Professional Learning Communities in the Teachers' College

A Resource for Teacher Educators

Joy du Plessis and Irfan Muzaffar

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Educational Quality Improvement Program
Classrooms • Schools • Communities

Educational Quality Improvement Program 1 (EQUIP1).

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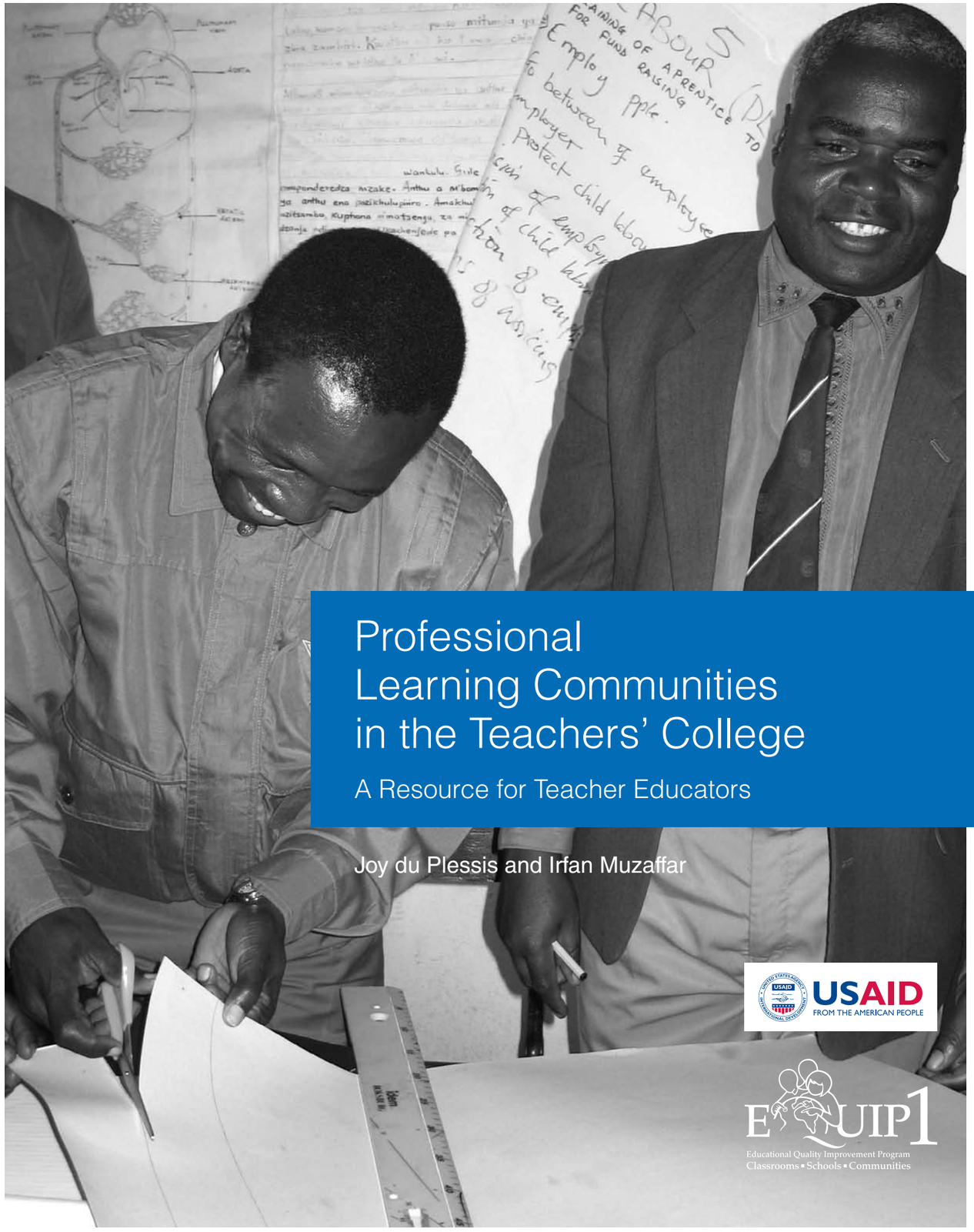

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Chapters

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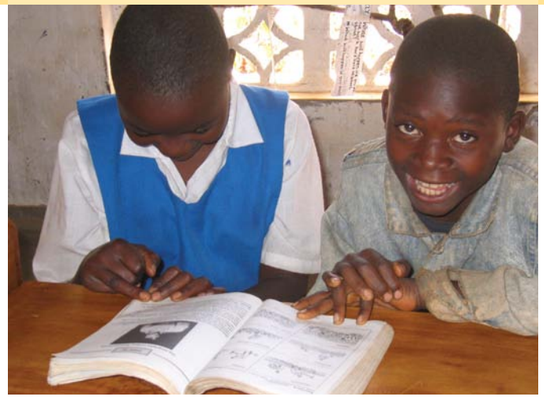

Joy du Plessis has been involved in teaching, teacher education and curriculum development in Africa for more than 30 years. She has been a junior secondary science and English teacher in government and community schools in Botswana, the Cook Islands and the USA. She was the head of the science and mathematics department at Ongwediva College of Education in Namibia. Ms du Plessis has worked with colleges and Ministries of Education in Zambia, South Sudan, Malawi, Ethiopia, Namibia, Ghana, Afghanistan and Jamaica to assist in the development of both pre- and in-service teacher education programs. She has a Masters degree in International Education from Florida State University and has studied curriculum and instruction at the University of Colorado. She is co-author of *Teacher Development: making an impact* and *In My Classroom: a guide to reflective practice*. She can be contacted at joy_duplessis@yahoo.com

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About **AIR**

Throughout its 60 year history, the American Institutes for Research (AIR) has improved the lives of individuals and communities in over 80 countries worldwide. AIR's International Development Division (IDD) seeks to enhance the capacity of developing countries to improve the quality of life through education and social development. In collaboration with local partners we work to:

- Ensure children's equitable access to all levels of education;
- Improve the quality and relevance of education; and
- Empower individuals, communities, and institutes as agents of social and behavioral change.

About **EQUIP1**

EQUIP1: Building Educational Quality through Classrooms, Schools, and Communities is a multi-faceted program designed to raise the quality of classroom teaching and the level of student learning by effecting school-level changes.

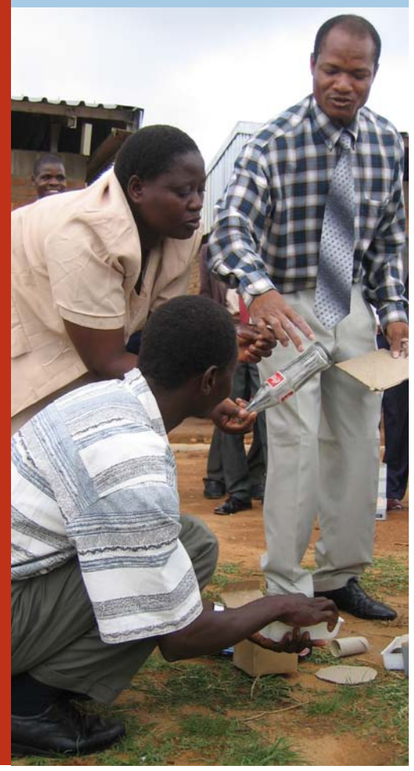
EQUIP1 serves all levels of education, from early childhood development for school readiness, to primary and secondary education, adult basic education, pre-vocational training, and the provision of life-skills. Activities range from teacher support in course content and instructional practices, to principal support for teacher performance, and community involvement for improving school management and infrastructure. EQUIP1 works with food-for-education issues and contributes to the provision of education and training in crisis and post-crisis environments.

Introduction

A Resource For Teacher Educators

"Practice in isolation… grooves errorful activity."

