessary but detailed notes should be taken) and if there is time for the two to sit down afterwards and talk it through. The mentor should also ask open questions, rather than telling the student what to do. For example: 'Can you tell me why you did that?' In this way the mentor can elicit the student's ideas and use them to scaffold her understanding of teaching (see Chapter 6 on mentoring).

REFLECTION

What have you learnt by reading this chapter so far? Do you think that your own personal theories, or conceptual frameworks, about learning to teach have changed? If so, in what ways?

Theories and teachers' learning

Looking at the four ways in which teachers apparently learn, how might these learning theories help us to understand what is going on?

Observing and imitating The behaviourists might say that seeing a teacher in action is a stimulus, trying to copy them is the response, and the reinforcement can come either from the tutor or from the reactions of the pupils.

In a constructivist view, the student teacher has already got images and ideas about teaching in their mind, drawn from their own experience of watching teachers and more general images in the surrounding culture. They use these to build up more complex mental frameworks which may then affect the way they work in classrooms.

Guided observation can be seen as a form of scaffolding. New teachers watch a more experienced colleague, or a peer, with a focus on how they perform certain tasks, such as explaining a difficult concept, or managing behaviour. The students then try it out for themselves.

Practice and learning by experience In behaviourist terms, the pupils provide a stimulus, such as being noisy, the student teacher produces a response, such as a reminder to

concentrate on their work, and this behaviour is reinforced when the pupils quieten down. Alternatively, student teachers' behaviours can be reinforced – or not – by the praise or reprimand of the tutor or supervisor.

A constructivist might see practice as a form of learning by discovery, as new teachers interact with the classroom environment and find out what happens when they do certain things with pupils. This quite often happens in reality, but results may not be useful if the new teachers fail to find effective teaching strategies.

Social constructivists would stress that practical teaching tasks should be within the student's ZPD and undertaken with the support and guidance of the tutor, so that the students can do them successfully.

Acquiring knowledge from different sources This can be most clearly explained by cognitive and constructivist models, in which student teachers are taking in new ideas and (it is hoped) altering their thinking to include the new concepts. Some of the knowledge would be of the formal, abstract kind, and the students would often be expected to be at the 'formal operations' stage in all subject areas, which might not always be the case.

Social constructivists would emphasise the role of language in mediating the new knowledge, and recommend much tutor–student interaction to ensure understanding.

Reflecting on experience Behaviourism is not conducive to reflection but in constructivist models reflection is a part of developing new ideas. Reflection assumes that student teachers are motivated to improve their teaching, and can take responsibility for their own learning.

Table 3.1 Summary of how three theories match the four ways of learning to teach

	Behaviourism	**Constructivism**	**Social constructivism**
Observing/imitating	Learning conditioned by stimulus, response and reinforcement	Use of own experience to build up ideas	Watching provides scaffold to support new practice
Practice/experience	Laws of effect and exercise; actions become a habit when reinforced	Learning by doing; discovering teaching techniques through trial and error	Student's practice is organised and guided by tutors/mentors
Acquiring knowledge	Memorising, rote learning	Taking in new ideas and reorganising previous understanding	Learning mediated by language, discussion and social context
Reflection	–	Encourages rethinking	Peers and tutors assist in rethinking

Learning to teach is not just about acquiring knowledge and skills. It is also about developing personal qualities, high standards, and professional judgement. Teachers need to learn appropriate attitudes as well as knowledge. There is an emotional side to teaching, and teachers have to be able to understand and deal with feelings. This is rather neglected in the theories of teacher learning that we have looked at so far. Firstly student teachers need some insight into their own emotions and secondly they have to recognise how children feel. Finally, they have to learn to treat pupil behaviour with the right mixture of patience, compassion and firmness. How do young teachers learn these aspects of their job?

To move on further, we need to look at other models of learning, in particular those which take a holistic view of the development of the whole person, and which include adults in their scope.

Humanist models

These theories emerged in the US in the 1960s. An important figure was Carl Rogers. In his book *Freedom to Learn* (1969), he said: 'I cannot teach anyone anything; I can only help them to learn'. He thought that the desire to learn is inborn, and that if they are given an appropriate environment, people will learn what they need to. As people mature, he claimed, they become more self-directed and responsible for their own learning.

Maslow (1954) argued that humans have a hierarchy of needs. Once basic needs (for food, shelter and safety) are met, people need to feel loved and to know they belong. This feeling of belongingness can be to a family or a community, and involves being valued, which leads to a feeling of self-worth or self-esteem. The final stage, he suggested, is a drive towards 'self-actualisation': that is, a need to create, to appreciate, to know and to understand.

It could be argued that these theories, which originated in the US, are culturally biased. They define the idea of maturity as autonomy and self-directedness. Collaborative values, such as working together for the good of a community, are less mentioned.

The social learning theorists stress, by contrast, that learning results from the ways in which individuals interact with their environment. This starts in the family and widens out to the school, the peer group and the work environment. People learn by imitation and by internalising the values and attitudes of those around them.

What these models have in common is their view of learning as a natural process which continues throughout life. Such theorists view human beings as active meaning-makers. That is, they believe everyone has an inborn desire to make sense of their experience, and to learn from it. These ideas have been more influential in the field of adult learning than in schools.

Humanist theories and teacher education

As we have said, there is much evidence that young teachers learn by observation, by imitation, and by internalising the behaviour, attitudes and values of teachers they have observed in their own school years, as much as the 'social learning' theorists describe. This suggests that 'informal learning', including learning on the job, is very important. Formal teacher education programmes tend to ignore such informal learning, and yet it may run counter to what is being taught in the college. Possibly this is why some formal programmes appear to have little effect on how teachers behave when they are in classrooms.

Humanist theorists, in different ways, see people as self-motivated and self-regulating individuals, striving for excellence. It may be that the idea of teachers 'being born not made' can be partly explained in these terms. Probably we all know teachers who love their work, who try hard to help all pupils, and whose teaching is thought to be 'good' even though they have only basic (or even no) training. These teachers can be termed 'self actualisers': they are motivated to help children learn and they have developed their own ways of doing this. This fits well with the idea of learning by reflection.

REFLECTION

How can we encourage these traits in students – motivation, responsibility, a desire for excellence – even if they don't show them at the start of the course?

ACTIVITY

What learning theories might help you plan teaching in one or two of the following topics or aspects of a teacher education programme?

a) Teaching practice
b) A topic in your subject
c) Teaching methods in your subject
d) Classroom management
e) Helping low achievers
f) The role of school in society

Explain your choice.

Concluding comments

Human learning is complex. Various theorists have advanced our understanding of how knowledge and skills are acquired, but no one theory can explain fully how children learn.

The authors of this book feel that the social constructivist viewpoint offers the best framework currently available. It emphasises how knowledge and learning depend on the culture and social context in which they exist. It opens the way for teaching and learning to be adapted to the local situation. Ideas from elsewhere may encourage change, but do not necessarily have to be copied. People generally construct their own ways of teaching by adapting examples from other people's work, attempting to apply teaching and learning theories, evaluating their own teaching and considering the needs and opportunities of their current teaching situation. In teacher education, theory should be allowed to develop out of good practice, when the practitioners analyse and reflect upon their work, individually and as part of a group. In some situations, teachers and teacher educators have limited freedom to develop and adapt the curriculum. Even here, we believe that constructing knowledge with colleagues about how to teach and tutor within the curriculum is the best way to develop lessons and seminars that will help students learn.

Professional learning often emphasises beliefs, attitudes and emotional qualities as well as the more 'academic' knowledge and skills that are typical of many traditional school curricula. Developing appropriate beliefs and attitudes can be a challenge for both teacher educators and student teachers. Humanist theories, which look at the development of the whole person into adulthood may also therefore have relevance for teacher education. These ideas are explored more fully in the next chapter.

Chapter 4
Student teachers as adult learners

Overview

This chapter looks at adult learning from the following perspectives:

- Whether student teachers can be described as 'mature students'
- How far their approaches to learning might differ from those of school pupils
- The meaning and importance of independent learning
- Kolb's experiential learning cycle and its use in teacher education
- The personal and emotional aspects of learning to teach
- The skills needed by the adult educator.

Introduction

Formal schooling sometimes works to keep people in a 'child' role when they are actually grown up. Many traditional societies had ceremonies that marked off childhood from adulthood (often around the age of puberty), at which point the young adult was expected to take on a new role in society. In modern societies the turning point is sometimes less clear. It is sometimes difficult to decide whether students, and student teachers in particular, should be termed 'young people' or adults.

Alan Rogers (1996:35) suggests that adults:

- are fully grown and mature
- are independent and can act autonomously
- have a sense of perspective and are 'balanced' (in the sense of not acting 'childishly').

REFLECTION

How does your society define an adult? Are there legal definitions? Are there social conventions or practices marking adulthood?

How mature are student teachers?

Table 4.1 shows the ages of entering student teachers in four countries.

Table 4.1 Ages of student teachers on entry in four countries

Type of course	Country	Age range	Average age
Pre-service courses			
	Ghana	18–30	21
	Lesotho	17–40	22
Initial in-service courses			
	Malawi	22–36	26
	Trinidad and Tobago	20–42	26

(Lewin and Stuart 2003)

Even where students were recruited as high school leavers, the average age was early 20s; where initial training took place after a period of teaching, the average student was in their late 20s. These figures suggest that student teachers on these ITE programmes can be classified as mature students. This is not always so: in China, preparation for primary school teaching is part of secondary education and students are younger. Serving teachers on CPD courses will almost always be adults. We need to consider how mature students might differ from pupils of school age in how they learn, and therefore whether they need different forms of teaching.

REFLECTION

Think of the student teachers you work with. How old are they, on average? How do they differ, in your view, from most high school pupils?

How do adults learn?

In what ways might adult students be different from child learners? Knowles (1978) suggests four interlinked ways.

1. *Identity, self-concept and self-direction*

Adults have a more developed self-concept – a clearer idea of who they are and what they want to be – and are capable of directing themselves towards this goal; they are more independent of the teacher.

Knowles was an American. He came from a culture where adults are expected to become self-directed individualists. Other cultures may not value individualism so highly and may define adults by other criteria, such as being able to take on family or community responsibilities.

2. *The role of experience*

Adults already have much experience and knowledge which they can use to help understand and organise new ideas.

In some cases, however, the experience and previous learning might block new learning. Recruits to teaching often already think they 'know' what a teacher does, and sometimes just copy their own former teachers instead of being open to new methods as well.

Adult educators need to show they value the learners' experience, and take them seriously, thus helping them to build constructively on what they already know, and to change it if appropriate.

3. *Readiness to learn*

> *In young children, learning readiness is partly linked to their physical and mental development; by comparison, adults are 'ready to learn' something if they perceive it to be linked to their social and professional roles.*

Students need to see clearly the links between what they are learning in college and their future role in the classroom. It is important to sequence the material appropriately; this may be an argument for having some teaching practice early in the course.

4. *Problem-centred orientation*

> *Adults will easily learn things that will help them solve problems or answer questions. They are less good at learning things just because they might be useful later on, as children do.*

This is particularly relevant to INSET/CPD courses, which are most successful when they focus on things that serving teachers know they need, be it more in-depth subject knowledge or new practical skills.

REFLECTION

Think of something you learnt in the last five years, either formally or informally. How far were Knowles' assumptions about adult learners true of you at that point?

These four 'assumptions' need to be tested against local realities. They may be true for some people, or at some stages, and not for others.

A continuum of learning

Perhaps it is more useful to think of people moving gradually from the position of a child learner to the position of an adult learner, at different speeds and according to different circumstances.

Figure 4.1 From child to adult

Even if students are in their 20s or 30s, it does not necessarily mean that they show all the characteristics Knowles describes in all situations. We need to ask how motivated they are, and how far are they capable of independent or self-directed learning. Unlike school pupils, student teachers have chosen to enter a teacher education programme, even though this may not have been their first choice of career. Teachers on INSET/CPD courses may have chosen to attend, or they may have been told to.

REFLECTION

1. Think of your current students. How far do they appear to show the four characteristics described by Knowles?
2. What do you think motivates your students as they study teaching?

Independent learning

People concerned with professional education all stress the importance of independent learning, particularly in the 21st century.

Becoming independent and taking responsibility for one's own learning could include some or all of the following:

> The world the students will be practising in ... will be characterised by rapid change and unpredictability. It is therefore essential that students learn to be independent, self-directed or autonomous learners.
> (Taylor 1997:5)

- Identifying your own learning needs
- Setting your own goals
- Planning your own learning activities
- Finding your own resources for learning
- Engaging in self-assessment
- Deciding when you have completed your learning task
- Reflecting on your learning process.

(Adapted from Taylor 1997:8)

REFLECTION

1. Which of the skills listed above do you yourself find easiest? Which do you find most difficult?
2. Which of these skills do you encourage your students to practise?
3. Which do the students find easiest and most difficult?

Learning these skills is not easy, particularly if the students have not practised them as school pupils. Tutors may have to teach their students how to learn independently. We take up this theme again in Chapter 5.

Some teacher education colleges treat students like secondary students; they have to wear uniform, and the organisation of teaching – the timetable, the methods – are very similar to those of a high school. Such a directed learning environment is less likely to encourage self-directed learning. If colleges treat students as mature and responsible individuals, arguably they are more likely to act in this manner.

REFLECTION

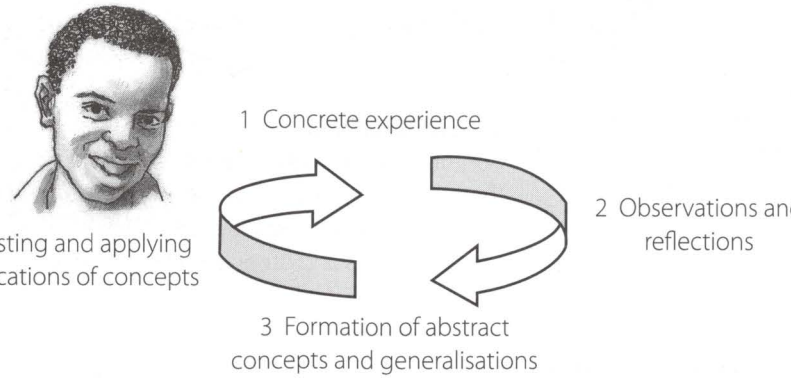
1. In what ways might the teaching environment affect whether learners felt, or acted, more like a child or more like an adult? If appropriate, give examples of a school or college you know.
2. How could student teachers in your context be encouraged and helped to take more responsibility for their own learning?
3. How quickly is education changing in your country? How far do you agree that becoming independent learners will help teachers cope with future change?

Experiential learning

One model that has been influential in discussing adult learning is the experiential learning cycle developed by David Kolb and his colleagues (Boud et al. 1985). It helps clarify how people might learn from experience and is particularly useful when looking at links between theory and practice in learning how to teach.

Kolb's experiential learning model

Figure 4.2 Kolb's experiential learning model



The model has four stages.

1. The person is involved in some *concrete experience*. This can be either in the course of daily life, or it can be specially provided for the learning purpose. It can include events that have happened in the past.
2. They *stand back to reflect* on this experience, to analyse and perhaps evaluate it.
3. They draw out some more *general meanings* from the experience. This may involve *abstract thinking* using ideas and theoretical frameworks from elsewhere, such as books or tutors.
4. They *apply their new understanding in a practical way*. This may involve planning, testing, experimenting, or just behaving differently.

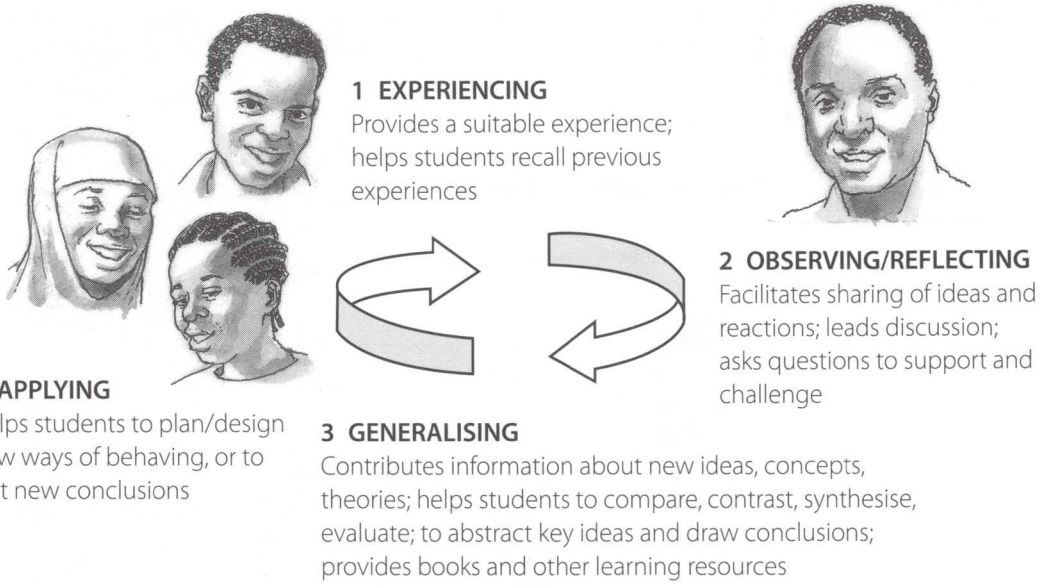
This leads to a new experience, and the cycle starts again.

The role of the tutor and the peer-group

While it is possible that someone can take themself through such a cycle – in our daily life we all learn from our experiences – the process is quicker, richer and more effective with a tutor to guide and **facilitate**. Other learners in the group also play a very important role.

As suggested in Figure 4.3, the tutor or leader organises, challenges and supports. Both tutor and peers can ask probing questions to help the students analyse and reflect; they can offer new ways of looking at the topic, make clear comparisons and contrasts, direct the learners to sources of new ideas and new information, and finally help them to apply the learning productively.

Figure 4.3 Role of the tutor in Kolb's experiential learning model



REFLECTION

Outline what might be the role of the other students in the group at each stage in the cycle.

Using the model in teacher education and development

Example 1: Visiting a school

This might be a day-long trip to a school for observation and participation in classroom activities. Tutor and students plan jointly the aims and organisation of the day; agree what students will do, what questions they want to answer, what information will be collected, and what will be done with it.

Concrete experience: The visit takes place. Students observe the teaching and learning, teach small groups, talk with pupils, draw plans of the classroom, sketch or photograph displays, sense the atmosphere of the school, etc.

Reflection: Students, individually or in groups, write up notes, analyse the data and record their conclusions, drawing on both thoughts and feelings. Tutor asks questions and stimulates discussion.

Generalisations: Tutor helps students to make sense of the experience and to set it in a wider context. What kinds of teaching and learning were going on there? Can this be related to stages of child development, or to learning theories? How did that lesson fit into the wider curriculum? Was there evidence that children's home backgrounds might affect their learning? Was the experience similar to teaching and learning in schools the students attended or have taught in, or have things changed? Was the lesson a good one, and what do we mean by 'good'? How can such lessons be improved? What would happen if...?

Applying new understanding in practice: Students use these ideas in some practical way: planning another visit, drawing up their own lesson plans, designing research.

Example 2: The year's programme

In one sense, the whole of the 'professional component' of an ITE programme could be seen as several large **consecutive** learning cycles.

Concrete experiences: Students already have experiences of teachers and schools from their pupil days. Some may have taught already; some may be caring for children of their own or for younger siblings.

Reflecting: The course tutors help them to stand back and reflect on these, by writing short educational **autobiographies**, or discussing child behaviour in groups etc.

Generalising: Tutors introduce students to theories of child development and to teaching methods. They help the students to link these back to their previous knowledge and to their experience and then forward to school practice. This might require challenging students' assumptions and demonstrating new methods.

Applying: Students use these ideas to design lessons to try out on teaching practice. They test the new methods and experiment with new ways of behaving.

More concrete experiences: The college organises periods of practical teaching experience in schools, starting off a new cycle....

Example 3: In-service course on methods of teaching reading

It is relatively simple to design INSET/CPD on this pattern. The Joyce and Showers' (1980) **coaching** model in Chapter 3, if extended to include reflection, can become a spiral of this kind.

Concrete experiences: The serving teachers are teaching reading in their daily work.

Reflecting: A key stage, in which the tutor or workshop leader designs activities to help the teachers articulate what they already do, why they do it, and to evaluate current practice.

Generalising: The leader summarises and introduces, if necessary, new ideas and methods about children learning to read.

Applying: The teachers return to their classrooms and try out what they have learnt.

This experiential cycle has much in common with the 'social constructivist' model of learning. The tutor is **scaffolding the learning** by providing new ideas in such a way that the students construct new knowledge for themselves, thus helping them to move through their ZPDs. Students can work in groups and similarly extend each other's understanding.

The key elements are *critical analysis* and *reflection*. Everyone has lots of experiences: we don't always learn from them. For learning to take place, we have to analyse them, to think deeply about what is working, what is not working, and why, and then apply our findings in practice.

What research shows: evidence about how student teachers learn

So far in Chapters 3 and 4 we have looked at possible explanations of how learning to teach might take place. What evidence is there about what actually happens in practice?

It is very difficult to research in detail how teachers learn to teach. In the 1960s researchers carried out 'process–product' studies. That is, the students went through a particular 'process' – training course – and then the researchers tried to measure the 'product' – effective teaching – by observation. Firstly there were problems with defining 'effective teaching' and secondly this research only examined fairly simple behaviour patterns (such as the use of visual aids)

shown by the teacher. It did not find out why the teachers behaved that way or how they thought about it.

More recently, researchers have tried to understand how young teachers' thinking changes during their training years. As well as observing the students, the researchers interviewed them repeatedly, and invited them to keep journals telling what they thought and felt about their progress. This is time-consuming and therefore can only be done with small samples of students.

Calderhead and Shorrock (1997) *Understanding Teacher Education*, pp 186–188

These authors studied 20 graduate student primary teachers in England. Ten were doing a one-year Post-Graduate Certificate in Education (PGCE) and ten were doing a two-year school-based training course. They were all in their 20s or older, and had high levels of motivation and self-direction; some were switching to teaching from other careers. Here is a condensed version of the research conclusions:

- In examining the reported learning experiences of the 20 student teachers in this study, five different types of learning experience could be inferred. First of all, there is knowledge accumulation, the learning of information vital to the task of teaching ... about schools, about children, about the curriculum, about procedures and strategies. Much of this is simply factual information that students need to have readily available and is learned from college lectures, books, school documents and conversations with teachers and tutors.
- Second, there is performance learning. Part of the task of teaching is to perform, to act as a teacher in the classroom ... This requires a detailed awareness of self and others and an ability to produce the various actions, movements, tones of voice, speech and gestures that are used to communicate in the classroom ....
- Third, learning to teach involves a lot of practical problem-solving. Planning lessons, thinking about how to cope with a particular form of classroom organisation, or arranging the day's activities all involve juggling various interests, opportunities and limitations in order to broadly achieve one's goals. [This was difficult for them because] practical problems are often 'messy' and can be viewed in different ways, as well as having a variety of solutions. Practical problem-solving involved bringing together various areas of knowledge and experience, looking for patterns and explanations, and mentally rehearsing various strategies in attempts to define and solve problems.
- Fourth, there is learning about relationships. In the view of the student teachers, negotiating and maintaining relationships in the classroom, and also ... with other teachers and parents, was a significant part of the teacher's work .... [Students suggested] that one had genuinely to like the children, to want to work with them and to be able to communicate that genuineness. They learnt it took time to build up good classroom relationships.
- Fifth, there are processes of assimilation in learning to teach. Teachers are constantly drawing upon a diverse range of strategies, beliefs, values and information in their everyday work, and there is considerable scope for dissonance. The images they have of themselves as teachers don't match the

kind of teacher they can see themselves becoming. Student teachers find themselves juggling different images of themselves and teachers, searching for rationales and justifications in an attempt to develop a more coherent and comfortable understanding of teaching and of themselves as teachers.

REFLECTION

Can you find examples from your own work experience of the five different types of learning that Calderhead and Shorrock describe?

This research account shows, though in different words, that the students were learning in the four ways we have identified in earlier chapters: observing and imitating, acquiring knowledge, practising, and reflecting. However, it also brings out the personal and emotional aspects of learning to teach.

It shows how students have to learn to play the teacher role. To do this well, many people need to become aware of their own feelings and actions, reflect on them and deliberately act in appropriate ways. For example, they might learn to speak clearly, to be patient under stress, and to listen to pupils.

Student teachers have to learn to build appropriate professional relationships with all pupils, whoever the child is or however they behave. New teachers also have to maintain good working relationships with their colleagues and often with parents. Such skills may be difficult for some people, but are essential. They depend on self-awareness, the ability to manage one's own emotions such as anger or impatience, and on maturity of judgement about how to respond in difficult situations.

Finally, this research stresses the holistic nature of learning to teach. New teachers have to draw together all aspects of their training and integrate their knowledge, skills and beliefs into the ability to teach effectively. We return to this in Chapter 7 on assessment.

What is needed to teach adults?

We are suggesting that teaching adults is not quite the same thing as teaching school-aged pupils. But it draws on many of the same attitudes and competences.

Alan Rogers (1996:193–4) says that a good teacher of adults needs at least four sets of things:

1. A series of attitudes towards the student learners: concern, sensitivity and support; attitudes of flexibility and innovativeness; a willingness to experiment, to adapt the material to meet the specific needs of the learning group...
2. A clear understanding of the philosophy of adult teaching; i.e. how adults differ from children;
3. The skills of teaching, such as:
   - ***Planning skills***: selection of teaching–learning strategies and the effective use of learning resources

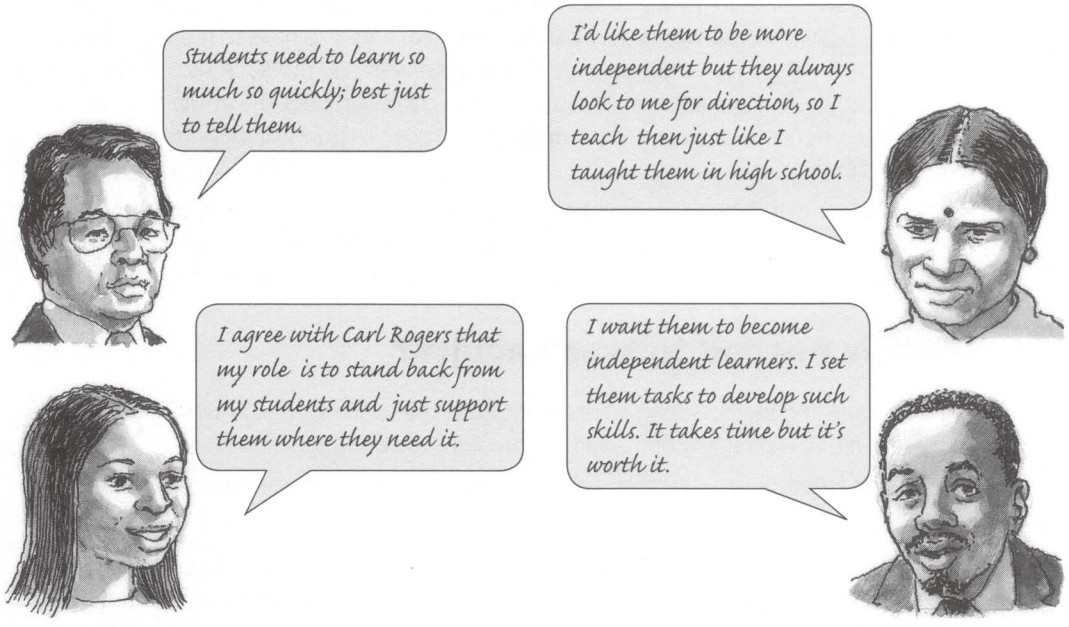
- ***Communication skills***: the development of means of communication and a sensitivity as to how effective these are, an awareness of when (for example) the wrong message may have been received by the listeners
- ***Caring–guidance skills***: counselling the participants, adjusting the learning tasks to the needs, intentions and capabilities of the individual learner
- ***Evaluation skills***: identifying the goals, monitoring progress and evaluating the usefulness of the learning process; presenting such evaluations to the participants
- ***Subject skills***: competencies in the subject matter of the course; continued learning in this area.

4. Above all, a measure of self-confidence and self-respect based on a belief in one's own competence.

REFLECTION

1. Consider the four points above. Which can you do well, and which do you need to work on?

2. How do the 'adult teaching skills' (point 3) differ from those you would expect a primary school teacher to have?



REFLECTION

Which of these positions do you feel sympathy for? If you are in a group, continue the debate on the role of the teacher educator. How would you ideally like to teach? What is realistic in your context? How can you gradually move towards your chosen position?

Concluding comments

In this chapter we state that student teachers should increasingly be recognised as adult learners. They will soon be working, and they need to become autonomous and independent learners. We have had to draw largely on UK and US sources, and readers of this book from other countries should consider how far the examples are relevant in their context. For example, the concept of self-directedness may be part of American culture, but not important in other places.

However, we also made the point that in today's world teachers will be constantly adapting to change, and that therefore they should be capable of organising their own learning, just as they organise learning for their pupils. In their future careers they may not have any close support to help them deal with new problems. They may even have to learn to teach new subjects, and they should be given the skills for doing this on their own.

Many teacher educators were themselves school teachers. In transferring to colleges or university departments of education, there are many challenges. Tutors have to adapt to new institutions, and to establish different kinds of relationships with their adult students. New kinds of pedagogy are needed. This leads into the next chapter, which looks in more detail at what kinds of teaching and learning might be appropriate for these more mature students.

REFLECTION

Some of the examples of learning to teach in this chapter assume that it is possible to work with student teachers in fairly small groups. How could they be adapted for larger classes of students?

Chapter 5
Pedagogy for teacher education

Overview

The first part of this chapter discusses some general points about teaching and learning under the headings:

- Teacher-centred and learner-centred teaching
- Content and process aims
- The organisation and management of learning.

The second part offers some practical suggestions for teaching/learning activities, grouped under:

- Presentation methods
- **Interactive** methods
- Independent learning methods.

Introduction

We are using 'Pedagogy' as an umbrella term to describe teaching and learning methods together with the rationale behind them. It can be seen as the practical side of the learning theories discussed in Chapters 3 and 4. There are at least two sets of good reasons for paying great attention to pedagogy in teacher education. Firstly, of course, we want our students to learn effectively. But secondly, we as teacher educators are modelling good practice for the student teachers, so they can implement similar methods in their future classrooms.

For example, student teachers are unlikely to learn how to use group work effectively by attending a lecture on group work where they are all sitting silently in rows. They will find out much more if they are themselves learning in groups. They will then know what it feels like to work collaboratively – or not – with others. Even more importantly, they will understand some of the difficulties involved in this method, for both the teacher and the pupils.

ACTIVITY

Below is a list of teaching methods that can be used with student teachers. For each, indicate some reasons for using it, whether you have experienced it as a learner, and whether you have tried it out yourself. You can add other methods.

Example:

Method	Reasons for using this method	Experienced? Y/N	Tried? Y/N
Role play	Learn through experience; create empathy, practise a skill	Y	Y
Project work			
Etc			

Lecture	Discussion	**Buzz groups**
Micro-teaching	Study of individual child	Oral presentation
Field trip	School visit	Quiz
Handout	Using **audio-visual aids**	School-based project

Keep your list with your notes. You can return to it at the end of reading the chapter and see whether you wish to amend any of your comments.

The teacher education curriculum includes many different subject areas. Some courses concern subject content, others subject methods, others educational theory or educational skills and practices. This chapter is written from a generalist standpoint and most of the examples will come from 'education'. Subject tutors can think of similar examples from their own area of specialisation. The methods are described mostly in the context of ITE, but most can be adapted also for INSET/CPD courses.

REFLECTION

How far do you think teaching methods do, or should, vary by subject area?

If working with others, compare methods which are particularly useful in your respective subjects. Why are they useful? Which on the above list would you like to try with your students?

Teacher-centred versus learner-centred teaching

There is a continuing debate about the respective roles of the teacher and the learners. This debate was reflected among the theorists quoted in Chapters 3 and 4. Both the behaviourists, and the social constructivists who follow Vygotsky, emphasise the role of the teacher, though in different ways and for different reasons. By contrast, Piaget and other constructivists emphasise the role of the learner, again in different ways. Different cultural traditions also have different ideas about the teacher's role, as further discussed in Chapter 11. Here we will try to clarify these ideas in the context of teacher education.

Teacher-centred teaching

This is also known as 'transmission' teaching. It implies that the tutor aims to transmit, or transfer, knowledge from themselves to the students. It is also sometimes called **didactic** teaching, meaning that the tutor dominates and controls the teaching–learning process. The emphasis is on teaching rather than learning.

People have referred to it as the 'mug-and-jug' method. This metaphor suggests we believe that students are 'empty' and the tutor's role is to 'fill' them with knowledge.

Paolo Freire termed it the 'banking' model. This highlights the assumption that tutors can put knowledge into students which can then be brought out for use another day in the same form as it went in, like putting money into a bank for later withdrawal.

Paulo Freire: a critic of teacher-centred education

Paulo Freire (1921–1997) was a Brazilian educationalist who worked mainly with poor and oppressed people. He believed that education should be a co-operative dialogue between teacher and learner, and that each must treat the other with respect. All teaching should be grounded in the experiences of the learner. Freire hoped education would make people more aware of the world and empower them to take action to improve their situation. His work has had much influence on informal education, especially the teaching of literacy.

(Adapted from www.infed.org/thinkers/et-freir.htm)

Learner-centred teaching

This phrase is frequently used these days. It suggests an emphasis on how the students are learning rather than on how the tutor is teaching. It implies that the student teachers are actively processing new knowledge and making their own meanings from it. For example, when they learn about child development, they are helped to relate this to their own family and use it to think about their children or their siblings in new ways.

Why are learner-centred methods much talked about but seldom practised? One reason is that such teaching/learning approaches can be more difficult. Students have to engage themselves more actively; often they need to 'learn how to learn' in this way. Tutors are still very important figures, but their role changes: they have to become organisers or facilitators of learning. This requires different skills.

For example, in teaching about classroom methods, the tutor needs to understand:

- what kinds of knowledge and ideas the students are likely to have already (for example what teaching methods have they seen or experienced?)
- what active learning methods could help them refine and reconstruct these ideas by gaining insights into the effectiveness of such methods (role play, discussion, reading, observing)
- what inputs from the tutor, or from other sources like practical experience, could provide new insights (a presentation by the tutor, observing an experienced teacher, reading a text)
- what activities would help students relate the new ideas to the old ones and help them move forward in their understanding (creating a lesson plan, writing a report, giving a talk).

REFLECTION

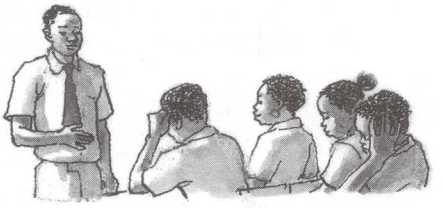
How well does this description of learner-centred teaching fit with Kolb's learning cycle in Chapter 4?

A warning

The differences between teacher-centred and learner-centred teaching go deeper than simple changes to room layout. Consider these two scenarios:

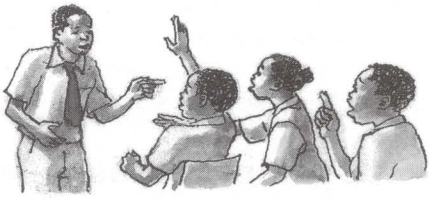
Comparison 1

Lecture A



Tutor is talking. He or she is enjoying being in control and being at the centre of the stage. Tutor knows the subject and is giving a good performance. Students are listening passively. Some are writing down the tutor's words. Others are dozing. At best, there may be some superficial learning of material which can be reproduced for an exam and then forgotten.

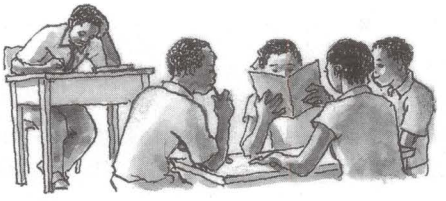
Lecture B



Tutor is talking. He or she has a very clear intention to engage the minds of the audience, using vivid examples, jokes and repetition of key points. Every now and then tutor pauses to interact with the students, asking them to question or discuss. Students are interested and motivated; they are mentally engaging with the information, rearranging and reconstructing their conceptual frameworks; they may take the ideas away, to think over them later. At best, they will understand them well enough to use the new concepts to solve problems.

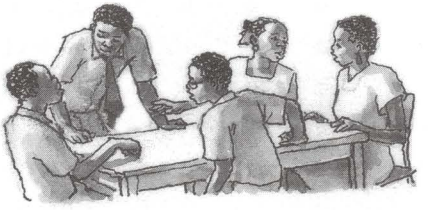
Comparison 2

Discussion A



Tutor is at the desk, marking books. Students are sitting in groups. In each group one student reads out a question from the handout, another offers an answer. Others say 'yes' and write it down. They don't understand the full implication of the question and their peers are not able to help them extend their knowledge. At best, they have thought superficially about the topic and produced an answer in student words rather than those of the teacher.

Discussion B



The students are sitting in groups, engaged in a task set by the tutor. Tutor circulates among the groups, asking and answering questions, supporting, challenging, offering new ideas and perhaps new resources. Students talk to each other, raise questions, and debate the answers. At best, they have been sharing knowledge, comparing views, and reconstructing their own ideas. This has enabled them to complete a task which they would not have been able to do before.

REFLECTION

What kinds of preparation would a tutor have to make beforehand for lecture B and for discussion group B?

Perhaps the best conclusion is to see the roles of the tutors and students as complementary, with neither being dominant. Learner-centred teaching should not mean that students have to discover everything for themselves and to 'reinvent the wheel'. The tutor has an important role in presenting ideas, guiding and **scaffolding learning**; there is a place for books, videos and now the internet. Teachers need to acquire a great deal of knowledge that has already been discovered and packaged into subjects, theories, etc. But such knowledge can't just be *given* to them passively: they need to be actively involved in building their own understanding through seminars, assignments, school experience and so on.

Learning to learn actively

However, students who have sat through long hours of transmission teaching during their schooling, are not going to switch to active learning methods so easily. They may well need much practice and encouragement before they – and you! – are happy operating in a different way. We return to this below.

Content versus process aims in adult teaching and learning

Content aims and objectives are usually about *what* knowledge and skills students should acquire.

For example, students will:

- understand topic A
- complete task B
- demonstrate method C
- be able to compare D and E
- and so on.

Process aims and objectives are about *how* to make the learning process most effective. Teaching plans, perhaps particularly for adults, need to include process aims as well as content aims.

Here are some examples of 'process aims'. During the teaching session the tutor will aim to:

- keep students' attention, enhance motivation and interest
- meet the different needs of individual students
- scaffold the students' learning
- empower them to become independent learners
- encourage them to learn from/through helping each other
- give them opportunities for using their new knowledge and skills
- model the approach we want them to use in class, suitably adapted.

ACTIVITY

Rank the process aims in order of importance to you. If you wish you could add one or two more.

Organising and managing learning

Tutors have the final responsibility for overseeing learning activities and learning situations, even though at times they may delegate some parts to students. There are basically four options when planning learning sessions:

- whole class
- small groups
- pair work
- individual work.

These are often combined within one session.

Whole class

This is not only an efficient way of presenting new material to a lot of learners at one time, but it also offers opportunities to stimulate and inspire them with new ideas. Most teacher education colleges will have large numbers of student teachers and a crowded timetable. Tutors are likely to be faced with large classes and, for at least part of the time, will choose to keep them together. There are ways of keeping a large class involved and active, as detailed under 'Improving the Lecture' below.

Small groups

These are useful for exchanging ideas, stimulating discussion and working collaboratively. You may allow groups to form on the basis of friendship. Alternatively, you may want to put able students together and give them more challenging work, while you help slower learners. Another option, when students are used to co-operating, is to form mixed ability groups so that the stronger students can help the weaker ones. Groups can be formed within a large classroom, or students can work on their own elsewhere, or after class, provided they are ready to take responsibility for working unsupervised.

Pair work

Pairs are often underused in higher education (and indeed in schools). A pair is a very 'normal' social group, for example two friends, a married couple, two teachers sharing parallel classes. Like small groups, pairs can scaffold each other's learning and give each other confidence; it is almost impossible for someone to keep silent in a twosome and people usually feel safe to speak there. Pairs are easier to organise than groups: furniture need not be moved, and pairs can work even in a traditional lecture theatre. In some ways, pair work is often more useful than group work. It is a good way to introduce co-operative learning for students who are unfamiliar with it.

Independent learning

Teachers will spend much of their working life alone in a classroom and may have to prepare, teach and mark without help. Student teachers need to gain experience and confidence in gathering information, making their own summary of it, or using it to solve problems. These are good reasons for setting individual assignments.

Some examples of pedagogy suitable for the college classroom

We suggest that methods for teaching adults can be divided into three categories:

- Presentation methods: teacher-led activities such as lectures, use of reading texts or audio-visual equipment
- **Interactive** methods: interaction between teacher and learner, or between learner and learner, such as discussions, role play, group activities, and pair work
- Independent learning methods: in which the learners work on tasks on their own or in small groups, exploring and discovering knowledge for themselves through practice, experiments, reading and writing.

(After Rogers 1996:188)

We have only space here for a few examples of each. Most can be used with the whole class, groups, pairs or individuals. In places, we have included a commentary linking the pedagogy to the learning theories discussed in Chapters 3 and 4.

Presentation methods

The most common form of presentation is the lecture, especially when groups are large and learning resources are limited.

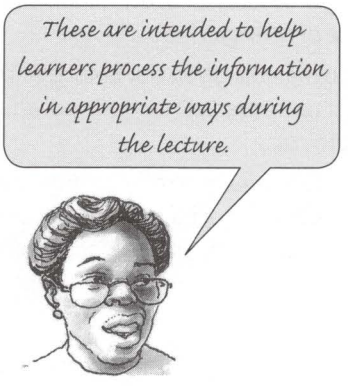
Improving the lecture

Lectures are often teacher-centred. But they can be made much more student-centred and effective with some very simple techniques. The key aims here are:

- to ensure that listeners are mentally connected to the lecture for as much of the time as possible, taking in, reviewing, and integrating the information, so that they are 'making their own meaning' from it
- to match your materials to the students' starting points, and allow opportunities for questions and clarifications along the way.

Here are some suggestions. A good way to start is to choose one or two and try them out. When you and the students need a change, try one or two others.

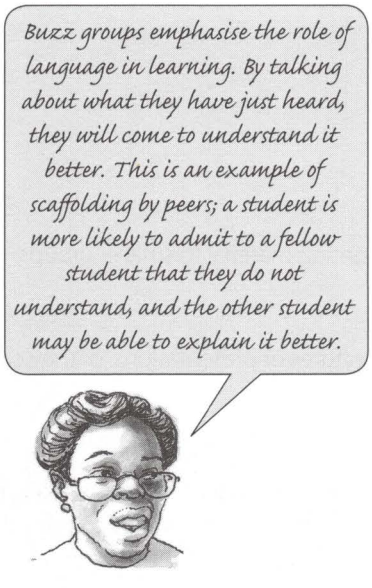
Before the lecture



a) Give out material that has to be filled in from information given during the talk, for example questions to be answered, definitions to be completed, a list of main points that need extending.
b) Give out some material to be studied beforehand, for example key words, points, questions, or skeleton notes covering the whole lecture. Tell the students to come prepared to comment/discuss/answer these.

c) Have the participants write down what they already know or think or want to know about the topic, (using **mental maps**, notes, questions etc). At the end of the lecture ask them to indicate what has been covered, what questions remain, etc.
d) Put notes on the board, with some short task to be done while waiting for the start, such as 'Recap what you learnt last time', or 'Write down what you think this lecture will cover', or 'What questions would you like answered by this lecture?'

Break up the lecture



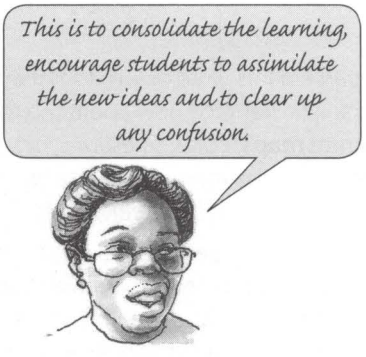
a) At the start of the lecture, get students seated so they can easily work with one or two neighbours. At intervals, tell these **buzz groups** to do something related to the lecture, for example to summarise to each other what has just been said, to explain anything not understood, compare their notes, write down questions for the lecturer etc. This should last not more than three to four minutes. It can be followed by a short time for students to ask you questions about anything that they, or their small group, didn't understand.

b) Give listeners a short task to do, for example, reading or writing for a few minutes to provide a change of activity.

c) Refer to material given out beforehand and request responses, either from individuals or from groups.

d) Have students raise coloured cards when they want clarification, a pause, or to ask a question (like football cards!). Hand signals would work as well.

After the lecture



a) Stop talking 15 minutes before the end of the session. Set quick tasks for pairs or groups: summarise, list key points, raise questions. You can take oral answers, or collect the papers.

b) Give out short questionnaires:

- to test understanding of content
- to evaluate the process of learning.

All these techniques can also be used when presenting material to smaller groups.

Interactive methods

These methods can follow or come before mini-lectures or presentations, or they can be used to fill up the whole of a seminar.

Discussion

Many tutors use discussion, but in different ways. Some approaches are more likely to be effective for student learning than others. Classroom research findings suggest that discussions are not always as productive as they could be.

REFLECTION

Think of one or two occasions when you have used discussion with your students.

What was the topic and what resources were used, if any? What did you do? What did the students do? What were the outcomes? How did you know? What were the strong and weak points of these activities/approaches?

If working with others, share the answers with your partner or the group.

Whole class discussion

In whole class discussion, a skilful tutor can scaffold the students' learning. By carefully directed questioning – using **open-ended** and **higher order questions** – the tutor can draw out responses from the students which will give some indication of their ZPD for this topic. Their answers should help the tutor link the new material to their previous understanding. For this it is important to use higher order questions rather than those which just require a factual answer or Yes/No. By probing and gently challenging their existing views, the tutor can lead the students to reach new levels of understanding for themselves.

Some examples of higher order questions

- Give me an example of X, and an example of Y.
- Why is Y not a good example of X?
- What do you think about X? Why do you think that? What evidence can you bring to support your view?
- If someone held the opposite view, what might they say, and why?
- What is the reason for X? Can you think of other reasons?
- What are the differences between X and Y? In what ways are X and Y similar?
- If we didn't do X, what might be the consequences?