Huberman, 1995



With the introduction of free primary education throughout Africa over the past 20 years, the demand for more qualified teachers has grown tremendously (Nilsson, 2003). Mainstream teacher education programs, typically consisting of 1-3 years of residence in teachers' colleges and some form of practice teaching, are unable to meet this escalation in demand. Given this, many countries have resorted to alternative models of teacher education to supply the needed teachers in a short period of time (*Global Campaign for Education,* 2006; Lynd, 2005; Moon, 2007). A number of hybrid programs have also emerged to deal with this increased demand for more teachers. With myriad approaches to teacher education and recruitment in place simultaneously, the quality of most teacher education programs has declined, resulting in calls for increased attention to quality (Carnoy, 2007).

Isolation of teacher educators is not conducive to the development of teacher colleges as high quality professional institutions. *Professional Learning Communities in the Teachers' College,* responds to this need for collective reflection. In *Professional Learning Communities* we take the perspective that teacher educators can transform their practice through 1) updating their knowledge on salient educational issues for teacher education, 2) engaging in critical dialogue about those issues in relation to their personal beliefs and the local context and 3) developing a reflective approach to their practice. The content of all the chapters is aligned with these purposes. The main body of each chapter consists of the main theoretical ideas underlying reforms in education. This is followed by proposed seminars that prompt the participating teacher educators to carefully examine their own system of teacher education and reflect on the possible ways of removing impediments to reform. Given the central importance of the idea of professional learning communities, the first chapter is devoted to surveying this idea. While the rest of the themes in the remaining chapters will vary, the authors hope that seminars at the end of each chapter will be part of a general effort to form professional learning communities.

Chapter 1

Professional Learning Communities

"Teacher educators at all levels, whether school or college-based, need to have induction and continuing professional development. This should ensure that they are aware of recent developments, can judge whether these should be incorporated into training, have perspectives that run beyond their direct experience, and have a rich range of material to draw on to support and stimulate trainee teachers."

Lewin and Stuart, 2003

In the absence of professional learning communities, teachers learn a lot on their own, effectively teaching themselves how to teach (Huberman, 1995). Huberman terms this isolated self-teaching the 'lone wolf' paradigm of professional development and argues that many teachers tinker, problem-solve, experiment, reason and take action in their classrooms as they grow professionally throughout their careers. However, learning in isolation does not bring us in touch with new ideas. While it may help teacher educators to achieve expertise in existing practices, it does not usually help them improve practice through reflecting upon and challenging their existing ideas. Changing teacher beliefs and practices to go to new levels of expertise requires more interaction with a community of like minded people (Huberman, 1995, p. 206). Without engagement with others to discuss their teaching and ideas about experimenting in the classroom, teacher educators and teachers are more likely to "to remain 'stuck' at lower levels of mastery for lack of explicit counsel from external experts or experienced peers" (Huberman, 1995, p. 206).

What would happen if you were to replace the 'lone wolf' paradigm by connecting teacher educators with each other through forming professional learning communities? Research has indicated that when teachers [and by extension teacher educators] engage in professional development activities aimed at meeting shared goals of improving practice in collaboration with other colleagues and experts, teachers are more likely to develop higher levels of expertise (DuFour, 2004). The main activities of teachers in these communities are: experience sharing, pedagogical analysis, observation, demonstration, feedback, experimentation, developing new methods, and technical consultations from advisors. These professional learning communities can be among teachers within a school, teachers from different schools, and networks of teachers with outside counsel from teacher centers or other advisors.

“Changing teacher beliefs & practices”

Professional **Learning** Communities

Collegiality and networking improves practice. More successful and effective schools (as defined by learner performance and school atmosphere) are found to have greater workplace collegiality and experimentation by teachers (Little, 1982). Little (1982) also found that the norms of collegiality (faculty working together) that were most powerful in professional growth included planning for, designing, conducting, analyzing, evaluating and experimenting with the business of teaching. When teachers understand that other colleagues have something new to offer them and that they stand to grow professionally through collaborative interactions, they are more likely to engage in professional development. Professional engagement with colleagues must also include critical practices (e.g., analysis and evaluation) for it to be meaningful to teachers.

Being part of a professional learning community is preferable to working as a ‘lone wolf,’ but professions are more than just networks. They are organized as *communities of practice* consisting of both novice beginners and experts. The novices begin at the margins of the community and, through interactions with more experienced participants, continually become more involved and experienced members. Such a community—with shared interests, crafts, or professions—are called *communities of practice* (Lave, 1991; Lave & Wenger, 2002). Etienne Wenger developed the notion of *communities of practice* as a way to explain the theory and practice of learning as a social endeavor. He believed that learning is fundamentally a result of social participation and that learning is “both a kind of action and a form of belonging.” (Wenger, 1999, p. 4). According to this perspective, learning does not just happen within classrooms and training sessions or just from textbooks, homework and exercises. Learning through participation in a community is consistent with the views of African indigenous learning[1] which holds that learning is holistic, takes place in the community and is ongoing in everyday life. Learning is integral to life, and professional lives require creating and sustaining *communities of practice* in which teacher educators can live and learn as professionals. Such communities, then, become valuable tools for learning, growth and development. In this chapter, we use the term *communities of practice* and professional learning communities interchangeably.

Professional learning communities, or *communities of practice*, exist in all walks of life. Most people belong to more than one such community at any given time. For example, you may simultaneously be a member of a sports team, your family, your class, a chorus or musical group, workers (including teachers), a church or mosque and even e-communities of individuals with a common interest who communicate on the World Wide Web. All of these are *communities of practice*. As individuals participate in *communities of practice* they share a set of practices including norms of interaction, repertoires of activities, and discourses (ways of talking) that they eventually begin to own. According to this perspective, acquiring these norms of interaction is the same as *learning* to be a professional.

Cognition—the process of acquiring ideas and concepts—is seen as an individual activity under the ‘lone wolf’ paradigm. However, under the *communities of practice* perspective, cognition is seen as being situated in a particular context. That is to say, your cognition is inseparable from your activities as a professional. This is referred to as *situated cognition*[2] of *communities of practice* (Putnam & Borko, 2000). In contrast to what was generally called “staff development” where teacher development was often individualized, off-site, not connected to the context of school or one’s own teaching experience, and didn’t result in increased mastery of content, Putnam and Borko (2000) called for an approach to teacher development that is both social and contextual. Thus, under this perspective, teacher learning and development takes place among *communities of practice* as teachers share a common discourse and participate in authentic learning activities. Authentic learning activities are real experiences in the context of the teachers’ work and lives.

The notion of *communities of practice* is already practiced in many parts of Africa. School-based teacher groups or conferences that allow teachers to engage with their peers in local problem solving, share experiences and ideas, interpret the curriculum and reforms, and assist new teachers, are all examples of such communities in action. In such activities, advisors or senior teachers provide expert assistance [or outside counsel] to groups when needed. These outside experts are usually classroom teachers who have been promoted to provide assistance to others because of success in the classroom and assisting other teachers. In addition to school based professional learning communities, teachers often meet with teachers from other schools in a school cluster and other increasingly larger administrative units (circuit, district, county, etc.). Participation at most levels in most places, and especially at the school level, is often included in the conditions of service or terms of work of teachers, and there are rarely external incentives (monetary or otherwise) for participation. Teachers are therefore compelled to particpate by an inherent collegiality and participation is quite common.

Professional learning communities are less common among teacher educators at colleges, however. Overloaded tutors’ schedules, large numbers of student teachers, lack of a supportive environment for professional development, lack of resources, and traditions of professional engagement are some of the impediments on development of professional *communities of practice* among teacher educators. These factors tend to skew teacher educators’ participation away from professional learning communities. Sometimes association of monetary allowances for participation in professional development can also work against the development of professional *communities of practice*. These barriers are real, but so is the responsibility to develop oneself as a professional.

Setting up professional learning communities in your college can be stimulating and professionally rewarding. Participation in professional learning communities may also trigger self-doubts about one’s mastery of teaching, learning, and instructional management. That is why it is important that all those who participate develop and adhere to norms of practice that provide a secure environment to examine beliefs and experiment with them in the classroom. It is important that professional learning communities go beyond a discussion culture and include experimentation with classroom practice. This experimentation should include observations by others, feedback, evaluation and further practice.

What would creating professional communities at teachers colleges involve? At a minimum, this would involve creating structures within the college (groups, times, meeting places, space on the timetable, etc.) and the identification of resources both within and outside the college. It also requires work and commitment to get it started. The interpersonal bonds that build up over time among members of the

Teacher educators can transform their practice through...

- updating their knowledge on salient educational issues for teacher education
- engaging in critical dialogue about those issues in relation to their personal beliefs and the local context
- developing a reflective approach to their practice

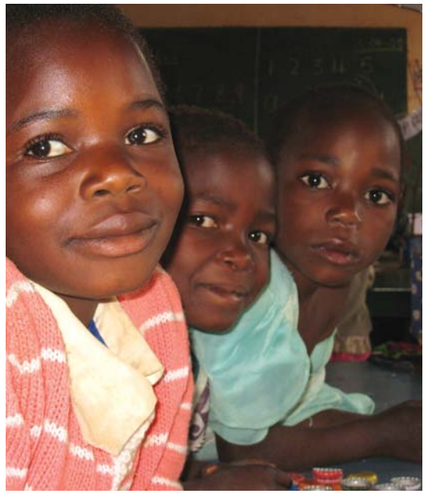
[1] See Chapter 5 for a discussion on Indigenous Knowledge Systems.
[2] This topic is taken up in more detail in Chapter 3.

group will help staff to move from friendly conversation to deeper dialogue on important professional issues. Change takes time. This is especially true in the context of long held beliefs and practices embedded in a socio-cultural context. In teacher education, change in the teacher educator is seen as fundamental to improved teacher practices in schools that lead to increased learner performance and whole child development. Developing professional learning communities is an important endeavor in creating change.

How to Use **this Resource** Book

This resource is designed to foster a transformation in the way teacher educators understand their job and how they practice their profession. It acknowledges that many teacher educators in African colleges of education do not have ready access to articles, journals and other educational research in their field. Also, professional development opportunities of college educators have been and still are limited in scope and availability. Opportunities for teachers' college faculty to participate in research and add to local and global knowledge in the area of teacher education are almost non-existent.

Professional Learning Communities in the Teachers' College has eight chapters, each one focused on a particular salient theme in teacher education. These themes were identified through a review of the literature on teacher education with an emphasis on pre-service teacher education in Africa. It would be impossible to cover all areas of teacher education, particularly all of the subject specialties. Consequently, though the scope of the material is necessarily narrow, we hope that the structure of the material and the accompanying resources will provide a base for deeper exploration of topics in teacher education. The introduction explores professional learning communities, how they might be established, and how this resource may be used. Chapter 2 looks at some of the literature on pre-service teacher education in Africa in order to provide a general description of the state of teacher education in Africa as a way of placing the work teacher educators do in a more global context. The remaining chapters each focus on a specific pertinent theme, namely: (3) learning to teach, (4) learner-centered education, (5) curriculum, (6) college teaching and learning, (7) expanding college assessment and (8) reflective practice.



"learning is 'both a kind of action and a form of belonging'"

Professional Learning Communities in the Teachers' College is structured so that each chapter starts out by addressing a critical area of teacher education and presenting a synopsis of research and theory in that area. This is followed by suggestions for seminars to explore the theme in relation to the context in which you work. These seminars are only suggestions on how you might explore the theme in depth and ways in which learning about the theme can influence your practice.

If you have a professional development program in place in your college, *Professional Learning Communities in the Teachers' College* could be used as a resource. If you don't have a formal program you could start one with interested colleagues. Individual college teacher educators may read and explore the manual and try out new approaches based on the readings. Groups of teacher educators may use the material as part of their own professional development and colleges may set up a series of seminars tackling some of the chapters in this book. *Professional Learning Communities in the Teachers' College* may also be used in education programs for teacher educators, of which there are, regrettably, few in Africa.

Many of the articles cited in the text are available on the accompanying CD-ROM for those who wish to go into more depth on any of the topics presented here. Websites are also listed for those with access to the internet.

Professional Learning Communities in the Teachers' College should not be seen as an authoritative and definitive treatise on pre-service teacher education. Rather, you should use it as a teacher education tool to help you update your knowledge and expand your professional perspectives by critically examining your own beliefs and understanding of teacher education, as well as those of the institutions in which you work. It is expected that the material will enable individuals and institutions to improve professional competencies that would lead to improved teaching and learning in schools. Whether used in informal discussion or college-wide professional development activities, the seminars are meant to stimulate thought, dialogue and reflection and lead to improved practice.

The material is meant to help you do your job as a teacher educator. The book takes a reform-minded perspective rather than a traditional approach. This is because in many countries, particularly in Sub-Saharan Africa, educational reforms toward learner-centered education in basic schools require teachers skilled in the methods of holistic child-centered education. In general, colleges in Africa have not been able to keep pace with these reforms. This book does not emphasize a 'traditional' approach, which might be characterized as teacher-centered where the predominant mode of instruction is a 'transmission' mode, and social norms of strict hierarchy are maintained between student teacher and lecturer (or student and teacher) (Owuor, 2008), except to include it as a perspective on education widely held by many educators and analyze traditional approaches and their persistence in education systems.

Seminars

Seminar 1. What is the professional development climate at your college?

Introduction

This seminar will help you and your colleagues explore the climate of professional development at your college. With a group of colleagues you can form a professional learning community. After reading through this chapter you can do the activities and have a dialogue around the issues raised. Some of the tasks require action. Reading, discussing and analyzing have important roles in professional growth. Putting new ideas into action shares that learning with others.

Specific Tasks

1. Prior to the seminar make a poster of Table 1.1. Add other interactions that you think might be missing from the table. Make a handout of the table for participants in the seminar to use individually.

2. Ask individuals to tick off the types of interactions listed in Table 1.1 that you think characterize the way teacher educators relate to each other at your college. Give plenty of time for participants to tick off all those they think apply to your college.

3. To summarize the groups' responses, ask individuals to make tick marks beside each interaction on the poster as a way of tallying up all the participants' responses.

Table 1.1: Inventory of Characteristic Teacher Educator Interactions at the College[3]

- Lend and borrow materials
- Create a shared file of materials
- Design and prepare materials
- Review materials or books
- Assign materials or books to student teachers
- Design curriculum units
- Research materials and ideas for courses
- Prepare lesson plans
- Ask for project ideas
- Ask for classroom management ideas
- Ask for instructional ideas
- Ask for assessment ideas
- Ask for help with specific problems of instruction
- Praise other teachers
- Criticize others
- Refer one teacher to another for an idea
- Credit new ideas and programs
- Discredit new ideas or programs
- Persuade others to try an idea or approach
- Describe to others an attempt to try something new
- Make collective agreements to participate in a program
- Make collective agreements to test an idea
- Trade teaching assignments/groups
- Invite other teachers to observe
- Observe other teachers
- Argue over theory, philosophy, approach
- Confront other teachers on issues of gender or other discrimination
- Praise individual students and classes
- Criticize or complain about individual students or classes
- Talk 'publicly' about what one is learning or wants to learn
- Attend in-service training as a group or team
- Set up seminars so that others can share what they know
- Talk about personal life
- Play cards
- Watch TV
- Have a beer on Fridays
- Spread the word about good classes
- Offer reassurances when others are upset
- Provide orientation to new teacher educators
- Provide ongoing assistance to new teacher educators
- Ask informally about what others are teaching
- Suggest to others to try something you are doing
- Team teach (voluntary)
- Team teach (involuntary)
- Defend or explain specific classroom practices
- Design professional development activities for colleagues
- Carry out action research
- Read professional journals and books of interest

4. Cluster the responses the group made into three categories: interactions required by college administration, voluntary actions leading to professional growth, interactions that contribute little to professional development (make up more alternative categories as appropriate).

5. Examine the three clusters and the responses in each. What does this say about your college? Discuss.

6. What might be helpful in developing a more positive professional development climate at the college? Discuss.

7. In the article by Little, she describes how schools that are more successful (learner performance and school atmosphere) also tend to have stronger norms of collegiality among staff. What are the norms of collegiality that she describes? Are any of these norms prevailing at your college? Are the norms of collegiality described by Little appropriate ones for your context? Explain.