ACTIVITY

Draft a series of questions to use with a group of students in your own subject. The questions should build on likely responses and aim for higher order thinking.

In whole class discussions, many students don't feel confident enough to speak up. But if they have already discussed the topic briefly in pairs or small groups, they will have rehearsed their ideas and have got help from their peers. They are then much more likely to speak up in the large group. This is particularly important for students who are not learning in their 'mother tongue'.

Small group discussions

These can be extremely productive. By talking and sharing ideas, participants can clarify things for themselves and scaffold each other's learning. They may gain in self-confidence and develop the social skills necessary for collaboration – both very important for teachers.

In effective groups participants will:

- all participate actively
- listen to each other
- give constructive feedback
- feel safe.

But if groups are not working well there can be problems, such as:

- one person dominates
- participants copy from each other, or from a text
- some people feel left out or not respected.

Research indicates that even mature adult student teachers often need help in how to participate effectively in group discussion. (See box below.)

Case Study: Training in discussion skills

During the course of an action research project into student-centred ways of teaching, Ms Dineo put her primary student teachers in groups to discuss and taped the discussion. Her findings were:

> Most students lack the skill of discussing. They say they 'discuss' and 'share ideas', yet they arrive at a consensus without having thrashed out the point in question thoroughly. Consequently ... the talkative students tend to dominate the 'discussion'. There are some students who are able to raise challenging issues ... but [other] students do not respond to the challenge; instead, they agree with what the challenger says.... The discussion dies away.

She concludes: student teachers should be 'drilled' in this skill with lots of practice.

Ms Dineo told her class of 80 students that in a good discussion, everyone is given a chance to say something; others listen and respond, critiquing, extending, or developing each others' statements. The chair **facilitates** this process, keeps them on track, and helps them reach a conclusion, which may include several viewpoints; the rapporteur (note taker) summarises the points, giving the alternative views if no consensus is reached.

She asked for six volunteers, who role-played a discussion – on a familiar topic (rural development) – following these guidelines, while the rest of the students watched. Though they had no training, the transcript shows their discussion fulfilled the criteria very well.

Her conclusion was now that her trainees did not need to be drilled, just shown what to do, and encouraged. The roles of chair and rapporteur, however, needed practice.

(Adapted from Stuart 1985)

ACTIVITY

Here are some possible learning outcomes for small group discussion such as that above. Which do you think would be most valuable for your students? Rank the outcomes in a diamond shape (see Figure 2.3).

a) Review content of topic

b) Elicit alternative views

c) Arrive at a consensus

d) Raise new questions
e) Internalise new ideas through talking about them
f) Help each other understand
g) Improve students' ability to express their ideas orally
h) Improve **active listening skills**
i) Share ideas.

Some practical tips for developing discussion skills

- At the start, everyone must have a chance to say something, (they can say 'pass' if they don't wish to speak) before anyone speaks twice.
- Each speaker must summarise what the last person said before they put their own point (ensures active listening).
- No one may speak unless they are holding the 'speaking horn' (any object, even a pebble, that can be passed around easily – good for groups with several dominant speakers, and useful in school classes).
- A ball of string is thrown to each person as they speak; they twist it round their finger before throwing it on. After five minutes, stop and look at the pattern created. Is anyone dominating? Is anyone left out?

Role play

REFLECTION

If you have experienced role play, either as a student or as a teacher, write down, or discuss with a colleague, the strengths and weaknesses of this method.

Role play can be powerful, memorable, motivating, and capable of helping students learn fast. It involves the emotions as well as the intellect. As students are producing the ideas themselves, it is likely to be within their ZPD. It draws on the students' personal resources, and they can learn from each other as well as from the tutor.

Drawing on students' memories: Role-playing good and bad teachers. (Teacher heroes and villains)

Ask students to recall particular teachers who taught very well – the 'heroes'. (This can be done as part of the educational autobiography exercise – see Chapter 2.) Let two or three volunteers act out their teacher's excellent methods. Encourage them to think widely: the good practice may be 'clear explanation', it may be 'encouragement', it may be 'attention to low achievers', etc.

Repeat the exercise, with memories of very bad teachers – the 'villains'. If they focus on such topics as corporal punishment or unprofessional behaviour, encourage them also to think back to poor teaching, muddled explanations, uncorrected work, etc. Make it very clear they should not mention names or other details that could identify the teachers they remember.

This is likely to be quite a powerful experience, and can be drawn on for follow-up lessons, for example:

- Lists of good and bad teaching techniques, methods, approaches, behaviours etc. can be drawn up, and later related to appropriate theories about learning or child development.
- Professional and unprofessional ways of behaving in school can be highlighted and discussed.
- If corporal punishment was mentioned, this can be used as a lead-in to a session about how this is regulated (or not), why teachers use it, what alternative methods of control are available, etc.

Bringing up some of these memories could be upsetting for some students and so you should make it clear to students that they do not have to disclose more than they feel comfortable with.

We know that new teachers tend to model themselves on their own teachers. This is often sub-conscious. By drawing on these memories, the students bring them into the open and articulate them. The models can then be critiqued; good practice can be copied and used more explicitly, and poor practice can be consciously avoided.

Teaching practical skills

Micro-teaching is a form of role play.

Micro-teaching

The tutor models a skill, such as asking higher-order questions, to a group of student teachers. Each student in turn prepares their own mini-lesson and then practises the teaching skill for five minutes or so. The other students usually role-play pupils, though the exercise is more useful if real pupils are used. Tutor and fellow students then feed back to the actor the strengths and weaknesses of their performance.

Here is an alternative approach, using a *poor* example to stimulate discussion of good practice:

Example: Tutor playing the negative role

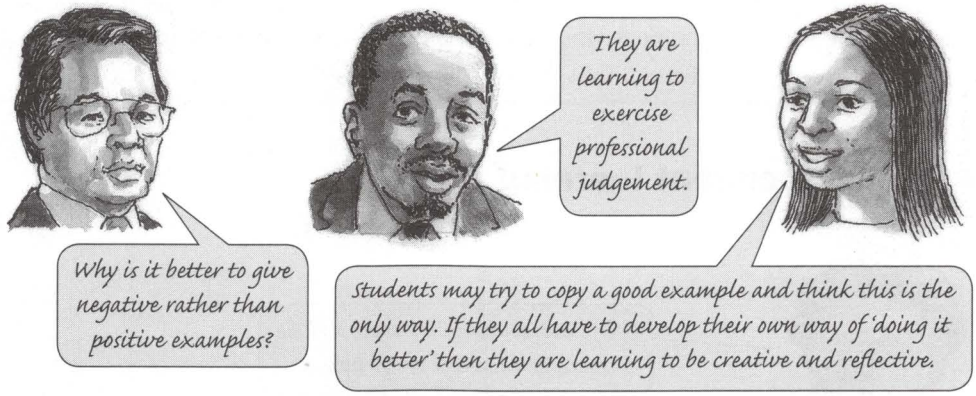
As an introduction to lesson openings, the tutor role-plays a teacher starting a lesson in a clearly inappropriate way. For example, the 'teacher' rushes in, fails to greet the pupils, drops things on the floor, writes on the chalkboard in letters too small to see, announces the topic in difficult language with no connection to previous work, tells the pupils to open their books before he has given them out, and so on.

The tutor then asks the students what a *good* teacher would do that was different, and follows this up with a short summary of 'theory' about starting a lesson.

The element of deliberate caricature by the tutor makes people laugh, and also enables them to criticise bad practice without hurting feelings. The method can be adapted to many classroom skills, such as demonstrating:

- very bad chalkboard writing
- poor questioning techniques
- handling discipline problems
- using visual aids.

This must, of course, be followed by discussion to ensure students see *why* these are bad, before they try to do it better. Ideally, they should then move into a practical session where they try to implement the good practice, either through role play, **micro-teaching** or in a real classroom.

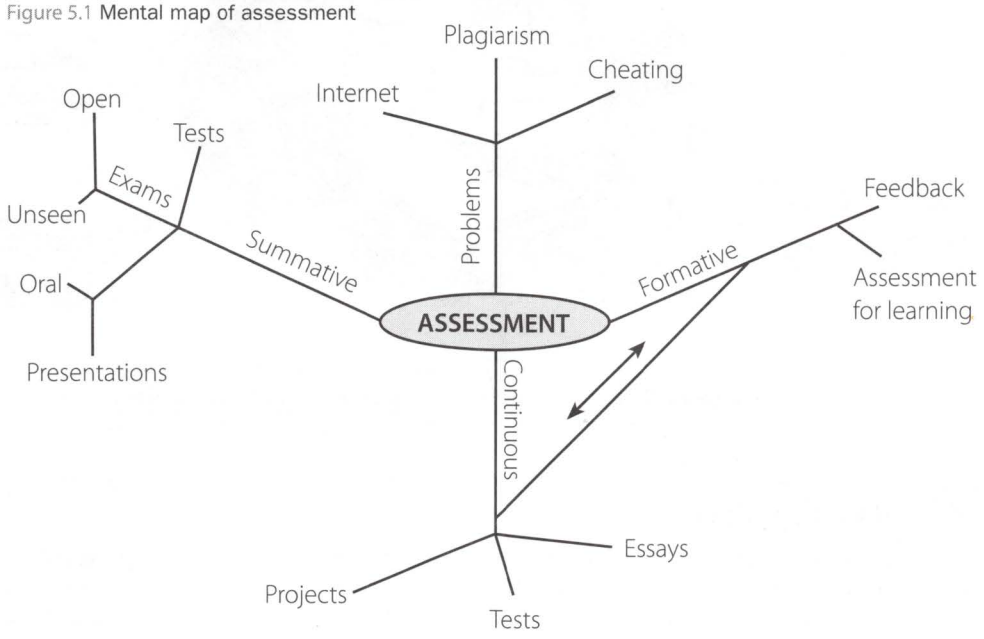


Mental maps

This is a creative visual way of representing ideas or information and relationships between them. They can be very simple, or very complex. Once students understand the basic idea, some may use them to take notes from lectures, to summarise books, etc. The tutor can gain some insight into where the student teachers are starting from; the students are encouraged to engage with the topic and reflect on what they already know.

The exercise can be motivating and enjoyable.

Figure 5.1 Mental map of assessment

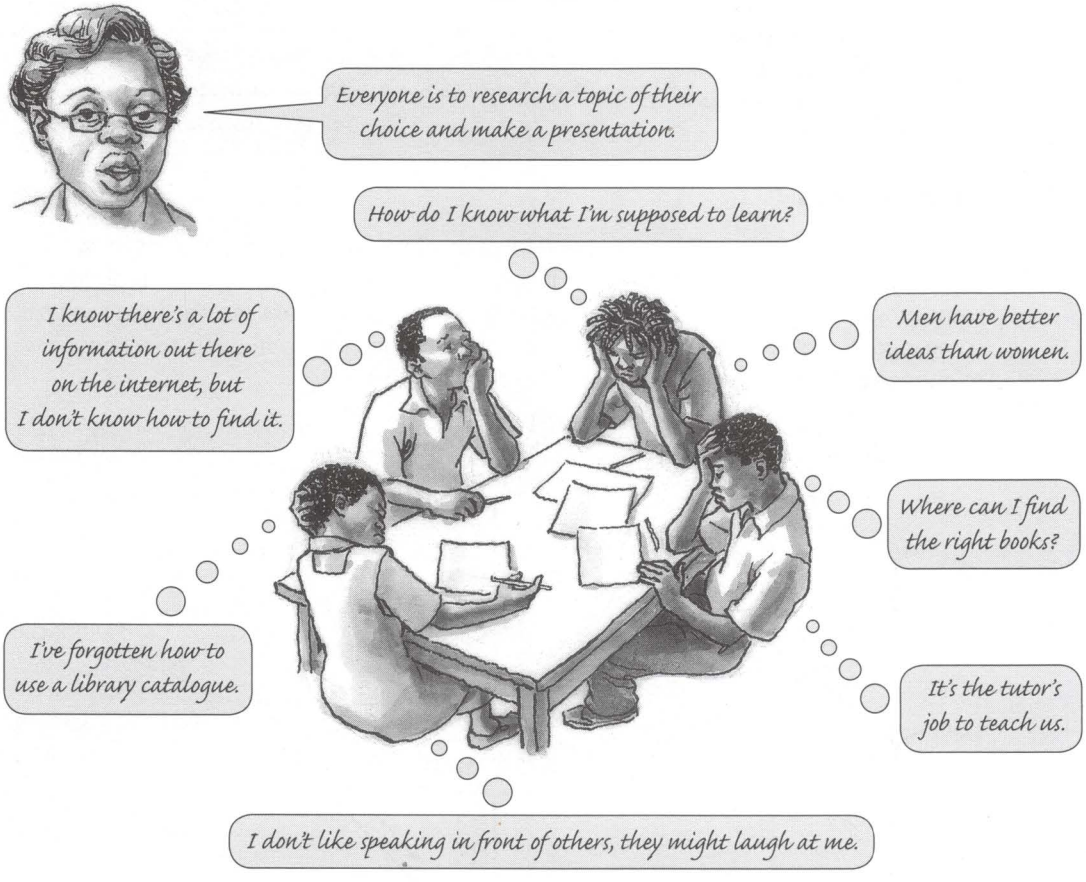


Tutor demonstrates on a board or screen, and then removes it. Students work as individuals, pairs or groups, using large paper if available, otherwise in notebooks or files. There is no right or wrong way of doing it. By looking at the results, tutors get some insight into what the students know, for example by what words and phrases they use, how much they put down, what links they show between ideas.

ACTIVITY

Draw a mental map about approaches to teaching and learning for teacher education, as you see them at this moment. Use your own experience, and what you have learnt so far in this chapter. If working in a group, discuss with a colleague

Independent learning



REFLECTION

Do your students say things like this? What else might they say? How might you help those that need confidence to gain it?

Students often find independent learning very difficult and time-consuming, particularly if they have done little of this at high school. It is helpful to explain at the start of their college programme what is expected and why. Tutors can then gradually build up students' skills and expectations, and to help them appreciate the strengths of the new approach. Clearly, this is a task for the whole teaching staff.

Project work

By this we mean activities in which the students have to find out something for themselves and report on it. Projects can be school-based, library-based, or even community-based, for example interviewing a sample of parents to find out what they think are the aims of schooling.

REFLECTION

Give some examples that you or your colleagues have used, or that you have heard about. Include library-based projects, school- or community-based projects, and if possible project work set by both subject tutors and educational studies tutors.

Project work is frequently recommended, but often students find it hard, and the results do not reach a satisfactory standard. It often works best when:

- students are given training in the relevant skills
- tasks are matched to students' ability, and to the resources and time available
- students have clear, structured guidelines on what to do, what the tutor expects, and the criteria for success.

Skills needed. Do the students have these? How and when are they taught?

- Library skills: using a catalogue, choosing relevant sources, interpreting contents lists, finding internet resources, etc
- Reading skills: skimming, taking notes, reviewing
- Writing skills: summarising, paraphrasing, communicating ideas clearly, and avoiding copying sections of text (plagiarism)
- Interpretation/transformation skills: getting information from tables, diagrams, etc; presenting their own material in tables, matrices, visuals, etc
- Academic skills: constructing and presenting an argument, using evidence to support statements, drawing conclusions etc.

If fieldwork is required, they also need skills such as:

- research planning
- data collection, for example observation, interviewing
- researching ethically

Resources for project work

Textbooks, reference books, photocopies of other selected texts, other students, schools, the community, etc.

Guidelines and criteria

Students need to be given clear directions for the project about focus, methods, expected length, timing, and **assessment criteria**, as exemplified below.

Example of guidelines for a school-based project

Focus: Investigate 'continuous assessment' in your practice school. We suggest you either use one class, and look at all the subjects, or take one subject and look at how it is assessed in all the grades.

Research questions: Formulate these clearly, for example how often are pupils assessed? What methods are used? What information is gained from the assessment? What is done with the information?

Methods: Collect evidence from documents, observation and interview.

a) Documentary evidence: From the syllabus, teachers' guides, Ministry regulations, children's exercise books, test or exam papers, etc. Ask Principal or head of department to help.

b) Observational evidence: Arrange with the class teacher(s) to observe a suitable lesson. Do a practice observation first. Have a checklist of things to note, for example: teacher's actions, pupils' actions, timing, methods of assessment, how discipline is managed, etc.

c) Interview evidence: Interview teacher(s) soon after the lesson observed. Use semi-structured questions such as:

- What were the aims of the test/assessment activity?
- How many times have you done it this term?
- What information have you gained, from the answers, about pupils' learning?
- What are you planning to do as a result?

Interview a sample of pupils in groups of three to four to find out what they think of the assessment methods.

Report: Write up your findings (1500–2000 words). Use headings such as: introduction, aims, purpose of the study, research questions, methods, summary of findings, conclusions. Add a reflective appendix saying what you personally have learnt from doing the project.

Hand it in to ..... by .....

Help is available from ..... at these times.....

Assessment criteria: Marks will be awarded for well-organised material, a clear argument, conclusions based on evidence, and good presentation (accurate use of English, neatness, diagrams and tables etc.)

Assessment

Projects can be done by individuals or by groups. If it is a group project, the tasks must be fairly divided within the group, so that the assessment is fair.

Oral presentation of project reports

This gives students practice in presenting complex ideas briefly and clearly – surely one of the most important skills for a teacher!

They can be used either formatively or summatively:

Formatively: Students present a summary of their project to the class, and receive feedback from both tutor and peers which they use to improve the written report which they will produce later.

Summatively: The oral presentation is assessed as the final product. The criteria have to be clear and agreed beforehand; it is useful to have two tutors present to avoid bias. There must be a marking scheme and a form for making notes on how each presentation meets the criteria.

Chapter 7 discusses more types of assessment.

ACTIVITY

1. Using your experience, brainstorm the main problems to do with project work.
2. In groups, think of possible solutions in your own situation.
3. Draw up guidelines for a project in your own teaching area. The project can be either school- or library-based.

Concluding comments

In the teacher education classroom, the roles of tutor and students should, ideally, be complementary. Both should be actively engaged. This chapter has highlighted learner-centred methods, because they are less well-understood than teacher-centred methods. Most of these methods can be used in both ITE and CPD programmes.

In some educational systems **interactive** and participatory methods are uncommon, and courses are not designed with such methods in mind. In such cases, it may be necessary to introduce them gradually. There may not be much support from colleagues. Students who have never experienced such methods may well be reluctant to participate at first. The tutor will probably have to spend some time 'teaching them to learn' more actively. We believe, however, that such time is well spent, since the students are likely to learn more and remember more. In particular, they will have experienced a wider repertoire of methods, which they will then be able to adapt for use with their own pupils. This may be one step towards breaking the cycle of automatically 'teaching as they were taught' and helping teachers learn to cope with rapidly changing schools and pupils.

With serving teachers on INSET/CPD courses, it may be easier to discuss the reasons for trying our such methods, helping the teachers to both reflect on their own teaching, and to analyse their own learning on the course. Yet it is difficult for teachers to move

overnight from using largely **didactic** methods to more interactive ones. They need time to analyse their teaching situation, experiment with new approaches, and reflect on what went well, noting what needs improvement, what suits their own style and what helps their pupils learn better. The tutor can help the process of change by asking them to address a different aspect of their teaching each week or each month, and gradually incorporate successful strategies into their repertoire of teaching skills. The ultimate aim is to help pupils learn, rather than to use a particular style or method of teaching for its own sake.

As we explain more fully in Chapter 8, it is important that other components of the curriculum are revised to match the focus on improving teaching and learning. The assessment system is particularly crucial, as the exams and tests can have a very strong effect on teaching methods. This is discussed in Chapter 7.

REFLECTION

How learner-centred can teacher education be? How useful would independent learning be to teachers in the environment where you work?

Chapter 6

The practicum: teaching practice and school experience

Overview

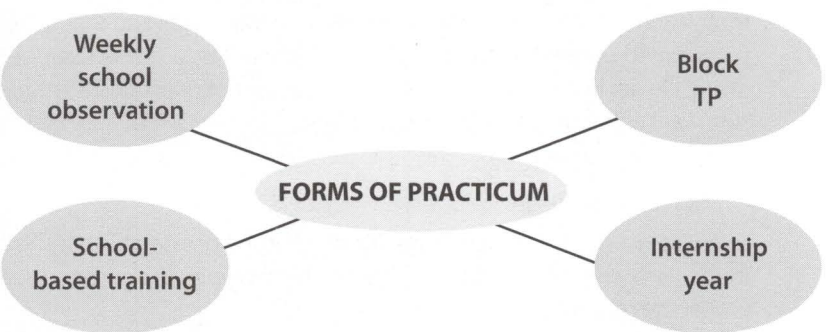
In this chapter we look at:

- what students can learn through practical experience, and how they learn it
- different forms of **practicum**, including its use in CPD
- how students can be supported, with particular reference to the role of the **mentor**
- some possible outcomes and how they can be assessed
- the need to integrate practical work into the rest of the curriculum
- management of the practicum.

Introduction

The 'practicum' is an overall term for what is variously called teaching practice (TP), school experience, practical teaching, and so on; in other words, it refers to the practical aspects of learning to teach.

Figure 6.1 Different forms of the practicum



The practicum should be at the heart of the professional curriculum for teachers. Instead, it is often added on as an extra bit of the course, like an appendix.

Students, however, often say it was the most useful part of the programme. Properly carried out, the practicum offers huge opportunities for the student to develop effective teaching skills and to take on many aspects of a teacher's role. But unfortunately, this potential is not always realised.

Two examples of student experiences

1. Muthoni is on three weeks teaching practice at Chula School. She is teaching maths to a Grade 3 class of 80 pupils. Suddenly her college tutor arrives, unannounced. After greeting her, he looks at her lesson plan and says: 'You have good objectives. The opening is OK, but the development is not very good.'

   He then sits at the back of the class and watches for the rest of the lesson. At the end he has ticked a number of boxes on his sheet and tells Muthoni:

   'You need to use more locally made teaching and learning resources. You should divide the children into groups. Always give the pupils some written exercises during the lesson. Your dress is appropriate. Your voice is good, and so is your blackboard work.'

   He leaves Muthoni a carbon copy of the mark sheet. In the space for 'comments' he has written: 59% – pass.

2. Sara is doing her second four-week period of teaching practice at Iqra Primary School. She is teaching English to 60 pupils in Grade 4. The class teacher, Mrs Khan, is sitting at the back of the class. She has recently received some mentor training.

   Sara observed Mrs Khan teaching English yesterday and together they planned Sara's lesson as a follow-up. Mrs Khan explained that some children are too shy to speak aloud and asked Sara if she could suggest any new approaches from her college training.
   Sara described how her tutor demonstrated simple pair-work exercises, where the pupils
   ask each other questions. The two teachers agreed Sara should try out this method. Mrs Khan promised to take notes about the behaviour of six very quiet children, as well as commenting on how Sara handled the class as a whole.

   In the lunch break the two teachers sit down together and discuss the results. Sara has noticed that some pupils appeared confused. Mrs Khan agrees but adds that the motivation and attention of the class was generally high, and that the quiet children participated better than usual. They agree Sara will try a similar exercise the next day, giving clearer instructions and using a simpler set of questions. Mrs Khan hands Sara a summary of her notes under the headings:

   Strengths of the lesson

   Aspects to work on

   Sara writes a short summary in her file of what she has done, what she has learnt from it, and what she plans to do next. This will be shown to the college supervisor at the end of the month.

ACTIVITY

Analyse these descriptions under the headings given in the table below:

Comparison of students' experiences on teaching practice

	Muthoni	Sara
Opportunities for student teacher to learn		
Feedback given to student teacher		
Relationship between student teacher and supervisor		
Types of assessment indicated		
Comment on any other aspect that interests you		

WHAT can the student teachers learn during the practicum?

Here are some possible objectives. Student teachers could:

a apply the professional knowledge learnt in college in a practical situation

b learn to solve problems of teaching and learning

c plan lessons and carry them out

d learn from their mistakes

e work alongside more experienced teachers and copy them

f learn things they can't learn in college such as .....(Put in your own example)

g learn how to work as part of a school community

h learn to be a change agent in a school.

Add your own objectives.

ACTIVITY

Rank these objectives, and any more of your own, as a line or in a diamond, in order of importance to you and if possible discuss the ranking with others (see Figure 2.3).

HOW do student teachers learn during the practicum?

In Chapter 1 we suggested there are at least four different ways in which people learn to teach. The practicum should provide opportunities for all of them, for example:

- learning by watching and imitating (or deliberately doing something different)
- learning by doing – practising, trial and error, learning from mistakes
- gaining new ideas, fresh insights and wider knowledge which might be applied or adapted at some point in the future
- reflecting on one's teaching so as to improve it: thinking analytically and critically about what they have seen and done, with the help of others such as peers, **mentors**, tutors.

All types of practicum can be evaluated against these four types of learning to see how far such opportunities are available and utilised.

Different forms of practicum

Many different methods have been used to provide practical experience, some short, some long. Sometimes the methods are dictated by circumstances, such as costs, the availability or not of suitable schools nearby and so on; at other times it seems that TP is done this way just because it has always been done this way!

Here is a list of some typical approaches; there can be many variations on each. Of course, the success of any method depends on the quality of the school, on the skills of the supervisor and/or mentor, and on the way that practice is linked into the overall teacher education programme.

Observational visits

Students, in groups, pairs, or individually, visit a nearby school for a day, or half a day, and observe classes in action. This is usually done early in the programme, before the first teaching practice.

Strengths: It gives student teachers some fresh images of teaching to discuss in class and to think about.

If focused observation is carried out important issues can be raised, relating to curriculum, learning theory, pedagogy, etc. Sometimes students have a project to carry out, such as a child study to help them understand child development.

Serial teaching practice

Students spend a day each week, for the whole term, teaching in a nearby school. This is often done when the college has a demonstration school attached to it.

Strengths: Students get a gradual introduction to teaching.

They are reminded regularly what a real classroom is like.

They can build up their skills and understanding from week to week, perhaps teaching groups of pupils before working with a whole class.

If tutors and the school(s) work together, college lessons can be linked to the students' on-going experiences in school.

Block teaching practice

Students spend a number of weeks – from two up to a whole term – in one school.

Strengths: Students become familiar with the school and the pupils so they can adjust their teaching appropriately. Teaching is seen to be about building relationships with pupils and other teachers, not only as a set of skills.

There is time to develop a broader knowledge of teaching, including writing schemes of work, assessing pupils, etc; the longer the block, the more responsibilities the student can take on.

If the college curriculum is organised appropriately, students can relate their subsequent courses to the experiences they had in schools.

Internship

Students are employed as teachers in the school, perhaps on a reduced timetable, for a whole term or whole year. This may be in the middle of the programme, or at the end.

Strengths: They learn to take on almost all the usual teacher's roles, but they are still being supervised, either from within the school or externally, so they have some support.

They can watch their pupils' learning develop over time, and thus see how successful their own teaching is. They also experience the school's relationships with parents and the community.

School-based teacher education

The students are attached permanently to one school for the duration of the programme, while studying by distance methods. Usually they are released for blocks of study time at a college – anything from an afternoon a week to three months – or they may be required to take weekend or vacation courses. Sometimes the school does all the training and assessment, using experienced and/or specially trained teachers from within the school. Normally this will be moderated by an external body such as a university department of education (UDE).

There is one key variation to be noted. In some programmes, the student is employed as a teacher, and often carries a nearly full teaching load. (See case study of MIITEP in Chapter 10.) In others, the student is a 'supernumerary' i.e. unpaid, and takes on the teaching role gradually, first observing, then working with other teachers, before finally taking over a class.

Strengths: Student teachers learn by doing; practice takes precedent over theory.

They are inducted into the full teaching role, and come to understand all aspects of school life, before they graduate.

There is room for experimentation; mistakes can be rectified during the course.

If supernumerary, the student has a gentle start to teaching and has time to observe a number of different teachers.

ACTIVITY

1. Add any other 'strengths' to the above list. List the 'weaknesses' of each approach.
2. Choose one of the above (or any other form of teaching practicum you are familiar with). How far does it encourage the four kinds of learning set out above?

The practicum and CPD for teachers

In CPD there is no need to organise much school experience because the teachers have this as part of their regular work. This day-to-day experience can be used by CPD tutors in two main ways. One is to broaden teachers' experience by arranging for them to see others teach, and the second is to help teachers to improve by reflecting on their own teaching.

Here are some ways in which these two approaches can be used, separately and together.

- Organise activities that encourage teachers to reflect on their work in schools and plan how they would implement things they are learning on the course.

- Video teachers working in local schools to show how new methods can be implemented. Watch the video during a session with a 'watching focus', such as noting down the ways the teacher uses songs in the lesson. Follow this up with discussion, such as sharing similar successful experiences.
- Give teachers the opportunity to try out new methods with support through various forms of **micro-teaching**. Pairs of teachers can try out an aspect of teaching (for example giving individual support with early reading) with one or more children. After the children have left, the teachers give each other feedback about the good points and points for improvement in their partner's teaching.
- Observe and discuss 'demonstration' lessons together.
- Hold the various sessions of a course after school in a different local school each week or month. Part of the session could be allocated to the 'host' teacher explaining how they have implemented what they have learnt so far on the course.
- Workshops can be linked into other opportunities for teacher development such as **cluster meetings, peer-coaching** and visits from advisors.

REFLECTION

Which of the four types of learning to teach (observing, practising, studying, reflecting, see Chapter 1) might take place in the above examples?

Support for the student teacher

The key question is, of course, what kind of learning actually takes place, and if so, what factors help make it happen. The amount and form of support is crucial, in both ITE and CPD programmes. In some circumstances student teachers are left virtually on their own. They only get brief and infrequent visits from the college tutors, and these are often focused on assessment rather than support. In other places the class teacher, or **a co-operating teacher** may be able and willing to give advice. However, the process becomes much more effective if an experienced teacher is trained to act as **mentor** to guide, support and challenge the student teacher. Teachers on in-service courses need similar support. We shall now look at ways of supervising and mentoring.

Supervision

The term supervision really means 'looking from above'. It implies an unequal relationship of a rather impersonal kind: a 'more highly qualified' person watching a 'less qualified person' to ensure they 'do it right'. Supervision is often used in teacher education to describe the process by which college tutors visit their students in schools to observe and assess. Many tutors also see themselves as 'helping' their students, but they cannot do very much on short, infrequent visits. In addition, their assessment role may conflict with the support role.

REFLECTION

If you have been involved in supervising students on teaching practice, note down how you feel your visits help the development of the student teachers. Are there any aspects of learning to teach that you are unable to help them with?

Clinical supervision

In order to ease this conflict, the concept of 'clinical supervision' was introduced into some teacher education systems. It was an attempt to move away from a hierarchical relationship between tutor and teacher and to be systematic and developmental rather than judgemental. The key features are that the 'supervisor' and teacher work through an agreed sequence of stages, and that each person takes a share of the responsibilities. At its most basic, the method involves:

- a pre-observation meeting at which both parties agree what the supervisor will look at, how this will be done, and what they expect to come out of it
- observation of teacher by supervisor
- a post-observation debriefing and discussion.

This has been adapted in some countries as a model for pre-service teacher education. However, it is sometimes considered more appropriate for CPD, where the teacher has more experience and where assessment is not so important.

REFLECTION

Consider the strengths and weaknesses of clinical supervision a) for ITE, b) for CPD.

Mentoring

The term 'mentoring' implies a more personal and supportive role. While the **mentor** may be older, and certainly more experienced, they are not necessarily 'looking down on' the student teacher they are mentoring. They are expected to give advice and guidance, and act as a 'critical friend'. The relationship is more like one between colleagues.

In teacher education in many countries there is a strong trend towards using experienced teachers in schools as mentors for student teachers, and sometimes for newly qualified teachers (NQTs) in their first year. One main advantage, of course, is that the mentor is in the school and can work with the student teacher on a regular basis.

A mentor's role includes the following:

- ***Modelling***: Demonstrating skills, showing good practice. The mentor should be an experienced and confident teacher who can be a good role model.
- ***Tutoring***: Explaining, sharing their knowledge and experience, giving direction where needed, and helping the student teacher achieve the desired outcomes (in terms of standards, competences, skills, etc). This may be harder than it sounds: good teachers often 'know more than they can say' and may find it difficult to explain to a **novice** skills that have become second nature to them – such as keeping track of everything going on in a classroom, or timing a lesson.
- ***Giving feedback***: As part of formative assessment. The mentor needs good communication skills, and the ability to offer the appropriate mix of praise and constructive criticism.
- ***Supporting***: **Active listening** and counselling in times of difficulty. The personal element is very important; the mentor needs interpersonal skills and a genuine desire to help a young colleague succeed.

The mentor may also be involved in summative assessment (see Chapter 7) of the student teacher, which can at times cause a tension in the relationship. For example, a student teacher might not want to ask advice on their problems if they know the mentor is assessing them as well as advising them.

How the mentor assists learning

One way of describing the process is to adapt Kolb's experiential learning cycle, described in Chapter 4. Applied to the practicum, it might look like this:

1. Student teaches a lesson; the mentor observes.
2. Student and mentor both comment on what they think actually happened, and discuss what went well, what went badly.
3. Mentor helps student to relate what he or she has just done – both strong and weak aspects – to some wider framework. On a simple level, this might be how it fitted into the scheme of work, what was the evidence for pupils' learning, why the class behaved as it did. On a deeper level, they might talk about child development or learning theory that could be applied to the lesson.
4. Mentor helps student plan the next lesson or series of lessons, agreeing what skills to practise, what targets to aim for, or what alternative strategies to try out.

Here the mentor is 'scaffolding' the student teacher's development. The mentor begins by finding out where the student is starting from – what they know, what they can do and what they find difficult. The mentor then provides some input, such as a demonstration, some information, or a piece of advice, which the student is able to use and try out. In Vygotsky's (1978) language, the mentor works within the student's **zone of proximal development** (ZPD) to help them to do something they could not – yet – do on their own. The story of Grace (p. 37) is an example of what a good mentor might do.

Initially, this takes up a lot of the mentor's time. But gradually the students become more independent of the mentor and can take themselves through such cycles with less outside support. After some practice, two students could carry out **peer observation** and support each other in this way.

Such processes are also common in CPD, when experienced teachers observe and comment on each others' lessons. This is sometimes called peer counselling, or peer tutoring

All mentors should be given training for this complex job, and to be rewarded in some way. Practices differ in different places and education systems. Sometimes mentors are paid extra. Sometimes they get a lighter teaching load – that is, they teach fewer lessons in exchange for the time spent on mentoring. Sometimes they take on the work because they want the experience; it looks good on the application form for a more senior job. Many feel rewarded by the satisfaction of helping to prepare new teachers. Sometimes it can help them gain access to further training, or to move to working in a college.

REFLECTION

Describe your ideal mentor in broad terms. Then select the three things you think it most important for a mentor to know or be able to do. If possible, compare your list with a colleague. It might help to think about the kind of person who most helped you when you started a new job, perhaps as a teacher, or as a teacher educator.

Case Study:
Mentoring in Zimbabwe

Summarised from: *Mentoring and the Professional Development of Pre-service Primary Teacher Training Students of Masvingo Teachers' College, Zimbabwe: a case study* by Sharayi Chakanyuka, unpublished PhD thesis, University of Sussex, 2002.

Context: At the time of the research, all primary student teachers were placed in schools for the whole of the second year of their three-year diploma course. Each student was attached to an experienced teacher who acted as mentor; typically they shared a class, the teacher demonstrating lessons and then observing the student teaching. Mentors guided the student in acquiring 'such skills as lesson planning, teaching skills, lesson delivery, teaching approaches and methods, class control and documentation'. (p. 136)

College tutors visited the students to observe students and talk to mentors once or twice each term. The tutors retained responsibility for assessing students.

Findings: The study concludes that mentoring was effective overall. The positive effects were:

- Students were introduced gradually to practical teaching in a supportive environment.
- Almost all students had clearly benefited from working alongside their mentor.
- Most mentors found the work stimulating and felt they had gained new ideas and knowledge from the students.

The weaknesses included:

- Occasional exploitation of student teachers, for example when the mentors left them to do all the teaching.
- Mentors were not trained and not all had the required skills.
- There was no written curriculum for TP and so there was no overall agreement on what the students should learn and achieve within the year.

The findings suggest that students learnt mainly from observation, imitation and practice. There was little evidence that they were helped to reflect or to explore new ideas about education. Mentor training would help mentors to support these other types of learning.

One interesting finding was a cultural difference between relationships that the Zimbabweans felt comfortable with, and those advocated by some Western literature on mentoring. The majority of student teachers described their relationship with their mentor in terms of parent/child roles. At best, this enabled students to develop in a nurturing atmosphere; at worst, the mentors were over-protective, or too directional, denying students opportunities to experiment. Other students described the relationships as those between siblings or friends, but only one pair seemed to have developed the kind of collegial and democratic relationship shown in example 2 at the start of this chapter. 'All the mentors preferred hierarchical relationships in which they were accorded respect for their role as teacher trainers.' (p. 280)

Chakanyuka comments that 'respect for elders and authority is a hallmark of African culture in general' and that it should not be lost. However, mentors should value a degree of assertiveness in students, while students should be encouraged to put forward their own ideas and develop their own styles. She concludes:

> It would appear that student teachers developed their full potential when they (a) accepted and utilised their mentor's advice and guidance and (b) were allowed the freedom to try out new ideas and methods of teaching. The second condition ensured that student teachers developed into individual teachers and not duplicates of their mentors.... [they were] able to reflect on their mentors' advice and adopt what they found workable. (p. 158)

REFLECTION

1. How might aspects of your own cultural context affect the mentoring relationship?

2. How might college tutors feel if mentors took over some parts of their role in this way?

Variations on mentoring

The ideas underlying mentoring can be used in simpler ways, even if a full-scale system cannot be introduced. For example, a college could:

- select two or three nearby schools and train the teachers in mentoring skills
- send students there in small groups, a week at a time, throughout the year, in addition to their longer TP in less well-supported situations.

Mentoring is also often used to support newly qualified teachers, and teacher educators, in their first jobs.

REFLECTION

Think of ways in which mentoring could be used in your context.

Outcomes of the practicum

The desired outcomes of the practicum will, of course, differ in different contexts and for different programmes. But to some degree, we would expect student teachers to:

- develop confidence, so they can 'act as a teacher' and to some extent 'feel like a teacher'
- acquire some basic skills: teaching subjects, organising classrooms, handling pupils
- acquire a store of 'experiential knowledge' and a 'repertoire of cases' on which they can draw to help them solve problems more easily in future
- develop the beginnings of 'personal theories', including an ability to evaluate their own teaching, and a willingness to develop further on their own.

In CPD courses, the outcomes may be focused on just one or two aspects of teaching, such as introducing new methods, or on improving assessment techniques.

There can also be unplanned, or undesirable, outcomes. In a bad scenario, they might have:

- developed coping skills and learnt to survive in the classroom, but lost their enthusiasm
- learnt some ineffective teaching methods, picked up from other teachers
- acquired a sense of false confidence, that they now know it all; alternatively, a fear of doing it wrong, because they believe there is only one right way to teach and are unable to learn by trial and error
- rejected all educational theory, because they found they couldn't apply the theory they had learnt to real classrooms.

REFLECTION

Which of the above have you experienced with your own students? Have you noticed any other outcomes, good or bad?

Assessment

Assessment must be linked to outcomes. Before we assess, we need to be clear about what we expect the student teachers to be able to do, and at what level or standard they can do it. This is fully discussed in Chapter 7; here is a brief summary.

Measuring skills or assessing a performance?

There are many ways of evaluating the results of the practicum. Here are two contrasting ones:

1. A number of skills and/or behaviours expected of a good teacher are defined, and set out as a checklist. Examples might be: making a lesson plan, introducing the lesson, asking questions of equal numbers of boys and girls, controlling pupils, using appropriate resources, being punctual, dressing appropriately, etc. The observer then gives a mark – typically between 1 and 4 – for each skill/behaviour and adds them up. The student then receives a mark, often expressed in percentage terms, for each lesson, and these are added together for the final mark.
2. A series of broad competences are set out, such as:

   - demonstrating knowledge of content and pedagogy
   - managing student behaviour
   - communicating clearly and accurately
   - reflecting on teaching.

For each, there is a series of statements describing how a teacher might perform these competences at different levels (typically from 1 – unsatisfactory to 4 – excellent). The observer is trained to use their professional judgement to assess which level the student teacher has reached. When these results are combined, the verdict is not a mark but a statement such as Pass, Fail, or Distinction. It may include a profile of the student, outlining their strengths and advising which competences they still need to work on, perhaps during their **induction year**.

REFLECTION

1. Which type of assessment described above would probably result from a behaviourist understanding of learning to teach and which might be found in a teacher education programme based on constructivist or humanist ideas?
2. Which is closest to the kinds of assessment used for TP or CPD in your institution?

Who does the assessment?

Traditionally student teachers were assessed by college tutors, supervisors, inspectors and so on. However, in countries where serving teachers have good professional training, it is increasingly common for the school to help assess the student teachers, either on their own or in partnership with the outsiders.

One reason for this is that senior teachers, mentors and head teachers are already in schools and can observe the student teachers far more often than the outsider, who can perhaps only visit two or three times. The school-based assessors can build up a much more detailed and probably fairer picture of the students' strengths and weaknesses, especially if there is a long teaching practice or **internship**. At the end they will be able to give overall judgements such as:

> This teacher works hard, achieved good results with pupils, has reflected on their own practice and is developing into a good teacher. PASS

> This teacher has been unreliable and their pupils have not made progress. FAIL

REFLECTION

What disadvantages might there be in using school-based assessors? How could these be overcome where you work?

Integrating the practicum into the curriculum

The content and theoretical knowledge taught in the college or university has to be well integrated with the opportunities for practical learning in schools. Often not enough thought is given to this when developing the curriculum.

Here are some questions that tutors or curriculum planners need to ask themselves:

- Does the sequence of topics dealt with in Educational Foundations or Professional Studies take into account the timing of teaching practice (TP)? What will student teachers need to know before they go to schools, what is best left until afterwards?
- How will the students' learning experiences on TP be utilised in the post-TP classes? In subject courses, is time set aside for analysing the problems students found in teaching certain topics in the syllabus?
- Are assignments set which use the TP experience? These could include tasks done during TP, such as mini-research projects carried out in students' classes, or reflective essays written later, analysing the teaching problems found, and suggesting strategies for overcoming them.
- In a school-based programme, or **mixed mode programme**, are study units organised so that student teachers can observe, or teach, something related to the topic they are studying? Do their assignments use these opportunities?

REFLECTION

Choose a programme you are familiar with and think how the above questions might be answered.

Integration between school and college

From a learning to teach point of view, the ideal situation would be one where student teachers moved frequently between college and school.

Such a programme would need:

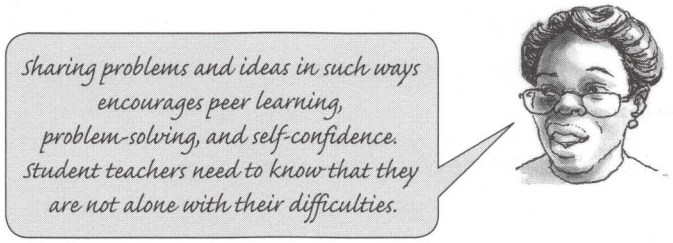
- enough schools within the local area, with a good transport system
- alternatively, a few 'professional development' or 'demonstration' schools, used for teacher education purposes
- close collaboration between school and college/university so each knows what the other is going to be doing/teaching
- agreement between the partners about what is good teaching
- CPD for school staff so they can take some responsibility for organising and supervising or mentoring.

However, even in situations which are not ideal, there are many ways in which tutors can work with students in the college to prepare them for TP and to help them to make use of the experience afterwards.

Some of the methods described in Chapter 5 can be adapted. Here is just one more example (from Woodward 1992).

Questions round the circle

Ask a general question such as: 'What will you do/did you do when children are/were noisy?' Each student in turn gives one answer and the others ask them brief questions about it. After this the next student gives their answer, is questioned, and so on round the circle.



Activities such as this take time and work best with small groups. It may be possible to select some able and self-confident students and prepare them as leaders. First, as a group, they demonstrate the activity to all the students. Then they **facilitate** other smaller groups in doing the exercise.

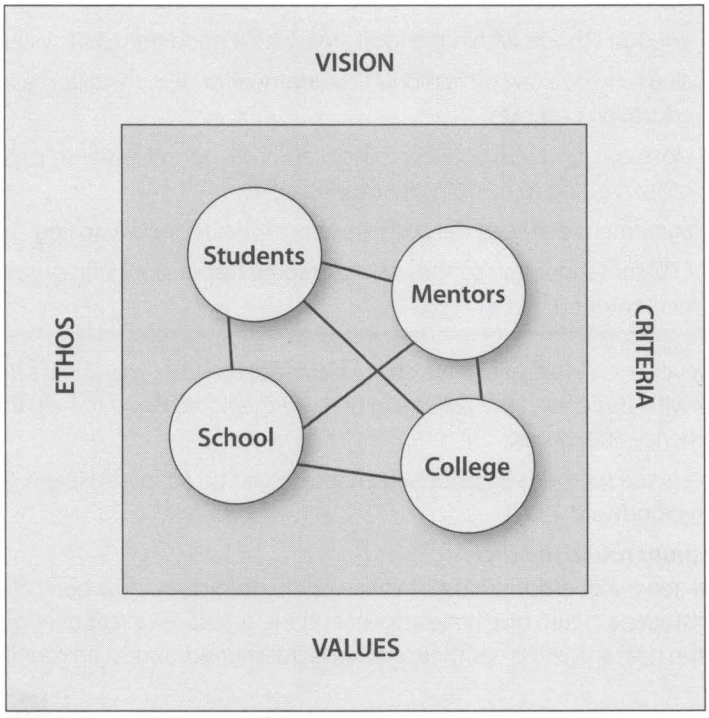
Management of the practicum

For a practicum to be effective in helping ITE students to learn to teach, all those involved need to work together:

- the student teacher
- the mentor/co-operating teacher
- the placement school
- the teacher education college.

However enthusiastic the student teachers, however motivated the mentors, however dedicated the tutors – the practicum has to be well organised and well administered. The whole exercise has to take place within an agreed vision of good teaching and how to evaluate it. For these aspects, the college or university must take responsibility.

Figure 6.2 Collaboration for the practicum



The practicum is likely to work best when:

Student teachers:

- are ready to make the best of their opportunities
- take the practicum seriously
- ask for help when they need it
- listen carefully to advice when offered, but take responsibility for making their own judgements.

Mentors:

- are willing to take on a teaching and support role for students
- undergo training for this
- take responsibility for one or two students at a time.