8. What are appropriate norms of collegiality for developing professional learning communities at your college?

Suggested Reading

Little, J. W. (1982). Norms of Collegiality and Experimentation: Workplace Conditions of School Success. *American Educational Research Journal.* Fall 1982, Vol. 19, No. 3, Pp. 325-340.

Seminar 2. Setting up professional learning communities at your college

Introduction

Maintaining a collegial atmosphere and ongoing dialogue and reflection with your colleagues can be supported by providing some structure to your professional learning communities. This seminar provides some guidance in setting up and maintaining professional learning communities.

Specific Tasks

1. With a group of colleagues interested in professional development as teacher educators, form a group (or groups) and set some parameters for your meetings. Some things you might want to think about are:

   a. How large your groups should be

   b. Where and when to meet, and how frequently meetings should take place

   c. How to structure leadership of the groups

   d. Whether or not to record participation, outcomes, plans, practices etc.

   e. Provision of materials in written or electronic form

   f. How to formalize your professional development seminars in the context of your institution or Ministry of Education.

2. Prior to the first seminar read the suggested reading listed above.

3. In the first seminar it might be useful to discuss the need for professional development as teacher educators. Some guiding questions for a group discussion might be:

   a. What is the level of professional training as teacher educators that group members have had? Describe this training as teacher educators. How effective was it?

   b. What have you learned on the job as a teacher educator? How might on-the-job training be improved at your institution?

   c. What are your strengths as a teacher educator?

   d. What are your weak areas as a teacher educator? What areas do you feel you need to improve? What support do you need to improve in this area? How can the group of teacher educators support that improvement?

   e. What are the barriers to professional development – individually or institutionally? As a group discuss how these barriers might be overcome.

   f. How will your own professional development benefit you? How will it benefit student teachers? How will it benefit the institution?

4. What are the areas of expertise among the college staff? Make an inventory of expertise among the teacher educators and share it with the staff.

5. What do teacher educators want to learn more about? What skills do teacher educators want to improve or develop? Make a plan to address the professional development needs at the college.

6. What resources outside the college are available to your group? What experts (teachers, administrators, Ministry of Education Officials, etc.) are available to support your professional learning communities?

Suggested Reading

Huberman, M. (1995). Networks That Alter Teaching: conceptualizations, exchanges and experiments. *Teachers and Teaching: theory and practice, Vol.1, No. 2, 1995.*

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[3] Adapted from Little, J. W. (1982). Norms of Collegiality and Experimentation: Workplace Conditions and School Success. *American Educational Research Journal.* Fall 1982, Vol. 19, No.3, Pp. 325-340.

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Chapter 2

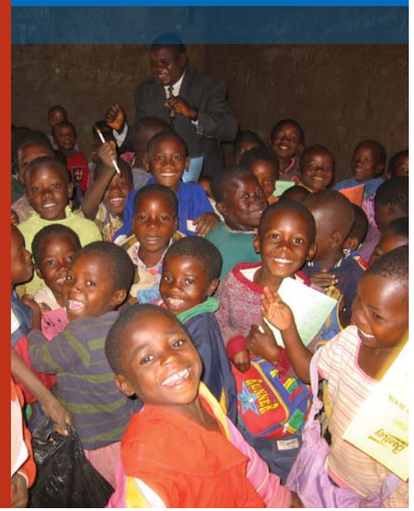
The State of Teacher Education

"Overall, deep learning deficits are too common among schooled children in developing countries."

Global Monitoring Report, 2009

"…teacher education programmes in many low income countries have remained substantially unchanged since their development under colonial administrations."

Lewin and Stuart, 2003



Numerous authors and global studies on teacher education in the past 20 years have advanced our understanding of what constitutes effective teacher education. There seems to be general consensus that teacher education is not on par with the professional training of other professions such as medicine and engineering. As Schwille, Dambélé, and Schubert put it, "…professional training as it is organized in many countries is not effective." (Schwille, Dembélé, & Schubert, 2007). This observation is echoed in calls for reconceptualization of teacher education in Africa to address the serious shortcomings in learners' performance (see, for example, Kwame Akyeampong, 2006; K. Akyeampong, Ampiah, Fletcher, Kutor, & Sokpe, 2000; Kanu, 2007).

Scholars in the field of comparative and international education have observed that while there have been a plethora of programs to support reforms for more effective teacher education that leads to improved learner performance, many of these programs have not been able to sustain the short term professional development gains made. (Craig, Kraft, & du Plessis, 1998; Lewin & Stuart, 2003; Moon, 2007; Schwille, et al., 2007; Villegas-Reimers, 2003). This is largely true of Africa, where college teaching of teachers has continued to be characterized as traditional in its approach, emphasizing knowledge transmission, theory over practice and superficial understandings of learner-centered education. Intended reforms have not taken root.

This chapter will help you learn what the research tells us about the characteristics of teacher education in developing countries in general, and Africa in particular. This resource assumes that you are aware of the vastness and, therefore, diversity in ways teacher education is organized in different African countries.

This chapter will first discuss the effects of EFA and other reforms on the quality of teacher education programs. It will then discuss some institutional and cultural factors impacting the quality of teacher education colleges in Africa, followed by examples of some successful programs. The proposed seminars at the end of this chapter will help the readers develop a comparative understanding of their respective programs and also reflect on possible reforms.

"educated learners ...think for themselves and go beyond the recall of facts and mimicking of skills"

EFA and **Increased Demand** for Teacher Education

In 1990 in Jomtien, Thailand, leaders from around the world converged to address current education issues on a global scale. The most important outcome of the meeting was an agreement to meet the goal of all children participating in basic education by the year 2000 – Education for All (EFA). This had enormous impacts on governments as their priorities shifted from providing for all levels of the education system to opening up access to primary education to masses of out of school children. The demand for teachers increased accordingly to burgeoning school enrollments. More teachers were needed for the increased enrollments in schools; and teachers' colleges, with their meager capacity, were unable to keep up. The quality of pre-service teacher education decreased as the goal of getting teachers into classrooms trumped teacher quality.

At the same time, a move to improve learner performance through improved teacher practices that focused on participatory, child-centered and progressive education was underway. This reform movement came to be known as Learner Centered Education (LCE). The introduction of LCE brought high hopes and promises of increased student performance and, more broadly, educated learners who could think for themselves and go beyond the recall of facts and mimicking of skills. These learners were expected to grow up to be active participants in the economy and civil society (Dahlstrom and Lemma, 2005). The conceptual shift away from traditional forms of teaching and learning and toward LCE, together with the need to increase teacher supply, produced twin pressures on teachers' colleges across Africa.

As the year 2000 approached, it was clear that the goals of EFA were not going to be met. In April 2000, another world forum was held in Dakar, Senegal, to reaffirm the commitments to EFA . The renewed commitment promised increased donor assistance to developing countries to achieve EFA by 2015. And yet the quality of schooling and in teacher preparation continued to decline. As classes in Africa became more crowded (student teacher ratios of 100 children for one teacher are still found in many parts of Africa), implementing reform-minded approaches based on LCE became more difficult. Teamed with inadequately prepared teachers and an increased demand for more teachers, teacher education quality declined.

Impediments to Changing the State of Teacher Education

During pre-service preparation in particular, LCE is broadly seen as not having taken root and teachers' colleges seem to be trapped in traditional ways of organizing teacher preparation. We use the terms traditional in this text to refer to uncritical use of teacher education methods, most of which do not encourage active learning, resort to direct instruction and knowledge transmission, and are not learner-centered. While the above mentioned rapid expansion in schooling can be justifiably given as a reason for this, there are also other impediments to reforms embedded in the current state of teacher education. The next sub-sections discuss some of these.

Teacher Educators Teaching as They Were Taught

Despite years of policy and programs designed to promote active, participatory and learner-centered education in primary school classrooms, the focus on whole class activities of choral response, memorizing and recalling information, and a focus on lower level cognitive skills remains the norm. Teachers' college classrooms tend to be characterized by an emphasis on recall and memorization similar to the one that characterizes the schools in general. While the effects of reform are not completely unnoticed, most observers of African education have found a narrow range of teaching strategies in use in college classrooms (Kwame Akyeampong, 2006; K. Akyeampong, et al., 2000; Kanu, 2007; Stuart & Tatto, 2000). For the most part, teacher educators teach how they were taught in African primary classrooms. As a result the student teachers reproduce the traditional norms of behavior in their own classrooms. Teacher education, thus, exhibits a self-perpetuating nature that works against change and improvement (Stuart, 2002, p. 368). From an early encounter with teaching as young students in their own schools to becoming teacher educators, most of us are exposed to both informal and formal experiences that continue to influence our perspectives on teaching and learning. This long stretch of learning to teach has been appropriately called *Continuum of Teacher Learning* (CTL) (Schwille, et al., 2007).[1] The CTL describes four phases of teacher learning as follows:

- Learning as a student (Apprenticeship of Observation)
- Pre-service teacher education
- Induction as a beginning teacher
- Continuing professional development

In the case of developing countries, the first two phases are the most formative for teachers' learning. If ideas about good teaching that most teachers and teacher educators have are associated with traditional methods, then it should not surprise us to see teacher education in Africa as persistently traditional in its approach, grounded in behaviorism and emphasizing knowledge transmission and theory over practice.

While most new waves of reforms continue to call upon teacher educators to change and incorporate more learner-centered, hands-on approaches into their practice, teachers continue to teach how they were taught due to an *apprenticeship of observation*. As you can see, the reform efforts clearly conflict with and attempt to displace what is traditionally regarded as good teaching. It is largely due to this conflict that most teacher educators may find it difficult to align their practice with reformist ideas. While you may appreciate the benefits of reform-based suggestions for change, your early experiences with teaching may work against translating them into practice. As a consequence, and as documented by many observers, the hoped-for reforms toward learner-centered pedagogies make little progress (ACTIVE-LEARNING, 2007; Kwame Akyeampong, 2006; Carnoy, 2007; Chizambe, Tindi, Kayombo, & du Plessis, 2007; Craig, et al., 1998; Lewin & Stuart, 2003; Schwille, et al., 2007; Tabulawa, 2003).

Lack of Sustained Institutionalized Professional Development for Teacher Educators

Most teacher educators in African colleges of education and in-service teacher educators are rarely professionally educated as teacher educators (Stuart & Tatto, 2000). Rather, most teacher educators are subject specialists formerly teaching in high schools who have been recruited to teach at the teachers' college. Sometimes the primary school teachers are also promoted to teacher education posts. In college education departments, specialists with degrees in education are appointed to teach education subjects, often with little experience in the primary school classroom. Degree holders in mathematics, science, literature, history and geography, with little or no studies in education, are often hired to teach those subjects at the teachers' college and often find it difficult to make connections between teaching the subject matter and preparing teachers to teach those subjects. In many colleges, this results in separation of academic subjects from the educational subjects.

Little relevant and practical material has been developed for college tutors to help them make progress on their understanding of theoretical perspectives on participatory or reform-minded teacher education, and even fewer relevant materials exist to assist teacher educators to develop their practice. College tutors wanting to develop their understanding of reform-based teacher education and improve their practice may not always have easy access to relevant resources due to poor college libraries, lack of or slow internet connections, or long distances to those places where resources can be found.

In some countries, professional development of college teachers has often been conducted through donor-supported programs aimed at a particular subset of college teachers (e.g., literacy, science and mathematics). Although implemented in conjunction with Ministries of Education, the effects of these programs on tutor performance are seldom sustained. Several reasons have been suggested to explain this, such as a narrow programmatic focus on specific interventions (e.g. teaching reading), lack of institutional ownership of programs, an absence of career incentives associated with such programs, and, in some places, high teacher educator turnover resulting in an ever present need to orient new staff with their new roles as college-based teacher educators.

Few countries in Africa have professional associations or journals on teacher education, and institutional climates may not generally be conducive to professional growth and development. The meager resources earmarked for reform activities are usually allocated to increasing the capacities of teachers at primary levels in teaching specific school subjects such as reading and mathematics. As a result, few resources are left for the professional development of in-service faculty at teachers' colleges. Thus, pre-service institutions are often left out of reforms in primary education.

Institutional Role in Professional Growth and Development

A college with a dynamic principal or educational leader can make professional development a priority for the college. Also, Ministries of Education or other bodies responsible for pre-

[1] The *continuum of teacher learning* is taken up in more detail in Chapter 3

service teacher education can provide resources and a policy environment for meaningful professional development that is sustained and leads to improved practice at the college. Yet it is rare to find the institutional leadership or policy environment needed to stimulate and sustain meaningful professional development of the teacher educators. In most colleges, little time is made for professional development for staff, and, in some cases, tutors with college degrees disdain participation in professional development, especially when it involves participating equally with junior colleagues. College principals tend to focus on administrative issues and are not generally provided with support to become instructional leaders.

As discussed earlier, an unintended result of EFA has been that college faculty often teach large numbers of students and supervise them in the field, leaving little time for professional development activities. Elsewhere, workplace norms provide little incentive for professional development: career ladders are limited, low pay of teacher educators compels many to supplement their incomes in off campus activities, and college leadership does not promote active professional development.

Cultural Barriers to Teacher Educators Implementing Active Pedagogy

Even where the concepts of active and participatory learning or learner-centered education reforms are well understood, there are often cultural barriers to implementation. A number of authors have written about the cultural norms that prevent the implementation of active pedagogy (Kwame Akyeampong, 2006; Kanu, 2007; Lewin & Stuart, 2003; Owuor, 2008; Tabulawa, 1998). Norms regarding hierarchy, gender, age, culture and epistemology are powerful drivers of what teacher educators do in their practice.

Examining your beliefs in this regard is an important step in moving beyond traditionalist approaches. However, deconstructing beliefs regarding teaching is rarely practiced as part of professional development of teacher educators. This topic is taken up in more detail in Chapter 4, Learner Centered Education.

Pressure of Exams to "Cover the Curriculum"

"Covering the curriculum" is a common expression used by teachers and teacher educators. Rather than seeing teaching and learning as a process of "uncovering the curriculum," many teacher educators are driven by the need to complete the syllabus and transmit all course material to student teachers in preparation for exams. Indeed this approach is regarded as exemplary when measured by student teachers' exam passing rates. This exam-driven approach spills over into in-service approaches (where there are often no exams or other assessments for what a teacher has learned in professional development activities) as the teacher educators rely on 'downloading' the information because the duration of the

workshop is too short.

With the pressure of exams as a measure of student teacher learning, teacher educators are compelled to 'download information' or 'impart knowledge,' and emphasize student teacher recall and tests and exams that mimic what has been delivered in class. Opportunities for deep understanding, debating issues, providing alternative views and deep exploration of topics from different perspectives are limited. When systems rely less on exams and more on authentic, locally derived, continuous assessment, there is more opportunity for a wider range of teaching strategies to be used, leading to deeper understandings by student teachers.

Examples of **Successful** Teacher Education **Programs**

Namibia in the 1990s provides an example of reform-oriented teacher education. In the years following its armed struggle and independence from South Africa, the Ministry of Education's policy for teacher education took a proactive stance of "undoing apartheid." For Namibians, this meant a focus on a democratic approach to teacher education reform that would develop "teachers as critical agents in creating the reform in relation to several broad principles: access, equity, quality and democracy" (Swarts, 2003). The shift in Namibia was away from a focus on procedural competence in the classroom to a more participatory methodology oriented to transformation. This approach was seen by the Ministry of Education as a way of raising the critical consciousness of teachers not only to provide quality education, but to act as agents of change at the community level. Continuous assessment was introduced and externally moderated final examinations were eliminated. Teacher educators were trained in new methodologies, and integrated and learner-centered curricula were developed. A component of action research (called Critical Practitioner Inquiry) was included in upgrading courses for both student teachers and teacher educators.