The schools:

- allocate a mentor for each student teacher, but also take collective responsibility for the student teachers i.e. all teachers being ready to offer help if needed
- are welcoming; organise **induction**/orientation; provide information and as many resources as they can
- play a part in assessment.

The college or university department:

- takes overall responsibility for managing the practicum, including mentor training
- creates or negotiates the vision of good teaching and sets the standards, in partnership with government authorities as appropriate
- works in partnership with the schools
- provides clear written guidelines for everyone
- takes the main responsibility for assessment but shares this with the schools where possible.

REFLECTION

Are there any points listed here that would *not* be appropriate in your situation? Why not? What responsibilities would you add to the list?

Constraints on the practicum

Providing suitable practical teaching experience is one of the most challenging aspects of a teacher education programme anywhere in the world. The difficulties are often even greater in developing countries. Here are some of the problems often mentioned:

- Lack of time in the programme
- Distance between schools and the college, causing transport and accommodation problems
- Poorly resourced schools
- Over-stretched, inexperienced and sometimes uncooperative teachers
- Logistical difficulties in sending tutors to supervise/assess
- Students with too many family responsibilities and insufficient support
- College tutors and school teachers giving different advice to student teachers
- Costs: to the students, the school, and college and the education system generally

REFLECTION

1. Which of these problems have you encountered?

2. What solutions can you suggest to any of the constraints?

Concluding comments

Learning to teach is a developmental process. The campus-based parts of teacher education programmes are useful, but they are not sufficient for developing a teacher's ability. Learning to teach, or learning new teaching skills, mainly takes place during the practicum. Student teachers have to build up their skills and experience gradually, over a period. The practicum, in whatever form, has to allow time and space for this, as well as appropriate support for each stage. For this to be successful, a number of factors need to be put into place and organised, as described briefly in this chapter. Key issues are the kinds of support given in the school, and opportunities to link the practical work to the wider issues discussed in college.

The proportion of time which student teachers on ITE courses should spend in schools, rather than on campus, is a much-debated issue. At the start of the 21st century, there was a widespread trend towards making practical training a much more important part of teacher development generally, both in ITE and CPD. In some countries, teacher education was being carried out almost entirely by and in schools, using specialist staff and mentors. Chapter 8 looks at different ways of structuring ITE programmes to include different amounts of school experience.

Teaching is now increasingly recognised as a career in which lifelong learning is needed. Therefore designers of CPD for teachers also need to plan how serving teachers can best use their experiences in schools to develop their expertise.

To administer a good programme of practical experience does cost money. If student teachers are supervised from the college, it can cost a lot to send out tutors on regular visits. If students are deployed as extra teachers, as in Zimbabwe, the government is paying for extra teachers (albeit at a student rate). If mentors are used, they need training and some non-teaching time to carry out their role.

REFLECTION

Think of a school system that you know. What do you think is the best use of scarce resources to ensure that student teachers get the kind of opportunities to practise teaching described in this chapter?

Chapter 7
Assessing teacher learning

Overview

This chapter discusses issues and concepts of assessment under the following headings:

- Purposes of assessment in teacher education
- The use of continuous assessment in teacher education assessment
- The importance of context in assessing teaching
- Competency-based practices in teacher education assessment
- Assessing reflection in teaching.

The final section puts forward a framework for thinking about assessing teacher development throughout teachers' careers.

Introduction

Assessment used in teacher education should, in principle, be linked to the aims of the programme, whether this is in initial teacher education or continuing professional development. It should also contribute to the kind of teacher we want to produce. If we take the three models of teacher education outlined in Chapter 1, we might expect that:

- In the craft model, practical skills will be tested, probably based on observing teacher behaviour.
- In the applied science model, formal knowledge will be emphasised, probably tested through examinations.
- In the reflective practitioner model, the focus will be assessing how teachers think through what they know, what they have observed and what they do under different conditions and contexts of teaching and learning.

This chapter looks at some of the general issues underlying the assessment of teachers and teaching, whichever model is adopted. Some of what is said applies mainly to the college-based components, such as in the section on continuous assessment. But the same principles should be applied to the more difficult area of assessing practical teaching. The section on competencies is particularly relevant to this.

The focus is mainly on assessment in ITE programmes. Here the methods of assessment are important, because a teaching licence or certificate depends on the results. In CPD, courses

are not always formally assessed. For example, teachers at INSET workshops may only get a certificate of attendance. However, increasingly CPD is recognised as just as important as initial teacher education. It is likely that in future more CPD courses will carry awards – certificates, diplomas or degrees – which can help teachers get promotion or salary increases. In such cases, assessment methods become very important. CPD programmes allow the use of some interesting and innovative methods of assessment, some of which we discuss below.

At the end of this chapter we hope that you will have developed the following understandings about assessment in teacher education.

- Assessment in teacher education should be guided by programme aims and objectives. In teacher education, assessment should foster what we want prospective teachers to do and to be in real classrooms.
- Testing subject content and pedagogical knowledge only provides insights into what theoretical knowledge students have developed in training. Such tests, however, are unable to show how prospective teachers will actually behave in real classrooms. For that we need to assess practical teaching. Only this will tell us how far student teachers can adapt theoretical knowledge in response to various teaching situations and engage in reflective practice.
- Finally, a teacher education assessment scheme should include strategies for assessing and recording *what* student teachers are learning, and *how* they are progressing towards the expected outcomes of training.

REFLECTION

Think about what you do when you assess your students. Which of these aims best describes why you assess students?

a) For administrative purposes
b) To motivate students
c) For future employers' information
d) To provide information to students about what they can do

Purposes of assessment in teacher education

Educationists often divide assessment into two aspects: formative and summative.

Summative assessment summarises a student's achievements. It is used at the end of a course, programme or stage of training. Typically it is a final mark, a grade, or a statement, such as Pass/Fail/Distinction. Summative assessment can therefore be described as *assessment OF learning* (AOL).

Traditionally, summative assessment has been used to provide 'a snapshot judgement about what a pupil can do at a particular time' (Weeden, et al. 2002). Such assessments make judgements about what students have achieved overall in order to award a certificate, or for selection into the next level of education or training. Applied to teacher education, this usually means assessing how far student teachers have acquired certain basic knowledge and skills about teaching, or the extent to which they can apply what they know in classroom teaching.

Formative assessment, on the other hand, aims to improve a student's future learning. It tells students how they are progressing and shows them how they could do better. Formative

assessment is aimed at improving learning and can be described as *assessment FOR learning* (AFL).

Harlen (2006) sets out seven principles against which to check whether a particular assessment practice or scheme promotes AFL:

- Does it focus on how students learn?
- Is it sensitive and constructive?
- Does it foster motivation?
- Does it promote understanding of goals and criteria?
- Does it help learners to know how to improve?
- Does it develop the capacity for self-assessment?
- Does it recognise all educational achievements?

REFLECTION

Which of your own assessment practices satisfy Harlen's principles and which do not? Give a specific example for each one for which your answer is yes.

Another aspect of formative assessment is that it shows how well a student is doing in relation to what he or she is expected to understand or do. Before assessing, it is important to know what *standards* the student should reach and what qualities we expect of a good teacher. We can explain to students how they can reach these standards and design our assessment so as to point them in that direction. Basically, then, formative assessment provides information (feedback) to students about how their current levels of achievement or performance compare with the expected level.

Thus, formative assessment is a way of scaffolding students' professional development. This means we should define learning outcomes as clearly as possible, even if these include complex professional skills. It also means we should find out what previous knowledge students bring into training and assess how far they progress from that point during the programme. This is particularly important when running CPD courses for serving teachers.

Another important goal of formative assessment is that it should 'lead teachers to think about their teaching in different ways' (Black and William 2006). When tutors see what problems their students are having, they may reflect on their own teaching. They can then adapt their lectures, seminars and methods of supervision to help the students make better progress.

REFLECTION

1. Do you tend to use more formative assessment or more summative assessment? Why?
2. What 'standards' do you expect a student teacher to have achieved by the time they qualify? Where have these 'standards' come from? For example, are they openly stated in your teacher education programme?
3. How have you tried to help students progress towards the expected goals of the programme?
4. How might standards for a CPD course differ from those for an ITE programme?

Providing feedback in formative assessment

Feedback is a key part of formative assessment. Feedback helps students to make sense of their own progress, particularly in the early stages of a course. The way tutors report the results of assessment to students determines the extent to which they can use the feedback information for maximum benefit. Of course, feedback could also come from fellow students or even from the students themselves reflecting on their performance.

REFLECTION

1. Which of these forms of reporting results would best help students make progress: marks; grades; certificates; percentages; written comments; verbal comments?
2. Think about the meaning of reflective practice (see Chapter 12 for more details). What aspects of reflecting on professional practice are similar to formative assessment?

Frequent feedback helps students gain confidence in learning. It can improve their ability to assess the progress of their own learning and become less dependent on the tutor. In teacher education, we should expect student teachers to reach a point where they are constantly assessing their own progress in relation to expected learning outcomes. This way they develop the ability to use insights gained from such 'self-regulated feedback' to improve future practice (see Chapters 4 and 5 on independent learning). Such assessment promotes the idea that we should continually develop our teaching skills and knowledge throughout our careers.

Pasch (1995) presents three ways of embedding developmental principles into teacher education:

- First, teacher educators should make it clear to students that the heart of their job as teachers is to help pupils to learn and to achieve. Tutors must be continually assessing how far students understand this key point.
- Second, teacher educators should remember that the students are adult learners developing their own abilities to process and apply knowledge independently. Therefore, tutors should find ways of providing for that development and monitor whether it is occurring. This is similar to providing scaffolds for students' professional learning and development.
- Thirdly, teacher educators should introduce assessments which allow for important ideas about teaching to be revisited in new forms as students gain deeper understandings of teaching.

REFLECTION

Think back to important lessons you have learnt as an education professional. Try to identify examples of where you received feedback, either informally or as part of formative assessment. How did this help your learning?

The role of continuous assessment (CA) in teacher education

At the end of many initial teacher education programmes, students take formal examinations, the results of which are used to determine who qualifies to teach. These certification examinations often include both a theory and practical element. Sometimes, a college-based continuous assessment component contributes to the final overall college score the student receives.

Continuous assessment (CA) is not a method of assessment but can be described as a process of assessing students during the teaching and learning cycle. Sometimes it is simply an informal teacher assessment of student learning. In this case, the purpose is not to generate a score or mark, but to provide a brief description about how well a student is doing in relation to some learning outcome; it is formative assessment. At other times, when we combine scores from a series of classroom tests and assignments with final examination scores, it becomes summative. It is a way of taking into account other learning outcomes (for example problem-solving ability; practical and mechanical skills; resourcefulness etc.), before reaching a final (summative) judgement on the student. Done well, the process of assessing continuously allows students the chance to improve and make progress towards their learning goals. CA also supports the idea that learning to teach is a process which develops over time and benefits from regular feedback.

According to Taylor (1997), if continuous assessment is to provide information about what progress and achievement a student has made in the course of their learning, the tasks used must exhibit these characteristics:

- ***Assessment tasks (tests, assignments or projects) should demand much more than information about theoretical knowledge***. For example, when student teachers write an essay on Piaget's stages of child development, this does not show what they will do when faced with children with different learning characteristics and needs. However, if we ask them to write about a specific environment of learning for individual children with certain defined characteristics, then their answers can provide valuable information about their progress towards effective classroom practice.
- ***The tasks should encourage students to develop problem-solving skills***. For example, a test might require students to *evaluate* and *recommend* appropriate strategies for dealing with a child's misconceptions (for example work which shows consistent errors in spelling, or adding two digit numbers). Such a task has the potential to develop problem-solving skills in teaching. It also encourages reflective thinking.
- ***Tasks should be structured to encourage more than one acceptable answer***. Students will have to produce arguments to support particular teaching decisions and choices, instead of simply recalling prescriptive information about teaching methods.

ACTIVITY

Critiquing assessment items

The box shows some examples of teacher education examination questions used in certification examinations in a sub-Saharan African country.

Review these questions in the box in the light of Taylor's criteria. Which questions are likely to encourage critical reflection on practice, and which are not, and why?

1. Explain how you would use the following resources for effective teaching:
   a) A building under construction
   b) A vegetable and flower garden
2. Why do children forget what we teach them? How can a teacher minimise forgetting and maximise retention among his or her pupils?
3. List any three things that should gain the attention of the teacher when he or she is preparing to teach.
4. A child has learnt that the number '3' is greater than the number '2', but she does not understand why in the number '23' the value of the digit '2' is greater than that of the digit '3'. Explain briefly how you would help this child using concrete materials.
5. Write a summary on the topic 'Practical Work'. Your summary should be on the following:
   a) meaning of practical work
   b) types of practical work usually done when teaching/learning science
   c) scientific skills which can be acquired by pupils when they are involved in doing practical work.

The importance of context in teacher education assessment

Many teacher education examination items are stripped of important background information such as teaching contexts and pupil characteristics, both of which influence teaching decisions and their outcomes. Yet when good teachers make decisions about how to teach a topic well, they take all these into account: they have to consider the state of the classroom, the learning resources available, the pupils' social environment, their previous learning experiences and so on.

Therefore, in assessing student teachers we need to make judgements about how far their decisions or responses take into account the teaching context and the needs of individual children – whether they have provided appropriate tasks; whether they have considered what 'concrete' teaching materials to use, etc. As Darling-Hammond, Wise and Klein point out:

> Efforts to measure teaching knowledge without reference to contextual factors and multiple bodies of knowledge that must guide teaching decisions fail to capture the essence of pedagogy while threatening to undermine effective teacher preparation. Furthermore, the traditional approach to teacher testing, which separates tests of subject matter from tests of pedagogical knowledge, is also inadequate. The interrelations between subject-matter knowledge and knowledge of learners and pedagogy make it virtually impossible to think meaningfully about teaching and content without considering learners and context ... Ultimately, the profession must develop strategies for assessing teaching that allow for contextualised evaluations of teacher judgement and skill.
> Darling-Hammond, Wise and Klein 1999:57

Therefore, it is important to choose assessment strategies which include evaluation of teaching context and the pedagogical choices that teachers make in relation to that context.

For example, a written assessment task can pose a challenging complex problem that requires thoughtful responses. The item might describe a specific teaching situation and ask the student to discuss a teaching approach or solve an instructional problem. They might have to outline the steps necessary to achieve the goal or solve the problem. (Some examples are given later in the chapter under 'assessing reflection'.)

Assessing such high level **pedagogic** skills is difficult. Simple marks or percentages do not do justice to the task. One way is to think of such skills as part of teacher's 'competence' and to use criteria which describe different 'levels of performance'. When setting appropriate levels, we can think of how a **novice** or young teacher might perform, and set this as the lowest end of the scale, and then think of what an experienced teacher might do, and set that as the highest point of the scale. This is described further below.

REFLECTION

Think of what an accomplished teacher you know does in the performance of teaching. How would you characterise the qualities of this teacher in terms of approaches to classroom organisation and learning? What abilities would you expect a **novice teacher** to be able to demonstrate when it comes to classroom organisation and learning?

Competency-based assessment in teacher education

Many teacher education programmes focus mainly on assessing the teacher's knowledge – of subject content, educational issues, pedagogy, child development and so on. Assessing practical skills is added on and given a low weighting. The competency-based approach starts from the opposite end. It focuses on the teacher's performance in the classroom. But in doing so, it assumes that the teacher does have some knowledge – they must know their subject and how to teach it, they must understand children. This knowledge is tested in practice, in how the teacher actually performs in front of the pupils.

This approach to teacher education and assessment has gained popularity in teacher education systems world-wide. Under competency-based approaches, important components of good teaching are identified and split into sub-components of teaching. These areas of expertise and their sub-components become the 'professional learning domains' that are used both to develop the content of teacher education programmes and to develop criteria for assessing professional learning in teaching.

Figure 7.1 shows key areas of professional educational practice sub-divided into components as drawn up by Danielson (1996).

Programmes based on this approach first determine what the core professional areas of responsibility of a teacher are, then use them to determine *what* to assess, *where* to assess (either at the school–classroom level or teacher education college level), and *how* to assess (for example practical teaching, written exams, projects, investigations etc). A further example is given in Chapter 8.

There are several ways of doing this. Barton and Elliott (1996), using a slightly different approach, show how a teaching competence can generate a number of criteria framed as questions. This is exemplified in Figure 7.2.

Figure 7.1 Components of professional practice

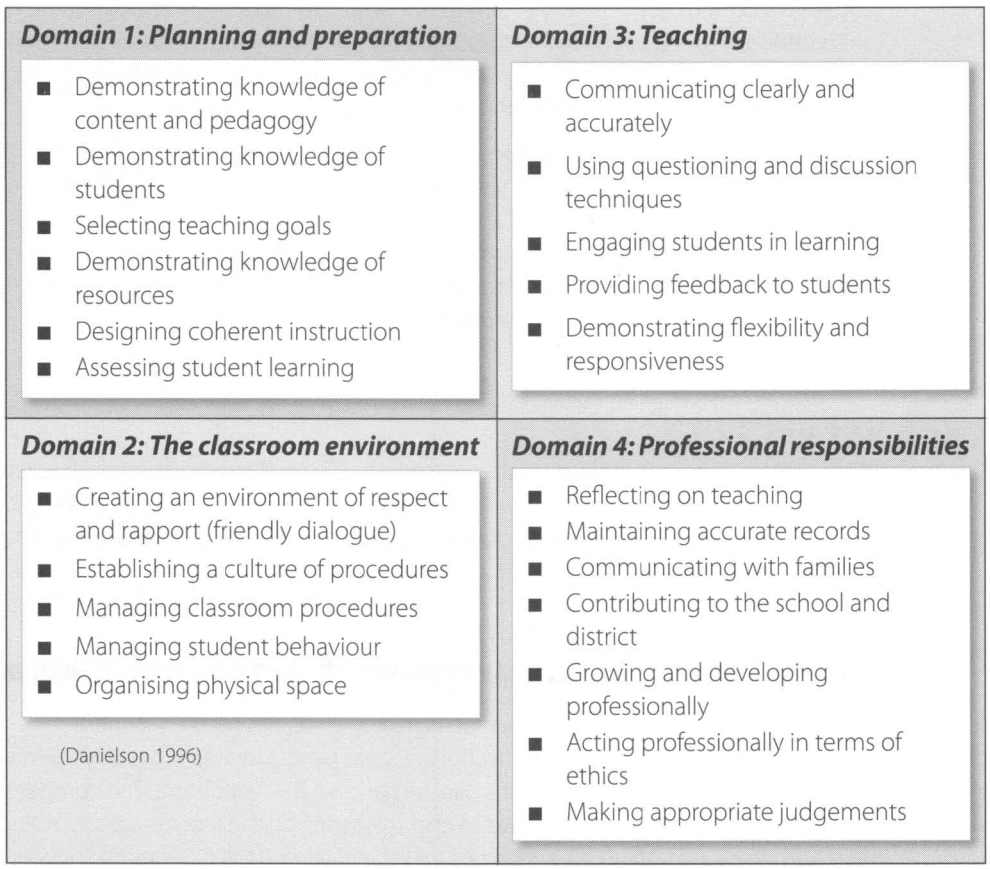


Figure 7.2 A teaching competency

Teaching competency: communicating content to pupils in ways that promote meaningful learning

a) Is voice clear and does the student teacher use a variety of tone and pitch?
b) Can the student teacher arouse the interest of pupils?
c) Is the language used appropriate to ensure understanding across the whole range of ability?
d) Does the manner of communication encourage respect for pupils' values and powers of understanding?
e) Are pupils' responses encouraged and reinforced?
f) Are pupils encouraged to ask critical questions and discuss issues?
g) Does the student teacher use a variety of questioning techniques?
h) Does the student teacher use a variety of teaching strategies and styles within a lesson and across a sequence of lessons?

(Barton and Elliott 1996)

The danger with separating teaching competencies this way is that they may be seen simply as a checklist of prescribed behaviours and activities that student teachers have

to demonstrate. It might look like one can simply assign a 'yes' or 'no' response to these questions, in which case one would conclude that either the competence is demonstrated or that it is absent. The reality is that teachers demonstrate competence to varying degrees. For example, teachers would vary in their skill when it comes to using critical questions and discussions in lessons (criterion) – some would use questions to good effect in terms of promoting meaningful class discussions and deep learning, whilst others may not be so good in achieving this.

To capture such difference in performance another approach is needed. This describes teaching competencies as 'levels of performance'. The lowest level represents what one would expect from a **novice teacher**, and the highest level represents what an expert teacher would be capable of doing. Figure 7.3 illustrates this using the example of the sub-component: '*demonstrating flexibility and responsiveness*' (Point 5 in Domain 3 'Teaching' in Figure 7.1).

Figure 7.3 An area of competency: demonstrating flexibility and responsiveness in three elements

	LEVEL OF PERFORMANCE			
ELEMENT	**Unsatisfactory**	**Basic**	**Proficient**	**Distinguished**
Lesson adjustment	Teacher adheres rigidly to an instructional plan, even when a change will clearly improve a lesson	Teacher attempts to adjust a lesson, with mixed results	Teacher makes a minor adjustment to a lesson, and the adjustment occurs smoothly	Teacher successfully makes major adjustment to a lesson
Response to pupils	Teacher ignores or brushes aside pupils' questions or interests	Teacher attempts to accommodate pupils' questions or interests. The effects on the coherence of a lesson are uneven	Teacher successfully accommodates pupils' questions or interests	Teacher seizes a major opportunity to enhance learning, building on a spontaneous event
Persistence	When a pupil has difficulty learning, the teacher either gives up or blames the pupil or the environment for the pupil's lack of success	Teacher accepts responsibility for the success of all pupils but has only a limited repertoire of instructional strategies to use	Teacher persists in seeking approaches for pupils who have difficulty learning, possessing a moderate repertoire of strategies	Teacher persists in seeking effective approaches for pupils who need help, using an extensive repertoire of strategies and soliciting additional resources from the school

A question that you might be thinking about is: how we can turn such judgements about levels of competence into a final (summative) decision about teaching competence. First, we have to compare the student teacher's actual performance (which we can call the *evidence*) against the *criteria* (i.e. level of performance – unsatisfactory, basic, proficient, distinguished), and then decide the closest match, i.e. between evidence and level of performance. If we

wish, each of these levels can be assigned a numerical value, for example from 1 to 4. We can then decide what range of overall scores should constitute a 'distinction, pass, or fail'. This qualitative 'summary' of performances represents the overall judgement about the level of competence.

For formative purposes, the **assessment criteria** in Figure 7.3 can be used to identify gaps in the areas of teaching performance of the student teacher. The criteria could also provide an indication of the 'standards' required to move from a novice to a more experienced performer.

Assessing reflection on teaching

In this section, we focus attention on three methods of assessments that are especially useful in promoting reflection on teaching. They are particularly useful in assessing CPD courses.

1. **Critical incidents** (particularly appropriate for formative assessment)
2. Simulations or case histories
3. Teaching portfolios

Critical incidents

Assessment methods in teacher education should foster dialogue between the teacher educator (the assessor) and the student teacher. The main purpose of this dialogue is to encourage self-evaluation by the student teacher. The assessor is interested in helping the student teachers to make better sense of teaching events and to make appropriate choices and decisions that will improve pupil learning and achievement. One way to achieve this is to identify **critical incidents** in teaching and use them as the basis for dialogue and assessment.

Critical incidents

When observing the student teacher teach, the tutor makes notes of certain events during the lesson (such as a change of direction in teaching approach, unexpected pupil behaviour, a moment of uncertainty or of excellent teaching). After the lesson, the tutor asks the student teacher to explain what was going on in the critical incident, why they responded in a particular manner, whether they would do the same again if faced with a similar situation, and so on.

Alternatively, the student teacher could be asked to write a 'reflective journal' on the lesson, describing what critical incidents made a difference to the outcome of the lesson and reflecting on their own reactions to them.

Such assessment can focus either on the quality of reflection – how honest and insightful is the student? – or the effectiveness of the teaching – did the student's action help the pupils learn? – or on both aspects.

In a post-teaching discussion the tutor could use this dialogue informally to encourage self-assessment. They could also produce a report of the dialogue (with specific examples) for the student's file (see portfolios below). Critical incident assessment is particularly relevant in CPD programmes where teachers have more experience and can talk or write more fluently about what they do and why they do it.

REFLECTION

Think of a critical incident in your own teaching or lecturing. Note down, or share with one or two colleagues what you did and why. Would you do the same again?

Simulations: case histories

A simulation is an imaginary event that matches closely what a person is likely to face in real life situations.

Earlier we noted the importance of context in judging whether materials and methods are appropriate in a teaching situation. Contextual information is needed if an assessment task is to be realistic. The information might include the following:

- relevant background information about learners
- the school–classroom environment and the broader context
- conditions under which teaching and learning might be taking place.

We can use *simulations*, or *case histories*, to provide this kind of background contextual information that would invite appropriate responses or actions from students.

The case history

Mr Mensah teaches Grade 6 mathematics to a class of 50 pupils. The class has more boys than girls; two of the pupils, both boys, have difficulty reading and writing. Several of the students, especially the girls, are high achievers whilst the rest of the class performance ranges from poor to high average.

The task

Describe how Mr Mensah should approach the teaching of Grade 6 level concepts in fractions, bearing in mind the characteristics of the pupils' in his class. In your response explain why he should use certain activities for certain pupils and not for others.

Case histories could even be more elaborate than this, describing relevant aspects of pupils' background knowledge and experiences, classroom and school expectations, rules, routines and procedures, and the structure of classroom space. Also, they could include detailed descriptions of pupil learning behaviour or a description of classroom dialogue between teacher and pupil(s) on a specific school subject concept.

Alternatively, students can be shown a short video clip of classroom teaching. They can be asked to analyse and evaluate the significance of a particular classroom event or critical incident. For example, they could be asked to describe how a group of pupils engage in discussions which lead them to understand a particular concept, or explain why some pupils in the same classroom seem unable to understand a concept that a teacher is introducing.

Another way of treating a case history is to present students with a sample of a pupil's work for analysis and evaluation. For example, a representative writing sample produced by one pupil in a particular grade could be the 'case' for assessment. Students could be asked to study the pupil's work and describe how they are going to help that pupil develop writing skills, or suggest ways of building on the pupil's strengths in the mechanics of writing.

Clearly, in case histories one is assessing the ability of students to *analyse* teaching situations and *recommend* teaching strategies on the basis of an appropriate diagnosis of teaching problems or challenges. If case histories are to offer opportunities for critical reflection on teaching, then as much as possible, they should also require student teachers to *critique* and *evaluate* particular teaching events.

One big challenge that case histories present is the difficulty of composing 'authentic' cases – that is, cases which are as near as possible to the situations teachers are likely to face in real-life teaching. Tutors can build a 'bank of case histories' from their own classroom observations.

If students' responses to case histories have to be graded for summative assessment, clear criteria are needed. These would include the different issues that the student is likely to raise, and clear descriptions of different levels of appropriate responses. In the example of Mr Mensah's class, an unsatisfactory answer would, for example, not include any mention of using *different activities* with various pupils. Good answers would include appropriate activities for two groups of pupils. Distinction level answers would include appropriate activities for gifted girls, for low achieving boys, and for the mid-level achievers in the class.

ACTIVITY

Draft a short case history that you could use as an assessment item for students in your subject area. Share with a colleague how you might use this case history for formative and summative assessment.

Portfolios

A portfolio is an organised collection (for example, a folder or file) of evidence teachers or students gather in the course of their practice for purposes of assessment. It is also intended to showcase the progress and accomplishments they have made in teaching.

The evidence could include:

- copies of lesson notes, unit plans or schemes of work
- handouts given to pupils
- pupil assignments
- pupil scripts, with or without marks and feedback
- teaching aids
- sketches or photographs of the classroom and pupils
- audio- or video-tapes of lessons (where possible)
- reports from observers (supervisors, **mentors**, peers)
- pupils' evaluations of their teaching

(Adapted from Darling-Hammond, Wise and Klein 1999:81)

Most importantly, the portfolio must contain *commentaries* and *reflections* on the documents contained in it. These must show how the classroom teacher or student teacher has used the evidence submitted to improve their teaching. Guidelines should be provided about the range of things to include in the portfolio and their purpose. For example, students could be asked to address the following issues/questions when giving explanations or evidence as proof of their progress and achievements in teaching:

- Why they have chosen certain documents or evidence to highlight their achievements and excluded others.
- What in their portfolio illustrates particular actions they took that led to meaningful learning for pupils.
- Provide examples of pupils' work to illustrate learning and achievements.
- What aspects of teaching they have tried to improve, and how far they have achieved this (with examples of lesson plans, pupils' work, and their own reflections).

Producing a portfolio makes the student reflect on their practice. Portfolios can be used for evaluating both the quality of that reflection, and also the achievements of the teachers' professional practice.

CPD for teacher educators?

In some places these methods of assessing teacher development are new and very different from previous assessments. In such situations, teacher educators would themselves benefit from professional development. The assessors' competence in using these methods/approaches ultimately determines what students can gain from the assessment experience. For example, the assessors must agree on the criteria to be used, so they can avoid bias. But even before such CPD is provided, teacher educators can start experimenting with some of these approaches and experience first hand how the different assessment approaches actually work in their professional context and what adaptations may be required to enhance their impact on student teachers' professional learning.

REFLECTION

Have you had any experience of using these kinds of methods for assessment? If so, outline their strengths and weaknesses. How useful might these assessment methods be in your situation?

Re-conceptualising assessment in teacher education

Figure 7.4 attempts to pull together the key messages from this chapter into a framework for re-conceptualising teacher education assessment for developing countries.

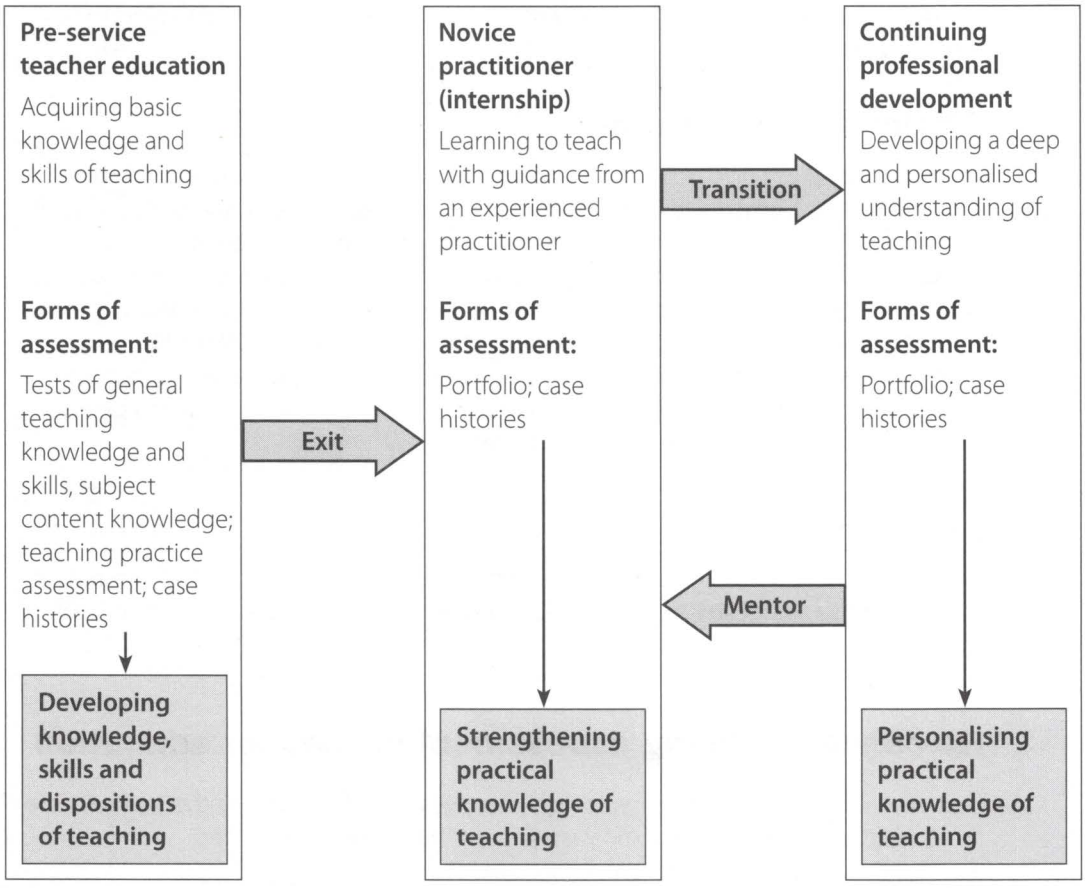
Basically, the diagram shows three levels of professional learning and suggests what assessment methods might be used at each stage to promote teacher development:

- The pre-service teacher education level where methods such as tests, examinations, continuous assessment can be used to assess general professional knowledge and skills of teaching. At this stage also, case histories can be introduced.
- The **internship period** where assessment methods focus on strengthening the practical knowledge base of teaching with support and assistance from experienced teachers. Here teaching portfolios, critical incidents and case histories are particularly useful methods of assessment.

- The period of continuing professional development where assessment focuses on major accomplishments using teaching portfolios to assemble the evidence.

It is important to view this framework as a way of conceptualising the stages of teacher development and the types of assessments most likely to produce deep insights into good teaching. However, none of the suggested assessment strategies is confined to a particular level. For example, case histories could be used in all three.

Figure 7.4 A framework for developing assessment practices for teacher education



Concluding comments

Failure to bring assessment practices into line with curriculum goals will almost certainly make it difficult to achieve the learning outcomes expected from education or training. In this chapter we have stressed the need to introduce assessment methods and tasks that do justice to particular teacher education programme aims. The kind of professional learning we desire to see as teacher educators in our students must be supported by the assessment approaches we adopt. Embracing a social constructivist perspective in teacher education has to be supported by assessments that reflect this perspective. Very often, assessment practices in teacher education systems in developing countries simply mirror those that are

used at secondary education level, where the emphasis is on timed tests and examinations. It is important that we articulate and communicate to our students the standards expected of them in learning to become an effective classroom teacher. As teacher educators, we also need to develop skills in making judgements about whether our students are producing work which meets the standards set for professional practice.

Changing old assessment practices will take some time and effort. Some of the suggestions we have put forward may initially take you out of your comfort zone as far as your own assessment practices are concerned. But, as you persevere in using them you will begin to see improvements in students' professional learning and outcomes.

Finally, it is important that our assessment practices communicate clearly the kind of professional teaching we are aiming to produce. If there is a mismatch between teacher education aims and the assessment methods it adopts, it is unlikely that teacher education will produce teachers who have the capacity to promote meaningful learning in schools.

Chapter 8

Analysing a teacher education curriculum

Overview

This chapter starts by discussing how 'curriculum' can be defined, and then suggests ways of analysing teacher education curricula, by looking at them under five broad headings:

- The overall aims, including rationale and purposes
- The objectives and outcomes
- The content, including practical experience
- The pedagogy: teaching/learning and communication methods and materials
- The assessment patterns.

It then considers how programmes are structured.

Introduction

The ways in which teacher education programmes are organised differ widely across the world. Each country seems to have developed its own structures and its own form of curriculum. These have been affected by the historical, political, social and economic factors existing in that particular part of the world.

There are, however, also many common patterns, partly because the basic task is the same, and partly because there has been much cross-cultural sharing (see Chapter 10). For example, teacher education in many less industrialised countries has been influenced by colonial legacies, or by international aid and development programmes.

This chapter and the next one are linked. They bring together some of the issues mentioned in earlier chapters and explore them in more depth, to encourage discussion and reflection.

The professional curriculum

Most teachers will be familiar with discussions about the school curriculum. However, a curriculum for preparing professionals such as doctors, lawyers, accountants, nurses and teachers is somewhat different from a school curriculum. The focus is on professional knowledge, skills, and attitudes. (Chapter 13 looks at professional knowledge in more detail.)

This has several implications. For one thing, it has to involve a **practicum** or period of practical work experience. Secondly, the students are usually more mature. Thirdly, they are being prepared not just to pass exams, but to provide services to the community, in the course of which they will be expected to solve problems and exercise their own judgement in a responsible and ethical way. Fourthly, professionals need to keep on learning, so their 'curriculum' should ideally be thought of as lasting throughout their whole career – covering both initial preparation and continuous professional development.

Our working definition of curriculum for this book is:

> The entire experience throughout the training programme, as taught by college tutors, as organised both on and off campus, and as learnt by student teachers. (Lewin and Stuart 2003:65)

In higher education it is common to talk of a plan for a period of study leading to a qualification as a 'programme'. Most programmes contain a number of different 'courses'. We shall use curriculum as a general term, but also refer to specific programmes and courses.

A teacher education curriculum can exist in different forms.

- ***In the printed documents*** – the public version laid down by the policy-makers, teacher educators or academics. This might include documents such as syllabi, learning programmes, reading lists, guidelines, **assessment criteria**, outcomes, etc. These can be collected, read and analysed.
- ***In the minds of the tutors*** – how they understand it (or not) and how they interpret it. Tutors are in a powerful position to change or adapt the official version, either deliberately or unknowingly. They may talk about the version they use to colleagues, or they may just 'do their own thing'.
- ***As delivered in the lecture or seminar room*** – what actually gets 'taught'. This may or may not be what is written down in the syllabus, or even in the schemes of work and lecture plans. Some of it may be found in supplementary materials prepared and handed out by the tutors.
- ***As experienced by students*** – what they understand and remember, what happens to them both in college and in school, and how this influences them. Eventually, it is this version that will affect their performance as teachers. Therefore it is the most important.

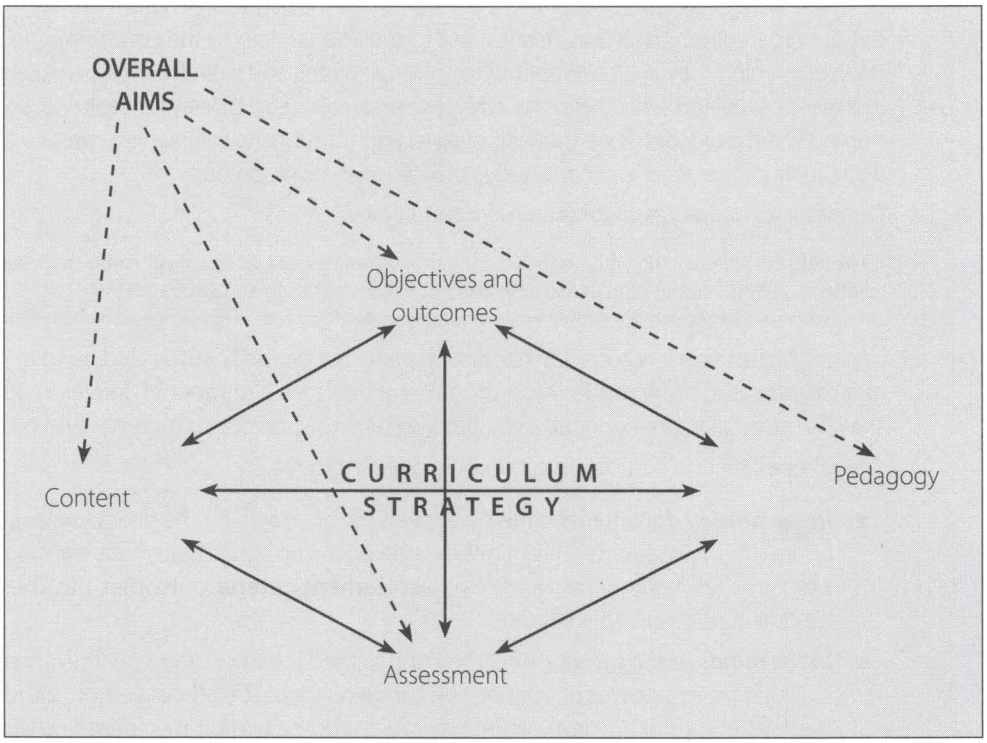
REFLECTION

1. Why do you think such different interpretations develop?
2. Try to find an example from your own work experience of how different versions of the curriculum co-exist.

Analysing the curriculum

The rest of this chapter is built around analysing how a teacher education curriculum fits together and whether there are any gaps or 'mismatches'. The analytical framework used here is adapted from the work of Michael Eraut (Eraut 1976). He suggests that in an effective curriculum all the components must work together and be consistent with one another. This is shown in Figure 8.1.

Figure 8.1 A curriculum strategy



(After Eraut 1976)

We shall discuss each component in turn. It would be useful, while reading this chapter, to have with you an example of a teacher education curriculum as an **exemplar** to which you can make reference. It could be the programme you currently teach, or have recently taught, or one you experienced as a student, or even one you have helped design. It could be for ITE or for CPD. Relevant ones can sometimes be found on the internet. A more extensive and formal analysis exercise, using the same model, is set out in the Activity Appendix.

Overall aims

What kinds of teachers will come out of the programme? What roles will the teachers be asked to carry out?

The aims may also include such things as the goals of the education system, or perhaps definitions of 'the good teacher' or 'effective teaching'.

Here are some examples:

Goals of the education system:

- to mould the youth of the nation into specific kinds of people, as determined by the government
- to conserve values and pass on the cultural heritage
- to 'develop' the nation (if so, in what ways?)
- to encourage independent life-long learning.

Roles the teachers might be expected carry out:

- to develop critical and analytical thinkers
- to enable children to succeed academically
- to offer personal care and guidance to their pupils
- to deliver the curriculum as laid down in the teachers' guides
- to develop and adapt the curriculum according to their professional judgement
- to be a role model as a working woman, or as a well-educated member of an ethnic minority.

An effective teacher:

- has a sound knowledge of their subject
- plans and prepares lessons ahead of time
- sets and marks work for pupils regularly
- uses a variety of teaching methods
- adapts the material to the level of the pupils
- develops good relationships with parents.

If the curriculum is for CPD it might focus only on teachers of one subject or for one role in schools, such as head teachers. In this case, the aims are likely to be much more specific.

REFLECTION

Were any of the goals mentioned above important in the schools that you attended as a pupil? If not, what were the main goals? What roles did the teachers perform?

Sometimes the rationale and aims are stated clearly in the curriculum documents, or set out in government policy statements. Sometimes the aims are very vague, or not there at all. Underlying the overall aims there will probably be some kind of rationale or reasoning, even if this is often left unstated. This might suggest a view of knowledge: for example, whether knowledge is fixed, finite and to be given to learners, or changing, open-ended and to be constructed by learners. Such a view of knowledge might be linked to theories about how teachers learn to teach; it might determine whether the curriculum is based on behaviourist or constructivist principles.

From reading the aims it may be possible to see which kind of model of teacher education underlies this curriculum: the teacher as craftsperson, as applied scientist, or as reflective practitioner (see Chapter 1). However, sometimes the documents may contain conflicting ideas. For example, some sections might stress the importance of following teachers' guides (suggesting a craft model of teacher training), while other sections stress the need to adapt the curriculum to the real context (suggesting a view of the teacher as reflective practitioner). Sometimes there are significant differences between the official view (for example the new curriculum proposed by the government) and the ideas of the college staff (who see no need for change). Sometimes international donor influences lead to competing ideas of teaching and learning being expressed in a curriculum.

REFLECTION

Consider your exemplar teacher education curriculum.

1. What are its aims?
2. What kind of teacher does it intend to produce?
3. What roles will the teachers be expected to carry out?
4. What views of learning appear to underlie it?

Objectives and outcomes

What will the students have achieved at the end of the programme?

It is important for both tutors and students to be clear about what the new teachers should know and be able to do at the end of their course. Two reasons are:

- the tutors can evaluate their own teaching against specific standards
- the students can be assessed against explicit criteria.

The ways in which tutors think about these objectives and outcomes, and how they are written down in the curriculum documents, will have **backwash effects** on the choice of content and on the pedagogy (see Chapter 7).

There has been, over recent years, a long debate about whether such targets should be thought of as separate items on a list, or designed as broad and integrated achievements combining knowledge, skills and attitudes.

In the 1960s and 70s in the USA there were attempts to be very precise about what teachers should be able to do in the classroom. This led to a focus on skills, such as questioning, which could be easily observed and measured. This was consistent with a behaviourist view of knowledge, suggesting that teachers could be 'trained' to behave in certain ways thought to promote good teaching. Such an approach was most appropriate where the teacher was being prepared as an 'effective instructor' or 'technician'.

However, if the teacher is seen as a 'reflective practitioner', who must learn to solve problems and take professional decisions in difficult conditions, such narrow objectives are inadequate. There have recently been attempts, in various English-speaking countries, to draw up broader targets for Teacher Education Programmes, often called 'Professional Learning Domains' (see Chapter 7) or **Teaching Standards**. These integrate knowledge, skills and values, and are assessed holistically by bringing together a variety of types of evidence, including on-the-job performance. This is more consistent with a constructivist view of knowledge.

Case Study:
UK Teaching Standards

In the UK the whole National Curriculum for Teacher Education was written down in the form of **Teaching Standards**. These were set out under three main headings:

1. Professional values and practice
2. Knowledge and understanding
3. Teaching

The teacher educators had to plan a programme – i.e. develop the syllabus and teaching methods – which would lead to such outcomes. What exactly they included depended on such factors as the planned length of the course, and the starting points of the entering students.

(Teacher Training Agency 2002)

Table 8.1 Examples of UK Teaching Standards for a qualified teacher

Standards	Students must demonstrate that they:
1. Professional values and practice	1.1. Have high expectations of all pupils: respect their social cultural, linguistic, religious and ethnic background, and are committed to raising their educational achievement.
2. Knowledge and understanding	2.1. Have a secure knowledge and understanding of the subjects(s) they are trained to teach.
3. Teaching: 3.1 Planning, expectations and targets	3.1.1 Set challenging teaching and learning objectives which are relevant to all pupils in their classes, basing these on their knowledge of: – the pupils – evidence of their past and current achievement – the expected standards for pupils of the relevant age range – the range and content of work relevant to pupils in that age range.
3.2 Monitoring and assessment	3.2.1 Make appropriate use of a range of monitoring and assessment strategies to evaluate pupils' progress towards planned learning objectives, and use this information to improve their own planning and teaching.
3.3 Teaching and classroom management	3.3.1 Ensure effective teaching of whole classes, and of groups and individuals within the whole class setting, so that teaching objectives are met, and best use is made of available teaching time.

In the UK there were also similar sets of standards for CPD, for example for teachers who are subject leaders, heads of department, or special education co-ordinators, and for head teachers.