Farrell (2008) also summarizes some successes at reform in teacher education in what are sometimes referred to as 'alternative' teacher education programs. While looking at a number of alternative teacher education programs he highlights the Escuela Nueva (New School) in Columbia, the Non-Formal Primary Education Program of the Bangladesh Rural Advancement Committee (BRAC) and the Community Schools Program of UNICEF in Egypt. These alternatives to the mainstream teacher education systems generally include the training of teachers for multi-grade classrooms and curricula, active pedagogy, individual and small group student work, self-guided learning and constructivist learning (discussed in more detail in Chapters 4 and 5). These programs often draw student teachers from unemployed young people (mostly women) with limited academic education who are based in the communities in which they teach and would not qualify for entrance into teachers' colleges otherwise. Compared to mainstream pre-service teacher preparation, these programs have a relatively short initial face-to-face segment followed by intensive on-the-job support. These programs provide in-service support to the teachers over a number of years, match teachers with mentors on the job and promote participation in peer support groups for teachers to share ideas, problem-solve and express opinions. All three of these programs are successful both in terms of student performance, as students often outperform their peers in government schools, and lower costs than those of mainstream schooling.

Conclusion

This chapter was a very brief survey of the state of teacher education in Africa in relation to recent waves of reform. The global push to increase access to primary education has put tremendous pressure on teachers' colleges to produce more teachers. At the same time, new perspectives on teaching and learning have put teacher educators in conflict with both institutional inertia and time-hardened traditional views of teaching and learning. These combined pressures may be contributing to an observed decline in the quality of teacher education.

Despite an emphasis on reform-oriented teacher education in most African countries, traditional teaching approaches have persisted. While this chapter has suggested some possible reasons for the slow pace of reform, the rest of this book focuses on examining some of these reasons in more detail, gives concrete examples of reform oriented practices, and provides suggestions for seminars as ways for teacher educators to reflect on their beliefs and practices as they grow professionally and strive for higher quality teacher education.

Seminars

Seminar 1. Traditional or reform oriented teacher education

Introduction

This seminar is designed to enable participants to gain a deeper comparative understanding of traditional and reform oriented teacher education programs. It will also prompt you to critically examine your own program in terms of this comparative framework. The purpose is to use this understanding to ultimately reflect on the possibilities of institutional change and reform.

Specific Tasks

Table 2.1 (adapted from Craig et al., 1998, p. 147-151) illustrates some of the characteristics of reform oriented teacher education as well as traditional teacher education.

Here are some questions you may want to discuss with other colleagues:

1. Look at the teacher education program you are implementing. Is it reform-oriented teacher education, traditional teacher education, or a mixture of both? Explain.

2. Are there other aspects of policy and program that don't fit into this dichotomy? What are they? Why don't they fit into either of these classifications?

3. Does the college or the Ministry of Education hold a particular perspective regarding teacher education? Is it traditional or reform-oriented approach? Or, is it a mixture of different approaches? Explain.

4. As a college, department or individual, examine each of the areas in Table 2.2 to determine how each component aligns with the approaches both stated and in practice. Add new areas such as practice teaching, timetabling, tutorials etc. For each component give examples of how it is consistent with reform or traditional approaches to teacher education. Can you develop a summary statement for each component? *Examples of how you might respond are provide for you in Table 2.2.

Suggested Reading

Craig, H., Kraft, R., and du Plessis, J. (1998) *Teacher Development: Making an Impact.* Washington, DC: World Bank and AED/USAID.

Schwille, John and Martial Dambélé with Jane Schubert. (2007) *Global perspectives on teacher learning: improving policy and practice.* Paris: UNESCO International Institute for Educational Planning.

Seminar 2. Addressing the policy-practice gap

Introduction

This seminar is to be held after the first seminar and not independently. The purpose of this seminar is to build on your understanding and develop potential plans to address the gaps in the college program that you identified in the last seminar.

Specific Tasks

Look at the gaps between areas of policy and practice you described in the last seminar. If assessment in practice, for example, is focused on recall of information and the approach is more of a reform-oriented approach, what is needed to bring the assessment more in line with this approach? Part of a plan might be to acquire books and other resources to update staff's knowledge on the types of assessment that are consistent with the approach. Student assessments could be developed collaboratively in departments and shared with other departments. Practical examples of interesting and effective assessments could be shared with others after they have been used with student teachers.

Table 2.3 mght be useful in facilitating the development of strategies to address the gap between what is expected (policy) and what is being implemented. This exercise might be repeated after completing the seminars in *Professional Learning Communities in the Teachers' College* or other professional development activities.

Table 2.1: Reform Oriented Teacher Education vs. Traditional Teacher Education

Traditional Teacher Education	Traditional Teacher Education
• Transmission of knowledge	• Generation of knowledge
• Lectures	• Participatory learning
• Focus on knowledge and procedure	• Focus on understanding, skills and attitudes
• Separate teaching methods from content	• Teaching methods integrated with content
• Teachers as transmitters of knowledge	• Teachers as agents of change
• Based in behaviorism	• Based in progressive education
• Listening and memorization	• Experiences and reflection
• Learning is unidirectional	• Learning is interactive
• Many distinct subjects	• Fewer Integrated subjects
• Learner as object	• Learner as subject
• Focus on individual learning	• Social interactions for making meaning
• Assessment is mainly summative	• Assessment is formative and summative
• Assessment through high-stakes exams	• Assessment is authentic and continuous

Table 2.2: Example Worksheet for Mapping Education Approach to Policy and Practice

College Component	Documented Policy	In Practice
1. Mission Statement		
2. Goals		
3. Curriculum		
4. Classroom Practices		*A narrow range of methods used. Emphasis on learner-centered education is translated into group work and student presentations. Group reports center on transmitting information in much the same way that tutors lecture.
5. Assignments		*Self directed learning is overused as teacher educators assign too many assignments based on library research. Emphasis is on finding information in library books, not generation of new ideas, creative thinking or problem-solving.
6. Tutorials or other support to students		
7. Assessment and Evaluation		
8. Textbooks and other resources materials for students		
9. Timetabling and Schedules		
10. Extra-Curricular Activities		

Table 2.3: Example Worksheet for Addressing Gaps Between Policy and Practice		
College Component	**Identified Gaps between Policy and Practice**	**Strategies to Address Gaps**
1. Mission Statement		
2. Goals		
3. Curriculum		
4. Classroom Practices		
5. Assignments		
6. Tutorials or other support to students		
7. Assessment and Evaluation		
8. Textbooks and other resources materials for students		
9. Timetabling and Schedules		
10. Extra-Curricular Activities		

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Chapter 3

Learning to Teach

"…becoming a learning teacher is not only a matter of individual disposition, it also depends on how teachers are prepared, and the conditions under which they carry out their work."

Feiman-Nemser, 1983

How do teachers learn to teach? What elements and experiences contribute to quality teacher development? When and where does Learning To Teach (LTT) happen? What are the main theories surrounding LTT? What is the value in being 'learning *teachers*' and how do education programs foster their development?

Scholars of teacher education have grappled with these questions, and this chapter provides you with a summary of some of the responses furnished by years of research in the field of teacher education. This summary will also help you appreciate the importance of grounding teacher education programs within the context of LTT. Two seminars at the end of this chapter are designed to help you use this perspective on LTT to reflect on your own programs.

While there is a need to ground teacher education programs in a theoretical perspective on how prospective teachers learn to teach, there is little evidence that pre-service teacher preparation programs actually respond to this need. As noted in the previous chapter, researchers have identified that teachers begin to learn to teach as children through an *apprenticeship of observation*. While we know a great deal about the *continuum of teacher learning,* this knowledge has not been deployed in any useful way in teacher education programs (Schwille, Dembélé, & Schubert, 2007). As a consequence, teacher educators "lack a conceptual framework of what it means to learn to teach."(Schwille, et al., 2007, p. 79) For example, a study of pre-service teacher education programs in Ghana found that most teacher educators viewed LTT as involving acquisition of adequate subject matter knowledge along with strategies to teach it effectively. While subject matter knowledge and teaching strategies are important, they do not take into account the complex aspects of LTT that become visible only if LTT is viewed as continuous and occurring both before and after formal pre-service preparation. LTT is a complex phenomenon that takes place over a time and space that extends beyond the formal teacher preparation and is grounded in particular historical and cultural contexts. To be optimally effective, teacher education programs need to be fully aware of this complexity.

In what follows, we will provide you with highlights of the major ideas from discussions surrounding LTT.