In discussing assessment, Chapter 7 described a similar approach, when showing how teacher achievement can be set out in 'domains' and 'competencies'. A key feature of this approach is that teacher achievement is not split into the traditional divisions of knowledge, skills and attitudes. Instead, the student teachers must learn to combine their understanding and their practical skills with appropriate attitudes in order to demonstrate some aspect of teaching. This is then assessed **holistically**.

REFLECTION

In your exemplar curriculum, what are the expected outcomes? How are they described? Are they consistent with the overall aims?

Content

What do the teacher education programmes contain? Are these courses appropriate for achieving the aims?

The basic outline of the content of ITE programmes seems to have remained remarkably stable over the years, at least within the English-speaking areas of the world. Though different terms are used, the typical programme contains elements of the following components:

Subject studies, sometimes related to the current school curriculum, sometimes focused on the academic discipline itself

Educational studies, comprising background theoretical understanding of teaching and learning, of children, and of the school within its society

General education, for personal growth and development, both academic and social

Pedagogic studies, ('methods' courses) focusing on how to teach particular subjects, manage the classroom, and assess the learning

Practical experience in simulated and real classrooms.

However, within this framework, curricula vary greatly according to how these components are weighted. These differences reflect a continuing debate about how far the curriculum should be academic and how far it should be professional/practical. The debate is usually between the *what* (to know) and the *how* (to teach it). The *who* (teacher's personal growth) is currently given less attention.

An academic curriculum develops the student's intellect. It gives them the analytical frameworks to understand their practice more fully. This raises the status of teacher education, and of the institutions providing it.

A practical curriculum is more immediately relevant and useful to the student because it gives them the skills needed to be competent in the classroom. I believe theory is better understood later in the teacher's career.

A personality-oriented curriculum is better because teachers rely on their personality in the classroom for fostering good relationships with pupils. So their 'emotional intelligence' is as important as their academic and practical skills. As role models, teachers need to cultivate appropriate attitudes and values.

REFLECTION

Which set of arguments do you find most convincing? If working in a group, hold a debate on the three aspects. How far is it possible and/or desirable to combine these different views to create a teacher education curriculum in a place you know well?

Historical roots of the curriculum

When we analyse the curriculum content we can often see how it is linked to one or other models of the teacher described in Chapter 1: the craftsperson, the applied scientist, or the reflective practitioner. Moreover, since curricula often have long histories, sometimes it is possible to see where these ideas came from. For example, in the UK the first primary teacher training college programmes were based on the 'craftsperson' model. Students were taught 'General Principles of Education', and teaching skills. Great stress was laid on morals and on how to deal with children. Mission colleges in the British colonies often exemplified this orientation towards the practical and the personal.

In the 1960s, in the UK, the curriculum moved towards the 'applied scientist' model. The four 'educational foundation' subjects: psychology, sociology, history and philosophy of education (called informally the 'ologies') were introduced to make the curriculum more academic and give teachers a deeper understanding of educational theory. Less emphasis was given to practice experience. Teacher training institutions in newly independent African countries often copied this model.

As the 'reflective practitioner model' developed, topics from the four 'ologies' were re-integrated and called 'Educational Studies' or 'Professional Studies'. Students spent more time in schools; they had to study practice and discuss it in the light of theory. No student could graduate without demonstrating their classroom competence during extended periods of practice teaching.

In the US two competing traditions can be traced. One is an emphasis on skills training based on a behaviourist view of education. This was criticised for producing teachers who were 'mere technicians' with low academic levels. American Aid projects sometimes introduced this model to developing countries.

The other tradition emerged in the work of Shulman in the 1980s. Concerned that developing knowledge was given less priority than skills, he listed the different kinds of knowledge needed by teachers. This perspective is similar to the 'applied scientist' model, as it stresses 'received' or 'public propositional' knowledge, mainly learnt from formal courses. (Shulman's ideas on knowledge are set out in detail in Chapter 13.)

REFLECTION

When was your exemplar curriculum written, or last revised? Does it fit into any of the models or traditions of teacher education described above? Who, or what, do you think influenced this curriculum?

Pedagogic content knowledge (PCK)

One key concept from Shulman's list – pedagogic content knowledge – has been recognised as particularly important. Shulman describes it as:

> ... that special combination of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding
> (Shulman 1987:8)

It means that teachers have to understand how a subject is conceptually structured and at the same time understand how children learn it. Then they can bring the two together and make the subject clear to the pupil. Ways of doing this are often subject-specific, but generally include: moving in short steps, using the child's own experience and linking it to the topic; using stories, analogies and examples, identifying children's misconceptions and clarifying them, and so on. For example, in geography a teacher might explain a map by asking the children to imagine how a bird sees the land as they fly over it.

So whatever way the curriculum balances subject studies, education/professional studies, and **pedagogic** studies, the student teachers need to be helped to develop this particular combination of understanding that produces PCK. As much of it is **situational knowledge** – linked to particular children, classes, or schools – it can only be developed fully in practice. This leads us to the **practicum**.

The practicum

The practicum is a crucial part of any professional preparation, but until recently the teaching profession has not given this the attention it deserves. Trainee doctors and nurses spend much time in hospitals under the guidance of senior staff. Young lawyers in some countries become 'pupils' in a law firm. Accountants are 'articled' to serve a kind of apprenticeship in an accountancy firm.

What happens to teachers? As we saw in Chapter 6, various attempts to provide supervised practice include:

- ***Micro-teaching***, to peers or to small groups of children
- ***Demonstration schools***, close to college, where they can observe good practice and try out their own skills
- ***Teaching practice***, ranging from two weeks unsupervised to a year's **internship**, under guidance from a school **mentor**, a **peripatetic** trainer, or the college tutors
- ***School-based ITE***, where trainees spend the large majority of their time in school under supervision, with evenings, occasional days or weeks in college
- ***Peer observation and coaching***, for serving teachers undergoing CPD.

In addition, many unqualified people join the teaching force and learn on the job in an informal way.

Which of these is most effective in producing the kind of teachers we want? The answer varies from place to place, but the ideas about learning to teach set out in Chapters 1 and 3 suggest that, whenever and however it takes places, the practicum needs to be closely integrated with the taught courses. This is also true for CPD, although school experience is generally a part of a participant's job and integrated into a course in different ways.

REFLECTION

1. What is the balance, in your exemplar, between the different components of the programme?
2. In what ways is the practicum integrated with the other aspects of the curriculum?
3. For CPD, how is school experience used in the course? (For example, visits to other schools, reflecting on and planning for new ways of teaching, etc.)

Pedagogy

How are the students taught? How do they learn?

As we said in Chapter 5, this is a very neglected area of the teacher education curriculum. Much attention has been paid to teaching methods in schools but little to the methods used in the lecture or seminar room. The MUSTER research in teacher education colleges in four countries of the South suggests that most teaching is similar to that found in secondary schools, with an emphasis on lecturing and some question-and-answer episodes.

Teacher educators often lectured their students about teaching pupils in learner-centred ways, but few had themselves developed a pedagogy suitable for the young adult learners they taught. This is particularly important because, as many research studies have shown, new teachers very often teach as they were taught. Unless they themselves *experience* active learning methods at college (*experience* as opposed to just *being told* about them), they are unlikely to use such methods with pupils. If a programme aims to develop learner-centred teachers, then the pedagogy of the tutors needs to demonstrate this. The pedagogy will not be exactly the same as at school-level however, it is focused on the needs of student teachers as adult learners, so different decisions will be made about how to teach them. For example, independent learning methods are much more important at the adult level.

Under pedagogy one should include not only teaching/learning methods, but also materials and resources, such as textbooks, lists of recommended books, laboratory equipment, etc and how they are used to support and explain the content. The kinds of methods used will depend on the kinds of theories held by the tutors, explicitly or implicitly, about how students learn (see Chapters. 2, 3 and 5). Distance education for teachers and the use of new computer technologies are sometimes also a stimulus for the development of new pedagogy (see Chapter 10).

REFLECTION

Using your exemplar curriculum, note what teaching and learning methods are recommended, and which are used in practice. What teaching materials and resources are listed? Are they available? Are there other kinds of materials you would find useful? How would these promote learning?

Assessment

How will students' performance be assessed, and how do we know what they have learnt and can do?

The assessment methods have to be consistent with all the other aspects of the curriculum. In a traditional college-based course, student teachers were assessed by written exams, supplemented by brief observations by college tutors during teaching practice. Here

knowledge was usually being assessed separately from skills; theory was split from most aspects of practice. Knowledge and theory were given most weight. Practical skills usually counted for little, partly because they were difficult, time-consuming, and sometimes expensive to assess properly.

It is clear that most of the UK Standards described above can only be demonstrated in classrooms where the student teacher has had time to build relationships with pupils and to teach them over a period of several weeks. This has implications for how the programme is organised and where it is delivered – in schools or in college.

Such broad and holistic outcomes are not suitable for assessment in terms of marks unless such marks have clearly defined criteria that exemplify the broad outcomes. How can you judge whether the student's 'high expectations of all pupils' deserves 59% or 69%? Normally students are either 'passed' as fit to start teaching, or 'failed'. Some courses might award 'merit' or 'distinction' to those judged above average. These are professional judgements made by tutors using their own professional knowledge and competence, and those who make such judgements must work hard to avoid bias. It is usual for such grades to be **moderated**.

It is important to realise how assessment patterns feed back into curriculum design. The types of assessment used will influence both *what* is taught and *how* it is taught. This was discussed more fully in Chapter 7.

In INSET/CPD there are again differences between short courses where teachers are not usually assessed, and longer programmes that can lead to academic qualifications or to promotion. The longer programmes tend to have the same kinds of assessment as ITE, but perhaps there will be less focus on examinations and more on projects where the new academic learning is applied to the teacher's current job.

REFLECTION

In your exemplar curriculum, what effects might the assessment methods have on the way the curriculum is taught?

Analysing the curriculum for consistency

Having analysed the curriculum section by section, you are now in a position to see how all the pieces fit together. As shown in Figure 8.1, the content, pedagogy, objectives and assessment should form a coherent 'teaching strategy' for achieving the overall aims. Each component should be consistent with the others, and with the aims. Where components are not well-matched, problems can occur. For example:

- If the aim is to produce teachers who can solve practical teaching problems, this is unlikely to happen if students are taught solely by lectures and assessed by exams testing mainly recall of facts.
- If the aims say that teachers should be able to integrate theory and practice, students will find it hard if these are taught and assessed separately throughout the programme.
- If there are few books in the college, it is of little use to assess students' understanding by elaborate library research projects; practical research in classrooms would be more appropriate.

- If the objectives state that students will 'be able to adapt their teaching to a wide variety of children in one class, including **multigrade classes**', the content should include theory about children's learning, skills in organising group work, and practical experience of setting **differentiated tasks**. These competencies need to be assessed mostly in actual classroom settings, rather than by written exams.
- If the assessment system insists on having a numerical mark for teaching practice, this often leads to box-ticking rather than a holistic judgement of teaching competence (see Chapter 7). Therefore, while it would fit with a behaviourist model, it would be unlikely to produce reflective practitioners.

REFLECTION

Looking at your example, are there any such mismatches?

Programme structures

The ways in which teacher education programmes are structured strongly affects the curriculum. Length, location and timing can vary. The form and extent of the practicum is closely related to the programme structure. Where the students spend most time suggests the kind of knowledge and skills that the programme values.

Length: ITE programmes can vary from a few weeks to several years. CPD courses can vary from a half-day workshop to a postgraduate degree programme taking several years part-time.

Location: Teacher education can take place in universities, colleges, schools, or teacher centres, or a combination of these. Increasingly some ITE and CPD are taught by distance methods, sometimes using computers (see Chapter 10).

Timing: Programmes can be offered either pre-service (before starting a teaching career), or in-service i.e. at various stages of the teacher's career.

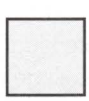
All these elements of structure have implications for what the curriculum contains and how it can be delivered. In particular, the structure and location affect the amount and type of practical experience the student teachers can have.

The following section shows some common variations in ways of delivering initial teacher education.

Some typical structures for ITE

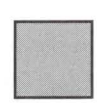
Examples 1 and 2 illustrate the difference between **concurrent** and **consecutive** patterns of training, for four-year programmes at university level.

KEY:


Teaching practice (1)


School-based PGCE course (2)


Internship (3 and 4)


Teaching and studying together (5 and 6)

1. ***B.Ed./BA.Ed.***

Year 1			Year 2			Year 3			Year 4		
	TP			TP			TP			TP	

This is a concurrent model in which students study academic subjects (related to the primary school curriculum) alongside education-related courses. They spend increasingly lengthy periods working in schools, first observing and later teaching, until they gain experience of handling their own class. The pattern permits relatively high levels of integration between theory and practice. This has been common in the UK, for primary teachers, since around 1970, though the amount of time spent in schools has been gradually increased (up to 50 per cent).

2. ***Bachelors' Degree followed by a one-year post-graduate qualification in education***

Year 1	Year 2	Year 3	Year 4
			Part school, part college

This is a consecutive model of training, in which students who have graduated with a B.A. or B.Sc. in an appropriate subject take a one-year intensive course focused mainly on professional studies. In the UK at least 60% of this year must be spent in 'partnership schools', which means that much more attention is paid to practice than to educational theory or to subject knowledge. In some US programmes students teach almost full time and attend college in the evenings.

Examples 3 and 4 show different ways of organising a three-year college Certificate or Diploma Course.

3. ***IN–OUT–IN***

Year 1	Year 2	Year 3
	School internship under supervision	

Students study both subject- and education-related courses during Years 1 and 3. Year 2 is spent working in school, under college supervisors and undertaking assignments. This allows for the practical experience in Year 2 to enrich the academic studies in Year 3. Zimbabwe ran its Diploma along these lines for many years. Lesotho had a Certificate in Education on this pattern 1975–87.

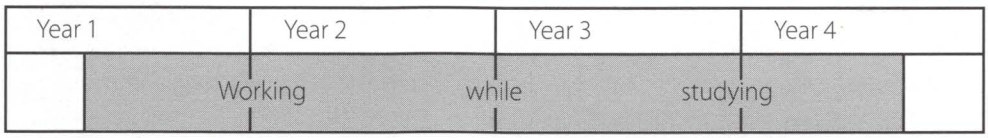
4. ***IN–IN–OUT***

Year 1	Year 2	Year 3	
		School internship under supervision	

Ghana moved to this model in 2000. Students study mainly academic content in Year 1 and have to pass exams in order to continue. The professional components are taught in Year 2, in preparation for the **internship** in Year 3. Students then return to college to take exams. There is probably less opportunity for practice to illuminate theory in this model.

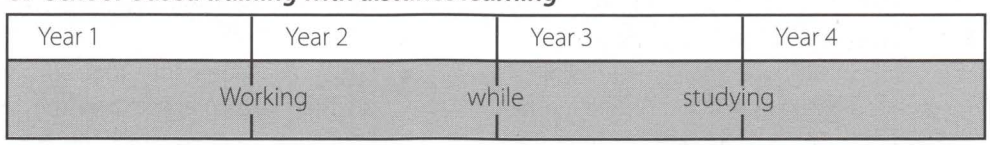
Examples 5 and 6 show models of school-based training.

5. ***Mixed-mode***



This is exemplified by ZINTEC (Zimbabwe In-service National Teacher Education Course) which was an emergency programme operating mainly in the first decade after Zimbabwe's independence. Students spent four months at the beginning and end of the programme in college, and otherwise studied by distance mode, supplemented by vacation courses and local supervision. This obviously allows for the integration of theory and practice, but opportunities for reflection and re-engagement with academic study are rather limited.

6. ***School-based training with distance learning***



Here teachers are trained entirely on the job, with variable amounts of distance education materials and local support. One effective example was the Fort Hare Distance Education Project in South Africa, for students who were long-serving but unqualified teachers. They met fortnightly in groups with supervising tutors, who helped them to work through the extensive, tailor-made, learning materials that covered both subject and professional topics. Instruction was combined with practical activities. Most of the assignments were based on their own teaching, but they had to show how theory informed their practice. The quality of both the materials and the supervision contributed to the effectiveness. It took place within a small geographic area, which allowed for frequent meetings.

REFLECTION

Which of these programme structures most closely matches your exemplar programme? Draw a quick sketch along similar lines, and say what opportunities it offers for the integration of theory and practice.

In many countries there are practical, geographic and economic constraints on how initial teacher education programmes can be structured, whatever the theoretical advantages may be of one particular model. If schools are far from the college, daily or weekly visits, by either students or staff, are not possible. When there is a shortage of teachers, the government may want to use student teachers as substitutes, even if this means they are carrying too heavy a teaching load to have time to study properly.

Initial teacher education does not have to follow such formal patterns, nor does it have to be delivered within institutions like colleges or universities. In Bangladesh there was a great need to train women teachers to teach girls at lower primary level. In response, the Bangladesh Rural Advancement Committee (BRAC) devised a cost-effective method of training local women on the job.

Case Study:
BRAC

The BRAC primary education programme – run by a non-governmental organisation – began in the mid 1980s in rural Bangladesh to educate out-of-school children, mainly girls. Today, there are over 27,000 BRAC one-room primary 'schools' built and maintained by the local community. Each school consists of 30–33 children, taught by one teacher for three to four hours a day. Pupils study the five-year national primary curriculum condensed into four years. If there is sufficient demand, the school is then 'reopened' and another four-year primary school cycle begins.

Teachers are almost all women with at least 10 years of schooling who are recruited locally. They receive 12 days basic residential training before the school opens, including learner-friendly and 'activity-based' approaches to teaching and learning. Once a month the teachers attend a one-day 'refresher' course and also have access to subject-based training depending on their needs, for example to upgrade their level of English. BRAC supervisors visit them frequently to monitor their work, and give on-the-job support and advice. Teachers are given teachers' guides, and these and other learning materials are improved based on teacher feedback.

This large-scale programme is widely considered a success in recruiting women teachers even for remote rural areas, and so encouraging the enrolment of girls. Both pupil drop-out rates and teacher turnover are low (less than 10 per cent), there is evidence that many teachers use activity-based teaching approaches at least some of the time, and some studies suggest that pupil achievement is generally higher than in government schools.

From a teacher education perspective, its strong points are:

- initial training is short but focused on teachers' immediate needs
- teachers receive ongoing support in their classroom and through regular local refresher courses
- BRAC management regularly 'reflect on their own practice' and the teacher education is frequently updated and improved
- BRAC's Research and Evaluation Division provides information to the Education Programme to help develop their work.

On a less positive note, teachers trained in BRAC programmes are not qualified to teach in government schools, are paid much less than government teachers and have no security of employment after the four-year cycle they are working on is completed. Despite this, BRAC's ability to scale-up its education programmes is impressive and its teacher development and support play an important role in this success.

(BRAC Education Programme, www.braceducation.org; Craig et al. 1999, Chabbott 2006)

REFLECTION

Which elements of this model might be useful in your country? Note down its strengths and weaknesses for your context.

Programmes such as BRAC, where some people, generally women, are qualified to teach in only part of the education system, raise certain questions. For example, are such teachers professionals, or only **paraprofessionals**? If they are considered as paraprofessionals, can this status be a step on the journey to full professional status?

There is a further practical consideration: in an era when 'Education for All' requires a huge and expensive increase in the number of teachers, could such paraprofessionals of sufficient quality and in sufficient quantity help meet part of the demand? Or would this diminish the status of the teaching profession?

REFLECTION

What answers might you give to the above questions in your country? What other questions are important to ask about these issues?

Programmes for continuing professional development

CPD can be offered in many different forms. The following types are classified according to their location.

Off-site

- ***Long courses***: certificates, diplomas, bachelors and masters degrees, etc, often leading to academic upgrading, either on campus or by distance education.
- ***Short courses***: workshops, weekend courses, etc.
- ***Cluster meetings***: for teachers from a group of neighbouring schools with similar jobs (English teachers, head teachers, lower primary teachers etc). Sometimes they are structured and run by advisors; sometimes teachers set the agenda and share ideas with colleagues.

School-based

- ***Courses***: run at individual schools (for example by advisory teachers) for the whole staff or a group of staff. This is quite common in the UK where schools are required to spend five days a year on staff development. Such CPD can be targeted at the particular needs of a school. Developing a group of staff means they can support each other as they try to put what they are learning into practice. The disadvantage is that teachers are not able to gain fresh ideas from colleagues in other schools.
- ***Various other learning opportunities***: include **mentoring, job shadowing, action research**, team-teaching, supported planning, or distance learning packs aimed at particular groups of staff. All of these could involve the support of outside advisors but might rely solely on the expertise found within the teachers in one school.

School-focused/school-centred

This is similar to school-based CPD because it is closely linked to the needs of a group of staff from the same school. It takes place off the school site – perhaps at a teachers' centre where there are fewer distractions. Sometimes groups of teachers from more than one school come together for a CPD event, but the focus remains on each group returning to their school to make improvements together.

As Chapter 10 will show, it is also possible to mix face-to-face sessions with distance teacher development.

REFLECTION

1. Note the types of CPD that exist for teachers in your area.
2. What opportunities do you know of for CPD for teacher educators?

Concluding comments

In this chapter we have discussed different components of the curriculum and how they interact. We also looked at variations in how the initial preparation of teachers can be structured. There are many effective ways of organising professional education and training and we hope that people will 'think outside the box' to develop different types of programme that suit their environment. Resources – money, tutors, institutions – are limited, of course, but within the practical constraints people with vision can devise effective programmes for teacher preparation and development that make best use of the available resources, as BRAC did. The next chapter offers some ideas about how professional curricula can be designed and developed.

Chapter 9

Design and development of teacher education programmes

Overview

This chapter looks at:

- the dilemmas in curriculum design and the choices that have to be made
- the influences and constraints on curriculum development
- some practical principles that could inform design for ITE and for CPD.

Introduction

Teacher education tends to be a conservative part of the education system. One conclusion reached by the MUSTER research team was reported as follows:

> History seems to weigh heavily on [some of these ITE] curricula.... Innovation has been sporadic, and often lagging behind changes in the school curriculum. There are apparently few mechanisms for regular review and renewal. Typically Ministries of Education work with college staff, sometimes with the aid of external consultants, to reform the existing curriculum rather than to renew it completely. Old ways of thinking and doing persist behind the façade of innovation and change. **International borrowing** sometimes results in curricular ideas being deposited, one above the other, like geological strata, without any of them being critiqued and adapted in the light of local needs and cultures.
> (Lewin and Stuart 2003:79)

It seems that teacher education curricula reflect aspects of their own cultural context and history, and evolve gradually over time. Their development is influenced by many factors, such as:

- government policies, which may include an ideological bias
- external influences, such as colonial legacies, or international borrowing; these may come from study abroad, or be brought by overseas advisors
- visionary individuals among politicians, educationists or local leaders
- economic constraints
- local cultural norms and traditions.

REFLECTION

Which factors do you think may have influenced the teacher education curriculum in an institution or country that you know?

It seems that there is seldom an opportunity to develop a completely new national curriculum for teacher education. Usually, designers can only make small revisions or changes. Nevertheless, we think it worthwhile to discuss here the issues involved in curriculum design, as well as the problems and constraints.

Some common dilemmas in teacher education curriculum design

Dilemma 1: What should be the balance between subject-related studies and educational studies?

Should the curriculum emphasise learning about the school curriculum subjects or learning about the theory and practice of teaching?

This depends partly on the academic level at which the students enter, and the school level at which they will teach. In a post-graduate programme, it is expected that entrants have a sufficient understanding of their subject(s) and that they know how to fill any knowledge gaps by themselves. Therefore the courses can focus on professional studies.

Students entering from high school may need to study more subject content, especially primary teachers who have to teach a wide variety of subjects. It has been argued, however, that it is more cost-effective to upgrade subject knowledge by keeping would-be teachers longer in high school, until they reach a certain academic level. Then the teacher education programmes, which are usually much more expensive, can be shorter and concentrate on the professional training.

Dilemma 2: What should be the balance between content and methods?

Within each subject area, how much time should be spent on extending the student's own subject knowledge, and how much on helping them understand how to interpret that subject to children?

This highlights the difference between 'Content Knowledge' and '**Pedagogic** Content Knowledge' (see Chapter 8). Research indicates that *both* are necessary: the teacher needs to understand the deep structure of the subject in order to understand how children learn it. PCK includes all the strategies and techniques of explaining a topic clearly to pupils.

Sometimes the decision is taken to merge the two. For example, an innovative Bachelor in Paedagogics degree at the University of Durban-Westville (UDW) in South Africa (a four-year primary teacher education course) took the decision *not* to separate content and methods,

even though the entering students came with relatively low academic achievements. The courses were named: Science Education, Maths Education, Language Arts Education and so on. Through learning to teach the subject to children, the students' own understanding of it was more effectively developed. The tutors modelled many of the pedagogic methods they should use with pupils, while teaching them at an adult level. In Botswana, this was done for science teaching within the Primary Teacher Diploma, although not in other subjects.

REFLECTION

At UDW the same tutors taught both content and methods in their subject, in an integrated way. Is that done in your institution, or are they taught as separate subjects, or by different people? What do you think are the advantages and disadvantages of each approach?

Dilemma 3: What should be the balance between educational theory and educational practice?

How much time should student teachers spend in schools – learning through doing – and how much educational theory should they study in college, learning in order to apply the knowledge later?

The debates are related to the models of teacher education (Chapter 1) and to views of teaching and learning, discussed in earlier chapters. A craft model of the teacher stresses practical experience, while the applied scientist model demands that theory comes before practice. The reflective practitioner model tries to integrate the two.

Here are some of the issues being debated in the context of initial teacher education:

Students should be taught theory in their initial training so they can use it to inform their teaching; theory is to be applied to practice.

Educational theory should arise out of practice; students should be taught to reflect on and theorise about their experiences in the classroom. But they need some kind of guidance to think effectively and rigorously.

Students should learn to teach first, and then use theory to critique and improve their practice. In this case, theory would be taught later, as part of CPD.

Teaching is a craft; teachers need to learn skills.

Teaching is a profession; by definition teachers need specialised, theoretical knowledge to underpin their work.

REFLECTION

Which of these statements do you agree with most? Why? If working in a group, let individuals take one of these viewpoints each, and argue the case for it. Take a few moments to note down the arguments you will make in the discussion.

Dilemma 4: How to make space for everything that a teacher needs to know?

A major problem is what to include and what to leave out of initial training. MUSTER research showed that many existing ITE curricula are heavily overloaded. It is as though student teachers can learn, in a two to three year programme, everything they will need for a 40-year-long career in education! This is unrealistic and often counter-productive. Students get tired and stressed and their performance deteriorates. Many topics simply don't make sense to the student teacher; they learn it to pass exams and then forget it.

For example, some students might not be interested in the details of how to include a visually-impaired child into a class of sighted children. Three years later, they might have such a child in their class. If they had access to CPD courses on **inclusive education**, they could then learn how to help that child succeed.

This highlights the need for initial teacher education to be part of a **continuum** of professional education. The initial education programme concentrates on the fundamentals a student needs to start teaching. Then CPD courses are designed to develop relevant knowledge and skills at later points in a teacher's career.

REFLECTION

If your exemplar programme is for ITE, is there anything in it that would be better presented as part of CPD? Are 2–3 year programmes possible and/or desirable in your context?

Dilemma 5: How to include general and personal education?

The place of 'personal education' has diminished in recent years. Some of the early missionary teacher colleges in Africa, working within a Christian framework, did endeavour to cultivate personal values and skills, but such topics are now seldom included in the official curricula.

Yet they would seem still to have some importance. Almost everywhere, teachers are seen as role models. When asked to describe good teachers, respondents – whether teachers or children – always include personal characteristics. They say that: 'Teachers are patient, kind, help lower achievers, are exemplars of good human values'. But there is very little in the typical teacher education curriculum to help students develop such characteristics. Is it assumed that good teachers are born this way?

One way is to provide supporting courses, such as basic counselling skills, self-awareness groups, or stress management. Other forms of self-development might come through music, art, poetry, dance, sport, martial arts or yoga. These might help teachers to become more rounded human beings, better at dealing with stress and less likely to resort to corporal punishment, more able to inspire their pupils, or to lead in extra-curricular activities.

Another way is to embed such self-development throughout the course. For example, educational theory courses might include examining one's own personality. The ethos of the whole institution could help to encourage such attitudes.

One interesting example comes from India.

Case Study:
Bachelor of Elementary Education, University of Delhi

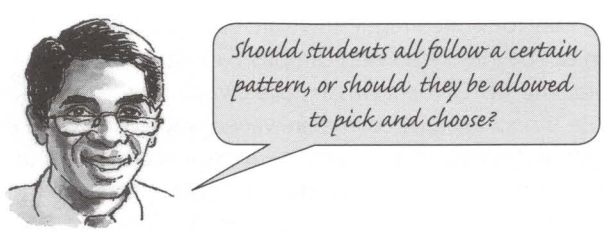
This innovative four-year programme is the first in India to offer professional degree-level education to primary teachers. It emphasises critical thinking, questioning and reflection. In Years 1–3 students undertake various forms of school experience, and in Year 4 there is a 17-week **internship**.

An unusual feature is a course of eight seminars on 'self-development', taught by external specialists. The course invites students to look at their own personalities, and their attitudes to others, particularly children, in depth. It helps them to develop qualities such as calmness, patience, and empathy. For those interested, it encourages them to search for personal and spiritual growth.

(MACESE 2001)

REFLECTION
Does your exemplar programme include anything that helps students develop personally? If so, how? If not, how important is this and what might be done?

Dilemma 6: What is the shape of the curriculum: developmental, spiral or modular?



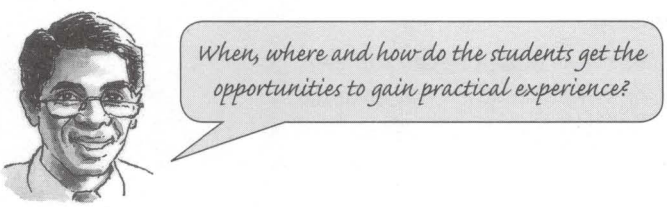
Another set of choices is about whether the curriculum content should be developmental or modular. A developmental curriculum is designed so that the whole cohort of students passes through the same experiences together in the same order. There are few, if any, choices for individuals to make. Often such a curriculum is conceptualised as a spiral: topics covered in Year 1 are revisited in Year 2 at a deeper or more extensive level, to match the ways in which students' understanding has developed. Students normally have to pass all course components – though these may include research assignments or extended essays on topics of their own choice. In the UK, this has been the predominant model, and it has been copied by teacher education colleges in many ex-colonial countries.

By contrast, a modular curriculum is organised so that individual students can, within limits, take different parts of the programme at different times. To graduate, a student will simply have to accumulate a certain number of credits. There may be compulsory courses, especially in Education Studies, but also many **electives**. For example, a student teacher majoring in history might have to take only three history courses out of a choice of six or seven. In the USA, teacher education programmes are often of this type, reflecting the organisation of their universities. In some developing countries, this pattern is likely to have been introduced into university departments of education. It can also be found in part-time and distance programmes.

REFLECTION

Is your exemplar curriculum modular or developmental? Which do you think is most desirable, and why?

Dilemma 7: How can the practicum be fitted in?



At the beginning of the 21st century there was, in industrialised English-speaking countries, an overall trend towards increasing the amount of practical school-based experience in teacher education programmes. This is in line with the social constructivist theories of knowledge and of learning discussed in earlier chapters.

There are, however, still dilemmas over the timing of such experiences: should they be **concurrent**, as with the B. Ed. and mixed-mode models, or should they be **consecutive**, as in the Post-Graduate Certificate in Education and some of the **internship** models?

Even when they run concurrently, there are decisions to be made as to how far the **practicum** can be integrated with campus-based studies. In the Namibian Basic Education Teacher Diploma (BETD) there was a move away from the traditional block practice and a desire to use 'school experience' in more varied ways to integrate theory with practice. But for one college, sited on the edge of a regional town, there were only four or five primary schools near enough to the college to allow close links between them. This meant that one primary school of 1500 pupils might host around 30 student teachers at a time.

Some countries have very large TECs to save money; would it be better to have more, smaller colleges with closer links to schools?

R

REFLECTION

What are the particular constraints in your context on working with local schools for the practicum?

Dilemma 8: Reproduction versus innovation?

Should the curriculum train teachers to deal with the pupils and schools as they are now, or should it prepare them to be agents of change and innovators?

Schools often expect Newly Qualified Teachers to bring new ideas and methods with them. On the other hand, new teachers are badly placed to lead changes. They are usually young and may have little power or status within the school.

A

ACTIVITY

Rank these eight dilemmas in order of their importance for you. Does the order change depending on whether you are thinking about ITE or CPD?

Influences and constraints on curriculum development

It is not only professional dilemmas that affect teacher education programmes. Curriculum developers work within many other constraints – economic, historical and cultural for example. These will influence the direction and pace of change. Some examples are:

Economic: Teacher education is frequently expensive, particularly if the courses are residential and if tutors have to travel long distances to supervise students. For this reason, a number of developing countries have cut the length of residential programmes and moved training partly into schools; Zambia is one. Others have set up distance learning programmes (Distance Education is discussed in Chapter 10) or **mixed mode**

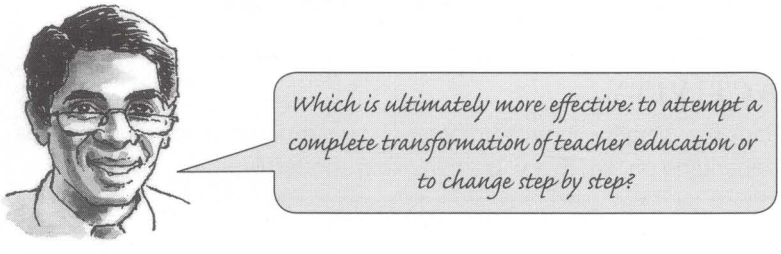
programmes like the former MIITEP in Malawi. In some cases, shortage of time or money may force curriculum developers to radically rethink the whole programme, with positive results. In other cases, people may just try to cram all the old content into a shorter time. This often does not work out well.

Infrastructure and vested interests: The existing institutions often act as a brake on change, or push new courses into old channels. This is particularly problematic if there has been much investment in colleges. If teacher education is moved into schools or even into universities as in South Africa, what is to be done with the college buildings and, more crucially, their staff? Few tutors would want to design a curriculum which put them out of a job!

Traditions: Historical and cultural norms about what teacher education is and how teachers learn also subtly influence design and development. What 'has always been done' can seem the right, the best or indeed the only way of doing things. Stakeholders often find it difficult to conceive of any alternative, so they end up making very small changes which may not meet new needs.

Politics: Teacher education is often a contested arena. In the UK, Margaret Wilkin has documented how practices and policies changed according to outcomes of debates and pressures between the governments of the day and educational professionals in universities and colleges (Wilkin 1996). Donors and development banks also have an influence on teacher education in many developing countries. Often the Ministry of Education is more powerful than the professionals, and at the same time more conservative, so teacher education tends to alter very slowly. In some places, such as Latin America, change has come from radical teachers' groups. (Avalos 2004)

A further dilemma: Radical or incremental change?



A radical change in government can also stimulate a dramatic shift in teacher education. Two recent African examples are Namibia after independence, and post-apartheid South Africa. In both cases, the whole of teacher education was radically transformed. The problem here is that some tutors may not understand it, nor want it, and there is not enough time to help them adjust their practice. Then the new programme does not achieve its aims, and is declared a failure.

An alternative approach is to introduce reform gradually, building on local good practice, so that tutors have time to experiment and alter their teaching. The danger here is that some things and people don't change at all and these can hold back the reform for a very long time.

Two case study examples show different policies in action.

Case Study:

Namibia (see Zeichner and Dahlstrom 1999)

When Namibia became independent in 1990, the new government decided to transform the whole education system. The underlying educational philosophy was based on 'learner-centred education, developmental theory and a constructivist approach' (p. 39). Unusually, they began with teacher education, which thus became 'the spearhead of the reform' rather than an afterthought (see Chapter 12).

In 1993 the three-year Basic Teacher Education Diploma was introduced. This aimed to change 'the mindset of the teacher as a passive and unreflective dispenser of **received knowledge**... [to that of] a critical inquiring and reflective professional' (pp. 64–5). Students spent substantial periods in school each year, during which they had to carry out 'critical practitioner enquiries', first collecting information about how the pupils learnt, and then doing **action research** into their own teaching. It proved in practice difficult to implement, but there was enough political will among teachers for many elements of the reforms to survive.

Perhaps more typical is the case of Lesotho. Here there was a fairly radical break after independence, but since then changes have been slow and incremental.

Case Study:

The development of primary teacher education in Lesotho

After Independence the government closed all the church-run teacher training colleges and set up (in 1975) a National Teacher Training College (NTTC) on a secular basis. The curriculum was strongly influenced by competency-based, skills-oriented practices from the USA, and by the behaviourist view of teaching. The student teachers, who entered with a junior secondary certificate, studied subjects and methods separately, along with educational foundations. The second year, out of three, was spent teaching under supervision in schools.

By the early 1990s there was dissatisfaction with the standard of NTTC graduates. A new three-year Diploma was introduced, for entrants with the Cambridge Overseas School Certificate. Consultants came from Ireland and drew on **cognitive**/constructivist models of teacher development. The College was renamed Lesotho College of Education to emphasise the wish to move away from training towards professional education.

A local educationist created a set of overall aims and objectives based on a 'reflective practitioner' view, but the subject-specific syllabi were written along behaviourist lines, similar to those of the previous curriculum. More emphasis was put on subject knowledge, and on foundation subjects such as psychology and sociology, along with study skills. Time allocated to methods courses was decreased. There was 15 weeks of teaching practice, in two blocks. Most staff remained in post and no professional development was offered to help them implement the changes. Observations in classrooms suggested that although the content of the syllabi changed to some extent, teaching and learning styles, and assessment procedures, did not. Analysis of the curriculum showed a number of mismatches between the overall aims and the other elements of the curriculum strategy.

(Based on MUSTER research papers; see Lefoka et al. 2000; Lefoka and Stuart 2001)

REFLECTION

1. When did the teacher education curriculum last change in a country you know? How far-reaching were the changes? In your view, how beneficial were they?
2. Do you think it is better to make small step-by-step changes, or to undertake a full-scale reform?

Where to start: designing ITE

All the stakeholders involved in curriculum development – college tutors, university lecturers, politicians, teachers' unions, parents, school administrators and so on – should be aware of such influences and constraints. However, we believe it is important that teacher educators, in particular, reflect on and regularly review their curricula. Sometimes this might just involve small improvements in teaching, based on the experience of last year's seminars; at other times a more far-reaching review might be necessary.

As we have said, there is no perfect template or model. Dilemmas seldom have a neat solution. All one can do is recognise the tensions and find a balance that meets the most important aspects. The following principles are put forward in response to some of the dilemmas outlined above, as a basis for discussion and reflection.

We suggest that an effective initial teacher education curriculum would:

- Take account of *what kinds of students* are likely to enter, what academic levels they have achieved, and what their needs are.
- Decide first on the *desired aims and outcomes* – whether expressed as standards, competences, or other kinds of achievements – and keep these always in mind.
- Ensure the different components of the curriculum form a *consistent and coherent strategy*.
- Be concerned with the *development and use of the many different kinds of knowledge* required by teachers: theoretical and practical, content-based and methods-based. For example, student teachers need some conceptual understanding of how children learn, but they also need to know how a particular child, in a particular class, is likely to learn each subject best.
- Be *spiral*, so that concepts are revisited several times over the programme, each time at a deeper level of understanding in the light of practical experience. This would mean, for example, that a topic like assessment would be treated in each year of a three-year course, but from different angles, for example using the students' own practical experience in Year 1, exercises carried out during teaching practice in Year 2, and a more theoretical overview in Year 3. In a one-year course the topic could be included each term.

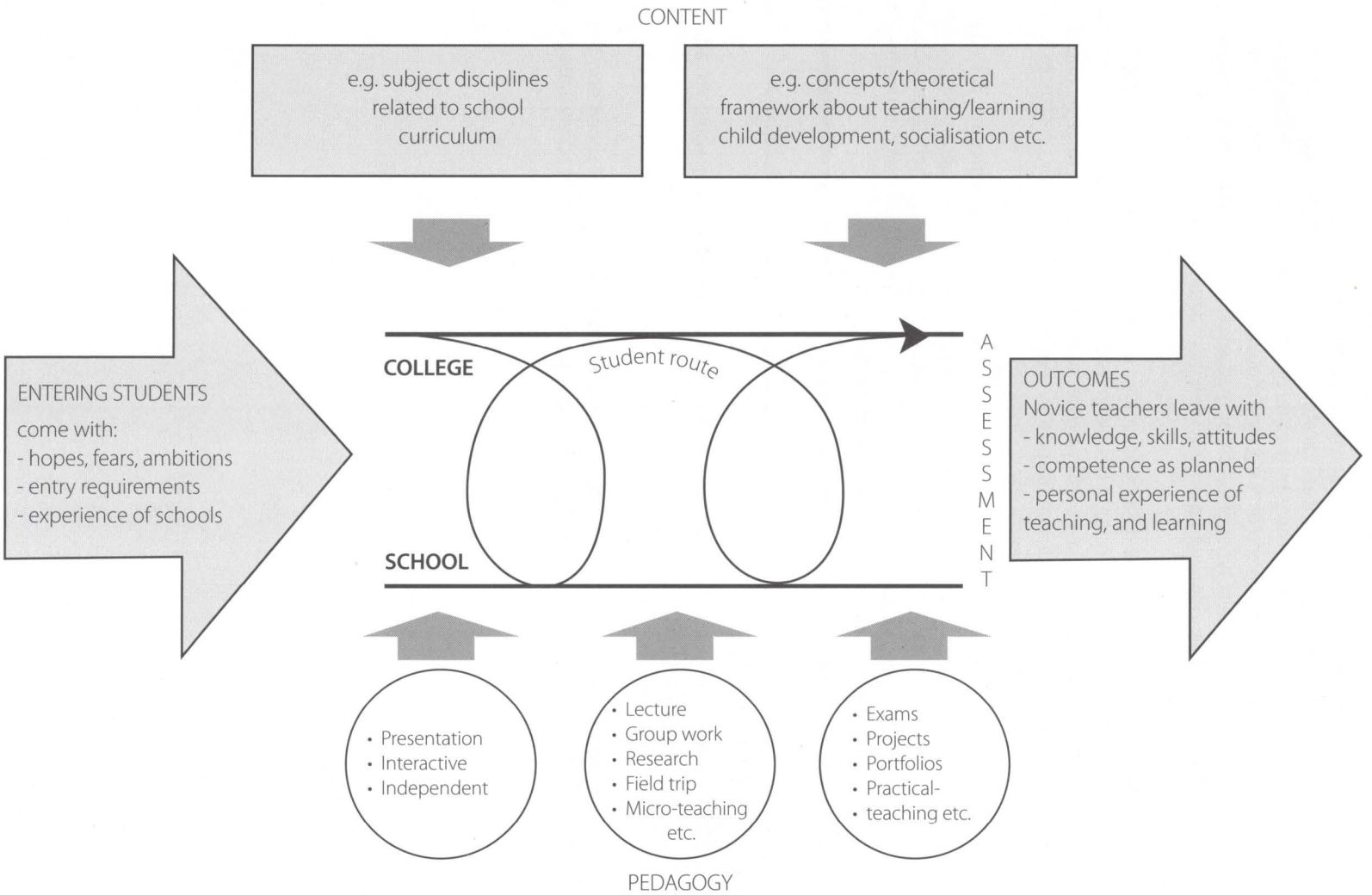
- Be *developmental*, in that the students' progress towards desired outcomes is regularly assessed against clear indicators of the level of competence expected over the course. For example, by the end of Year 1 students should be able to plan a basic lesson; by the end of Year 2 they should have planned and carried out a number of different types of lesson; by graduation they should be able to evaluate their own classroom performance in the light of certain principles of good teaching.
- Respond to, but also be designed to improve, *the education system of which it is part*. Student teachers need to be able to teach the present curriculum but also see themselves and their classroom in a wider context. Teachers have to be capable of adapting the school curriculum and their teaching to changing circumstances in schools and in the wider society.
- *Integrate theory and practice.* This can only be achieved if the **practicum** is placed at the heart of the curriculum, so that student teachers spend a significant proportion of their time working with pupils. This practical experience should then relate back to the more theoretical parts of the curriculum. As students reflect on their practice, they will develop their own personal theories of teaching.

REFLECTION

Do these principles for the ITE curriculum apply where you work? What would you add, or take out, if anything?

Figure 9.1 uses the curriculum components discussed in Chapter 8 and shows how they could be used in designing a programme along these lines. There is an activity based on this at the end of the book.

Figure 9.1 Designing a teacher education curriculum



Where to start: designing CPD

REFLECTION

Which of the principles outlined above might apply to CPD, in whole or in part?

It is more difficult to generalise about CPD programmes and courses, since they cover a wider range of purposes than initial qualification. We hope that the reflections and activities in this book will themselves give you a **repertoire** of CPD ideas that you could adapt for different groups of teachers and for various purposes. From our own experience and recent research we suggest the following general guidelines:

Career-long learning

As a general principle, plan CPD courses to help teachers become life-long learners. CPD should take place at regular intervals, build on what teachers learnt in ITE programmes and help them further develop their professional understanding. The first year of teaching is particularly important. Some countries provide an **induction** programme with a mixture of in-school support from a **mentor** and local meetings for newly qualified teachers (NQTs) from several schools.

Start where the teachers are

Carry out a careful analysis of the teachers' professional learning needs. These might be for subject knowledge up-grading, training to meet curriculum changes, new teaching methods, or to prepare for new posts of responsibility, such as head teacher, inspector or advisor.

Be realistic

Take into account the realities of the classroom environments and teachers' already busy lives. It is better to have more modest objectives that can be achieved, than to aim for some impossibly idealistic target. Courses must take into account local resources available: methods using computers are demotivating when many schools only have blackboards and chalk.

Build on good practice

Help teachers to share what they already do well, evaluate the usefulness of outside solutions, and develop their own ways of improving practice. In many developing countries there has been relatively little research into teaching and learning strategies that work in local contexts. Here, there is a particularly strong case for CPD that includes teacher research, reflective practice and teacher networking.

Try to be positive! It is too easy to see teachers as the root cause of all the problems in education because they lack something, such as commitment or a suitable academic qualification. Instead, focus on what is working in schools. CPD can be seen as a way of helping teachers and schools grow, personally and professionally, so that they can cope with a challenging job.

Pedagogic processes

Be clear about the kinds of learning you aim for, and link these to the models and theories discussed in Chapters 3 and 4. For example, the Joyce and Showers' **coaching** model, (see Chapter 3) and the Kolb experiential model (see Chapter 4) are useful for CPD. In general, social constructivist approaches are most appropriate for these adult learners. It is important to aim to empower the teachers to continue learning both independently and collaboratively with colleagues.

Consider the needs of the school

Use CPD for all staff together to raise standards of teaching and learning throughout the whole school. This helps the school become a 'learning community' based on reflective practice. There may, however, be tensions between the felt needs of individuals – perhaps wanting to further their own careers – and the needs of the school, which might want them to retrain in a new subject.

Sustainability

Build follow-up support into the course design. Much of what is learnt in 'traditional' CPD is not implemented when teachers return to their classes. There are many reasons, including lack of appropriate resources, pupil opposition, limited teacher confidence, time pressure, indifference or even hostility from colleagues, who might feel threatened by change.

REFLECTION

Think of as many different ways of organising follow-up support as you can. Which of these would be useful where you currently work?

Case Study:
Teachers' mimicry

Mattson and Harley (2003) writing from experience of South Africa, emphasise that CPD must start from and develop teachers' views of who they are, and who they can imagine themselves being. The authors found teachers adopted the strategy of 'mimicking' the type of teaching recommended without internalising it. Perhaps it was because they were not truly convinced of its relevance to them and their school, or perhaps because they did not always fully understand the reasons for the underlying policy changes. This sometimes happens when new methods are imported from elsewhere without considering how well they would fit in the new context (see Chapter 10).

Consider gender and other inclusion issues

Ensure CPD programmes are accessible and relevant to men and women, to disabled teachers, and to teachers from all ethnic groups. For example, will a one-week residential CPD course free female teachers from household responsibilities so that they can concentrate on learning, or will this design mean that those with young children are unable to attend?

Evaluation

Monitor and evaluate the impact of the courses. This is sometimes easier in CPD than in ITE programmes. The evaluator may be able to observe the teacher in the same school, both before and after the course, to collect evidence of changes in teaching practices, and perhaps even in pupils' results. Discussion with teachers, and longer-term evaluations are also important.

REFLECTION

Which five of the above guidelines do you consider most important? Why?

Case Study:

CPD as an integrated part of school reform: the 'new school' movement in Latin America

A successful model of large scale CPD was developed in Columbia ('Escuela Nuova' Project) and later in Guatemala (Nueva Escuela Unitaria programme). Teacher development was seen here as part of an integrated programme to transform rural, mostly multigrade, schools.

Key elements were:

- a philosophy of democratic participation, community involvement and learning from experience, combined with charismatic leadership
- a clear vision of what was realistic and applicable in the local context
- close links between theory and practice; the teachers were treated as 'reflective practitioners'
- 'teacher circles', in which 'groups of teachers participated in analysing, studying, reorienting and validating curriculum materials'
- practical classroom support, including books, teaching aids, and teachers' guides showing how to plan lessons using the new methods
- continuing support and development for the teachers.

(*Teacher Development: Making an Impact*, H.J. Craig, R.J. Kraft, J. du Plessis, World Bank 1998:78–91)

Concluding comments

This chapter has been about dilemmas and difficulties, as well as about design and development. In some ways it has expressed a contradiction. On the one hand we have said that teacher education tends to be conservative. Research shows that curricula usually change very slowly. We highlighted some of the constraints, both from within the society, and internationally. On the other hand, we have put forward a design model and urged teacher educators to keep developing their initial teacher education programmes. This represents perhaps the most important dilemma of them all: how to learn from the past and yet to move forward using the opportunities in today's globalising world.

Throughout the book, we have argued that teacher development is a lifelong process. Well-organised and regular CPD can have a significant impact on teaching

and learning because it is tailored to the needs of both teachers and schools. Unfortunately in many countries far more money and efforts are put into residential campus-based ITE programmes than into supporting and developing the teachers already in the schools.

REFLECTION

In your country, is more emphasis put on ITE or on CPD? Do you think the balance is appropriate? Why or why not? What are the factors that have influenced the balance in your country?

The next two chapters pick up some of these themes. Chapter 10 looks at ways of developing teacher education through open and distance learning, and Chapter 11 discusses international influences on the curriculum.

Chapter 10

Teacher education through open and distance learning

Overview

In this chapter we look at:

- what open and distance learning (ODL) is
- how useful ODL is for educating teachers
- the role of a teacher educator in ODL
- the uses of information and communication technologies (ICTs) in ODL for teacher education
- how teacher educators can learn more about ODL.

Introduction

Open and distance learning (ODL) is increasingly used to educate teachers in many countries, but there is often little professional development for the staff who teach by distance. This chapter looks at teacher education from the point of view of these staff – the teacher educators.

In education today, information and communication technologies (ICTs) are revolutionising ways of teaching and learning. ODL often exploits these new developments and so this chapter will also serve as a brief introduction to some of the possible uses of ICTs in teacher education.

What is open and distance learning?

ODL has a long history. For example, the University of South Africa (UNISA) began offering correspondence courses by post to non-residential students in 1946. Today, ODL is changing and growing as it makes use of new ways of getting information and communicating over great distances. But, what exactly is ODL, and how does it differ from face-to-face education?

ACTIVITY

1. Look at the words and phrases below and tick or list those that you think describe ODL.

Computerised	Innovative	Multi-media
Second-best	Good for women	Good for rural teachers
Lonely	Traditional	High status
Convenient	Face-to-face	Rewarding
International	Open learning	Correspondence course
Motivating	Good for initial teacher education	Suitable for INSET/CPD
Hard to complete	Cost-effective for governments	Challenging for tutors
Big business	Expensive to set up well	Expensive for teachers
Poor quality	Good way to get promotion	

2. Look at the words and phrases you have chosen. Do you have a generally positive, a generally negative, or a mixed view of ODL? There is no 'correct' list. Your view of ODL is likely to depend on how it works in your situation.

ODL has often been defined by contrasting it with face-to-face classroom-based education. The key feature of distance learning is that there is some physical distance between the teacher and the students. Bernadette Robinson defines it this way:

> ... a teaching–learning system or process in which the teachers and learners are physically separate for some or all of the time, and where learning materials take on some of the role of the traditional teacher. (Robinson 1997:122)

Good quality distance learning often also aims to be 'open learning' – meaning that it is accessible to as many people as possible. Open learning gives tutorial and other support so learners have the best chance of success. Student teachers with a weaker academic background might, for example, take an extra course in mathematics. Open learning also often recognises relevant prior work and study experience and gives course credits for this, so that people can gain the qualifications they need efficiently. Open learning often uses the flexibility of distance methods and so they are often thought of together as 'open and distance learning'.

Key features of ODL

Learning materials are even more important than usual – they have to do more of the work of a teacher than in conventional classrooms. Because of their key role, learning materials for ODL often use several media to get their message across, such as textbooks and workbooks, television and radio broadcasts, audio- and video-tapes, and various computer technologies. Pedagogy often becomes less teacher-centred, and more resource-centred. If these resources are well-designed they can provide activities to help the learner make sense of the material for themselves, and so be more learner-centred.

Face-to-face contact is usually less than in classroom-based education. As a minimum, the provider will usually send out materials, receive assignments and give some form of certificate

at the end. The better programmes provide *support* that ensures that most of their students complete their studies. Many programmes include some time when students meet tutors individually, or meet other students, with or without a tutor. As a rough guide, distance education is sometimes defined as a programme in which 70 per cent or more of expected study hours are taught by distance. Contact and support can be easier to organise with new technology.

The physical distance between learners and teachers means that there is also often a **time difference** between the act of teaching (writing materials, writing comments on students' work) and the act of learning (reading materials, listening/watching radio and television broadcasts, writing assignments and receiving comments on them). Nowadays, however, there are two-way technologies such as telephones, and computers with internet access. These allow teaching and learning sometimes to happen at the same time, even over a distance of many kilometres.

Flexibility is another key feature of ODL. People can mostly study at a time and place that fits in with the rest of their home and work commitments. In some places distance learning is still often seen as second-best, partly because some programmes have been poor quality, offered little support from tutors and had high drop-out rates. Where there is good internet access, ODL is becoming the first choice of those who wish to continue with their careers while studying.

ODL aims to increase social justice by giving educational opportunities to disadvantaged groups such as women, poorer people, ethnic minorities and those living in remote places.

How does ODL differ from face-to-face education for student teachers?

ACTIVITY

Imagine a crowded lecture hall filled with rows of student teachers. They are busily chatting to each other about their three-week teaching practice placements which have just been posted on a notice board. At 9 a.m. their tutor enters the room, they quieten down and for the next hour only the odd whisper is heard among them. The tutor starts his lecture and continues for 50 minutes. The student teachers write furiously trying to keep up with the lecture. At the end, the tutor asks if there are any questions. Some students look back over their notes to see if they appear to make sense. If not, they will take their questions privately to the tutor as he packs up his things, or go to his office in the afternoon. The tutor sets an essay to be handed in when

they next meet, and then allows the student teachers to leave. They have a busy morning of lectures and seminars, and then eat lunch in the student dining room. In the afternoons they have time for private study, sometimes working together in small groups.

Now, imagine a student teacher on an ODL programme. A woman in her mid-20s sits at a small desk with a book labelled *Student Teacher Handbook* open in front of her. On one side of her, behind a curtain, a small child lies sleeping on the bed. Her husband works away during the week so she does not need to make too much effort with supper and the evenings are her own. She decides to work until she has finished the next two self-study units. Then, next week she will be ready to start the assignment that must be in by the end of the month. She makes a note of two or three unfamiliar words, ready to discuss at school tomorrow with another unqualified teacher who is studying the same programme. If her friend does not know the words, they will ask the older qualified teacher who works with them in Grade 1. She reads about a new way of teaching subtraction, and decides to try it out in her next mathematics lesson. If it does not work well, she will be able to ask the advisor about it at the monthly meeting for student teachers in the local cluster of schools. Towards the end of the evening, tiredness washes over her. Her days are long and busy, but she tells herself it will be worth it in the end. She pictures herself receiving her teaching certificate and dreams of the better life she will make for her daughter with the extra salary.

Compare these two brief views of teacher education programmes.

What are the similarities and differences for the teacher educators and the student teachers?

For example, consider:

a) who the teacher educators are, what kind of work they do and what their relationship is with the student teachers

b) when and how the student teachers are learning, and how much choice they have in this

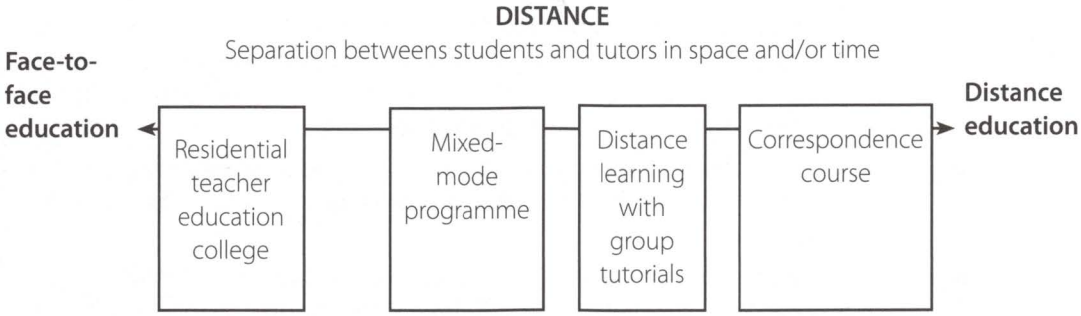
c) what opportunities the student teachers have to learn from each other.

Where is the dividing line between distance and face-to-face education?

The activity above describes two situations which are clearly very different. There are, however, few educational programmes that are completely taught by distance, and few that are completely taught face-to-face. Even traditional schools and colleges give homework which students do without the presence of a teacher. So, the amount of teacher-time and

support that students get varies from programme to programme. Some programmes are called 'mixed-mode' because they mix both face-to-face and distance modes of education. These include periods of studying by distance, and some periods of studying full-time at college, perhaps in the school holidays, or for one term. It can be useful to think of a continuum of teaching and learning programmes (see Figure 10.1).

Figure 10.1 The continuum of educational provision



How useful is ODL for educating teachers?

ODL is often recommended as a way of helping large numbers of teachers gain their initial qualification, and as a way of helping qualified teachers develop professionally. Many expanding education systems face the problem of a limited supply of qualified teachers, particularly those who are willing to work in remote schools in rural areas. As a result, unqualified teachers are frequently recruited. ODL appears to be the answer to the problem of how to educate these teachers while keeping them teaching in classrooms. ODL is also used in many countries for continuing professional development. But how suitable is ODL for educating teachers? This section looks at some of the key arguments for and against the use of ODL for teachers.

Key arguments for teacher education through ODL

There are a number of arguments for using ODL to educate teachers:

Access to relevant teacher education

- ODL can be used on a large-scale and over a wide geographical area. Teachers who do not live near a town with a college or university can still live at home, work and study.
- Serving teachers do not have to be absent from school for a long period.
- It is less disruptive to family life than a residential course. This is often an advantage to women who have young children. In some countries female teachers are less-qualified than male teachers, and so they are more likely to need to upgrade their qualifications.
- ODL gives teachers a wider choice of programmes than those available at the local college or university. This is useful for continuing professional development (CPD) as teachers often want to specialise in a particular area as their careers progress.
- Teachers and teacher educators can enrol at overseas universities and gain internationally recognised qualifications. Distance fees are often less than face-to-face fees, and there are few if any travel and subsistence costs.

- It can be more flexible when learners find their personal or professional lives change. Some programmes allow learners a long period over which they can complete their study. So if they have a baby, or have to take charge of a school as acting head teacher, they can stop and restart when they have more time.

The process of teaching and learning

- Introducing ODL gives an opportunity to develop new ways of teaching and learning. Because it is a different style of teaching, it can be a stimulus to reorganise existing material, or to devise a new teacher education curriculum. It is also an opportunity to try out new media such as television, radio, the internet, etc.
- When student teachers and serving teachers are studying as they work, there is a short time gap between learning about new ideas and having an opportunity to put them into practice.
- ODL can support a programme of mainly school-based teacher education for unqualified teachers. This is particularly useful when there are few qualified teachers in schools to support the unqualified teachers.
- ODL can support head teachers who run whole-school development programmes in their schools.
- ODL can be more adapted to individual students' learning styles. Students can choose whether to study early in the morning or late at night, and how, and to some extent how fast they work through the material. (There are usually some deadlines for assignments so that students know they are making progress and stay motivated.)

Key arguments against using ODL for teacher education

As is the case in many areas of life, some of the same factors that are an advantage to one ODL student, can be a disadvantage to another.

Access to relevant teacher education

- Teachers working in remote schools might not have easy access to libraries, group tutorials, telephones, the internet and other support for their learning. Even the core distance learning materials might be hard to get hold of if the postal service is slow and unreliable.
- It can reinforce the unequal position of women in society by allowing them to study in isolation for qualifications that are sometimes seen as lower status than those given by traditional colleges and universities.
- Individual students can find themselves paying more for their education if they study by distance. Government programmes often pay student teachers' fees but sometimes ODL transfers other costs of education to individual teachers and away from the Ministry of Education. Teachers might need to pay to travel to seminars, or they might need to buy a computer.
- Distance programmes run by overseas universities and colleges might not be useful for teachers in some countries. The programmes might not be relevant to the local curriculum and pupils. The qualifications gained might not be nationally-recognised

for promotion. The language level might be difficult for teachers or teacher educators studying in their second or third language. The expectations of independent resource-based learning might be difficult to adjust to if tutor support is limited.

The process of teaching and learning

- While for some women ODL offers their only chance to study, for others, it means that they have four or five 'jobs' to do – teacher, mother, wife, part-time farmer and student instead of being able to concentrate on being a student by attending residential college.
- Motivation is a key difficulty with distance learning. It can be hard to keep studying without the deadline of preparing for the next class you will be attending.
- Related to this is the desire for the company of other students. Other students can help explain difficult ideas, provide examples from their own teaching experience and give friendship and encouragement.
- Teachers who are working full-time in school might find it hard to prepare and mark pupils' work adequately while having to study in the evenings.
- Learning materials usually take more time, skill and money to write and produce than those for face-to-face learning. ODL is not always cheaper for a government wanting to get large numbers of teachers qualified in a short space of time. The initial investment in writing and piloting good quality materials is high.
- The tutor is not there as the student teacher learns, to adapt the materials if the student teacher finds them difficult to understand or not applicable to their situation.
- It is hard to assess and advise directly on teaching practice from a distance. It is sometimes therefore necessary to employ local tutors and/or collaborate with advisors, inspectors and head teachers.
- Many organisations offer programmes by ODL. It can be difficult for teachers to find out if a programme is good quality and suitable for them before they pay their fees.

REFLECTION

Look back over the advantages and disadvantages of ODL for teaching. Which of them are most relevant in a country or region that you know well? Which of them are least relevant to that situation?

ACTIVITY

Gender and the arguments for and against teacher education by distance

Think of an ODL programme, preferably one for teachers/student teachers that you have experience of as a learner, tutor or designer.

a) Note down how many of the arguments for and against distance teacher education applied to this programme.

b) Put a 'W' for any argument that would particularly apply to women.

c) Put an 'M' for any argument that would particularly apply to men.

d) If possible, discuss/compare your answers with a colleague who knows the same programme.

e) How much do you think the designers of the programme and tutors on it were aware of any differences between the advantages and disadvantages for men and women? How could it be made more accessible for both men and women?

The case study below is an interesting example of a national programme that used a combination of distance and face-to-face education.

Case Study:
MIITEP, Malawi

MIITEP (Malawi Integrated In-Service Teacher Education Programme) was a collaboration between the Malawian government and a German development agency, GTZ. It was funded through a loan from the World Bank. In 1994 Free Primary Education was introduced in Malawi and over a million extra pupils quickly enrolled in primary schools. Thousands of new teachers were needed to teach them, and so many unqualified teachers were recruited. MIITEP started in January 1997 and ran for several years with the aim of training 15–20,000 unqualified primary teachers. These teachers had either a junior (two-year) or a full (four-year) secondary education certificate.

How was MIITEP organised?

Table 10.1 Overview of MIITEP

Duration	**3 months**	**21+ months**		**6 weeks**
Location	Teacher education colleges	Primary schools	Teacher development centres	Teacher education colleges
Learning material	Student Teacher Handbooks 1–5			
Activity	Residential course	– Return to teaching job – Self-study – Teaching practice supervision from qualified teachers, primary education advisors and college tutors	12 zonal seminars	Residential revision course
Assessment	Assignments and projects Teaching practice			Final examinations

The table gives an overview of MIITEP. It was a mixed-mode national programme which combined residential study with distance learning. Malawi had six colleges for primary teachers located across the country. The existing tutors in these colleges taught on MIITEP. All other programmes of primary initial teacher education were discontinued. MIITEP centrally produced five *Student Teacher Handbooks* which gave detailed instructions and content for every face-to-face college seminar and self-study unit for the 12 subjects on the teacher education curriculum.

Some of the college tutors were part of the writing teams that produced these handbooks.

Each of the six colleges had around 500 student teachers enrolled on a three-month full-time residential course. These student teachers were taught a range of courses by the full-time tutors. They studied over a thousand pages contained in *Student Teacher Handbooks 1–3*. When the first group of 3000 student teachers left the colleges to go back to their schools, the Ministry of Education sent another 3000 student teachers to the colleges for the next three-month residential course.

The student teachers returned to their jobs with two further handbooks as self-study manuals. They studied while teaching and were expected to have support from qualified colleagues in school, and in-school supervision from Primary Education Advisors (PEAs) and visiting college tutors. In practice, this was sometimes hard to organise.

Students completed projects and assignments during this school-based period. The intention of MIITEP was to provide regular supervisory visits and local seminars. After five or more terms teaching and studying, they returned to college for around six weeks for revision and to take their final examinations.

(See Stuart and Kunje 2000, Kunje and Chirembo 2000 for details)

REFLECTION

The *quantity/quality trade-off*: MIITEP was one solution to the teacher shortage that used a large element of distance learning. What do you see as the main advantages and disadvantages of the MIITEP programme?

Important questions to ask when evaluating a programme such as MIITEP are:

a) What other kind of teacher education programme could have done a better job of dealing with the teacher shortage?

b) How can student teachers be best supported in their learning while they are based in schools?

Challenges in the implementation of ODL for teacher education

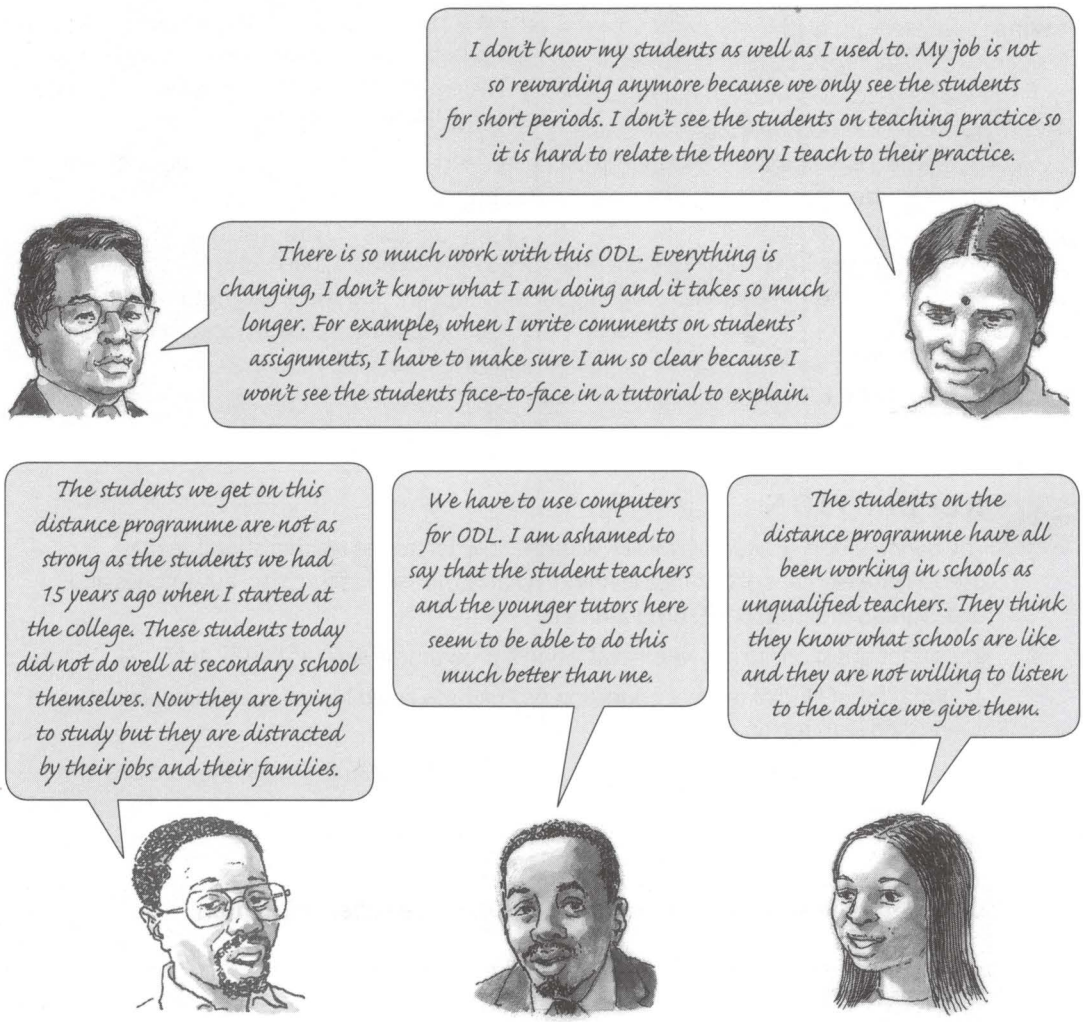
ACTIVITY

Study the discussion on the following page. Draw a table like the one below and use it to make a list of the problems that the tutors are talking about. Next to each problem, suggest something the tutor could do to respond to the problem.

Problem	What could the tutor do?

Have you ever felt like any of the tutors in the picture when change has been introduced? Did your opinions change as you got used to the change?

Teacher educators who have worked in colleges for years are sometimes expected to start teaching by distance with only a few short workshops to guide them. In this situation, the teacher educators can find it hard to manage the change to ODL.



There are often short-term problems when any change is introduced. Change is inefficient and is usually more work for everyone as they learn their new roles. A new way of educating teachers needs the commitment of the tutors. It is only likely to get this if tutors understand the need for the changes to their work. Reasons for using ODL in teacher education are well set out in Perraton et al. (2002).

How effective is ODL for teacher education?

Can every aspect of the teacher education curriculum be learnt by distance, or are there aspects of teacher education that need to be taught face-to-face? In earlier chapters we looked closely at how people learn to teach, and what they need to learn to do this. Bernadette Robinson has analysed how distance learning can help serving teachers with different aspects of their professional development. Although this table focuses on CPD, much of what it says also applies to ITE.

Table 10.2 Can distance education provide effective elements of in-service teacher education and training? (Robinson 1997)

Effective elements of in-service teacher education	**Distance education's capability to provide them**
1. Exposure to new theory or techniques	■ Can provide materials for wide and rapid dissemination. Can create good quality learning materials explaining new theory and techniques, and illustrate them, using print and other media. ■ Can draw on 'best experts' or 'best practitioners' to contribute materials, and provide a wide variety of ideas and techniques.
2. Demonstrations of their applications	■ Can demonstrate through print (case studies, examples of teachers' work) and through audio and video materials. Can illustrate teachers and children at work in a variety of classrooms and in discussion with each other; can include 'teachers' voices' and their real concerns in the materials. ■ Can show a wider range of practice and contexts than a teacher would otherwise have access to.
3. Practice by the teacher	■ Can support a teacher's practice by structuring teaching activities in self-study texts and guiding the teacher through them. Offers some support for reflective practice, especially if linked to peer-group meetings and tutor support. ■ Can set course assignments which link theory to practice and give students feedback on them. ■ Can organise practical sessions at local centres with other teachers, in partnership with local agents. ■ Cannot observe individual teacher's practice in schools; needs local partners. ■ Cannot easily negotiate local access to particular schools for special practice or observation sessions, without local partners.
4. Feedback to the teacher	■ Can provide feedback on written work and reports of practice. ■ Cannot provide feedback on actual practice to individual teachers. Other agents, including group activities, are needed for this.
5. **Coaching** over time	■ Can assist coaching activities through providing support materials to develop the concepts, theory and attitude changes which underpin practice. ■ Can provide support materials and guidance in good practice for local agents (tutors, **mentors**). ■ Cannot provide individual diagnosis, feedback, coaching or counselling without local agents or the use of **interactive** technologies (such as two-way video).

This analysis shows that ODL can provide many elements of teacher education, but the phrases beginning 'cannot' show the limitations of ODL. Most of the limitations focus on the difficulty of assessing teaching at a distance so that teachers can improve their practice in

the classroom. These difficulties can often be overcome by local arrangements, for example the MIITEP design had local seminars and supervisors to help teachers. The reflection below considers what is best studied face-to-face, what is best studied by distance, and what can be taught well by either mode.

REFLECTION

1. Think about your role as a teacher educator. Which elements of teacher education (1–5) do you provide?
2. If you teach face-to-face, how easy would it be to switch to ODL? What opportunities could be gained, and what might be lost?
3. If you already teach by distance, which elements of teacher education do you find most difficult to provide? How much of a problem is this in your situation? Have you or your programme found ways of giving feedback to teachers (4) and coaching them over time (5)?

What is the role of the distance teacher educator?

Many aspects of distance teacher education programmes are decided by policymakers, planners, or college managers, for example the length of a programme, and the type of assessment. But teacher educators are usually directly involved in writing distance learning materials and/or tutoring. The exact role of a distance teacher educator depends on the programme they work on. For example, they might be:

- working in traditional print media (books and paper assignments), or with new technology, or with both together
- working in initial teacher education or in continuing professional development
- involved in designing a teacher education programme, or teaching on a programme designed by others
- working only by distance or using a mixture of distance and face-to-face teaching
- developing, and then teaching with, their own learning materials, or tutoring on a course written by others
- helping students prepare assignments and then assessing and giving feedback on these, or only involved in helping with assignment preparation
- teaching subject studies, educational foundations, pedagogical studies, general education, or supervising practical teaching.

Earlier chapters of this book have already looked at how teachers learn, different types of pedagogy, and assessment. All of these form a useful background for working as a distance teacher educator. In addition, there are a number of areas that are particularly important in ODL (see Figure 10.2).

Figure 10.2 What do tutors and materials writers need for teacher education through ODL?

Specifically for teacher education by distance

- Knowledge of potential students and their learning needs (teachers and student teachers)
- Knowledge of strengths and weaknesses of different media (for example video, print, internet) for teacher education through ODL
- Knowing *how* teachers can learn at a distance
- Knowing *what* teachers can learn at a distance

For ODL in general

- Understanding how distance learning materials differ from teaching face-to-face with textbooks
- Willingness to work collaboratively, editing and rewriting
- Ability to write clearly in the language of the materials
- Up-to-date subject knowledge
- Ability to develop a supportive tutoring relationship with students through post or email, etc
- Ability to guide students through clear comments to students on their assignments to help them understand subject content and how it applies to their work
- Knowing how to enable students to learn at a distance
- Knowing about the basic administration of the programmes they teach on
- Desire to learn from students' experience of programmes and improve

Foundational understanding

- Understanding the reasons for using ODL for teachers

Why ODL is used

Understanding why ODL is used helps teacher educators make the most of its advantages, and work to avoid its disadvantages where possible. For example, understanding how ODL can provide qualified teachers for remote schools might help teacher educators be motivated to face the challenge of teaching by distance.

Learning materials

As mentioned in the introduction, learning materials have a key role to play in ODL. Mark Endean (2003) suggests four guidelines for writing distance learning materials. Writers should:

1. write as if they are having a 'conversation' with students
2. give them things to do or think about
3. provide a clear structure
4. set out some outcomes relevant to students' learning needs.

In this book, we have tried to do these things. These points can also be used to evaluate the usefulness of existing ODL materials (see activity in Appendix).

Tutoring

Another important area is tutoring. ODL students often have limited contact with tutors and other students, and so the contact that they do have with a tutor should help them as much as possible. Research by O'Rourke (2003) found four key categories of skills for distance tutoring: *supportive, guiding, enabling, and administrative*. Some distance tutors meet up with one student or with groups of students face-to-face to give tutorials. Others contact their tutees by post, while others are increasingly using email and online discussion forums to tutor their students individually and in groups. Whatever the means of communication, the skills and attitudes are largely similar.

Supportive tutors:

- encourage students to keep going when they are finding studying hard
- show that they understand the difficulty and sometimes the loneliness of studying by distance
- help students solve problems affecting their learning, even when they are not to do with subject content
- maintain friendly contact and reply promptly to messages from students.

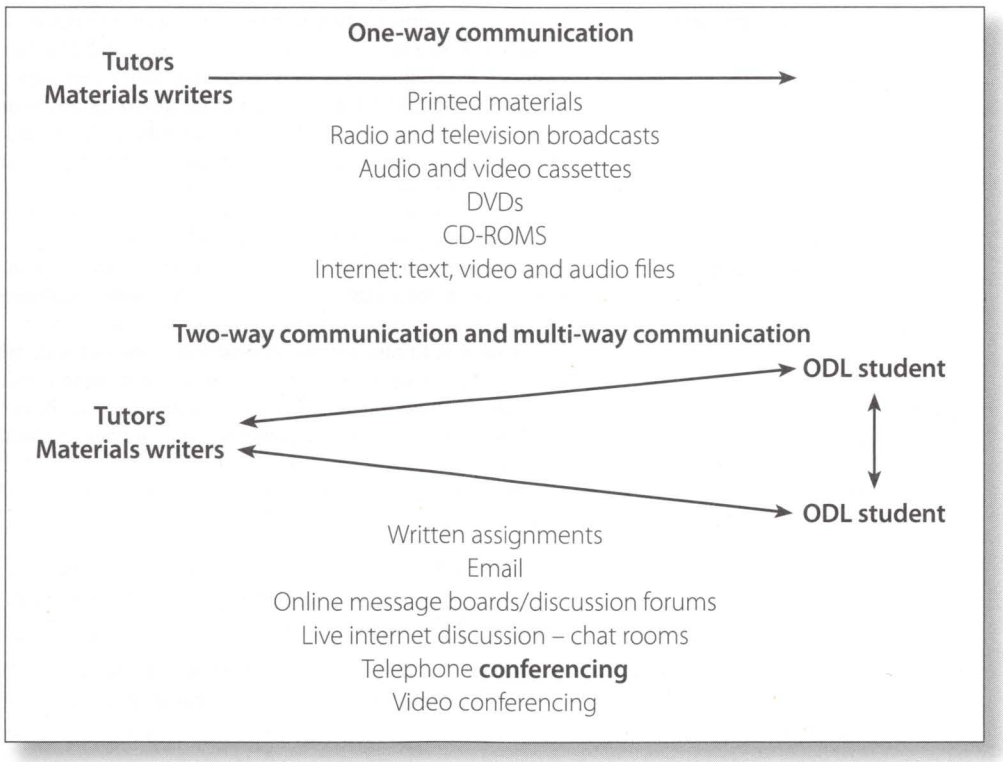
When tutors *guide* students they help them understand content, and how this content can apply to their professional work. Being able to do this clearly in writing is often harder and more time-consuming than doing it face-to-face. Another key role for tutors is to *enable* students to study by helping them know how to learn, for example where to find information for their assignments, how to plan an essay, or how to learn from discussing with other similar students. Guiding and enabling are both part of preparing for assignments and providing feedback on assignments and examinations so that students can improve in their future studies. Lastly, a good distance tutor is willing to be an *administrative* link between the ODL provider (for example college) and students. This might mean passing messages on to another department, or supplying the name of the right person to contact.

Finally, the appropriate use of ICTs is often important in ODL, and so this will now be discussed in detail.

How can ICTS be used in ODL?

The phrase 'the death of distance' is becoming popular to suggest that physical distance no longer matters in the modern world of information and communications technologies (ICTs). How far is this true for teacher education? In traditional distance education textbooks, workbooks, television and radio broadcasts communicated the tutors' ideas in one direction to the students (see Figure 10.3). To a limited extent, the students sent back their ideas later to the tutors in their essays and other assignments, and in some cases could talk to their tutors on the telephone. Some new computer technologies make two-way communication much easier and quicker so that tutors and distance students are encouraged to interact more. They can discuss issues and check understanding, and students can learn from other students' ideas. When everyone is connected via computers ('logged on') at the same time, this discussion is known as synchronous, 'real time' or 'live'.

Figure 10.3 Communication and technology in ODL



Older communications technologies have a long history of use in teacher education, such as television and radio, audio- and video-cassettes. Hilary Perraton and his colleagues (2002) have identified five ways that new communications technologies are being used in teacher education to promote learning. These are listed in Table 10.3 with some additional examples.

Table 10.3 The use of new computer technologies in teacher education

Use	Examples of technologies and their uses
a) Producing teaching and learning materials	Computer word-processing has many advantages over Pictures etc can be easily added to the materials using modern computer software.
b) Distributing teaching and learning materials	*CD-ROMS and DVDs* are much lighter than print materials and so are cheaper to post. They are also easier to store and can be easier to search for information. *Internet:* Some teacher education programmes have their own websites where students get course documents and can see videos etc.
c) Simulating two-way communication	Computers are programmed to act as if they are tutors, and so respond to information that students give them, for example they can 'mark' students' answers to questions. Student teachers in England must pass literacy, numeracy and ICT skills tests. They can get practice tests from the internet, which give them automatic feedback on their test performance. CD-ROMS and DVDs can also include **interactive** multi-media learning materials.

d) Two-way or multi-way communication	Where computers are connected to the internet, or other local networks, communication between two or more people is possible. There are many forms of this; one of the best-known is email. Discussion is also possible by typing messages on an online 'message board' which other students and teachers can read later and add their own comments to. 'Live' discussion in chat rooms is possible when people log on to their computers at the same time.
e) Allowing resource-based learning	There are many websites for teachers' professional development, run by governments, colleges and national and international organisations. These provide teaching materials, information on a vast range of educational issues, and opportunities to share experiences and materials with other education professionals. New technology is making it ever easier to share sounds and visual images as well as text. Knowledge of teacher education is being constructed by individuals and groups.

Table 10.3 shows that there are several different ways in which new technologies are being used in teacher education. Uses a) and b) make the practicalities of ODL easier. There are, however, not many examples of use c), where student teachers interact with a computer programme as if it was a tutor. Perhaps this is because much knowledge about how to teach is complex and difficult to programme into a computer. Areas of the teacher education curriculum which might benefit from simulated two-way communication include academic upgrading in mathematics or a second language, and computer literacy.

Uses d) and e) allow distance students to do things that in the past were usually only possible for face-to-face learners, i.e. discussing with other students and accessing a wide range of resources through a library. The technology also makes it increasingly easy to do things that were difficult or impossible before. For example, teachers and head teachers can discuss and share materials with other professionals who they will never meet face-to-face, and have access to vastly more teaching and learning materials than could be held at a local teachers' centre. Technology is also often being used to make the administration of ODL easier.

Case Study:

Supporting the *Enlaces* Programme, Chile

The *Enlaces* Programme has introduced ICTs into Chile's schools. Serving teachers therefore need to learn how to use new technologies in their teaching. Primary and secondary teachers can study the application of ICTs in education either face-to-face or by distance. For a distance diploma programme teachers had to study for approximately 1000 hours over 15 months. The programme was entirely computer-based and covered the following areas:

- using educational and mainstream software, email and the internet in teaching
- using ICTs for school administration, for example planning and record-keeping
- basic skills in operating and maintaining equipment
- choosing, obtaining and installing educational software.

Teachers had to pay their own fees for the programme, but some received a three per cent increase on their salary if they successfully gained a diploma.

Hilary Perraton and colleagues have written up a range of case studies of teacher education through distance learning. They made the following comment on the Chilean distance diploma programme:

> In one respect the distance education programme was more effective than its face-to-face equivalent. Teachers participating in it made more use of the virtual working environment than those on the face-to-face programme and developed a network communication culture' through their constant use of it. Because of this there was better integration of theory with practice.
>
> (Perraton et al 2002:12)

Despite this, in some years the drop-out rate was up to 50 per cent of the teachers who enrolled. This experience shows that ODL can work well for *some* teachers learning to use ICTs in education. Although the programme was entirely computer-based, it is important to remember that local technical assistance, a policy of involving around 20 teachers per school, and other support in schools all helped teachers implement what they had learnt.

Hinostoza et al n.d.

REFLECTION

What are the advantages and disadvantages of using ODL for teaching teachers how to use computers in their work?

Limits on the use of technology in distance teacher education

Not everyone, however, is enjoying the benefits of technology in distance teacher education. There are two main factors that are limiting the use of ICTs in distance teacher education.

Computer and internet access

While computer and internet access around the world is constantly increasing, particularly in parts of Asia and South America, in other places it is still very limited. For example, in 2003 the Open University of Tanzania had few computers in its headquarters and did not have internet/email infrastructure. Each of its 22 regional centres only had one computer 'mostly used as traditional typewriters' (Mahenge in UNESCO 2005:146). Sometimes old and new technologies are combined to tackle the internet access problem. For example, Malaysia converted several buses into 'mobile internet units', each with 12 or more computers on board. The buses visited schools without computer facilities once a fortnight. Tutors on the bus helped teachers and pupils develop their computer literacy.

Although there are many projects such as these, there are still big differences in ICT access even within the same country. Poor, rural people are much less likely to have access to computers than rich, urban people. This unequal ICT access is known as the 'digital divide'. Because of this situation 'traditional' forms of ODL are often still the most useful: 'Despite globalisation and the impact of ICTs, the 'classic' mix of print, radio and face-to-face instruction is still the most accessible mode of delivery' (IRFOL 2004:3).

Teacher educators' need for CPD

There are several aspects of the digital divide between those who are benefiting from ICTs and those who are not. Having a computer on the desk in front of you is a starting point, but it is not enough to bridge the divide. Another aspect of the digital divide is knowing how to

use ICTs when you have access to them. We also have to experiment and learn how to use the technology to improve the way teachers and student teachers learn. New technologies offer exciting new ways of student teachers sharing their experiences of teaching, but this can be a challenge to existing ways of teaching teachers. Teacher educators therefore need time for their own professional development.

Sometimes we can be sidetracked by learning to use new technology, and lose sight of our ultimate goal – helping people become better teachers. A South African study describes this problem as follows:

> Sadly, many people harnessing ICT seem to think they are harnessing the benefits of good quality distance education, when, in most cases, they are simply finding technologically-advanced ways of replicating traditional, face-to-face education methods.
> (SAIDE 2004:75)

A report from the South African Institute of Distance Education (SAIDE) describes the same practice as 'high-tech chalk' (2000:9). We are sometimes guilty of using a lot of costly technology for not much educational gain.

REFLECTION

What ICTs are used in teacher education in your country? Could greater use of ICTs improve the process of learning to teach in your country? If so, what would be needed to increase the use of ICTs in teacher education?

Instead of using ICTs only because they appear to be the new, 'modern' way, Thabeko Mda (in UNESCO 2005) has suggested two other ways in which they can be used:

1. so that student teachers become technologically literate
2. to improve pedagogy, as part of a shift from a focus on teaching to a focus on learning, and towards student teachers learning more independently.

In earlier chapters we have described a pedagogy for teacher education that aims to encourage teachers to learn through trying out new ideas in their classrooms, reflecting on these experiments, and sharing their thoughts on teaching with other professionals. If we help and encourage our ODL students to use ICTs then there is a world of new ideas out there on the internet for them to discover, and a planet full of teachers to discuss them with.

This section has given a brief introduction to the use of technology in teacher education. We have not had space to teach you how to use ICTs in distance teacher education, and anyway, new technologies are being developed so fast that no book could keep up-to-date with all the possible uses. The best way to learn about using technology in teacher education is to experiment with using it – learning by doing, and by reading about and sharing experiences with other teacher educators. Many people find it useful to introduce ICTs into their teaching gradually. We hope that we have given you some idea of how to evaluate the usefulness of technology in distance teacher education. Important questions to ask include:

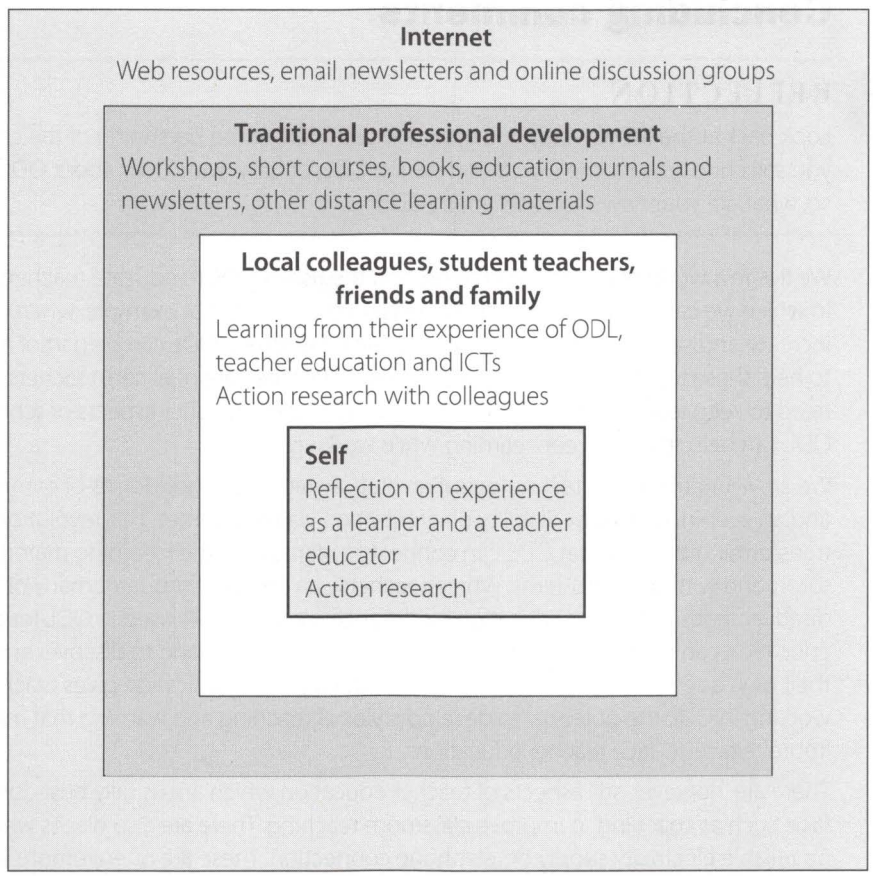
- What problems do we have? How could we use technology to improve one of these problem areas?
- What kind of teacher learning does a particular technology encourage?

- Does this technology help teachers learn more than a book or a handout?
- Why would we want to spend money on this and not on cheaper technologies?
- Is this technology equally accessible to male and female teachers and student teachers, to teachers in rural schools as well as teachers in town schools?
- If not, what can we do to make access fairer?

How can a distance teacher educator learn more about their work?

There are several ways that a distance teacher educator can learn more about their work and so improve their practice. Figure 10.4 summarises the support available.

Figure 10.4 Local to global: sources of support for a distance teacher educator



Imagine yourself standing in the middle of Figure 10.4 with different types of support for your professional development within you and all around you. The centre of the diagram is yourself. At various points in this chapter you have been asked to think about your own experience of ODL; you could take this forward into planning changes to your own work to improve it. It is often better to take one change at a time, and when this has become a habit

that seems to bring benefits to your students, then plan the next change. **Action research** is a more formal way of improving your own practice as a teacher educator. In this, you actively seek information about your teaching and your students, plan a change, and then gather information to see how it has worked. Chapter 12 looks in more detail at reflecting on your practice and action research.

The next level of support is those who are close to you professionally and socially. Perhaps you can learn by talking to them about their experiences of ODL – what has worked well for them as learners, teachers and teacher educators. There is also the possibility of collaborating with colleagues on action research. There are often opportunities for traditional forms of professional development such as reading educational journals and attending workshops. These can be held locally, or bring together teacher educators from a wide area. Finally, there is the international arena of the internet, with different kinds of resources, courses, email newsletters and discussion groups. A selection of web resources is given for further reading at the end of this book.

Concluding comments

REFLECTION

Look back at the list of words you associate with ODL at the beginning of the chapter. Would you still choose the same words to describe ODL, or have your ideas about ODL changed? If so, what are your new thoughts about ODL?

We live in a world of increasing change, and the use of ODL to educate teachers is one area in which we can clearly see this change in many countries. For example, when pupil numbers increase and schools can only recruit unqualified teachers, ODL can be part of a programme to help these teachers become qualified. Even after they are qualified, teachers increasingly need to keep learning because school curricula and many other aspects of school life change. ODL can help teachers keep learning while working.