LTT as a Continuum of Learning

Probably one of the more widely held perspectives on LTT sees teacher learning as a *continuum* spreading over one's lifetime. According to this perspective, LTT takes place over a period of many years and is not confined to the pre-service college classroom and practice teaching experience. Although pre-service training can provide building blocks for much career-long professional development, LTT goes beyond formal teacher preparation and is grounded in prospective teachers' own experiences as students. Prospective teachers arrive at a teachers' college with views of teaching based on observations of their own teachers who they observed when they were students. When a teacher takes on his or her first job, there is, in some schools, either a formal or informal period of *induction* when the new teacher receives guidance and support from more experienced teachers. Along with formal learning experiences, LTT also happens as teachers are exposed to various learning and teaching situations throughout their lives. Reflective teachers can turn all teaching and learning problems, such as large class sizes, diverse learners, lack of resources and other common issues into occasions for LTT.

While on the job, the continuum of learning is extended through in-service workshops, short courses, training activities and other professional upgrading opportunities available to teachers. As mentioned briefly in Chapter 2, LTT can be seen as taking place over four phases in a teacher's life.

Apprenticeship of Observation

This period of observing one's teachers (in both a formal and informal context) is called the *Apprenticeship of Observation,* because observations from the perspective of a learner provide the foundation on which future beliefs about teaching and learning are built (Lortie, 2002). Apprenticeship of observation refers to the possibility of LTT through observation long before entering a pre-service teacher preparation program. It refers to what you learn about teaching as a young child when observing your teachers. If you were asked to say something about the teachers who taught you as a child, you would likely recall both good and bad approaches to teaching. In fact, you would likely have a host of characteristics that you would use to justify your claims about your childhood teachers. You do not have to be a teacher educator to make such judgments. Anyone who has been to school develops some preconceptions of what it means to teach. Developing these preconceptions is the same as learning about teaching, or LTT. This implies that we should expect prospective teachers' ideas about teaching to be influenced by their early observations of their own teachers. Teachers are inspired by favorite teachers and try to be like them. New student teachers in the teachers college are equipped with powerful images of what it means to teach. Because most of the classroom contexts in Africa follow a more traditional[1] approach to education, student teachers rely on their experiences in traditional educational settings to guide them as they learn to teach. Most student teachers have not had prolonged, deep experiences with education that is experiential, participatory and learner-centered.

An individual's observations of one's own teachers during the formative years as a student furnish powerful models of what constitutes both good and bad teaching. These models, consciously or unconsciously, influence the ideas of effective teaching and behaviors of teachers, especially new teachers. Research has shown that student teachers' and even beginning teachers' images of former teachers play a powerful role in influencing how new teachers teach. Additionally, people learn from many other teachers besides those in the formal school setting. Peers, elders and one's own experiences provide rich teaching and learning experiences. But, not everything learned through this apprenticeship of observation is positive and desirable. For example, prospective teachers may have learned that a great teacher is one who effectively uses his or her authority to keep the students quiet during lessons. Fully recognizing the implications of Apprenticeship of Observation can help the teacher educators address undesirable conceptions of teaching.

Pre-service Teacher Education

Pre-service teacher education may be imagined as a mechanism of regulating the entry of prospective teachers into the teaching profession. All professions have such gate-keeping mechanisms for the initiation of the beginning professionals.

Pre-service teacher education takes place in various forms, lengths and emphases, but it is not the intention of this resource to survey the diverse pre-service teacher programs in Africa. However, it suffices to note that, in general, pre-service teacher preparation involves learning subject matter, education and pedagogy and socialization (explicit or implicit) into the teaching profession. Student teaching or a practice teaching component in schools is also included in pre-service teacher education.

Induction as a Beginning Teacher

The phase of induction begins immediately after the completion of pre-service teacher preparation and generally includes what the beginning teacher experiences during the first year of his or her teaching career. Induction tends to be informal in nature in most African contexts. The formal process of induction would require nominating mentors for beginning teachers, providing them with training to equip them with necessary knowledge and skills throughout the induction phase. Such support can help beginning teachers gain confidence in the application of knowledge and skills gained during pre-service preparation. However, induction can lapse into an informal arrangement due to lack of sufficient resources to provide training and other support to mentors and others who would guide new teachers in their first year or two of teaching. More often, the induction period for teachers is a period of adjustment to routines and developing practices that help the teacher survive. These practices tend to be oriented to 'survival skills' such as classroom management and lesson planning as well as schemes of work.

[1] Traditional in this resource book refers to the kind of educational milieu in which the students are expected to receive knowledge, and teachers are expected to transmit and impose true knowledge by virtue of their authority. We should also observe that traditional is not used here to denigrate local and traditional culture or practices, but only a certain kind of teaching and learning that has come to pervade all cultures.

Continuing Professional Development

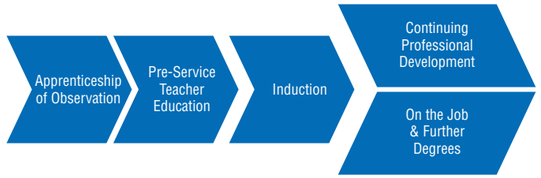
Continuing Professional Development (CPD) refers to teachers' participation in training and professional upgrading while on the job. CPD is a high priority area of focus for scholars and practitioners. Governments and donors spend a great deal of money designing and implementing programs under the rubric of CPD. Professional development programs take many forms. Sometimes they appear as fragmented and single workshops for teachers. Other times they are offered as programs leading to credit for further qualifications. For example, in Zambia teachers take distance learning courses with some face to face sessions to gain diplomas in education management. At other times the professional development activities are offered to address particular needs, such as helping teachers to teach a new curriculum implemented by the Ministries of Education. Also gaining ground throughout Africa in recent years is a structured engagement in ongoing improvement in practice where teachers are expected to participate in continuous professional development at the school, cluster, zonal or other levels as part of their professional responsibility and, in some cases, for credits that help them move higher along the career ladder.

As mentioned above, a complete description of CPD and every way in which it can be improved is beyond the scope of this resource. However, CPD is seen by many as critical to reform. Finding ways of making CPD more coherent and effective in your own particular context is, therefore, important. We hope that situating CPD as part of the continuum of LTT may assist you in doing this better.

"Reflective teachers can turn all teaching and learning problems into occasions for LTT"

Figure 3.1 shows the continuum of LTT described below. Most authors view the continuum as a lifelong learning experience.

Figure 3.1: Phases of LTT



Informal teaching and learning from peers, elders and others plays a role in forming potential teacher's beliefs about teaching. In Africa, cultural conventions about sharing knowledge, asking questions, providing information, learning by experience, hierarchies of speech, initiation and other ceremonies all have an influence on the beliefs surrounding teaching and learning that student teachers bring to pre-service teacher programs. All incoming student teachers have played a role in teaching others, because, in the African context, education takes place everywhere and anytime, and every member of a community is a teacher at some point or other. This concept is embodied in the well known phrase: *It takes a village to raise a child.*

Conceptions of LTT in colleges tend to be additive; teacher educators believe student teachers need to gain subject matter knowledge and the strategies and skills to teach it. In Ghana, for example, LTT "was seen as essentially possessing some adequate level of subject matter knowledge and the pedagogical strategies to transmit this knowledge." (Akyeampong, Ampiah, Fletcher, Kutor, & Sokpe, 2000, p. 39). However, these observations in teachers' colleges in Ghana were among individuals and did not reflect college based policy or explicit program approaches.

Influences of **Cognitive Psychology** on LTT

Other work on teacher learning examines research in the past few decades in the areas of epistemology (views of knowledge) and cognitive psychology. The scholarship in this area (based on the earlier work of American philosopher and educator John Dewey (1859-1952) and Russian psychologist Lev Vygotsky, (1896-1934)) has transformed the ways in which we conceptualize teaching and learning in and out of schools. Learning is no longer regarded as isolated and individual. Rather, it is located in particular contexts, social in nature and distributed among persons and tools.