We are living through a technological revolution with many new forms of communication and an ever-increasing availability of information via the internet. This revolution is transforming the way that ODL can connect students with their learning materials, with tutors and with other students. Where teachers can access computers, many of the traditional disadvantages of teacher education by distance are gone. ICTs used in ODL for teacher education can encourage students to learn from each other and to discover answers to their own questions on the internet. This multi-way communication gives teacher educators working in ODL the potential to develop styles of teaching and learning that might also improve face-to-face teacher education.

There are, however, still aspects of teacher education which are usually best done face-to-face, such as coaching to improve classroom teaching. There are also places where there is no reliable electricity supply or telephone connection. These are often remote schools with unqualified staff and the greatest need of teacher education. Here the more traditional ODL mix of print, radio and face-to-face tutorials is still most useful. Whatever technology is found to be most useful in a particular place, at a particular time, ODL is likely to grow as a way of helping teachers learn.

Chapter 11

Cross-cultural sharing in teacher education

Overview

This chapter looks at:

- different kinds of educational cultures
- the kinds of cross-cultural sharing of knowledge that occur in teacher education
- the problems that can sometimes arise with such cross-cultural sharing
- ways of designing programmes to make the best use of local and international knowledge about teacher education.

Introduction

Throughout history and all across the world, people have tried to improve education by taking ideas and techniques from one place and applying them to schools and colleges in another place. Educators from developing and middle-income countries are sometimes keen to learn about teacher education in more developed countries. How useful are 'Western' forms of teacher education, such as school-based teacher education, in developing countries? Without doubt, comparing ourselves with others and learning from their experiences has its place. Robin Alexander puts it this way:

> For those who have the responsibility for the education of others, be they policy-makers, administrators, researchers or teachers, comparison is actually essential to educational progress. Whether we are talking of whole education systems or of the day-to-day encounters of teachers and pupils, education by its nature requires hard choices of both a technical and a moral kind. To make such choices requires an awareness of options and alternatives, together with the capacity to judge what is most fitting in a given set of circumstances. The vocabulary of possibilities is vastly increased and enriched if we extend it beyond the boundaries of one school to others, one region to others, one culture to others and one country to others. Education positively requires, and positively benefits from, a comparative imagination and a comparative understanding.
>
> (Alexander 2000:27)

We need, therefore, to welcome the possibilities that new ideas from other places can bring, but also to examine the 'cultural fit' of imported ideas to see how useful they might be, and how much they need to be adapted. Even within one country, there can be many different cultures and local contexts: urban/rural, Northern/Southern, mountains/lowlands, ethnic and religious groupings etc. Cross-cultural sharing of ideas can therefore happen between communities within the same country, as well as between countries. There can be problems

when ideas only flow in one direction, such as when local, 'home-grown' ideas in a rural area are not given the same respect as ideas from the capital city. Or, when ideas from developed countries are automatically given more respect than ideas from developing countries.

REFLECTION

Think of an educational reform that you know in some detail, preferably one that included some teacher education.

1. Where did the ideas behind this reform come from? Who designed it?
2. Which parts of the reform were most successfully implemented, and why?
3. Which parts of the reform were least successfully implemented, and why?

Different educational cultures

In order to study cross-cultural sharing of knowledge in teacher education, we first need to understand what we mean by culture, and then look at possible differences in culture in different educational systems.

Defining culture

The definition of culture used in this chapter includes all the physical objects used and all the ideas passed on by people within a community or population. Different countries and regions, even age groups and workplaces, for example, can have their own particular cultures. This is a much broader definition than the arts, music and craft often found in a 'cultural centre'. Culture certainly includes the arts, but it also includes:

- habits of behaviour (for example standing up when teachers enter a room)
- beliefs (for example that teachers learn best when they can share ideas together)
- attitudes (for example expecting student teachers to have useful ideas)
- organisations (for example schools, universities, ministries of education), and
- all other products of human work and thought.

Differences in these areas make each culture distinct from other cultures. We learn our cultures from the societies in which we live. Much of what we learn is communicated in the form of words. Language allows us to share and negotiate meaning and so is an important part of culture. Another general point about culture is that it is constantly changing. Human beings are always trying to improve their lives by designing new tools, such as the mobile phone, and new ways of finding and communicating ideas, such as the internet. When these are useful, they often spread from person to person within a culture, and throughout human history they have spread between cultures. The internet itself is an example of an invention that can bring people much closer, help them learn from each other, and in itself produce a global information culture. This raises questions about the role of local knowledge in today's world.

Educational cultures

We often talk of national and regional cultures, but there are also other cultures to which we belong. These include the professional cultures found in various workplaces. The physical

products of an educational culture are usually the easiest to recognise, such as school and college buildings, books and computers. Next, we are often aware of organisations, such as the network of advisors working out of a district or regional education office, or monthly meetings for head teachers. Seminar rooms and teachers' centres in many countries look similar at first glance, but if you look for longer you will see important differences. These differences include the invisible habits of relating to each other that people have within educational institutions. For example, in some countries it is common for teachers to help each other solve teaching problems through informal conversation at break times, but in other countries teachers rarely talk about teaching and learning in the staffroom. These habits are based on what the people in schools, colleges and education offices believe about pupils and teachers, student teachers and tutors, teaching and learning. These beliefs are in turn influenced by the surrounding cultures and the ways people in general relate to one another.

As Alexander writes:

> Life in schools and colleges is an aspect of our wider society, not separated from it: a culture does not stop at the school gates. The character and dynamics of school life are shaped by the values that shape other aspects of our national life. The strengths of our primary schools are the strengths of our society: their weaknesses are our society's weaknesses.
>
> (Alexander 2000:29–30)

For example, teachers in Japanese state schools mostly call each other by their surnames and add the word *sensei* (meaning 'teacher') to this. Miss Suzuki would be called *Suzuki-sensei* at work and often outside work as well by those who know her occupation. This suggests at least a traditional respect in the national culture for the role of the teacher, and also that a person's job is usually an important part of their identity.

There is a danger in discussing culture that we can become too fixed in our expectations of other people. When we expect student teachers from a certain region, academic level or ethnic group to behave in a set way, we might deny them freedom to respond in a creative and original way to their situation and fail to see them as unique individuals. Alternatively, they might already be doing something different from 'normal' that we fail to see because we do not expect to see it. Culture supports and constrains us as we build our lives, but it does not completely deny us opportunities to choose and change how we live. For example, we might work in an educational culture that has great respect for age and professional status, reinforced by the culture of the broader society. But as a young tutor in a college we might decide to question this by raising a difficult issue directly with the college principal. Most people have some power to make individual choices.

Case Study:

The power to choose and change: dilemmas at a teachers' centre

Mr Premkumar runs a teachers' centre in central Sri Lanka. A volunteer teacher educator from Australia, Rita King, has been sent to work with him. She is keen to conduct a professional development needs analysis as suggested by the Ministry of Education. Mr Premkumar and Rita will talk to teachers in local schools and ask them what help they think they need to improve their teaching, before planning workshops to meet these needs. Mr Premkumar is not happy about this idea. He thinks that it goes against the way things should be done. In Mr Premkumar's opinion, it is the job of the education authorities to say what training the teachers need. His job is to organise the workshops. The teachers' centre is busy enough with the workshops

the Ministry recommends, and sometimes aid agencies come in with their own workshop plans and funding. He wonders how schoolteachers can know anything useful about what they need to learn. Perhaps the teachers will lose respect for him if he has to ask them how to do his job.

Rita schedules school visits for the needs analysis. Mr Premkumar always says that he cannot do the visits because he has to attend a meeting or a workshop. Mr Premkumar thinks it would be rude to openly criticise Rita's plan. He hopes Rita will soon get the message that he does not want to be involved in the needs analysis.

Figure 11.1 How local educational cultures help form ideas

The local educational culture has helped to form Mr Premkumar's ideas in the following ways:

- He is used to the programme for teacher development workshops being recommended by the Ministry of Education.
- He believes that the people higher up the educational hierarchy know what teachers need to learn.
- He believes that teachers might lose respect for him if he asks them for advice.
- He believes that making excuses to get out of the school visits is the kindest way to show Rita that he does not agree with her plan.

Rita's home educational culture has helped to form her ideas in the following ways:

- She is used to local teachers' centres planning and designing their own courses.
- She believes that teachers in classrooms know what their real needs are, and that being involved from the beginning will ensure their motivation during the courses.
- She believes that teachers will respect teacher educators who ask for teachers' opinions.
- She believes that being direct is the honest way to work with colleagues. She therefore expects Mr Premkumar to tell her very clearly if he has a problem with her plans.
- As a foreigner, she wants to collaborate with local staff to pool their different knowledge. She believes that it is very important for her to work with her Sri Lankan colleagues, so she does not want to do the school visits alone.

These are some of the typical ways of working and beliefs of two teacher educators from two different cultures. But does it have to be this way? Can Mr Premkumar and Rita adapt their ways of working and their beliefs so that they can work successfully together? In other words, can they choose to go against aspects of their culture? Can Rita learn to see when Mr Premkumar is politely showing that he does not like an idea? Can Mr Premkumar experiment with asking teachers for their ideas? Perhaps they will still respect him if he respects their opinions – society is changing and younger teachers might like this. Or perhaps, together, they can think of other ways of getting information about teachers' professional development needs.

ACTIVITY

Look back at the story of Mr Premkumar and Rita.

a) Write down the ways that Mr Premkumar and Rita might break through the wall of non-communication. How can they both bring together their knowledge and experience so that they can ultimately help teachers improve their work?

b) If in a group, you could role-play a discussion between Mr Premkumar and Rita, as they try and solve their misunderstandings. (You might want to swap roles or let two different people play the roles and see if new points come out.)

c) Discuss any similar experiences you have had in your work.

d) Draw up a list of ways to help create positive cross-cultural communication in teacher education, for example 'swapping stories of how we learned to teach'.

Types of educational culture

Understanding the differences in our educational cultures can help us understand our colleagues' approaches to teacher education. In Chapter 1 we looked at three models of teacher education. These were the craft or apprentice model, the applied science model and the reflective practitioner model. Different educational cultures are likely either to favour one of these views of learning to teach, or to have a combination of them. Perhaps student teachers are mainly seen as apprentices when they learn practical tasks such as organising writing on a chalkboard. In the same culture, however, teacher educators might view student teachers as reflective practitioners when they discuss how to handle parents who have complaints about the school. This would be a combination of the craft and reflective practitioner models.

REFLECTION

How would you describe the educational culture where you work? How has it changed over time? What do you think has caused these changes?

Cross-cultural sharing in teacher education

Many teacher education colleges in former colonies were founded by missionaries who brought ideas about how to train teachers based on their religious ideals. Today donor funding and policy advice to developing countries are a major source of cross-cultural

transfer of educational ideas. In teacher education these include school-based teacher development, student-centred learning, teacher centres, and the use of workshops to introduce a great many school-level reforms. Almost every change in curriculum includes an element of teacher education to help teachers put it into practice.

In teacher education we have an interest in school culture, and in the culture of teacher education itself. These influence each other, and are both influenced by the broader cultures of a society. The various cultures that surround a formal education system influence the values of people working in schools, colleges, and education offices. Here are two examples of how the broader culture can influence formal schooling and affect the success of cross-cultural sharing of knowledge in teacher education.

Child development in Malawi and Zambia

Sylvia Kambalametore (2000) studied the development of young children in Malawian villages. Her research had several findings. Firstly, adults thought that work would stimulate children's development. So, children were given tasks to do which would help them learn to be responsible and benefit their community. Secondly, adults did not think that playing with children helped them to develop very much. Robert Serpell (1993) had earlier found similar results with his research across the border in Zambia. This way of bringing up children differs from general Western educational culture in two ways. Firstly, the adults highly valued 'cleverness' that was used to help other people, and secondly, the adults gave children tasks to do to help them develop, rather than valuing play to stimulate young children's development.

This has implications for reforming teacher education. Ideas of what kind of development is valued differ between cultures. Concepts such as 'intelligence' are the subject of much debate and are defined differently in different places at different times. Much educational psychology taught in colleges of education in developing countries does not take account of local values in child development. Western educators often recommend that children learn through play, and so some of the content of teacher education courses is about how to teach using games. Learning through play is even thought to be important for teachers and student teachers as well. Teacher educators are therefore sometimes advised to use games in college seminars and workshops. If play is not normally used by adults to stimulate development, this can seem to be a waste of time. In some countries, using games as part of a lesson is often taught in colleges or at CPD workshops, but rarely put into practice in classrooms.

Respect for books and memorising study materials

When Western educators see students memorising study materials they sometimes criticise this as rote learning, thinking that this means only surface learning. In some cultures however, memorising study materials is seen as a good way to learn. Confucius was an ancient Chinese philosopher with a continuing influence on Chinese culture. In the Confucian tradition of education, memorisation 'means becoming familiar with a text in order to achieve a deeper understanding' (Volet 1999:632). This is similar to the situation in many countries where a system of Koranic education operates alongside state schooling. The emphasis on memorising in Koranic schools sometimes influences state schools which also often ask students to memorise texts.

Ron Griffin studied teacher education in Tanzania. In ways similar to the Chinese tradition, he found that 'some teachers would argue that from cramming comes the store of factual knowledge from which understanding may grow' (1991:173). In many other countries, state education is likely to have been influenced by older traditions of religious education. In India, there is evidence that reading and writing have been taught for over four thousand years. These traditional roots of education often include a deep respect for books and much whole-class repetition of key phrases as a way to learning. Education is seen as a light that can be used to see and appreciate the meaning in books. This contrasts with a modern Western approach where education can be seen as learning to be critical of existing ways of doing things, so that they can be improved.

A culture of learning that values memorising and respects text has implications for the reform of teacher education. In some places, it is common to teach teachers in a traditional teacher-centred way about new ways of teaching. Alexander describes primary teaching in many Indian schools where there were short, 30-minute lessons, large classes in small classrooms and few physical resources. In these conditions it would be difficult to implement progressive primary education (learner-centred, resource-based discovery learning) in the same form that it has developed in classrooms in developed countries. Indian teachers who were interviewed in a research project did, however, talk about the importance of 'individual attention', 'group work' and 'teaching aids'. Alexander described how the teachers had probably picked up the phrases from their training:

> We observed courses in action in two of the District Institutes of Education and Training (DIETs). They delivered a mixed message to say the least. The trainee teachers we observed and talked with busied themselves making 'low-cost, no-cost teaching aids' from cheap or recycled materials. They were instructed in the importance of activity methods and group work. The form of such instruction, however, was unremittingly **didactic**. The student teachers sat in rows, in large classes (as if they were at one of the schools whose methods they were supposedly preparing to transform), listened, took notes, and repeated what they had been told.
> (Alexander 2000:307)

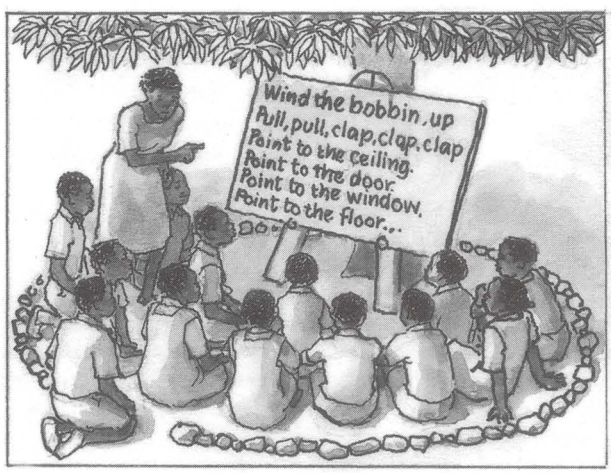
If the teacher educators really believed in activity methods and group work, they might have used these methods in teaching their students. Instead, ideas about good teaching seem to have been reduced to a few well-known phrases. These are said to be the new 'right' way to teach, and are passed on by the authority of the teacher educator. They appear to be accepted without question by the student teachers. Whether these ideas have any impact in classrooms is another question, however. On the one hand, it might be possible for these student teachers to learn new methods in old familiar ways. Perhaps they will remember key phrases which will gradually affect their practice as they reflect on what 'activity methods' might mean in their classrooms. On the other hand, as we argued in Chapter 5, new teaching methods may have to be experienced before they are understood. Perhaps there are aspects of teaching knowledge, such as child development, which can be studied in one way, while practical skills are best learnt in other ways.

REFLECTION

1. Think about your own experience of learning in formal education and informally, perhaps learning to cook or play sport. How far do you find that repeating and memorising key phrases helped you to understand new ideas and make them your own? For example, in sport we often remind ourselves, 'Keep an eye on the ball!' Do you have similar principles that you remind yourself of when teaching?
2. How far might it be possible to teach new **interactive** ways of teaching partly through traditional lectures and memorising texts?

What problems sometimes arise with cross-cultural sharing in teacher education?

Sometimes, newly transplanted educational ideas either completely fail to take root, or are used in one or two places but do not spread as expected. This section looks at some common difficulties found when taking educational ideas from one culture to another.



It can be easy to see when cross-cultural borrowing is inappropriate to the physical context of schools.

A limited view of good teaching

How easy is it to know when we are observing good teaching? Chapter 7 looked at assessment in teacher education and raised some of the issues to consider when judging teaching and student teachers. These issues become even more complicated when judging teaching in a culture in which one has limited experience.

REFLECTION

What is at the heart of good teaching for you? What aspects of teaching can vary depending on the pupils, the teacher, and the classroom situation?

Case Study:
Lower primary teaching in Malawi

Alison Croft's (2002a) research in Malawi found that lower primary teachers were sometimes criticised for getting all their pupils to answer in chorus. Detailed study of lessons in several schools found that some teachers asked questions which required the children to think about the answer, whereas others mainly asked children to repeat after the teacher. The choral response teaching method should not therefore be dismissed as always treating children like parrots, who only repeat what the teacher has said. When teachers had classes of over a hundred children with few books or pencils, they had few choices about teaching methods. Teachers used singing to give all the children a chance to participate in class. This singing and the choral responses seemed to link into the strong oral culture, such as work songs, traditional in Malawian society. It gave children who were sometimes cold or very crowded a chance to stand up and move about. Afterwards their concentration on the lesson often appeared to be refreshed. In this way, the lower primary teachers were focusing on the needs of the pupils and being children-centred. The more usual Western interpretation of child-centred teaching looks at children as individuals and uses active discovery learning and many books and other resources, but it is possible for teaching to be centred on children while still using group and whole-class teaching methods.

This example illustrates that in order to judge teaching we need to take account of physical factors and also broader cultural values in society. In Malawi there was a cultural association of work and singing. Alexander puts it this way:

> Though there are undoubted cross-cultural continuities and indeed universals in educational thinking and practice, no decision or action which one observes in a particular classroom, and no educational policy, can be properly understood except by reference to the web of inherited ideas and values, habits and customs, institutions and world views which make one country, or one region, or one group, distinct from another.
>
> (Alexander 2000:5)

Sometimes a new curriculum programme will formulate aims such as 'develop child-friendly schools' with little discussion with local teachers and teacher educators about their vision of good teaching and the challenges they face in achieving this. Lesson observations then consist of showing how the teachers fail to use particular methods that are assumed to be 'child-friendly'. This results in a teacher education programme which tries to introduce completely new methods, instead of building on what teachers already do well, or working with them to find solutions to their teaching problems that make sense to them. (See Chapter 9, where we discussed whether radical or incremental reform is usually most successful in teacher education.)

Lack of recognition of local knowledge in teacher education

It is easy for those working outside schools and colleges, locals and expatriates, to think that teachers and teacher educators are getting it all wrong. Kwame Akyeampong and colleagues wrote about the need to question the 'well-worn deficit model' when exploring Ghanaian primary teachers' views of learning. (Here they were writing about the common assumption that there is a deficit, or 'something lacking', in teachers.) Some of the practices of these teachers are often criticised, but 'if one works with the premise that the teachers are potentially competent but struggling to cope in difficult circumstances, these practices can

be seen in a very different light' (2006:170). For example, some education reform programmes assume that whole-class teaching always leads to rote-learning, and so they promote individual and group work. Teachers who use whole-class teaching are automatically criticised although some teachers ask stimulating questions that require the pupils to solve problems. Individual and group work might not help pupils learn in classrooms with few resources, and so the teachers might well be choosing a good teaching method for their difficult circumstances.

Expecting educational change to happen quickly

Many donor-supported teacher education programmes have grand ambitions to change the culture of learning overnight. The research described above at the Indian training institutes is one example. If such change is considered necessary and desirable it often takes time. Martin Cortazzi puts it this way:

> Since cultures of learning are part of cultural identity they may be resistant to change... For teachers to change their culture of learning seems to challenge their professional and personal identity.
> (Cortazzi 1998:214)

Teachers and teacher educators are most likely to develop slowly their vision and practice of what makes good teaching and learning. There can be flashes of inspiration when new ideas cause a revolution in a teacher's professional views, but even then, it will probably take time for these new ideas to change the habits of a lifetime of teaching. Education programmes are often under pressure to produce results quickly that can be easily measured. In this situation it is tempting to provide detailed advice about how to teach, rather than provide the 'tools for reflection and the further development of practice' (Zeichner and Dahlström 1999:251).

Changing teacher education without changing other parts of the education system

Teacher education is important for improving the quality of learning in schools, but it cannot change a whole education system alone. Teacher education works best when it develops alongside similar changes in schools. In Chapter 9, we described Namibian teacher education reforms which were developed together with a push for learner-centred education in schools.

REFLECTION

Have you experienced any of these problems with cross-cultural borrowing in teacher education reform? What could be done to address these problems?

Designing teacher education reform that makes good use of local and global knowledge

Sharing understandings of learning, teaching and teacher education

We need more awareness of the variety of theories of learning that teachers and teacher educators might hold. We need a vocabulary of education and educational reform that allows us to discuss these underlying differences, so that we can then judge the usefulness for a particular place, of proposals to change schools and teacher education. Our discussion needs

to be freed from the stereotyping of learning theories and methods as essentially 'good' or 'bad', or as 'modern' or 'old-fashioned'. In order to work well together in teams, we need to share an understanding about what kind of teachers and teaching we want to develop. This does not mean that everyone should agree on all aspects of it from the outset, but that it will be hard to work together if we are pulling in opposite directions all of the time. This is a particular challenge when people from different cultures work together, but it can also lead to a stimulating experience in which all learn.

ACTIVITY

How did you learn as an education professional?

Hold a discussion with a colleague who qualified or worked in another country. What differences and similarities can you uncover? You might look at issues such as:

a) forms of teacher education, initial and continuing professional development

b) beliefs about how teachers learn to teach (see Chapter 1)

c) visions of 'good teaching'.

What aspects of culture might explain the differences?

Learning from the next-door classroom and from across the planet

As the quotation from Robin Alexander at the beginning of this chapter explained, education benefits from considering alternative ways of doing things by comparing ourselves with others. As well as learning from colleagues working alongside us, we can also learn from further afield; from different areas of our own country and also from the experience of teacher educators across the world. What is important in teacher education is how we treat this information. Gandhi expressed an attitude of being open to new ideas but not being overly impressed by them:

> I want the cultures of all peoples to flow through my house as freely as possible, but I will not be blown off my feet by any of them.
> (quoted in Molteno et al. 2000:31)

It is quite a common human response to be 'blown off our feet' by new ideas which we adopt without considering their strengths and weaknesses for our situation. Alternatively, we might close ourselves off to new ideas, putting up the shutters, unwilling to consider how we might be able to learn how to do something better.

Mel Ainscow was part of a team that developed an international teacher education programme on the inclusion of children with special educational needs in mainstream schools. He wrote about the programme's teacher education philosophy as follows:

> Our concern is to find approaches that encourage teachers to learn from their own experience, taking note of evidence from elsewhere certainly, but recognising the importance of the inarticulate component of practice that is developed through a more intuitive form of learning.... What is needed is for each teacher to seek deeper understandings of the nature and outcomes of particular educational events and situations.... we wish to promote forms of teacher education that encourage teachers to take responsibility for their own professional learning.
> (Ainscow 1994:30–31)

As we are teaching and tutoring, the responses of our students affect our ideas about teaching and learning. It is hard to find the words to talk about this kind of professional learning (the 'inarticulate component of practice'). We are also often not fully aware of how our opinions are changing (the 'intuitive form of learning'). Ainscow suggests that we think deeply about particular incidents in our own teaching and tutoring. For example, asking ourselves: what students learnt, what they didn't learn, why we acted in certain ways, why individual students and groups of students acted in certain ways. When we do this, we will be able to judge what ideas from 'elsewhere', (whether from the next-door classroom or from across the other side of the planet) can help us teach particular things to today's student teachers. We will look in more detail at the role of this kind of reflection in teacher learning in Chapter 12.

Keeping the focus on learning

Education is ultimately about promoting learning. It is easy to lose track of this overall aim and focus on things that are easier to measure, such as how many teachers graduate from college. Caroline Gipps and Barbara MacGilchrist (1999) studied teachers in the UK and found that they held several theories of learning and selected from these depending on what was most useful for achieving their lesson objectives at a particular place and time. They called this a choice based on 'fitness for purpose'. For example, as discussed above, there might be times when whole-class teaching is the most useful teaching strategy given the aim of the lesson, the resources available, and the way the pupils usually learn best etc. In the same way in earlier chapters, we have argued that several theories of learning are potentially useful in teacher education. With a range of knowledge of teacher education strategies, and a detailed knowledge of the physical and cultural context, teacher educators can decide which will best fit a particular purpose and promote learning.

Education programmes need time and flexibility

Education at all levels involves people, and at its heart is the process of these people learning. Education, of all subjects, needs to take account of our ability to learn, and the remarkable ability of human relationships to develop. It is not a kind of engineering in which a bridge must be built according to carefully pre-drawn plans or it will fall down. As well as time to allow for learning and for the development of good relationships, teacher education programmes need the flexibility to respond to the changed situations that result from this learning and these relationships.

Concluding comments

This book is witness to our belief that cross-cultural sharing in education has a place. Education needs to change as the world changes and we believe that sharing our experiences as teacher educators and researchers of teacher education has value. In this book we present principles, and examples that build on these principles. We aim to explain the theory and history behind developments in teacher education, so that you are better equipped to contribute to discussions about improving teacher education in your situation. At first glance, some of this chapter might seem to contradict what we have written earlier in the book about reforming teacher education. We argue however, that considering the role of

memorisation and other apparently teacher-centred methods might have a place in a social constructivist approach to teacher education. This is because a 'constructivist' approach builds on what is already in place, and a 'social' approach uses the varied knowledge and experience of teacher educators to jointly improve teacher education.

As explained in the introduction, we aim to raise possibilities and stimulate thinking so that you are more able to solve your teacher education problems with your colleagues. Valuable ideas can come from other places, but these must be assessed to judge their suitability in a new place. We need to work hard together to communicate across our cultural differences, to develop shared understandings of what is valued in different cultures, and to shape an education that will be valuable for children in a particular place at a particular time, and the kind of teacher education that will help achieve this. Cross-cultural communication is a valuable skill in today's increasingly connected world.

Chapter 12

Improving our practice as teacher educators: from reflection to action research

Overview

This chapter is in two halves. The first part includes:

- a discussion of reflection and where the ideas come from
- some examples of reflection among teachers and teacher educators
- ways in which tutors can teach reflection to their students.

The second part describes **action research** and gives some examples of how teacher educators have used the process.

Introduction

What is the overall aim of our work in education? If it is to help pupils in schools to learn more effectively, then the ultimate test of all our teaching – be we school teachers or teacher educators – is what happens in the classroom.

As we have said, good teaching involves life-long learning. We want our student teachers to be willing and able to evaluate their own teaching and try to improve it, throughout their careers. Similarly, teacher educators should be willing and able to reflect on their own practice and take steps to improve the ways in which they prepare and develop teachers.

We suggest that such a process starts with simple reflection, honestly and carefully undertaken. In many cases, this leads to finding ways of teaching better. Most, perhaps all, teacher educators already do this to some extent. However, it is not difficult to take

the process further, and to carry out some form of action research, either individually or collectively. The results of such research can be shared with others and thus have wider effects.

Meanings of reflection

REFLECTION

What does 'reflection' mean to you? Brainstorm some ideas, drawing on your own experience.

Reflection in everyday life

We use the word informally to mean thinking about things. It often implies a choice was being made and sometimes has serious connotations.

She nearly sent him an angry reply but then she reflected that it wasn't really his fault.

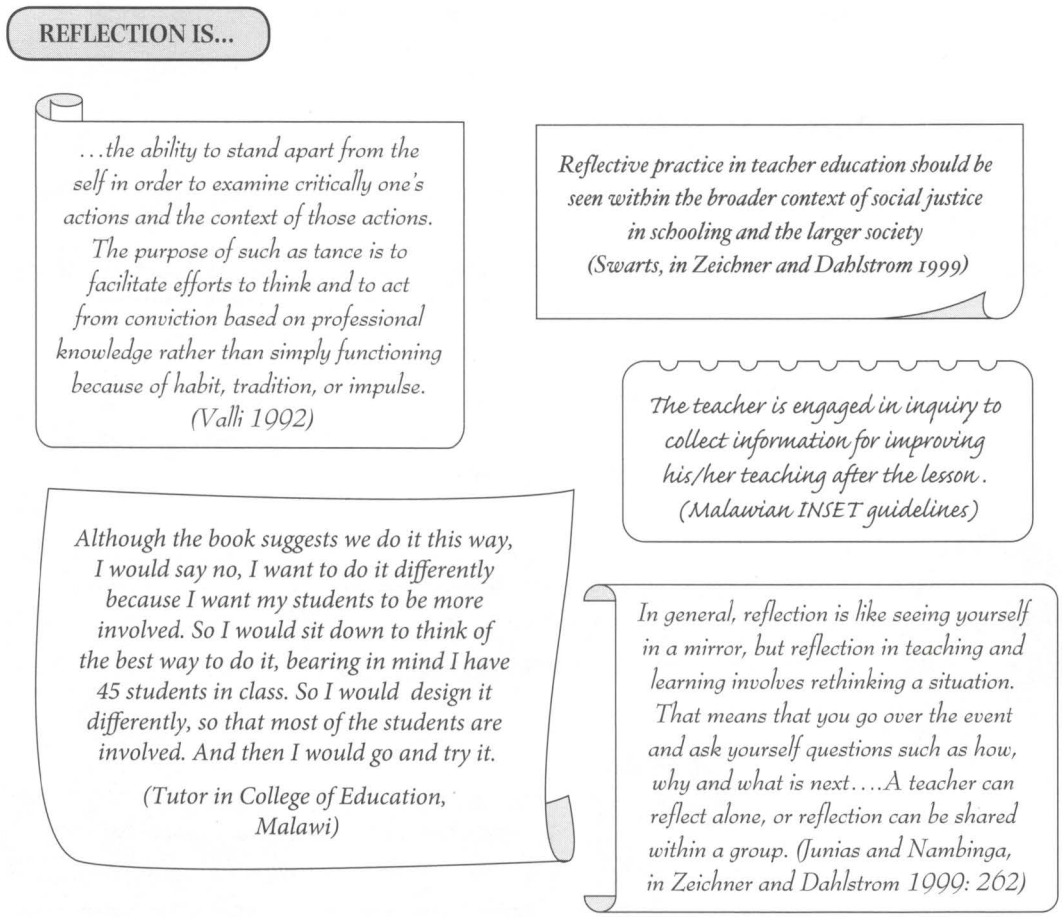
On reflection, they decided it would be better to visit the family before the wedding.

He gazed at the huge war memorial, reflecting on all those who had died fighting for freedom.

Reflection in education: the core ideas

'Reflection' as used in teaching basically means: thinking purposively about what you are doing, so that you can do it better. Its use in education goes back to the American philosopher and educationist John Dewey, who contrasted 'routine action' with 'reflective action'. According to him, routine action is guided by factors such as tradition, habit and authority, and by institutional definitions and expectations. Such action tends to remain the same, and does not respond to changing priorities and circumstances. Reflective action, on the other hand, involves a willingness to engage in constant self-evaluation and development. It implies flexibility, rigorous analysis and social awareness. (Adapted from Pollard and Tann 1987:4)

Figure 12.1 Reflection is ...



REFLECTION

Which speaker is closest to your own view of reflection? What do you like about this statement?

Who is a reflective teacher?

According to these ideas, a *reflective teacher* is someone who:

- Thinks about their own teaching at every stage: through the planning, delivering and evaluation of each lesson, taking both short and long-term aims into consideration
- Feels responsible for evaluating and improving their own teaching
- Asks questions about what they are doing, poses problems, seeks answers and solutions
- Is prepared to act on their own judgement, after carefully considering available information, basing their decisions on acknowledged values and aims.

By contrast, a routine teacher is someone who:

- Follows the routines that were given to them, whether laid down in the book, copied from others, or taught in training
- Expects to use the same techniques and skills time and time again
- Relies on the authorities to tell them what to do.

REFLECTION

Think of someone who taught you well. Which of the above characteristics did they show? Do you think that pupils can learn equally well under each kind of teacher?

Case Study:

Teresa's story: a newly qualified teacher

Teresa was worried when she started teaching her Grade 3 class in a rural Namibian primary school. 'None of them can read at all!' she noticed with concern. 'This school doesn't have a single copy of the Grade 3 reader'. She had qualified as a teacher, but had her teaching diploma prepared her for teaching here? She certainly hadn't met this situation before; the pupils in the schools close to town where she'd done most of her teaching practice could read much better. But her ITE programme had prepared her in other ways, she had done action research and other projects which had given her the opportunity to reflect on her practice, think about problems she was facing in her teaching and experiment with solutions.

Teresa thought about what she wanted her pupils to learn next and the resources she had to work with. 'Well, if they can't read at all, there's no point starting with the Grade 3 work, I need to go right back to the beginning.' She went to the Grade 1 teacher and arranged to borrow the Grade 1 readers every day for one period. Luckily, colourful new readers had just been published, so her learners wouldn't be going back to their old books. Reflecting on her work after the first few days, she could see that the pupils were making progress, and so she increased the pace, covering the lessons far faster than would be expected for Grade 1.

The weeks passed and soon Teresa and her class would have finished the Grade 1 reader. What should she do now? Did she need to cover the Grade 2 work? There was no new reader for Grade 2, and only a few copies of the old reader in her school. She visited a friend at a neighbouring school and borrowed one copy of the Grade 3 reader. With the solid foundation that they now had, she was sure her pupils could cope with it. She copied the text from the reader onto the board so that all the class could see it. As the school year progressed, the passages got longer, but the learners still seemed to be making progress.

Towards the end of the year an advisory teacher visited the school. She was surprised to hear from Teresa about her use of the Grade 1 readers, but realised that Teresa's class was now further ahead with the Grade 3 reader than any other class in the surrounding schools. Teresa did not think she had done anything special, 'I had to do something, the learners couldn't read at all' she told the advisor. Although she did not disclose Teresa's name, the advisory teacher told the details of the story to other teachers at a **cluster meeting**, and asked for their opinions on it. Some teachers supported the idea of using the new Grade 1 readers, but others were critical, saying that it was not allowed to use Grade 1 books in a Grade 3 class.

REFLECTION

1. What aspects of a reflective teacher did Teresa show?
2. If Teresa was your former student would you be pleased with her first year of teaching? Why, or why not?
3. The story raises the issues of how much freedom or autonomy teachers have. Should we spend time teaching teachers to be reflective if they have few choices over how and what they teach?

An African discussion

In Africa many teachers are reflective – they have to be, in order to help their pupils learn. They have to cope with large classes and few resources; they have to be inventive and creative even to teach the curriculum given to them.

American theories of education are not relevant to us. We have to follow routines, we have to teach as the curriculum tells us to, and we don't have time or resources to do anything different.

Some aspects of routine action are useful. Teachers can rely on tried and tested methods. They give clear and well-practised explanations. Their teaching becomes instinctive.

REFLECTION

Carry on the above discussion, in pairs or as a group.

List some examples of teaching in your own context – either in school or in college – which you would consider either a) reflective or b) routine. Does there seem to you to be a real difference or not? If so, describe it in your own words.

A continuum?

Perhaps most teachers act reflectively at some times, and follow routines at others. This could be pictured as a continuum, which people can move along, in both directions.

Figure 12.2 The continuum of reflection

Reflection among teacher educators

In similar ways, college tutors may carry out their work in reflective or routine ways.

A comparison

Tutor A was teaching research methods within a 'professional studies' course.

Interviewer: Did you ever use any other method than lecturing?

Tutor A: I sometimes use grouping, a group to work on a certain sub-topic and they present.

Interviewer: How successful is that?

Tutor A: Ah – some are so lazy that you find only one concentrated on the work. You find so many mistakes which show that hey! this group was not working together because if it was working together – these mistakes would not have appeared here… sometimes the students want to run away.

Tutor B was teaching maths on an in-service diploma course, and was asked what he learnt from a year's M.Ed. course overseas.

Tutor B: What they really taught me – all I had to do was reverse what they taught me! What is happening here is that the conditions were the exact opposite of what was happening in the UK. The methods they wanted us to use, for instance, were not practicable in our situation, in the sense that we have too many kids to teach, you know, and lack of resources and all these things.

I realised when I tried to put it into practice it was not going to work because of the time element. So I took a bit from them and mixed it up and did some improvisation here and there where I thought it was necessary;

Interviewer: Can you give me an example of something you say you mixed up and adapted?

Tutor B: You see, for instance, when you are teaching mathematics, they talk about the use of games. Now normally you find that when we teach, we have an array of students – those who are from the rural areas and those who are from town, and if you use examples from town and games from town and those from the rural areas will have a problem understanding that. So I did a little bit of research into the kinds of games our people played and the kind of games the rural children played and then I took that and I used those kinds of games to derive mathematical concepts. So that is why I said you know you can go and mix these approaches. I used the games, yes, but I was not using the games which I usually played around town here – I tried to make a little bit of research work into our original background and I tried to build up these ideas around that and I found it worked very well.

(Adapted from MUSTER interview data)

REFLECTION

1. Compare the responses of the two tutors. Suggest some of the factors that might be hindering Tutor A from looking at ways of improving her own teaching instead of blaming the students.
2. Note down or discuss some ways in which you have 'mixed up and adapted' ideas from elsewhere.

The idea of 'Reflective Practice' was popularised by the American writer Donald Schon. Here is a summary of his ideas.

Reflective practice

Schon based his work on close observations of other kinds of professionals – architects, psychotherapists, managers, engineers – but his ideas seem to apply equally to teachers. He argues that professional knowledge, although rigorous, is not the same as scientific knowledge, and that professional problems cannot be solved simply by the application of scientific principles.

In the early 20th century people tried to use the same methods in the social sciences, for example education, sociology, psychology, as were used in the natural sciences, for example physics, chemistry, maths. They tried to reason out scientific principles and apply them, using proven techniques, to solve practical problems. Schon argues that this **technical rationality** model is inappropriate when applied to professional practices such as medicine, business, engineering and teaching. It does not describe what really happens. In professional practice, problems are seldom 'given' in such a way that a technical solution can be applied. Rather, each situation is unique, full of 'complexity, uncertainty, instability and value conflicts.' (Schon 1983:14) This calls for an 'art of practice' in which skilful practitioners have to set or 'frame' the problem in such a way that they can design a solution, drawing on their repertoire of professional knowledge and skills. In particular, the technical rationality model assumes that ends are given and straightforward, so that the only question is to select the means. But in professional practice it is not always clear what we want to achieve; often there are multiple and often conflicting aims. Value choices must be made, and this is part of the professional's skill.

Let us apply this to good teachers. They cannot just go into the classroom and deliver a lesson according to the principles of child development or learning theory. They have to think about these particular pupils and what they need; they 'frame' the problem as they plan their lesson, choosing from their repertoire of skills and knowledge. During the class, they note what happens, monitor the learning, and if they see a problem, they try something else, test it out, monitor the response, and so on until they are satisfied the pupils have understood. This is what Schon means by *'reflection-in-action'*. He also used the phrase *'reflection-on-action'*, meaning thinking about it afterwards, evaluating what went well and what went badly, before re-planning the next lesson in order to improve the situation.

(Summarised from Donald Schon: *The Reflective Practitioner* 1983, *Educating the Reflective Practitioner* 1987)

Implications for educating teachers

We have said above that teachers learn through observing, acquiring knowledge, and practising. Learning to reflect is no different. Students need to observe reflection in action among the tutors, read about it, and practise it themselves during their programme. Reflection on experience is also a key component of many CPD courses.

Learning through observation: how can tutors model reflection?

Reflective teachers are likely to learn this from reflective teacher educators. How can this be done?

John Loughran, a British teacher educator, described the strategies he used to do this (Loughran 1996). For example, he would 'think aloud' to his students about how he was planning his course, or give a commentary on his lecture, explaining what he was doing and why. He kept a diary about his teaching which he shared with his students and invited them to make written replies. Later, his student teachers would write similar diaries about their teaching practice, and he would add comments. Today's e-learning environments, or even email, make this quite easy to organise when there is adequate computer access.

But to do this takes courage, openness and self-confidence. It may also challenge cultural norms about hierarchical relationships between tutors and students. However, tutors need to find locally appropriate ways of demonstrating to their students how they put reflection into practice, both as individuals and as a group of staff working or planning together.

Understanding reflection

As well as attending lectures and reading texts on reflection, students should read case studies about teachers reflecting on and improving their practice, such as the story of Teresa given above; these give powerful insights into what teachers actually do.

Practising reflection

This needs to be done not only during school experience but throughout the whole programme. In particular, the assessment system must give credit for reflection rather than only for reproducing knowledge.

For example:

- educational autobiographies: these encourage introspection and analysis of experience (see Chapter 2)
- keeping a journal during the practicum: noting what went well, what needed improvement, and recording attempts to solve the problems encountered
- discussions (pair, group, whole class) which are designed to challenge students and help them critique, analyse and look at alternatives
- during school experience, studying **critical incidents** with the help of a mentor or supervisor
- assessment by portfolio (see Chapter 7).

REFLECTION

Think about how you have learnt to do your current work. Have there been times when you have particularly reflected on what you were doing, how and why? How did such reflections help you?

ACTIVITY

Look at the chapters on Pedagogy, the Practicum and on Assessment. Note down which of the methods suggested would help student teachers to learn to reflect. How could the tutor help stimulate this?

Use the grid below to help you. Add as many methods as you can.

Aspect of course	Activity	How tutor can stimulate reflection
Pedagogy	Ranking ideas	Ask each student to support choice by reasons
	Pair work	
	?	
Practicum	Keeping a journal	Insist students write not only what they did, but what they *could* have done, or did differently in a later lesson
	Clinical supervision	
	?	
Assessment	Portfolios	Make clear that critical analysis and evaluation of their own actions will be graded highly
	Formative assessment	

Constraints on teaching for reflection

Teacher educators have often reported how their own attempts to include reflection met with much resistance in some quarters, such as:

- Traditions, especially those that proclaim there is 'one right way to teach'
- A view of students as apprentices who are there to learn from older teachers
- Assessment practices, such as heavy reliance on tests or exams
- A heavy syllabus to be covered
- Students' own expectations that they will be told how to teach
- Challenges felt by schools and serving teachers to their own routines by reflective student teachers and newly qualified teachers
- Expectations of school, society and government that teachers are there to deliver the curriculum rather than enquire into its effects

Promoting teaching for reflection

In the US, Valli and colleagues describe a number of teacher education programmes based on the Reflective Practitioner model (Valli 1992). Those which succeeded in becoming 'reflective' shared these common features:

- Staff work together, over several years, to develop the new programme; this includes frequent evaluations and revisions; a process of continual development and improvement, being reflective about the programme.
- Tutors also model 'reflection' to their students, sharing some of their thinking about their own practice.

- Teaching and assessment strategies are designed deliberately to enhance and encourage student reflection.
- Content includes a study of alternative perspectives, from which students are expected to develop their own 'personal theories'.
- Relationships with co-operating schools and teachers are built up to ensure they understand and share the same approach to supporting student teachers' reflection during teaching practice.
- There are relatively few student teachers on the programme, and they work in small collaborative groups for at least part of the time, sometimes clustered in schools.

All the case studies report difficulties, experimenting with different solutions and a lot of hard work. However, both tutors and their students believe it was worth the effort.

REFLECTION

Consider your own teaching environment. What factors work against teaching for reflection and what factors support it?

The environment and context in which you work may not always be conducive for reflective practice. Changes can feel difficult and threatening. Sometimes changes in practice bring a dip in achievement, as old habits are put aside and new skills learnt. But working collaboratively, with a vision of what you want to gain through change, can bring great rewards.

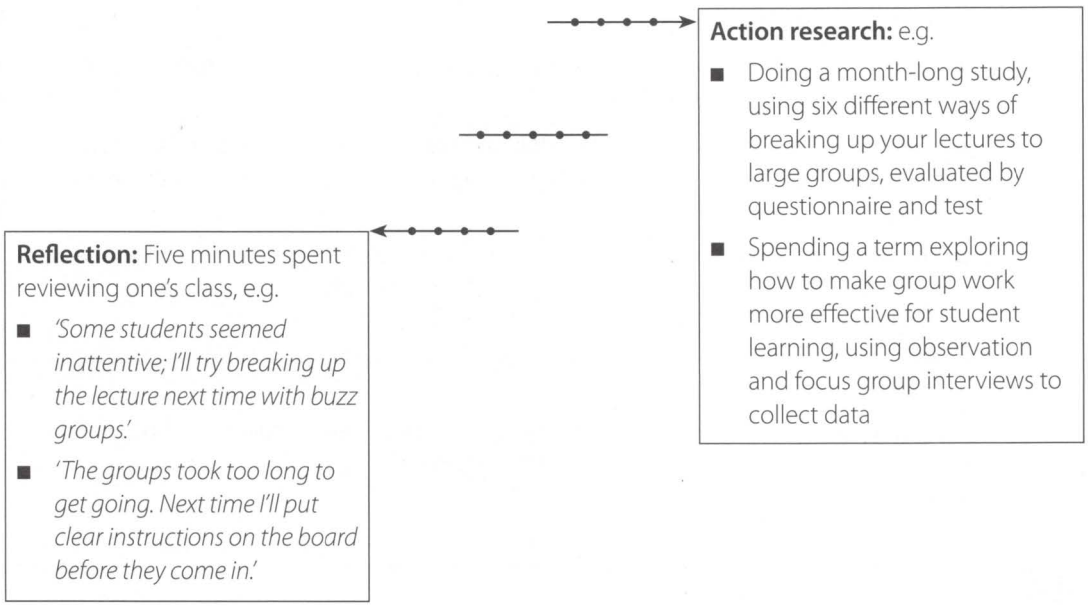
Moving into action research

Reflection in education implies thinking about something purposively, with a view to taking action about it. Action research can be thought of as developing the reflective process in several ways to make it more explicit, systematic and rigorous, for example:

- *slowing down the process*: studying your practice over a longer period
- *deepening the reflection*: looking at what you do in more detail
- *collecting data*: using simple research methods, perhaps with the help of an outsider, to find evidence about what is actually happening
- *making your conclusions public*: sharing your findings with others so that they can provide helpful comments for you and perhaps use them to improve their own teaching.

Again, one can think of a continuum, where someone moves gradually from one to the other.

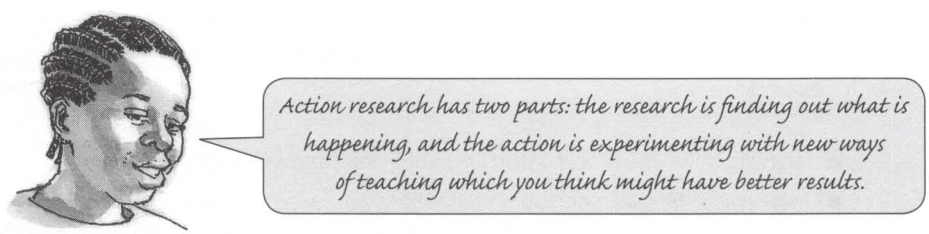
Figure 12.3 From reflection to research



Definition of action research

Educational action research is undertaking some kind of systematic investigation into what is happening in a classroom, lecture hall, school or college, with the aim of changing it for the better.

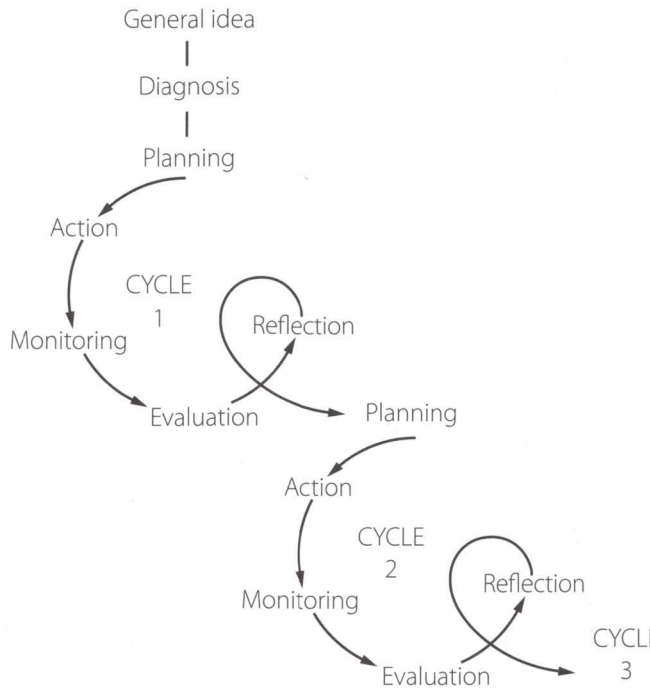
It is usually carried out by those individuals or a group who are themselves involved in the situation. However, it is useful to have the help of an outside 'consultant' or 'critical friend' i.e. someone not closely working with you, so you can discuss what you are doing openly and honestly.



The cyclical process

Action research is usually pictured as proceeding in a series of cycles, which include planning, acting, monitoring, and evaluating. The cycles can be big or small (indicating longer or shorter periods of time), and there can be one cycle or several. Figure 12.4 shows a typical cycle. Different authors label the stages in slightly different ways, but the process remains much the same.

Figure 12.4 The Action Research Cycle



The following section describes each stage in turn in order to explain them clearly. However, in practice stages may overlap or run into each other. Researchers may find they have been carrying out small circles inside larger ones. Sometimes the first cycle is used to provide the diagnosis.

Stages of the process

The process starts with a '*general idea*', focusing on something that needs improving. This may be, for example:

- a learning problem – students do not seem to understand this problem well
- a sense of dissatisfaction with my teaching – my students are not participating as actively as I would wish
- an aspect of organisation – schools and colleges are not co-operating well with each other over teaching practice.

Sometimes researchers phrase the general idea as a question:

- How can I improve my student teachers' communication skills?

Or as a **hypothesis**:

- Because of women's traditional roles in our society, women students need targeted support and structured exercises to encourage them to participate more in class.

Or as an experiment:

- What would happen if I used local school pupils instead of other teachers on the CPD course for a microteaching session? (Or the other way round!)

Diagnosis

During this stage you try to find out more about the problematic situation by collecting data, for example:

- observing students in class
- analysing their written work
- interviewing
- circulating questionnaires
- reading documents or books.

This period can be quite short and simple, done over a day or two, or long and detailed, taking up several weeks.

Planning

Using the findings from the diagnosis stage, you decide on some action steps. These could be:

- trying out a new teaching method
- introducing a new resource or technology
- organising a meeting with local schools and writing guidelines for school experience.

It is wise to keep it simple and plan for only one or two steps at a time, especially when beginning action research.

During this stage you also plan how the action will be monitored.

Action

You then implement the planned action steps as carefully as possible. Often the situation changes as the research goes on, and the steps have to be amended. This does not matter, as long as the changes, and the reasons for them, are recorded as part of the monitoring process.

Monitoring

During and after the action you and/or an outside 'critical friend' (see below) collect data of various kinds. For example, you could record:

- what actually happened during the action steps
- student classroom behaviour, and their responses, both oral and written
- views of various participants in the action, including your own responses, insights, confusions, feelings, etc.

Ways of collecting such data include:

- keeping a reflective journal, and asking the students to keep journals
- questionnaires
- interviews, with individuals, pairs or groups
- observation (by yourself or an outsider) focused on particular aspects of teaching and learning
- students' work: essay scripts, tests, reports
- audio- or video-recordings of the class.

Almost any type of research method can be used, but action researchers tend to use **qualitative methods**. Whatever methods are used, it is worth being sure you can use them accurately, for example by referring to educational research textbooks. The 'critical friend' can help check that your findings really show what you think they show.

Evaluation

You then carefully study the data and draw conclusions, for example:

'The women students have participated more in group work but they say they still feel uncomfortable when called on to present their own ideas in class. Very few have been recorded as asking questions.'

'The average marks of the class have risen but the lower achievers have not improved.'

'Micro-teaching results were quite different with 'real pupils'. The teachers took the exercise much more seriously and said they had gained new insights about speed and clarity of questioning.'

'Unexpected outcomes should be recognised; they are often the most useful.'

'The **co-operating teachers** at X school did not understand our marking scheme so they invented a variation which worked better.'

Reflection

At this point you sit back and consider the whole process. You note:

- what you have learnt about the issue and about research methods
- what new insights you have gained
- what different aspects of the problem, or new problems, have emerged
- whether the original diagnosis was correct, or needs to be adjusted.

This then leads into a second cycle, with further planning, acting, monitoring and evaluation.

Making it public

It is important that the research is carried out in a way that enables other people to understand and comment on it. Such comments, if made in a supportive way, can be extremely useful at any of the stages, but particularly in planning and in evaluation. This is part of the role of the outsider. Details sometimes need to be kept confidential to protect research participants.

Role of the outsider

Although action research is often simpler and more 'user-friendly' than other kinds of research, it can be quite a complex procedure and requires a commitment of time and energy,

especially if the results are to be written down and shared with other people. It is normal for action researchers, whether working individually or in groups, to ask an outsider to help them. This person can be a mentor – implying they have more expertise and experience – or a 'critical friend' – implying a more equal relationship. The role of the outsider may include one or more of the following:

- ***Facilitator*** – support, counsel
- ***Commentator*** – commend, analyse, challenge, ask questions that help the researchers to develop their ideas further, suggest alternatives
- ***Resource person*** – for information and expertise; as an observer or interviewer to help collect data
- ***Organiser*** – of meetings, funding, preparing reports for publication, etc.

In the case of teacher educators, action research might be supported by someone from outside the institution with research experience, or simply a trusted and experienced colleague who could be relied on to be both supportive and objective. If action research is undertaken as part of a college programme or university degree, or for a CPD programme, a tutor will probably take on the role.

REFLECTION

Do you have any current concerns about your teaching? Do you have a 'general idea' about something you would like to improve? If so, make brief notes, or discuss with a colleague, to see whether you think it possible to undertake action research on this problem.

Case studies

The following case studies of action research by teacher educators in Namibia, Lesotho and India show how it might look in reality. The accounts have been edited to show the different stages of the cycle as described on pages 181–183.

In Namibia, as part of the educational reform following independence in 1991, action research was built into the professional development programme for teacher educators. The case study is based on a report written by a tutor on the Higher Diploma in Teacher Education.

Case Study 1:

Promoting active participation in the education theory and practice classroom,
G.M. Tubaundule in Zeichner and Dahlstrom (1999:144–156)

Godfrey Tubaundule was a lecturer at Caprivi College of Education, in the Department of Educational Theory and Practice.

General problem: The student teachers were reluctant to participate in classroom activities. They were not developing the skills of communication, critical thinking and problem-solving which were central to the programme (the Basic Education Teacher Diploma).

Diagnosis: He thought this might be partly due to cultural factors such as authoritarian relationships between elder and younger people, and to traditional gender roles which affect the way young women behave in class. He raised these issues at the end-of-term evaluation, in a whole-class discussion, but student teachers either gave stereotyped answers or remained silent. This highlighted the students' unease at participating. At this point the tutor felt quite frustrated but was determined to attempt to change the situation for the better.

First cycle

Plan: To collect more information about student teacher views, and to experiment with a variety of participatory teaching methods.

Action: **1**. He distributed a questionnaire at the start of the following term and analysed it.

2. He devised and taught a series of lessons to include: debates, peer editing, group and pair work, and micro-lessons, each being designed to develop particular kinds of skills and competences.

Monitoring: **1**. Only 43 per cent of students returned the questionnaire, mostly from the agricultural students and/or males.

2. He observed students in class and made notes after each lesson.

Evaluation: In the questionnaires, students gave as reasons for non-participation: difficult subject matter, difficult questions, shyness, language problems and unpreparedness. They were more ready to take part in collective activities like group or pair work than in individual activities such as presenting a report or asking questions. His lesson observations confirmed these results.

Reflection and refined diagnosis: He decided his students 'did not think the issue of participation was important. They felt the teacher was there to teach and tell them what to do' (p. 149). However, learner-centred education (LCE) is a key part of the new education system in Namibia. The programme document states: 'Students should take responsibility for their own learning process .... [they] should learn in an active way' (p. 147). This was clearly not taking place.

Second cycle

Plan: To raise awareness among the student teachers about the importance of LCE and to introduce them to methods which would promote more meaningful teaching and learning, both for the student teachers and for their future pupils. (This is a good example of thinking on two levels – see Chapter 1.)

Action: **1**. Discussed with the student teachers the concept of LCE.

2. Taught the student teachers in new ways to demonstrate LCE in practice:

a) an activity structured to include whole class address, individual tasks, group work and display

b) role play followed by discussion

c) pair work including peer-editing, miming, brainstorming, observing, discussing and doing classroom projects; the aims were to improve listening, writing, thinking, communicating and assessing each others' work

d) outdoor walk, involving observations, compiling information, group discussions, feedback and assessment

e) teaching and learning through poetry and songs.

Monitoring: He took notes of student behaviour during these classes and held discussions with them after each class, as well as using the end-of-term evaluation.

Evaluation: He found:

- student teachers became more active and, in particular, women participated more
- they enjoyed the activity-based methods and asked for more examples
- during **micro-teaching**, students showed ability to use a mixture of methods.

Reflection: 'I have come to realise that students in general have the potential and ability to participate in activities as long as there are clear guidelines and teacher encouragement, ... in order to make sure that all students participate in classroom activities, the teacher should be thoroughly prepared for the lesson... it is advisable that a variety of activities are employed in a single lesson.' (ibid. p. 155)

Case Study 2:

Reflecting on the Practice of Educating Teachers, (Stuart et al. 1997)

Mahlape Morojele had just begun teaching Development Studies to primary student teachers at the National Teacher Training College in Lesotho. She was part of a team of five teachers who were exploring action research in their classrooms.

General problem: 'Student teachers seemed unable to answer satisfactorily questions that required higher order skills such as comprehension, application, analysis and synthesis. For example they transcribed material from library books without any understanding of the text. I wondered if this inability was due to my teaching, or to other factors' (p.183). She set out her ideas in the form of hypotheses:

'Students show a lack of higher order skills (HOS).'

'They believe that knowledge is closed or fixed, a thing which they are given, rather than an exploration in which they can take part.'

First cycle *(this was used as a form of diagnosis*

Plan: The tutor devised activities where students would need such skills.

Action: **1**. She organised students to discuss in groups.

2. She asked them to contribute to a message board.

3. She set them assignments requiring HOS.

Monitoring: She taped some of the student discussions, and analysed their scripts.

Evaluation: She found some students did show ability to use HOS, but they were not applying them within the classroom.

Reflection: She refined the original ideas and concluded that:

- Lessons should be organised in such a way that they encourage active student participation.
- Students need to be both encouraged and challenged if they are to become independent learners; methods of teaching should enable this.
- Methods of testing should be modified to test understanding.

Second cycle

Plan: To test these ideas through a number of teaching and learning activities.

Action: **1**. With a selected group of six students, she demonstrated how to conduct a good group discussion. Some 80 student teachers watched, and then went into groups to carry out a similar discussion.

2. She taught the topic 'Family' through role play and family trees.

3. She used pictures to stimulate discussion, in pairs and groups, about 'human needs'.

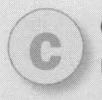
Observe/monitor: She kept notes of lessons; asked an outsider to interview some students; analysed student written work.

Evaluation: There was some improvement orally, but also a long way to go, especially in written answers. Students still showed much

dependency on the teacher, they wanted notes and to be given conclusions. They claimed the test questions were 'too difficult'. Their lack of English language skills was an important factor.

Reflection: 'I concluded that by asking the students to use HOS and, in particular, to see knowledge in a new, more open way, we were actually challenging widespread attitudes that permeate the educational and social systems.'

This piece of action research had only some small effects on the learning of that particular group of students. But the tutor acquired new insights which had a great effect on her understanding of the problems she was facing. Her next step was to share these with colleagues.



Case Study 3:

Using action research for CPD

One of the authors of this book (Janet Stuart) ran a week-long action research workshop for serving teachers at the Druk White Lotus School in Ladakh, India, in 2006. The school is dedicated to combining traditional Buddhist values and culture with more modern teaching and learning methods.

General idea and diagnosis: This was carried out by the head teacher prior to the workshop. The 15 teachers in the lower and junior school were graduates but only three had any professional training. The rest of them 'taught as they were taught'. The teachers were used to the 'learning by rote' method rather than activity-based learning.

The head teacher began a programme of on-the-job training based on reflective practice, consisting of one session a week, after school. Our action research workshop fitted into this programme. The head teacher found that the teachers seldom used group work in their lessons and chose this as the focus of the workshop.

To show how this can be fitted into school-based CPD, the eight-day programme of activities is shown below.

Day 1

Introduction: We presented a simple form of the action research cycle to the teachers and explained how to collect evidence through observation, field notes, analysing pupils' work, short questionnaires and interviews.

First cycle

Planning: The teachers, in groups of two or three based on year teams, planned an English lesson using groups. They also planned how they would collect data.

Day 2

Action: The teachers, individually, taught their lesson.

Monitoring: The head and I observed the lessons, using various informal observation schedules and notes; I conducted interviews with a group of pupils. Where possible, we fed back our comments individually to each teacher. The assistant head videoed short extracts of each lesson. Some of the teachers wrote field notes or gave pupils short questionnaires about their experience of the lesson.

Evaluation and reflection: After school we held a feedback session. Each teacher reported briefly what they had done, what evidence they had of pupils' reactions and pupil learning, what they thought had gone well, and what they wanted to improve next time. The head and I added brief comments from our observations.

Second cycle

Planning: The teachers planned a similar lesson for the following day, deliberately changing some elements (such as the composition of the groups, the organisation of the work, etc.)

Day 3

Action: The teachers taught the second lesson.

Monitoring: The observers assisted as before. More teachers this time were able to collect their own evidence, and some interviewed pupils.

Evaluation: In the feedback session after school everyone watched the video clips. The teachers, as well as the observers, gave feedback to their peers, including praise and challenge.

Reflection: Each teacher talked about what they had learnt from the experience.

Making public

Day 4–7

Workshops on report writing: Teachers, with tutorial support, drafted reports, first individually, then in year groups, covering what they had done, what evidence they had collected, and what this showed about pupils' learning and pupils' reactions to group work. They summarised what they had learnt, showing what had gone well and what they needed to work on.

Day 8

Final Plenary: Each group presented their final reports. They reflected on the process and set out what they would do next in the form of Action Steps.

Consultant's summary and reflection I kept a daily journal recording what I saw, preliminary analyses of the data, summaries of the teachers' responses, and plans for the next stage of the cycle.

There were small but noticeable changes in the lessons. During the second cycle the teachers showed more confidence in organising the pupils into groups, and the pupils worked better because they understood more clearly what they had to do. Both pupils and teachers were highly motivated, partly because of the novelty and because of the attention being shown to them by the consultants and senior teachers. At the end the teachers were proud of their achievements in trying out new methods successfully, and in collecting data (something they had never done before).

Head teacher's evaluation 'The teachers found it very different and very helpful. Through this exercise they began to realise that the book is not the only focus for learning. Since carrying out the action research exercise, most have tried using group work, but a few still need to be directed to do so. Some use it in art and IT, where there are no set texts, but not in other subjects. Their thinking still seems to be: if there is a book, you do what it says. It is not clear whether this is laziness or a lack of confidence in their own knowledge.'

Comment One week is not usually long enough to break old habits or to embed new methods in a teacher's repertoire. In this case, the head teacher was able to build on the workshop and reinforce the messages during her on-going training programme. In this way, it is hoped the teachers will develop professionally to the point where they have a repertoire of teaching strategies and the knowledge and confidence to use them appropriately.

Concluding comments

We have stressed the importance of 'reflecting on practice' throughout this book. It seems to us a useful and realistic way of helping teachers to take greater responsibility for improving their own teaching. However, if they are to do this, 'learning to reflect' must be built into all types of teacher development programmes, from ITE through to CPD. Teachers need to understand what 'reflection' means, and to practise the skills of reflecting, until it becomes a habit or 'second nature'.

To teach reflection requires tutors not only to explain the idea, but also to demonstrate it in practice, which is much harder. Students need to be given as much opportunity as possible

to reflect at all stages of the programme: in seminars and in assignments, as well as during the **practicum**. The ability to reflect constructively on their own teaching, and on their own learning as well, has to be an important criterion for successfully passing the programme.

Research is often seen as something that only academics or outside 'experts' do. But since the 1960s there has been an important movement to encourage teachers themselves to become researchers within their own classrooms and schools. A good way into this is to develop the skills of reflection, learn simple research methods, and undertake action research.

This applies even more so to teacher educators. The case studies in this chapter show how people have done action research within teacher development programmes. We hope these will inspire you to try it out for yourselves.

Chapter 13

The nature of professional knowledge in teaching

Overview

The main objectives of this chapter are to:

- discuss the general idea of professional knowledge and the different kinds of professional knowledge needed in teaching
- examine ways in which teachers develop and use their professional knowledge
- highlight the importance of practical teaching knowledge in developing expertise in teaching
- sketch the stages of professional teacher development, from novice to expert.

Introduction

Throughout the book we have examined different aspects of learning to teach, some theoretical, some practical. In this chapter we shall try to draw together some of the threads by looking in more depth at the nature of the professional knowledge needed for successful teaching. To teach well teachers have to understand, at least to some degree, the broad theoretical principles which underpin teaching in general. They must also develop practical insights into what works in any particular teaching environment. The central message of this chapter is that teaching is not a ritual to be learnt and repeatedly rehearsed. Rather, it is a professional learning journey that requires teachers to adapt what they know about teaching to different school settings and classroom situations.

In the course of this journey, teachers draw on knowledge from different sources, as they gradually widen and refine their knowledge and understanding. Classroom teaching can generate further insights about organising teaching to improve pupil learning. Thus knowledge about teaching arises from practice as well as from theory.

Understanding how teachers acquire and use both theoretical and practical teaching knowledge has implications for what should be included in the teacher education college or university curriculum, and what should form part of school-based teacher education.

Becoming a professional

REFLECTION

On hearing the word 'professional' what comes to mind? Use a **mental map** to show this.

Usually before new entrants are admitted into a profession, they have to follow a prescribed course of study, set by those responsible for defining, transmitting and enforcing the minimum standards of that profession. At the end, they have to pass some kind of formal examination and demonstrate the ethical commitments and values associated with the profession. Only then are they granted a licence to practise.

However, the knowledge, understanding and skills that professionals acquire and use are not gained simply by following a prescribed course of study and passing exams. Kennedy (2002) suggests that there are different kinds of professional knowledge which come from different sources.

1. ***Academic institutions***: Universities and colleges provide *systematic knowledge*, for example about subjects, theories of teaching and learning, and research findings.
2. ***Policy-makers***: Both governments and professional bodies may lay down *prescriptions*, setting out the dos and don'ts for a particular profession at a particular time. For example, teachers must conform to a code of ethics. There may be rules about lesson planning, or using continuous assessment; there might be a policy about treating girls and boys equally.
3. ***Personal experience***: Much of a teacher's *craft knowledge and skills* comes from practical experience, including their own schooling, parenthood and so on. We are often only half-aware of such knowledge, and may find it difficult to articulate.

REFLECTION

As a teacher educator, which of these sources of knowledge do you feel are most useful to you in developing teachers? Why?

In certain professions new members are required to work under the supervision of more experienced colleagues for a specified length of time. During this time they sharpen their skills and are expected to develop in-depth practical understanding of their work. For example, medical doctors learn to carry out surgical operations by working with senior colleagues. Sometimes this practice-based training will lead to higher qualifications which show that the new entrant has progressed beyond the level of a beginner to a level nearing that of an expert or specialist. Research shows that such supervised learning on the job plays an important part in developing professional knowledge (Eraut 1994).

Professional knowledge in teaching: different types and uses

Different authors have written about types of professional knowledge in different ways. One common broad distinction often made is between *propositional* and *practical* forms of teachers' knowledge.

Propositional knowledge is usually public, and often published; it is written down as statements (or propositions) about facts, principles, theories, research findings, and so on. Wallace (1991) calls it **received knowledge**, partly because students often just 'receive' it from tutors or books, and partly because it is treated as 'received wisdom' and accepted uncritically. Public **propositional knowledge** generally originates from academic institutions and policymakers as Kennedy (2002) describes above.

Practical knowledge, on the other hand, is often private and difficult to express in statements. Much of it is 'experiential' because it is developed through personal experience. Craft knowledge is of this kind.

Case Study:
Starting teaching in rural Ghana

At my first station, a fishing community in the Western Region, where the children like fishing more than going to school, I organised a parent teacher association (PTA) meeting with the help of the headmaster and other colleagues. Unfortunately, the number of people at the meeting was not encouraging so we had to reschedule it to the end of the term. During this second meeting we tried to find out what problems the parents faced and we also spoke to them about the importance of children's education. We finally promised them we were going to give the pupils the best education possible provided they, the parents, gave us the necessary support. It was difficult teaching science and mathematics in a rural community because most of the children are not exposed to the 'world'. However, with the assistance of a lot of teaching and learning materials they were able to understand me.

Another problem was children coming to school very late. I used a whole term to visit most of the pupils in their homes. I found out that the community was a scattered one, with some children living as far as five kilometres from the school. With the help of the headmaster, we changed the time for schooling. The new time was suitable for both parents and children.

To enhance best teaching practices there should be co-operation between the teachers themselves and the community in which the school is located. Let the community know what is happening in the school and get involved in community work.

(Extract from Best Teacher Award in Ghana, MOE 2003)

REFLECTION

What kinds of knowledge do you think are being used by a) the teacher in the case study above; b) by the teacher educator in the quote below?

Teaching is an art. This means the good teacher needs to keep reviewing his/her methodology in order to refine the delivery of lessons. Many think that teachers teach the way they were taught, which may be true at the very beginning of a teacher's career. However, through training and structured experiences, they are expected to adopt new ways of teaching. These should take into account the backgrounds of their pupils and the teachers' working conditions.

Propositional professional knowledge

Let us examine these two types of knowledge more closely, beginning with **propositional knowledge**. Shulman set out a useful list of seven different kinds of knowledge that teachers need:

- subject content knowledge (what to teach)
- **pedagogic** content knowledge (how to teach it effectively)
- general pedagogic knowledge (about classroom management, assessment, lesson planning, etc.)
- curriculum knowledge (about the school curriculum)
- knowledge of learners (about child development, educational psychology)
- knowledge of educational contexts (relations of school and society, educational sociology)
- knowledge of educational aims and values (policies, philosophies)

(Shulman 1987)

These different kinds of knowledge can be given different emphases in different contexts. Many teacher education programmes, especially in developing countries, weight subject content knowledge heavily in an attempt to strengthen student teachers' background knowledge of school subjects. This is seen as necessary when many of those who enrol in teacher education programmes enter with weak qualifying grades in key subject areas such as mathematics and language. But 'pedagogic content knowledge' is equally important. This knowledge focuses on how school subjects are internally structured and the methods that can be used to convey meaning and understanding of school subjects. For example, to teach the concept of fractions well, the teacher must first possess a good conceptual understanding of fractions (subject content knowledge), and then possess understanding of the methods or strategies (pedagogic content knowledge) for teaching fractions in ways appropriate for particular age groups and ability levels.

All teachers need to know about the school curriculum, including teaching materials and general assessment strategies. They also need to understand the characteristic features of local schooling, such as what resources are available, how communities perceive the schools, and what factors have contributed to the current situation.

Teachers should also be able to draw on knowledge about education or teaching that comes from educational research on schooling, theories of social organisation, teaching, human learning, **cognitive** psychology and so on. However, much of the research that has provided the basis for educational theories was carried out in industrialised countries of the North and West. As discussed in Chapter 11, difficulties can arise when such knowledge is applied wholesale in countries that have very different social and educational environments. For example, teaching in multigrade classrooms in rural Vietnam presents challenges that may be very different from teaching in urban schools in richer countries. Although theory and abstract knowledge is important, to be useful it has to be adapted to different needs and situations or generated more locally.

Practical professional knowledge

Every teacher possesses some knowledge of teaching derived from practical experience. Some call this the 'wisdom of practice'. Others describe this as **tacit knowledge** because

it is deeply personal and hard to put into words. The teacher educator above called it an 'art of practice'. As teachers gain more experience in teaching, they are able to develop insights about their work that go beyond simply applying the prescribed rules and strategies of teaching. They begin to act more spontaneously in response to a classroom teaching problem. They can do so because they remember, perhaps subconsciously, how they tackled similar problems before and what happened. As this experience continues, teachers who have formed the habit of reflecting on their practice develop a range of personal teaching strategies and tactics which they constantly adapt in their teaching. They build on lessons that were successful and learn from the failures. From this store of knowledge and experience they can decide quickly what teaching approaches are most likely to help pupils understand a particular concept.

Michael Eraut (1994:15) calls this type of knowledge 'practical know-how' – knowledge about teaching which is present in the action of teaching itself. It is a combination of what one *knows, does* and learns from *doing*. It may be shown in simple practical ways, like keeping order in class, or in more complex activities such as lesson planning. There are some examples below.

Examples of teachers' practical professional knowledge

- Controlling the class
- Dealing with individuals, knowing when to 'step in'
- Small practical ways of making a lesson run smoothly
- Ways of organising classrooms and pupils
- Opening routines
- Tried and tested strategies for handling different situations
- Knowing how to turn academic knowledge into lesson content that makes sense to the pupils
- Different ways of dealing with disruption
- Ways of interpreting what goes on and being able to respond quickly to classroom events
- Marking and assessing

(From *The School Mentor Handbook*, Hagger, Burn and McIntyre 1993:11)

Much practical knowledge is '**situational**': it includes knowledge of the particular school, a particular class, and how particular individuals are likely to behave. The teacher has acquired this knowledge through day-to-day experience in that situation.

REFLECTION

1. In your view, will the kind of practical professional knowledge required for teaching in primary schools be different from that needed in secondary school teaching? Why or why not?

2. Similarly, will practical professional knowledge be different for different subject areas? Why or why not?
3. Do school teachers and teacher educators use similar knowledge in their jobs? If not, what do you think are the differences?

Integrating different kinds of knowledge for effective practice

How do effective teachers bring together the different kinds of knowledge – propositional and practical – to deliver successful lessons? Research suggests that each teacher constructs their own store of personal knowledge, drawing on all the sources we have mentioned. This is a complex process. James Calderhead, who studied teacher thinking, uses the term 'metacognitive processes' to describe what happens when teachers do this. According to Calderhead **metacognitive** activity involves:

> ... processes of abstraction, comparison, analysis, and evaluation that operate on different images of practice or on a variety of knowledge bases to generate usable practical knowledge
> (Calderhead 1988: 60)

This sounds complicated but it is something that we all do without fully realising it. He uses this example to illustrate the idea:

Teachers' metacognitive activity

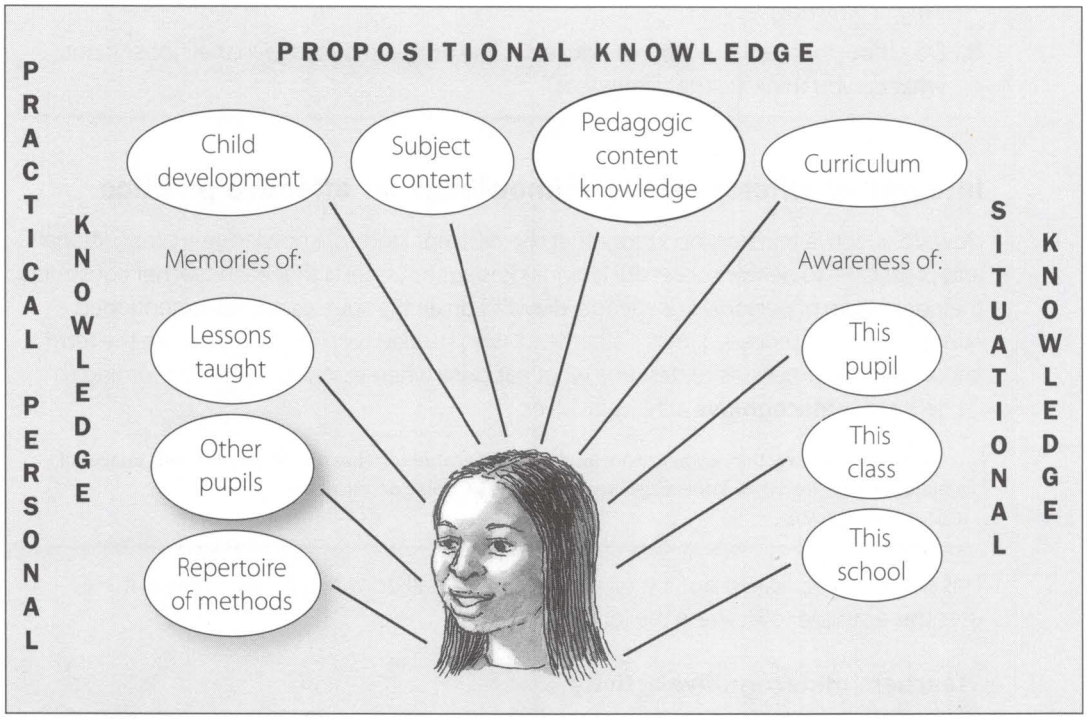
Planning for a class of 11-year olds requires some conception of what a class of 11-year olds is generally like, what range of abilities, interests, and spans of attention they might have and how they typically react to different types of material or situations. In order to plan a scheme of work for a class, a teacher has to have accumulated a considerable amount of knowledge about children and to have abstracted from that knowledge typifications, or **exemplars**, of what children and classes are like ... Planning might start with an idea which is generally elaborated into a formal plan or mental image of a lesson, drawing on knowledge of subject matter, pupils, teaching strategies, material context etc., which are all compared and contrasted in a series of decisions about what form a lesson will take.

(Calderhead, 1988: 60)

This example shows the teacher drawing on:

- ***Propositional knowledge***: about child development, about subject matter, the curriculum and classroom management
- ***Practical (craft) knowledge***: their own experience of planning lessons, their memories of how 11-year olds normally react, and a repertoire of teaching strategies that have been tried in the past
- ***Situational knowledge***: about that particular class and the school context.

Figure 13.1 A teacher uses different kinds of knowledge



Here is what a teacher in a public school in Africa says he does in preparing to teach:

What I try to do is to ensure that it suits the age of the pupils, it is relevant to them, attracts their attention; and I select appropriate learning materials that can convey meaning to them ... after a lesson I reflect on all that happened and find ways of improving, especially if questions were not answered properly by the pupils.

What this teacher says illustrates the importance of *reflection* in the development of practical knowledge (see Chapter 12). Any teacher can pick up ways of teaching from their experience, but the more effective and successful ones give serious thought to what they do, compare it with what they were taught at college, and try to understand why some strategies work and others don't. They then feed this understanding into their future classroom practice and continue to do so whenever they teach. In effect, every teaching event presents an opportunity for learning about how to improve pupils' learning.

In many developing countries, classrooms have limited resources and a wide range of mixed-aged children. In such cases the teacher must constantly be thinking of appropriate strategies to sustain the interest of all pupils and make learning possible for them. What is most needed under these circumstances is practical knowledge. No formal teacher education programme can prepare teachers for every possible situation that they may encounter in the real world of teaching. Yet the **propositional knowledge** learnt in college can help shape teachers' thinking and therefore help them get the most from their practical experience.

Learning from practical experience

An experienced primary teacher in Malawi, working with large numbers of children in a poorly resourced school, was explaining to a researcher how he adapted his teaching to the needs of his Standard 1 pupils: 'I observe their playing level, and when I start from their playing level it's not difficult for me to teach them new things.'

This teacher knew, from his formal training, that children develop by stages, but that individuals move at different speeds. He observed his pupils carefully as they played together, for example, how far they could count, and what caught their interest. He then used his own judgement to adapt lessons in the teachers' guide to their abilities, with whatever resources were available. For example he showed some pupils how to use the sandy ground to practise writing.

(Croft 2002a: 331)

Thus teachers use their knowledge in practice to solve teaching problems they encounter. But often the problems are unclear, or ill-defined, and frequently there are no simple answers. The teacher can gain insights by observing how their pupils interact with each other and how they learn best. They can experiment with different approaches and see which works best. As Danielson (1996:18) has observed, the key to good professional practice is: 'the appropriateness of different choices, there are no right and wrong answers … these choices and decisions represent the heart of professionalism'.

Reflective teachers are able to use their considerable knowledge of pupil characteristics, classroom climates, ability groups, learning environments, subject structure, pedagogical principles etc., to choose an appropriate strategy for teaching. Even in the action of teaching itself, reflective teachers constantly adapt their teaching plans through a process of self-evaluation – this is what Schon (1983, 1987) calls 'reflection in action' (Chapter 12).

REFLECTION

1. Danielson (1996) says it is not helpful to think of teaching as having 'right or wrong answers'. Can you think of any teaching and learning situations where a course of action can be described as *always* right or *always* wrong?
2. Do your students think there are right and wrong approaches to teaching? How can you help them develop 'wise judgements' and learn to make appropriate choices in the classroom?
3. In some countries a lot of effort goes into finding 'best practices' in teaching, and teachers are encouraged to learn these best practices. Can you think of an example of 'best practice' in teaching? How much should we aim to describe and spread '*good* practice' or are there ways of teaching that are clearly 'best'?

To summarise, teachers draw on different kinds of propositional and practical knowledge, which could come from different sources: books and lectures, official guidelines, demonstrations and observation, CPD courses, teaching experience and reflecting on that experience. From all these sources, each teacher develops a very personal practical knowledge-base of teaching that varies from teacher to teacher. In the next section we shall discuss the stages of developing such knowledge and what can be done to promote it in appropriate ways.

Phases of developing professional knowledge

Initial teacher education programmes

Initial teacher education programmes often focus on various kinds of **propositional knowledge**. Most teacher educators agree that student teachers should have acquired basic knowledge and skills of teaching by the time they qualify. This fundamental knowledge base forms an essential starting point for making decisions in the classroom. But real teaching conditions are far from the ideal usually presented in formal teacher education programmes. Teachers have to constantly adapt and improvise to meet the learning needs of their pupils.

Thus, although propositional knowledge is necessary, it is not sufficient. This is why practical knowledge is so essential. It is therefore surprising that in many teacher education programmes, practical knowledge is the least discussed, even during teaching practice. Ultimately, personal practical knowledge is the most critical part of professional knowledge as it is what distinguishes a **novice teacher** from the more experienced and successful teacher.

REFLECTION

How could ITE programmes be designed to give more attention to the development of personal practical knowledge? (See Chapter 9) Do you know a programme that does this well?

There is some evidence that many college teacher education programmes do not make much difference to what teachers are able to do in the classroom. In Chapter 2 we reported research from Ghana which suggested that some newly qualified teachers were unable to put into classroom practice what they had learnt at college. Nor had their training had much impact on changing their prior beliefs and attitudes to teaching, or even the images of teaching they had brought with them. Such a finding poses a real challenge to teacher education programming.

Kennedy puts it like this:

> If we know that teachers are highly likely to teach as they were taught and if we are not satisfied with the way they were taught, then how can we help them develop different teaching strategies? ... We are caught in a vicious cycle of mediocre practice modelled after mediocre practice, of trivialised knowledge begetting more trivialised knowledge. Unless we find a way out of this cycle we will continue re-creating generations of teachers who recreate generations of pupils who are not prepared for the technological society.
>
> (Kennedy (1991:662)

REFLECTION

Note down some strategies that might help to break this cycle. You could refer to earlier parts of the book, such as Chapters 2, 5 and 6.

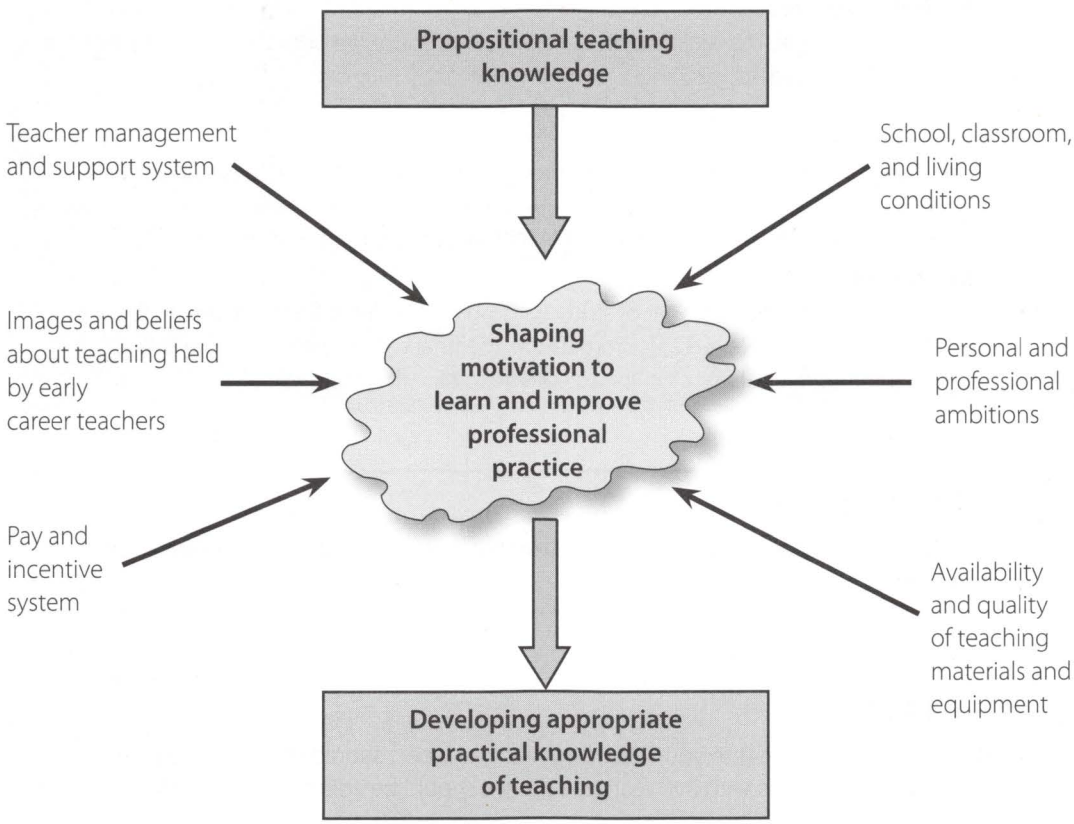
The newly qualified teacher phase

In developing countries there may be additional reasons why teachers find it hard to bring practical and propositional knowledge together to develop workable personal approaches

to teaching. Some of these are illustrated in Figure 13.2. It shows that certain critical factors impact on the commitment and ability of teachers to make the most use of the insights they have gained from college to develop into effective teachers. If not handled well, these factors could also become major distractions that shift teachers' focus away from reflective practice.

For example, poor school facilities, inadequate teaching resources (such as not enough chalk, books, and writing materials), and poor pay and living conditions could become disincentives for developing effective teaching. Early career teachers may bring negative or out-dated images and beliefs about teaching, and may receive very little professional support from their school. Under these circumstances, motivation would decline and teachers may not invest personal energy to improve their classroom practice. Some early career teachers may even neglect many of the valuable ideas about teaching they learnt in college and concentrate on simply surviving their early years.

Figure 13.2 Influences on the development and use of practical knowledge



Even under such difficult circumstances, many new teachers do deal successfully with such challenges. Some find supportive colleagues or head teachers who give good advice or act as role models. Access to good **induction** courses, followed by regular CPD, would greatly help them to develop more appropriate teaching strategies and improve pupils' learning.

Induction, probation and internship

There are various ways in which newly qualified teachers (NQTs) can be supported in their first year.

Induction programmes

These are often fairly informal and could include:

- a school-based programme for the new teacher to meet all the staff, members of the local community, pupils and parents
- opportunities to share experiences with other new teachers, discuss problems and find ways forward, perhaps meeting regularly under the guidance of a head, a District Education Officer, or teacher educator
- classroom observation of more experienced teachers; being observed by a colleague who offers constructive feedback
- local seminars on useful topics, perhaps suggested by the NQTs themselves.

Probationary year

This is more formal. The teachers do not get their final licence until they have satisfactorily completed one year of teaching. During this time they may be:

- required to attend classes or seminars
- assessed through observation or through a portfolio of evidence (see Chapter 7).

Ideally, the NQT should have a reduced teaching load during this time.

Internship

In some countries the final year of study is combined with the first year of teaching. For example in Ghana's 'IN–IN–OUT' programme, the final year is spent teaching in a school under supervision, before returning to college to take the final exam.

REFLECTION

Who and what helped you develop your own practical knowledge in your early years of teaching?

ACTIVITY

1. Make two lists: what, in your view, beginning teachers should know and be able to do, and what teachers with five years experience should be able to know and do.
2. What are the main differences?

Moving from novice to accomplished performer

In many developing countries, initial teacher education is given far more emphasis than continuing professional development (CPD). Much money and time is spent in training colleges and university departments of education preparing student teachers to teach,

whilst very little is spent on professional development once they start their teaching career. This leaves many qualified teachers without the needed guidance to develop appropriate practical skills for teaching. Many countries do not have systematic programmes for **induction** and teacher development.

REFLECTION

Think of the most useful and least useful CPD activity you ever took part in. What were the important differences between these two?

As Danielson has noted:

> Teachers demonstrate lack of flexibility and responsiveness when they stick to a plan, even when the plan is clearly not working; when they brush aside a pupil's comments or question ... or stay with an approach even when it is clearly inappropriate for some pupils. [On the other hand] more able professionals are good at using, and redefining where appropriate, propositional knowledge in the light of accumulated 'wisdom of practice' to achieve good learning outcomes for pupils ..., such teachers have acquired the appropriate tools for problem-solving.
>
> Danielson (1996:103)

The difference between novices and their more experienced colleagues lies in the extent to which the latter are able to make *interpretations* and *judgements* about teaching that reflect a much deeper understanding of how goals, plans and actions help pupils improve their learning and achievement. Once the newly qualified teacher steps into the classroom, the goal should be to move them towards becoming reflective practitioners who are always striving to improve their own teaching and their pupils' learning.

The pathway might look something like the model shown in Figure 13.3.

REFLECTION

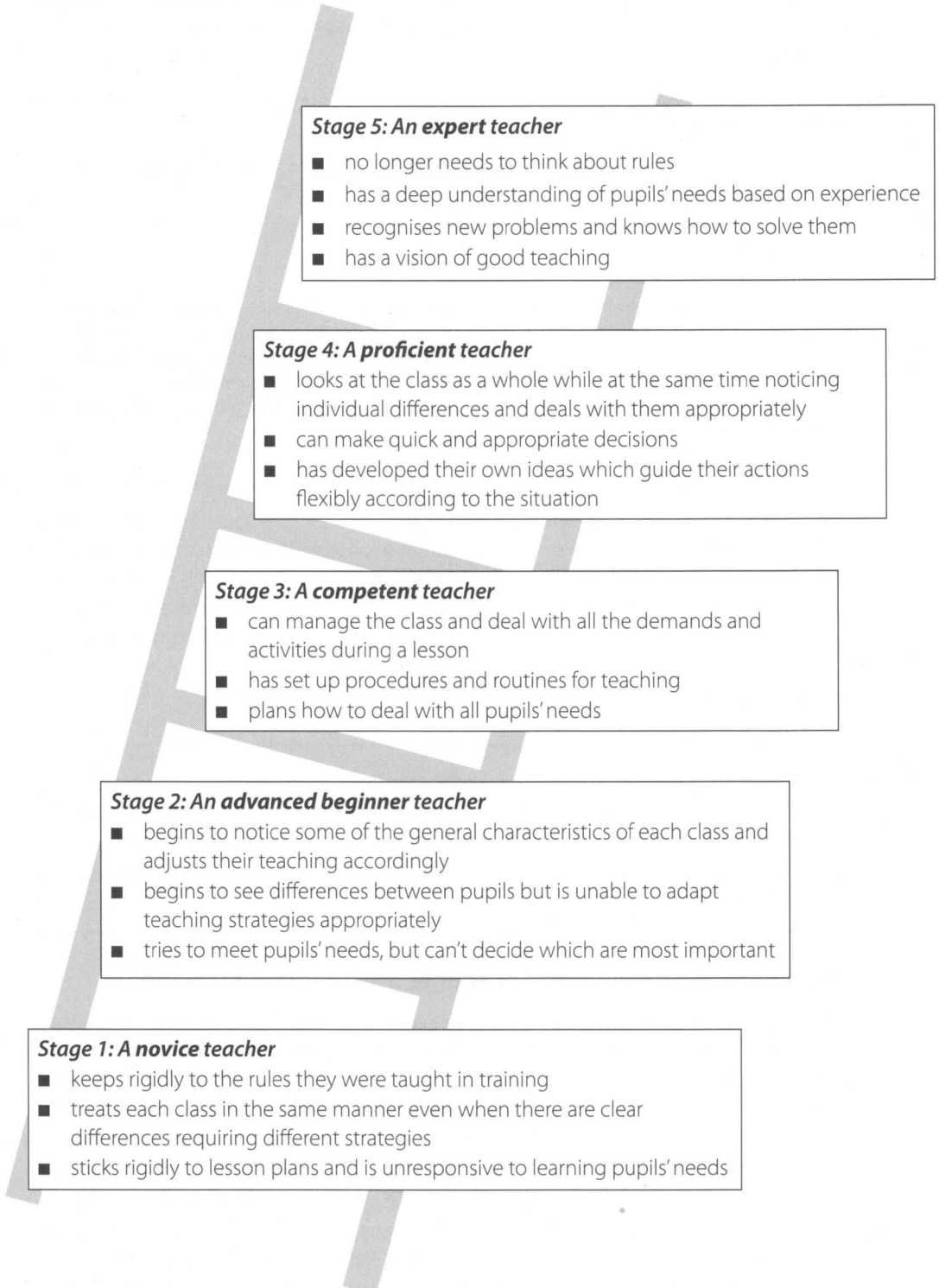
1. Can you find examples from your own experience of teaching and/or observing others teach to match the Dreyfus model? You may find some criteria fit better than others.
2. If you have worked as a teacher educator, did you experience similar stages as you learnt this role?

Constructing personal and practical pedagogical knowledge

After initial teacher education, new teachers are expected to have acquired a basic theoretical knowledge of teaching and some limited practical knowledge from teaching practice. This knowledge base of teaching may be what they need to start work in the classroom. With time and experience, the teacher – or teacher educator – who is constantly reflecting on his or her practice should develop a personalised and practical knowledge base of teaching, 'which includes notes and memories of cases and problems which have been encountered, reflected upon and theorised to varying extents and with varying significance for current practice' (Eraut 1994).

This is shown in Figure 13.4, which also shows how social interaction such as collaboration plays a role in constructing pedagogical knowledge. Personal collaboration can be between teachers, or between teachers and teacher educators, either face-to-face, on the telephone, via email etc. Collaboration via public materials includes all that we can learn

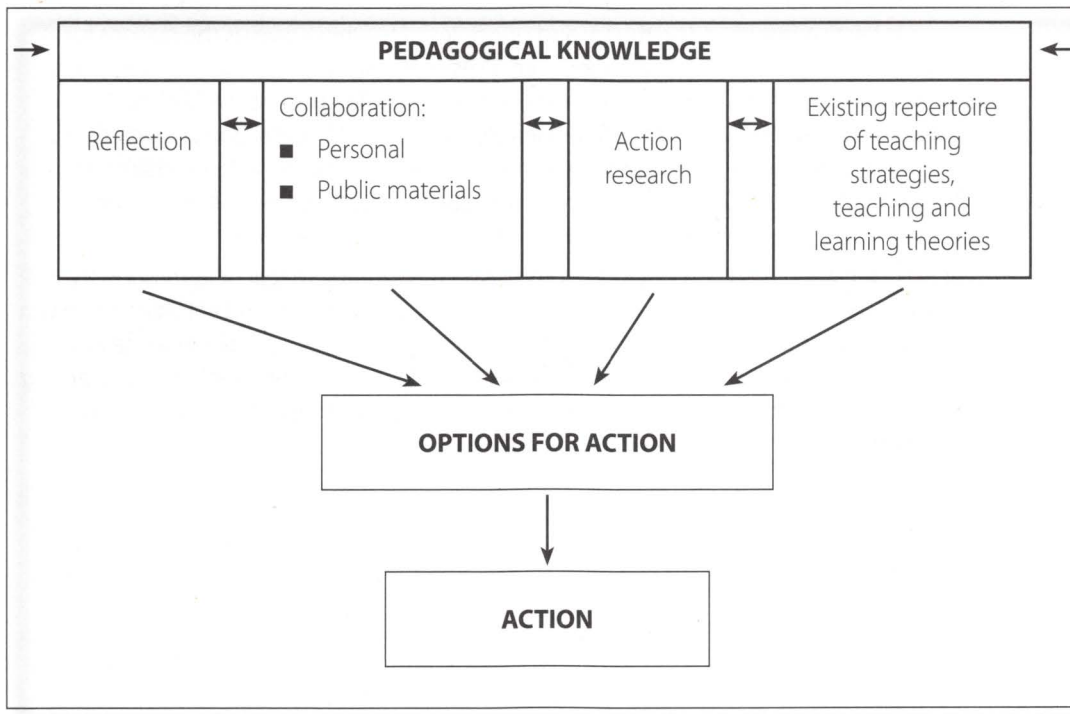
Figure 13.3 From early career (novice) to expert practitioner



(Based on the Dreyfus model of developing practical professional skills, summarised in Eraut 1994:124)

from, and contribute to, teachers' guides, textbooks, teacher newsletters, radio programmes, professional websites etc. As well as this collaboration, their existing strategies and theories, and reflection, teachers can also use action research to identify options for action. These options can be thought about in lesson planning, or be considered during teaching. Teachers then act, the results of which help to develop their knowledge of pedagogy and school context as a basis for future action.

Figure 13.4 **Social constructivist view of teacher development of pedagogical knowledge (Based on Croft 2002b)**



Case Study:
Case study from China

Experienced Chinese teachers commonly plan lessons together. Student teachers also do this; they practise with each other before entering the classroom, watch each other teaching, and later the group share comments and observations. Similarly, as in-service training, primary teachers systematically observe others teach for ten hours per term. Teachers from other schools are invited to give demonstration lessons. Through such collaboration, changes and innovations are disseminated face-to-face.

(Cortazzi 1998:211)

Concluding comments

Throughout this book we have tried to show that good teaching is a deeply reflective and creative activity, in which teachers are continually reconstructing and refining their own ideas. This is in sharp contrast to the behaviourist perspective of learning to teach which

tends to focus on developing, or prescribing, specific teaching behaviours. We have argued that teaching, including teaching teachers, is a *constructive* problem-solving activity and a lifelong learning process. Effective teachers are not produced in an instant after successfully completing initial teacher education. Their journey to become effective teachers really begins when they start regular classroom teaching. This journey is also a *social* process because teachers learn from many people, including teacher educators, each other, and their pupils.

In this concluding chapter, we have tried to show what a social constructivist teaching approach means in practice. In particular, we have pointed out the importance of paying attention to and valuing the knowledge produced through the activity of teaching. This is termed 'reflective teaching'. The theory and principles of teaching give us the reasons for methodology in general. Practical experience gives us the knowledge needed to respond to every situation in a suitable way. Teachers work under different school and classroom conditions and teach pupils with different learning needs and background characteristics, which means they need to constantly evaluate and adapt their knowledge and skills. Those in the habit of reflecting on their practice and evaluating the outcome will be the most successful in helping their pupils improve their learning and achievement.

Teacher educators can play a key role in promoting this attitude to teaching through their own example. We hope that this book, including its reflection points and activities, has given you many opportunities to develop your own knowledge and practice, either alone or with colleagues. Through you, many more teachers will be able to improve teaching and learning in their classrooms for all their pupils. That is, after all, the aim of teacher education and teacher development.

Activity appendix

These are longer activities based on the ideas in the different chapters. They could be adapted for college-based assignments, or for workshops.

Chapter 1

Research into CPD for teacher educators

A World Bank study of teacher education argues that:

> ... teacher educators [should] be active in classroom and school research, model good practices in their own teaching, impart clear subject pedagogies, have a clear concept of how adults and children learn, and take time to reflect with students about teaching practice
> (Craig et al. 1999:14)

Interview five or six people involved in some way with teacher development. (They could be any of the groups mentioned in 'About this book' on page vi). Find out what professional development they have had for their job: informal induction, in-service courses, further study opportunities, workshops, etc. with particular reference to the above suggestions. Finally, ask them what kinds of CPD would help them most.

Chapter 2

Select one or two of the exercises described in this chapter and try them out with a group of students. Write a short report on the results, including:

- why you chose this exercise
- what instructions you gave
- analysis of the results
- your conclusions
- how you intend to follow this up in your teaching
- whether you would try this again, and if so, whether you would do anything differently.

Chapter 3

Take a teaching topic that you are familiar with. If you are working as a teacher educator or trainer, take one you are teaching now, or have recently taught, on either an ITE programme, or an INSET/CPD course. Plan one or two lectures, seminars or workshops on this topic, making deliberate use of the discussion of learning theories in Chapter 3.

Chapter 4

Select one topic or activity from a teacher education programme. Design a learning cycle for it based on Kolb's experiential learning model. How might this improve the students' learning?

Chapter 5

Select one of the methods described in this chapter which is new to you. Make a list of ways of doing it well, and note the problems you might encounter. Add an explanation about how the method might help student learning.

Then try it out and write a short report.

Chapter 6

Use your own ITE or INSET/CPD programme, or one you are familiar with. List ways in which the taught courses and the practical experiences of the students/teachers are already linked. Then list potential ways of integrating them more closely.

If possible, plan and implement one change for the coming term or year which will lead to better links between practical teaching experience and other aspects of the programme.

Chapter 7

1. Assessing practical teaching and developing competency criteria

Part 1: Review the items in the teaching practice assessment instrument used in a teacher education college. (You can use the example overleaf or any other you have.)

- What do you consider to be the strengths and weaknesses of the evaluation items in the teaching practice assessment instrument?
- Compare the marks given and the 'remarks' of the assessor using the teaching practice assessment instrument – what issues do these raise in terms of making judgements about teaching performance?
- How easy or difficult is it to use such an observation format?
- How useful are the remarks as feedback to help a student teacher improve? Why?

Part 2: Form four groups of student teachers in your class. Each group should take one of the domains of professional practice described earlier and develop criteria for *levels of performance* similar to the ones developed in Figure 7.3.

Each group should present and explain their work to the class. A flip chart or similar will be useful in presenting the group's work. From this exercise, the whole class should come out with a common competency-based assessment framework for assessing student teachers and early career teachers. This could also be used for CPD for mentors

2. Using portfolios

Work with your student teachers, newly qualified teachers, and/or other colleagues to produce criteria for compiling records of teaching that would go into a professional portfolio for (a) student teachers and (b) early career teachers. How would you assess the evidence assembled in the portfolio for summative and formative purposes?

An example of a teaching practice assessment instrument

Name of student:	Date:
College:	Time:
Topic:	Class
Subject:	

Evaluation items	**Marks**					**Remarks**
1. Lesson preparation						
1.1 Clear definition of learning objectives					4	*Clear and specific, keep it up*
1.2 Logical sequencing of teaching				3		*Good*
1.3 Suitability of content					4	*Very good*
1.4 Suitability of introduction and conclusion				3		*Satisfactory*
2. Lesson presentation						
2.1 Appropriateness of introduction				3		*Good*
2.2. Logical presentation of content					4	*Conversant*
2.3 Using of teaching and learning aids					4	*Available and were used*
2.4 Use of chalkboard					4	*Good*
2.5 Pupils' participation				3		*Good*
2.6 Appropriateness of questions					4	*Very good*
2.7 Clarity of instructions and explanations				3		*Good*
2.8 Mastery of subject matter				3		*Good*
2.9 Achievement of learning objectives				3		*Good*
2.10 Time management					4	*Keep it up*
3. Classroom management						
3.1 Class control				3		*Good*
3.2 Organisation of pupils' activities (group work etc.)				3		*Keep it up*
3.3 Management of teaching resources				3		*Good*
3.3 Teacher–pupil relationship				3		*Satisfactory*
4. Teacher presentability						
4.1 Appropriateness of dress					3	*Room for improvement*
4.2 Punctuality			2			*Improvement is needed*
Key: 0 = not done or very poor, 1 = weak, 2 = adequate, 3 = good, 4 = outstanding						
Total score:			**Grade:**			

Chapter 8

Analyse a teacher education curriculum using some or all of the questions below as a guide and write a short report on your findings.

If you choose a programme that you are familiar with, you can supplement the curriculum documents with insider knowledge of how it is taught, and perhaps even how it is experienced by students. Otherwise, you can do the analysis from the documents only. This may be more difficult as most documents focus on the content, ignoring pedagogy and giving little detail about assessment.

Aims

The documents usually spell out some of the general aims, though others may not be written down because they are taken for granted by the stakeholders.

- What kind of teacher is envisaged, in terms of knowledge, skills and attitudes?
- What role(s) will that teacher be expected to play?
- How appropriate are these aims for the local education system?
- What views of learning to teach are implied in the document?

Content

The content is usually set out in the form of a syllabus for each course

- What is the balance between the components of the programme (subject studies, educational studies, general education studies, pedagogic studies, practical experience)?
- How are the components interrelated, i.e. how coherent is the programme?
- Does the curriculum appear overloaded?
- How is the content related to the prior knowledge of the students?
- For CPD, how far does it meet the needs of serving teachers?
- What assumptions are made about the kind of knowledge needed by the students, whether new or serving teachers?
- Is the content relevant and appropriate to the overall aims?

Practicum

- What proportion of the programme consists of practical experience in schools?
- Is it serial (i.e. regular short visits) or block practice?
- How is the practicum organised (for example role of the school, logistic and financial arrangements, etc.)?
- How is it assessed?
- What practical reasons underlie the organisation?
- For CPD, how is school experience used in the course?

Objectives and outcomes

These may be stated either for the programme as a whole or for specific components of it, for example separately for the practicum.

- What knowledge, skills and attitudes are to be achieved?
- Are the outcomes described in terms of separate items of skills and/or knowledge, or as broad, holistic competences or standards?
- Do they stress behaviour, or understanding?
- Are specific components of the course linked to specific outcomes?
- How closely do these objectives match the overall aims?

Pedagogy
a) Teaching/learning methods

- What methods are recommended explicitly in the documents?
- What methods are used in practice?
- How do the teaching/learning methods match those used in the schools?
- How are practical and professional skills taught?
- Are the views of teaching and learning, and the relationships expressed in them, consistent with the aims?

b) Teaching/learning materials

These are often very scarce and/or inappropriate, with students largely relying on lecturers' notes. What evidence is there for use of the following?

- Textbooks for subjects, for pedagogy, for education studies
- Library resources, including relevant school textbooks, teaching aids etc.
- Audio-visual resources
- Use of local resources, human or physical
- Use of computers

Assessment

A brief description can be given in terms of type(s) of tests, exams, assignments, projects, etc. Further questions might include:

- How are the different components assessed, and how are they weighted for the final grading?
- Who carries out the assessment, and what moderation processes are there if any?
- What certification do successful graduates receive and from whom (for example Ministry, college, university or development agency?)
- How far do the assessment procedures encourage development of the type of teacher described in the aims?
- Is assessment used in CPD, and if so, what kind of assessment, and for what purposes?

Evaluations and comparisons based on the analysis

Finally, questions can be asked for the purpose of evaluating the curriculum against selected criteria, or comparing it with others. For example:

- What appears to be the underlying rationale for the programme, for example behaviourist, constructivist, knowledge-based, skills-oriented, reflective practitioner, etc?
- Is the curriculum strategy as a whole internally coherent. i.e. are the aims, outcomes, content, assessment and pedagogy consistent with each other?
- How relevant is it to what the new teachers will need in their jobs?
- What attention does it pay to what the entering students bring with them?
- How does it tackle values and attitudes?
- When was it developed, and who by?
- What factors do you think have influenced its development?

Chapter 9

Use the model depicted on page 212 (Figure A.1) as a stimulus for discussing/developing a teacher education curriculum for your context.

- Start with the desired outcomes and work backwards.
- Look at the entrants' experiences and work forwards.
- Consider the content, pedagogy and assessment procedures in the college.
- Build in appropriate practical school experience.

You can fill up the boxes and spaces in as much detail as you wish. It is the discussion and thoughts that are provoked which are more valuable than the finished pieces of paper.

1. Structure

The arrows show a progressive movement through the course. The cyclical lines suggest a two-stage developmental programme, taking place partly in the college and partly in schools. These can, of course, be altered to fit any length or location, or any balance between school and college experience.

2. Outcomes

Describe these in terms of:

- Academic and professional knowledge
- Practical skills and competences
- Values and attitudes
- Personal and professional philosophy and ethics

These objectives should be realistic, achievable in the time scale, and capable of being assessed.

3. Entering students

How does the curriculum take into account what the students bring with them in terms of, for example:

- Academic knowledge
- Prior experience of schools, as pupils and/or as teachers; other experiences of children, for example as parents
- Attitudes to, and expectations of, children
- Perceptions of teaching and teachers
- Values, motivations, personal characteristics, hopes and fears?

How are these to be investigated, and what support is built in for this?

4. Curriculum processes

What goes on during the course, in terms of:

- Content, both academic and professional
- Pedagogy and teaching/learning materials
- Assessment procedures?

What kind of coherent curriculum strategy do these form?

5. Practicum

How long do students spend in schools and what do they learn there?

How do the school-based and campus-based parts of the course complement and reinforce each other?

Are these processes consistent with what we know about learning to teach?

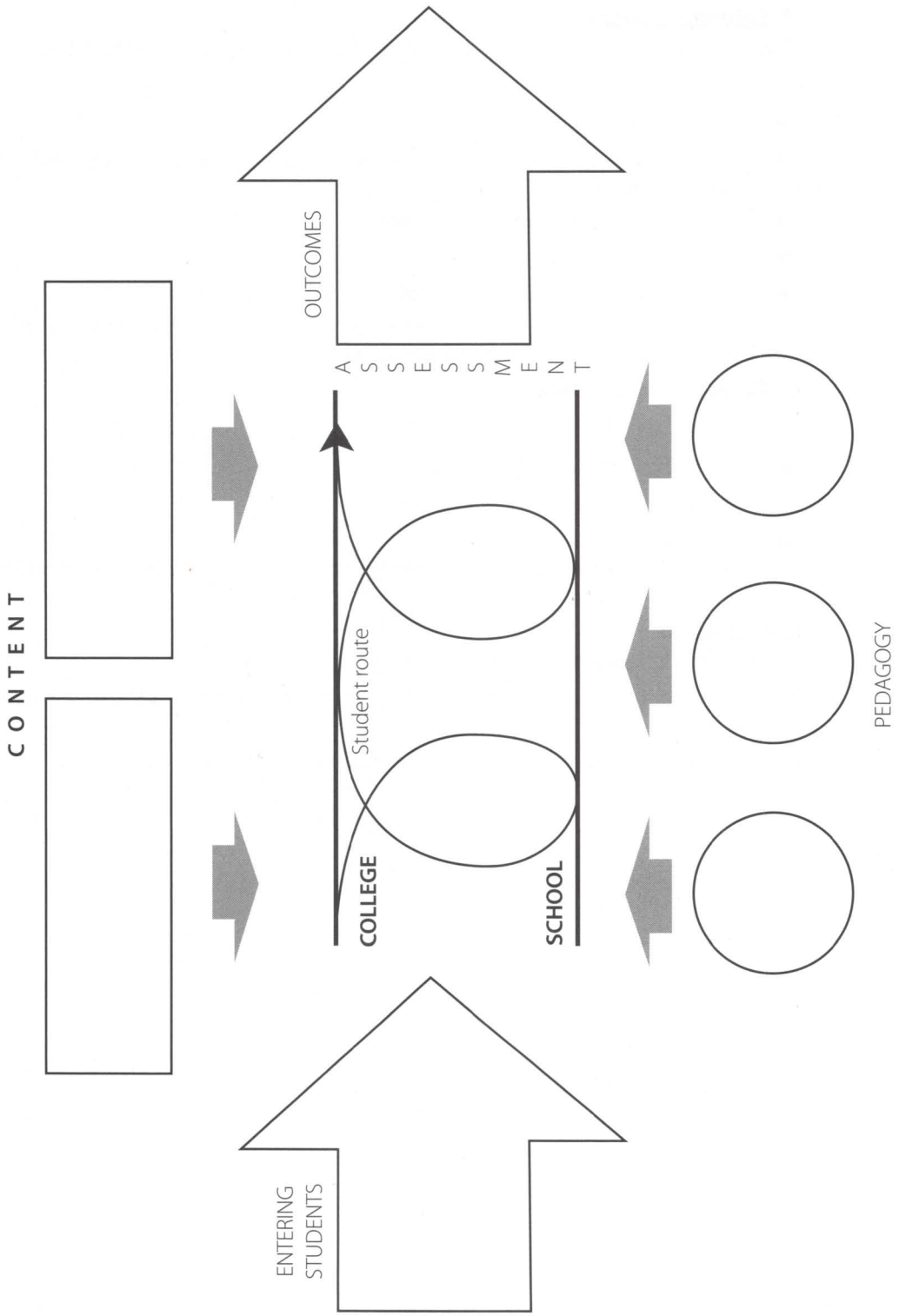

OUTCOMES
ASSESSMENT
CONTENT
Student route
COLLEGE
SCHOOL
PEDAGOGY
ENTERING STUDENTS

Figure A.1

Chapter 10

Learning from examples of distance learning materials

Collect together examples of distance learning materials. Collect materials used to educate teachers where possible, but examples from other subjects can also be useful. These can be materials from courses you, your family or friends have taken in the past, and also perhaps newer materials from the internet. Some could be downloaded to be studied by a group of people who can meet together.

Discuss the materials using some or all of the following questions. If you are working alone you could make notes in answer to the questions.

- Who are these materials written for? Who else could use them?
- Do the materials state their aims or objectives? If so, what are these?
- How do the materials try to get the student interested? Do they try to engage you in a conversation? Do they explain how the objectives might be relevant to your needs?
- Is the language level right for the intended students?
- How are the materials structured? (For example, Chapter 10 was structured around answering five main questions.) What shows the structure (text boxes, diagrams, use of headings)?
- Would the materials make sense to the intended students without a tutorial to explain them?
- What different kinds of tasks are students given to do?
- What different ways do the materials encourage interaction:
  - between the reader and the materials (for example activities, reflection points)
  - between students?
- What do you particularly like in the materials you are looking at?
- What activities could you adapt for a course you teach?
- What do you think could be improved in these materials? Would there be a financial cost to the improvements you suggest? (For example colour photographs in printed materials are usually expensive to reproduce.)
- For internet materials: how do they use the advantages of the internet? Could they be printed out or downloaded and used later on a computer, or is it necessary to use them while connected to the internet?
- Are there any other questions that you think are important to ask in evaluating ODL materials?

E-version of this activity

Research and share examples of distance learning materials. You could share files and/or let each other know the location on the internet of learning materials for teachers/teacher educators available on the internet. These can then be discussed either by group email (fairly low-tech) or, using the tools available in a virtual learning environment, such as the message board (asynchronous) or a 'live' online discussion forum (synchronous). For

example, you could evaluate the 'Teacher and Learning' section of the East Asia Global Distance Education site http://www.ouhk.edu.hk/cridal/gdenet/index.htm. Another possible site to explore is the National Teacher Research Panel part of the UK government's Department for Education and Skills. At the time of writing it included distance learning materials for encouraging teachers to use research as part of their continuing professional development, www.standards.dfes.gov.uk/ntrp (search for 'CPD coordinators' guidelines'). The 'Wikieducator' site provides distance learning materials on how to design ODL materials http://www.wikieducator.org/Training_Educators_to_Design_and_Develop_ODL_Materials.

Chapter 11

(These can be used in many situations but are recommended here for looking at cross-cultural sharing of knowledge.)

Activities for developing a common vocabulary and discussing visions of good teaching and teacher education

1. Joint observations

Group video observation: If you are working with people from different countries, it would be good to watch videos of teaching from the countries where you have all worked and/or went to school. After watching, discuss one or more of the following points:

- What was good about the teaching, what you were not sure about, and what you thought was not good
- Anything that surprised you in the video
- What you would say to the teacher if you were giving feedback on their work
- Discuss any differences in your impressions of the teaching and why you value certain things they do in teaching.

Lesson/seminar observation in schools or colleges: This often works well in pairs, but in some countries there is a tradition of demonstration lessons and it is acceptable for larger groups to observe a lesson together. (Explain the purpose of the observation to the teacher or tutor, and that it is not for 'supervision', coaching or appraisal.) Afterwards, you could discuss the same points as the video observation. In some situations it might be best to do this as part of your everyday work, so after a normal lesson observation and follow-up meeting with a teacher, two teacher education colleagues (e.g. local advisor and expatriate worker) could discuss the lesson later together.

2. Ranking exercise

This activity again gives people from different countries an opportunity to understand and discuss their colleagues' ideas. You might want to adapt the list of example statements so that you raise local issues. If you want to open up a broader debate about teaching and the aims of education, you could use statements about teaching or teachers in general. In this case, write your own statements based on comments that you have heard people make, and/or use an internet search engine and look for 'quotes about teachers', or similar.

- Each group of about three to five teacher educators needs a copy of the list of statements.
- Discuss the statements and try to rank them in order from 'agree with most' to 'disagree with most'. (It can be helpful to separate the statements by cutting up the list.)
- If there is more than one group they can compare their ranking with other groups at the end.

Example of possible statements to rank

- The best way to learn to teach is on the job.
- People should work as untrained teachers before they come to college.
- Experienced, qualified teachers only need further training when a new curriculum is introduced.
- It is best to recruit student teachers straight from school. People who have worked as unqualified teachers have too many bad habits that can't be broken.
- Teachers need to practise new teaching styles in INSET workshops – just hearing about a new method is not enough.
- The best place for serving teachers to develop their teaching is in meetings at their own schools.
- Calling teachers to workshops away from their schools is not the best use of scarce funds, and often leaves classes without a teacher.
- Cluster meetings are the best way of helping experienced subject teachers to improve their practice.
- School-based training is alright in more developed countries, but it doesn't work here where the schools are full of unqualified teachers.
- Most of a student teacher's time should be spent in schools, not in college.
- The academic level of future teachers needs to be improved.
- The university is the proper place for student teachers.
- Colleagues from other countries have some interesting ideas which can be adapted to our schools and colleges.
- Ideas shared among developing countries will be of more use than ideas imported from developed to developing countries.
- People coming in from outside do not understand the teachers here.
- Some volunteers and aid agency staff lack sensitivity to our way of teaching.

Chapter 12

Plan and carry out a small piece of action research within your own work context, either on your own or as part of a small group. If possible find an outsider who can act as consultant or critical friend.

If this is the first time you have done research, keep it small and simple.

If possible, share the results and findings in public, either orally by reporting to colleagues, or by writing a short report.

Chapter 13

Draw up an outline plan for helping new teachers make sense of their early teaching experiences and improve their classroom practice.

This should include helping them to:

- describe key challenges and opportunities they encountered, and say what was particularly significant about these incidents
- identify what they see as their successes and what they need to improve
- draw up their own action plans, for a limited time period, with specific targets for improvement
- ensure some support is available, from peers, mentors, the headteacher, or outsiders.

Agree with the teachers what evidence will be needed to evaluate how far they have progressed, for example observation by peers or others, their own portfolios, pupils' work, etc. and how, when and by whom this evidence will be collected.

Glossary

Action research	research in which the researcher aims to investigate a situation and to improve it at the same time, e.g. a teacher researching their own classroom practice
Active listening skills	focusing carefully on what the person is saying, often shown by paraphrasing/summarising their words, or constructive questioning
Assessment criteria (singular *criterion*)	standards by which something can be assessed
Audio-visual aids	pictures, charts, tapes, etc. that help pupils learn
Backwash effects	unintended effects, caused by a later part of a programme on an earlier part, e.g. when teachers focus only on preparing students for exams and neglect other aspects of the curriculum
Buzz groups	when two or three students discuss briefly a given topic
Cluster meeting	(can also be called zonal or circuit meeting) a meeting of teachers from schools that are near each other, e.g. a monthly meeting of science teachers, a termly meeting of heads, etc.
Closed question	a question to which there are very limited appropriate answers, such as yes or no, or a short factual statement
Coaching	individual in-class support for a teacher; includes demonstrating teaching, observing and giving feedback
Cognition	knowing, understanding or thought
Cognitive	to do with knowledge, understanding or thinking
Concurrent	happening at the same time; used of an ITE programme where both professional courses and academic subjects are studied together
Conferencing	(by video or telephone) when several people in different places discuss something together using technology such as the internet or telephone system; cameras can also be used so that the speakers can see each other while they talk
Consecutive	happening one after another; used of an ITE programme where professional courses take place after the subject degree has been completed
Constructivism	a theory of learning which suggests learners actively create their own understanding of the world through experience and thinking
Continuum	a range; something that goes from one extreme to the other

Co-operating teacher	a teacher who has a student teacher on teaching practice in their class, but is not necessarily the official mentor
Critical incident	a brief but important event during a lesson which is later discussed and analysed, such as a pupil asking an interesting question, or an episode of bad behaviour
Differentiated tasks	tasks given to pupils that cover the same topic but at different levels of difficulty, e.g. simple sums with 1 digit numbers for lower-achieving pupils and harder sums with 2 digit numbers for higher achievers
Didactic	a teaching style dominated by the teacher telling
Electives	subjects that the student chooses, or elects, to study
Exemplar	an example of something, used for study or other purpose
Facilitate	to guide, motivate and challenge a group for the purposes of learning
Higher order questions	questions that need analytical thinking in order to answer them, rather than statements of facts learnt
Holistically	taken together as a whole; in assessment of teaching, the performance is evaluated as a whole, rather than point by point
Hypothesis	a likely suggestion, made as a starting-point for research or analysis
Inclusive education	where schools aim to include all children, such as girls, children from all ethnic groups, and those with disabilities or special needs, in a mainstream school
Induction	a period when teachers are introduced to their working environment, with support and training
Interactive	methods of teaching where teacher and students are in dialogue with each other, exchanging questions, answers and opinions
Internship	a period where an inexperienced or unqualified teacher works under supervision
International borrowing	in education, when ideas or methods from one country are implemented in another
Job-shadowing	spending a period observing and perhaps working with a person doing their job, with the aim of learning how to carry out that role
Mental map	a diagram showing ways in which ideas can be connected or linked together
Mentor	experienced teacher who takes on the task of guiding a student teacher, or who acts as an advisor to someone less experienced
Metacognitive skills	very general mental skills used to organise thinking or learning, such as planning or reviewing one's work. These skills can be applied to many different areas of life.

Micro-teaching	when students or teachers practise one particular skill for a short time with a small group of pupils or other students/ teachers role-playing pupils
Misconception	a false idea; used especially in science education, when pupils have formed their own ideas about the natural world which are scientifically inaccurate
Mixed mode programme	a teacher education programme which uses both distance education methods and face-to-face teaching
Moderated	when results that depend on professional judgement are assessed by more than one person to minimise the danger of bias
Multigrade classes	where pupils from different school year groups or grades are taught by one teacher in the same classroom
Novice teacher	a teacher who is new to the profession
Open question	a question which can be answered appropriately in a number of ways, such as analysing a situation, giving an opinion or a personal experience
Paraprofessional	a person qualified to a certain level, but who has not achieved full professional status. Their roles and duties are limited and they sometimes act as assistants to fully qualified professionals
Pedagogic	to do with teaching and learning and the theory behind them
Peer observation	when teachers observe each other in class and give feedback
Peripatetic	someone who moves around teaching in different institutions
Plenary discussion	discussion including everyone present; the opposite of breaking into small groups
Practicum	a period of professional learning through experience on the job, such as teaching practice or school experience
Propositional knowledge	knowledge given in the form of statements about facts, theories, and research findings
Qualitative methods	research methods that mainly include observation, interviews and document review as data. Analysis of the data focuses on opinions and values of the participants.
Quantitative methods	research methods that mainly include surveys, questionnaires and numerical representation of observations. Analysis of the data focuses on the relationships between important factors/ variables, which are often explored using statistical analysis.
Received knowledge	knowledge/facts from books or other authorities that are taught and accepted without being tried out in practice
Repertoire	a collection of teaching skills and strategies which a teacher has learnt and practised so that they can adapt them to any suitable class

Scaffolding learning	a scaffold is a framework on which builders stand as they construct a house. In education it is used to describe ways in which teachers provide learners with a framework to support the next steps in their learning. It could be pupil activities, or thought-provoking comments or questions by the teacher.
Situational knowledge	knowing and understanding a particular situation, such as one's own class or school
Snowballing	increasing the size of something, like a group, gradually, for example students discuss in pairs, then form fours and share ideas, then form eights and share ideas
Tacit knowledge	literally 'quiet knowledge'; used when something is understood or known without being discussed or explained, or perhaps even thought about directly
Teaching standards	used in teacher assessment: descriptions of the role behaviour, understanding, and achievement, required to qualify as a teacher, or to be promoted, e.g. to head teacher
Technical rationality	the belief that everything can be solved by following scientific reasoning
Zone of Proximal Development	as suggested by Vygotsky: the next steps in learning; an area of either knowledge or skills where the student needs the support of a teacher or peer to achieve success before being able to do it on their own

Abbreviations

AFL	assessment for learning
AOL	assessment of learning
BETD	Basic Education Teacher Diploma (Namibia)
DEO	District Education Officer
CA	continuous assessment
CPD	continuing professional education
HOS	higher order skills
ICT	information and communication technology
INSET	in-service education and training
ITE	initial teacher education
LCE	learner centred education
MIITEP	Malawi Integrated In-service Teacher Education Programme
NQT	newly qualified teacher
NTTC	National Teacher Training College
ODL	open and distance learning
PCK	pedagogic content knowledge
PEA	Primary Education Advisor
PGCE	Post-Graduate Certificate in Education
TP	teaching practice
TTC	teacher training college
UDE	university department of education
UDW	University of Durban-Westville
UNISA	University of South Africa
ZINTEC	Zimbabwe In-service National Teacher Education Course
ZPD	zone of proximal development

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Suggestions for further reading

We have mainly listed resources that are freely available via the internet, but have also included some print resources.

Web resources

Many national and international organisations provide detailed information about teacher education on their websites. Start by looking under 'Resources', 'Publications' 'Documents' or sometimes 'Research'. Try using a variety of search terms, for example 'teacher education', 'teacher development', 'teacher learning', 'in-service', 'INSET', 'CPD' etc.

The 'Links' pages will lead you to other relevant websites, and there are sometimes opportunities to post messages and join in with discussions about teacher education with other professionals.

The small selection of relevant websites given here mostly includes information on more than one country. If you cannot find the resource listed, try searching these websites using the author's name or the title of the document. Other websites helpful for the study of teacher education in developing and middle-income countries can be found under 'Links' at www.sussex.ac.uk/education/cie

Commonwealth of Learning

www.col.org

COL encourages the development and sharing of open learning/distance education knowledge, resources and technologies. A wide range of information is available in the 'Training Resources' section such as a 'Glossary of ODL terms'. The 'Start-up guides' found under 'Publications' give practical information, for example *Tutoring in Open and Distance Learning*. COL publications can be ordered from:

Government Publication Services, Queen's Printer
Attn. COL Customer Service
PO Box 9452 Stn Prov Govt
Victoria, BC V8W 9V7
Canada
Tel: 250.387.6409 (toll-free in North America: 800.663.6105)
Fax: 250.387.1120
Email: QPPublications@gems5.gov.bc.ca

Government agencies and institutions in developing Commonwealth countries may receive copies at no charge. Details of small charges for orders from other countries are on the website.

Department for International Development (DFID)

www.dfid.gov.uk

This UK government website has many useful resources including a series of research papers on education. These can be downloaded by following the link to 'Publications' and choosing 'Education Documents' as the type of publication. You can also order print copies to be sent free of charge by post by emailing *dfidpubs@ecgroup.uk.com* or by writing to EC Group, Europa Park, Magnet Road, Grays, Essex, RN20 4DN, UK. A collection of papers 1–42 is available on CD-ROM for those with computers but limited internet access. Relevant papers include the following:

No. 64 Teacher Education at a Distance: Impact on Development in the Community, F. Binns and T. Wrightson (2006)

No. 63 Field-based Models of Primary Teacher Training. Case Studies of Student Support Systems from Sub-Saharan Africa, E. Mattson (2006)

No. 58 Deep Impact: An Investigation of the Use of Information and Communication Technology for Teacher Education in the Global South, J. Leach with A. Ahmed, (2005) (see also www.open.ac.uk/deep)

No. 55 District Institutes of Education and Training: A Comparative Study in Three Indian States, C. Dyer, A. Choksi, V. Awasty, U. Iyer, R. Moyade, N. Nigam, N. Purohit, S. Shah and S. Sheth (2004)

No. 49a Multi-Site Teacher Education Research Project (MUSTER) Researching Teacher Education – New Perspectives on Practice, Performance and Policy (Synthesis Report), K.M. Lewin and J.S. Stuart (2003)

No. 49b Teacher Training in Ghana – Does It Count? K. Akyeampong (2003)

No. 49c Initial Primary Teacher Education in Lesotho, K. Pulane Lefoka with E. Molapi Sebatane (2003)

No. 49d Primary Teacher Education in Malawi: Insights into Practice and Policy, D. Kunje with K. Lewin and J. Stuart (2003)

No. 49e An Analysis of Primary Teacher Education in Trinidad and Tobago, J. George, L. Quamina-Alyejina (2003)

No. 34 The Effectiveness of Teacher Resource Centre Strategy, ed. G. Knamiller (1999)

No. 30 In-Service for Teacher Development in Sub-Saharan Africa, M. Monk (1999)

Enlaces: ICT in Chilean schools

www.mirandanet.ac.uk/internat

Click on 'Chile' to find out more about *Enlaces* (see Chapter 10).

IRFOL International Research Foundation for Open Learning

www.irfol.ac.uk

Look under 'Our work' and 'Publications' for a list of relevant resources, some of which can be downloaded freely, such as the *Teacher Education and Training Guide* (2003)

MUSTER Project (Multi-Site Teacher Education Research Project)

www.sussex.ac.uk/education/muster

This site contains free access to many detailed research papers from our teacher education research in five countries in Africa and the Caribbean.

Teachers TV

www.teachers.tv

This website is associated with a UK TV channel for teachers. Searching for 'CPD' will bring up free access to videos about school-based professional development, such as mentoring of teachers in their second and third years.

SchoolNet Africa

www.schoolnetafrica.net

SchoolNet Africa supports the integration of ICTs into education in Africa. The site operates in English, French, Kiswahili, Portuguese and Arabic. It is useful for teacher educators wanting to keep up-to-date with developments in this area.

UNESCO

www.unesco.org/education

Look under the 'teacher education' theme to see resources such as 'tools for teacher education', links and many publications and information on current programmes to support teacher education. There are also other UNESCO sites including:

IIEP (International Institute for Educational Planning)

www.unesco.org/iiep

This site will be of particular interest to those interested in policy and planning in teacher education, for example:

Schwille, J. and Dembélé, M. (2007) *Global Perspectives on Teacher Learning: Improving Policy and Practice*, Fundamentals of Educational Planning No. 84, UNESCO International Institute for Educational Planning: Paris (can be downloaded free)

UNESCO's Sub-Saharan Africa Open and Distance Learning

www.africaodl.org

This knowledge base contains information on five key themes. The pages on learner support and assessment, programme and course development, and on the use of media and technology in education are likely to be useful to teacher educators.

UNESCO Bangkok: ICT in education

www.unescobkk.org/education/ict/themes

This site provides a comprehensive range of useful ICT in Education information for teachers and educators, particularly those in the Asia-Pacific region.

There are many Regional Bureaux of Education such as the one for Latin America and the Caribbean, www.unesco.cl

For this site you can choose, English, Spanish or Portuguese.

World Bank

www.worldbank.org/education

This website contains a vast range of information on education in many countries. The 'research guide' will help you find the information you need on the site. The first two documents listed below include particularly useful overviews of teacher education with detailed case studies from around the world (click on 'publications' and then search 'documents and reports' using an author's name as a keyword e.g. du Plessis).

Craig, H.J.; Kraft, R.J. and du Plessis, J. (1998) *Teacher Development: Making an Impact* Washington: USAID/World Bank Report no. 19009

Moon, B., Leach, J. and Stevens, M. (2005) *Designing Open and Distance Learning for Teacher Education in Sub-Saharan Africa: A Toolkit for Educators and Planners*, Africa Region Human Development Working Paper Series 104, Report No. 40895, Washington: World Bank

Moreno, J.M. (2005) *Learning to Teach in the Knowledge Society*, Washington: World Bank

World Bank: Global Distance Education Net

www.worldbank.org/disted

The Global Distance Education Net (Global DistEdNet) is a knowledge guide to distance education. It contains links to many relevant articles for teacher education through ODL.

Journals

Many academic and professional journals are now available online. This list mostly includes international journals but there are also journals produced by universities or national Ministries of Education that cover issues in a particular country.

Open access

Comparative Education Review

Directory of Open Access Journals www.doaj.org

Search the 'Education' journals found under 'Social Sciences'. Journals available with free access include:

- *Asia-Pacific Forum on Science Learning and Teaching*
- *Contemporary Issues in Technology and Teacher Education*
- *Current Issues in Comparative Education*
- *International Education Journal*
- *International Journal of Education and Development using Information and Communication Technology*
- *Journal of Distance Education www.cade-aced.ca*
- *Journal of Education for International Development*

This site also includes access to journals in French and Spanish.

Limited free access

Earlier issues or selected articles of these journals have free access:

The Teacher Trainer www.tttjournal.co.uk

A practical journal for those who train, mentor and educate teachers of English to speakers of other languages.

Teacher Development

Technology, Pedagogy and Education known as the *Journal of Information Technology for Teacher Education* until 2002

Type the title of one of these two journals into the 'search' box at www.journalsonline.tandf.co.uk

Access restricted to subscribers

These journals have articles that are only available to buy, or you might have free access through a university library. Discounted subscription rates for organisations or individuals based in developing countries are sometimes available.

- *Compare*
- *Comparative Education*
- *International Journal of Educational Development*
- *Journal of Education for Teaching: International Research and Pedagogy (JET)*
- *Journal of In-service Education*
- *Teaching and Teacher Education*
- *Teachers and Teaching: Theory and Practice*
- *Teachers College Record* (there is a only a small membership fee for access)

Books

We have included some recent and also some 'classic' older books which might be available in libraries or second-hand through online bookstores, even if they are no longer in print. Some of these books are also available to purchase online as e-books (electronic books).

Alexander, R. (2000) *Culture and Pedagogy: International Comparisons in Primary Education*, Oxford/Malden: Blackwell

Calderhead, J. and Shorrock, S.B. (1997) *Understanding Teacher Education: Case Studies in the Professional Development of Beginning Teachers*, London: Falmer

Caro-Bruce, C.; Flessner, R.; Klehr, M. and Zeichner, K.M. (2007) *Creating Equitable Classrooms through Action Research*, Thousand Oaks, CA: Corwin Press

Cochran-Smith, M. (2006) *Policy, Practice and Politics in Teacher Education*, Thousand Oaks, CA: Corwin Press

Day, C. and Sachs, J. (2004) *International Handbook on the Continuing Professional Development of Teachers*, Maidenhead: Open University Press

Fullan, M. and Hargreaves, A. (2002) *Teacher Development and Educational Change*, (2nd ed.) London/Philadelphia: RoutledgeFalmer

Giordano, E. (2008) School Clusters and Teacher Resource Centres, UNESCO-IIEP

Pollard A. (2005) *Reflective Teaching*, (2nd ed.) London/New York: Continuum Books

Pollard, A. (ed.) (2002) *Readings for Reflective Teaching*, London/New York: Continuum Books

Rogers, A. (2002) *Teaching Adults* (3rd ed.) Buckingham/Philadelphia: Open University Press

Rust, V.D. and Dalin, P. (1990) *Teachers and Teaching in the Developing World*, London: Garland

Schon, D. (1990) *Educating the Reflective Practitioner* (new ed.) San Francisco: Jossey Bass

Tatto, M.T. (ed.) (2007) *Reforming Teaching Globally*, Oxford: Symposium Books

Thomas, E. (ed.) (2002) *Teacher Education: Dilemmas and Prospects*, World Yearbook of Education, London: Kogan Page

Turner, M. and Bash, L. (1999) *Sharing Expertise in Teacher Education*, London: Cassell Education

Woodward, T. (2004) *Ways of Working with Teachers: Principled Recipes for the Core Tasks of Teacher Training, Teacher Education and Mentoring*, Broadstairs: TW Publications

Zeichner, K. and Dahlström, L. (1999) (eds.) *Democratic Teacher Education Reform in Africa: The Case of Namibia*, Boulder: Westview Press

Other print materials

See the DFID and COL sections above for details of how to order print copies of publications.

Index

Key Issues in Teacher Education is an important resource for teacher educators and those involved in teacher development. It aims to help readers improve their work by broadening their knowledge of the ways teacher education can be practised, and by deepening their understanding of the principles behind supporting teacher learning.

This book is for all those teaching or supporting student teachers, such as lecturers and tutors in teaching training colleges, colleges of education and universities. It will also be invaluable for in-service trainers and facilitators, headteachers, government officers and NGO staff concerned with the continuing professional development of teachers. It can be used to accompany a university course, such as a Diploma or Masters in Teacher Education, as a handbook for teacher educators or as a starting point for self-study.

The book discusses how people learn to teach, the role of the teacher educator and teachers as adult learners. It considers some of the main theories of learning, how they can be applied and ways in which teachers can learn through practice and be assessed. Typical teacher education programmes from a variety of countries are discussed, along with open and distance learning, the use of new technologies and cross-cultural issues. Reflective practice and action research, and the kinds of professional knowledge used by teachers are explored in depth.

The book provides summaries of research findings, examples and case-studies, suggestions for reflection, discussion and some practical activities suitable for workshops or short courses which can be adapted to local needs. It is designed to make ideas contained in academic and technical reports on teacher education available to a wide audience. It is illustrated and written in a clear and lively style.

Between them the authors have many years experience of teacher education around the world. They all participated in the Multi-Site Teacher Education Research (MUSTER) project between 1997-2001 and this book grew out of the international experience and insights gained from that research.

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