Learning as Situated

Often referred to as *situated cognition*, this perspective regards the context and what is learned as inseparable. Situated cognition sees learning as taking place within the interaction of the learner with activities, culture, language and other people. Instead of an accumulation of the facts and knowledge, situated cognition regards learning as taking place when the learner engages in authentic activities. Authentic activities are just the "ordinary practices of a culture." (Brown et al., 1989; Putnam & Borko, 2000, p.4). In schools, this means that tasks and activities should be based on ordinary and commonplace activities in society. A teacher who is making use of situated learning would, for example, involve students in actual gardening when teaching botany, creating costumes for local dances when teaching expressive arts, or buying and selling things when teaching arithmetic. In doing these activities, students construct knowledge in the actual situations in which the knowledge will ultimately be used.

Learning as Social

This concept entails the need to share learning. Learning remains invisible until shared through social interactions. Social cognition says that learning takes place within a context of social interactions. Learning takes place through interaction with others and is later internalized on an individual level. Opportunities to express one's thoughts, hear what others have to say and process that information in order to make meaning are fundamental aspects of social cognition. This is why a social cognition perspective promotes an education that is interactive, participatory and provides opportunities for engagement with others. A teacher making use of this notion will involve students in debates, reading clubs, quizzes, local dance shows, theater, and other activities. Interactions with a larger social community from which students are drawn can also be meaningful learning experiences.

Learning is Distributed

This notion implies that thought processes are held among different people and tools, and this distribution allows complex tasks to be carried out. For example, building a house requires people who have different knowledge, skills and abilities and tools to accomplish the task, thus exhibiting the distributed nature of learning. Likewise, group work in the classroom setting is designed to make use of a common pool of learning and skills to accomplish assignments. A particular group assignment can exemplify all three—situated, social, and distributed—aspects of learning. These above mentioned developments in cognitive psychology have prompted different and new ways of thinking about the experience of learning in school classrooms.

As you can imagine, the new perspectives on learning must also have implications for LTT. Three aspects of LTT have been identified that have been heavily influenced by these paradigmatic shifts about conceptions of learning:

Regarding learning to teach as situated

It is important for student teacher learning to have some basis in the authentic contexts of the school, as well as in the context of the subject matter being learned (e.g., a science laboratory). Practice teaching usually allows for this. However, there is a tendency in some colleges of education to delay the experience of practice teaching until the student teachers 'acquire the theory.' In addition to student teaching practice, there are multiple ways that teachers' learning can be situated in the appropriate context. Among them are: reading to children at home or on campus, carrying out a child study at home or a nearby school, observing teachers at nearby schools, reviewing written case studies of actual classrooms, observing and critiquing video footage of classroom practice, and micro-teaching with peers.

Making social learning possible for student teachers

When considering the concept of social cognition for teacher learning, it is important to create opportunities for student teachers to form discourse communities. This goes beyond group work that asks student teachers to provide recall or factual answers to questions asked by teacher educators. It allows student teachers to engage in dialogue, debate, ask questions and express their opinions on complex problems. This process allows them to make meaning as their own experiences and beliefs conflict with alternative views. This also means that teacher educators should be open to multiple answers to problems and be able to promote and model practices that reflect the concept of *teacher as learner.* As above, there are many ways in which student teachers can form discourse communities. Among them are group assignments that are complex enough to last longer and optimize the opportunities for social interactions, for example, a term-long project, micro-teaching, group presentations, and other group projects.

Use of pedagogical tools to support learning

In resource scarce environments, the use of information technology (computers, video cameras, DVDs and television) may not be feasible. However, in the information age, it is important that colleges prioritize the utilization of some basic technology to promote teacher learning. Teacher learning could be greatly enhanced by the use of videos to examine and discuss teacher practices, learner interactions and engagement, the internet to search for information and update their knowledge, and computers to prepare materials and lessons and manage administrative tasks (Koehler & Mishra, 2005; Mishra & Koehler, 2006). Alternatively, authentic teaching and learning materials, written materials prepared by teacher educators and textbooks and other resources can provide support to teacher learning.

These views of teaching/learning and teacher education are not

widespread. What is more common is the behaviorist perspective of LTT which focuses on "skills, tasks, routines and strategies that the teacher would be able to perform in the classroom" (Stuart & Tatto, 2000, p. 498). At the time of independence in Africa the behaviorist perspective was imported by Western donor agencies and welcomed by Ministries of Education because they were "a decisive break with the [colonial] past" (Stuart & Tatto, 2000, p. 498). This perspective has been overtaken with constructivist views of teaching and learning in western teacher education, but the behaviorist traditions are so institutionalized and entrenched in Africa that they remain the norm. This poses problems for training of teachers for learner-centered education (a constructivist paradigm) when teacher education is grounded in behaviorism. This is addressed further in Chapters 4-7.

The **Knowledge Domains** for Teacher Preparation

Another way in which LTT has come to be known is by examining *what* should be taught in a pre-service teacher education program. While this endeavor is complex and highly dependent on local needs, socio-cultural context and alignment of political goals with educational philosophy and approaches, three areas of teachers' special knowledge base have been identified (Shulman, 1986a, 1986b).

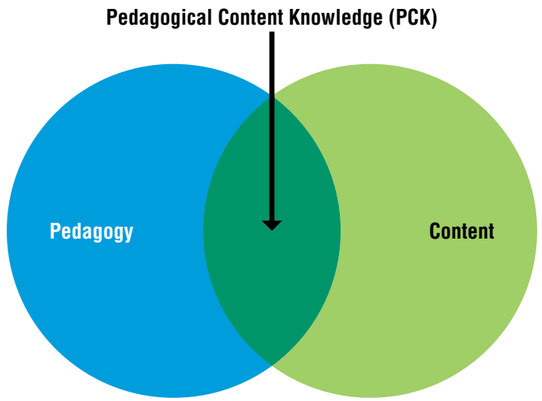
In the mid eighties, Lee Shulman, a psychologist and a scholar of teacher education, developed the notion of *Pedagogical Content Knowledge (PCK)* as a response to what he saw as a problematic distinction between knowledge of a subject (content knowledge) and knowledge of teaching and education (pedagogical knowledge) in the preparation of teachers. Effective teacher education, he argued, went beyond knowing the subject to be taught (content knowledge) and a set of strategies to deliver it (pedagogical knowledge). He created a third domain of knowledge that encompassed ideas on how to teach a particular subject. This included knowing what students preconceived ideas of a subject are, how to structure the content so as to make sense for particular learners, why particular topics are easy or difficult to learn, how to represent concepts and processes of a topic and what strategies to use to help learners gain understanding of the content.

The three knowledge domains described by Shulman and used extensively in teacher preparation are outlined in Table 3.1.

Table 3.1: Pedagogical Content Knowledge

Content Knowledge
Knowledge of the content of the subject including the factual information, how knowledge in the subject is built up, processes of inquiry and verification, habits of mind, technical skills and procedures.
Pedagogical Knowledge
Knowledge of general teaching and assessment strategies, including knowledge of child development and classroom management, planning and lesson structure, use of teaching and learning materials, theories of learning, and schooling in a particular context.
Pedagogical Content Knowledge
Knowledge of how to teach a particular subject or topic, knowledge of student's perceptions and misconceptions, knowledge of strategies to use to teach particular topics, knowledge of what topics are difficult or easy and why, knowing ways to represent topics for ease of learning.

Figure 3.2: Pedagogical Content of Knowledge



Summary

LTT has many aspects to it. This chapter has presented LTT as a life-long endeavor along a continuum that begins when one first starts to learn things and continues throughout one's teaching career. Within the continuum, the teacher is a learner. LTT is also reflective of the new scholarship in the area of cognition and knowledge which says that learning does not take place isolated from context (situation), other people and the tools of the trade. All of these are important to consider in creating learning opportunities in effective teacher education programs. Lastly, the chapter examined the knowledge domains that most effective teacher education programs include, describing the idea of PCK, which bridges the traditional divide between subject matter and pedagogy. PCK also provides teachers as professionals with a unique knowledge base.

Seminars

Seminar 1. Assessing our individual and institutional perspectives on LTT

Introduction

The purpose of this seminar is to unravel the ideas related to *Apprenticeship of Observation.* Use this seminar to attempt to dig deeper into what you learned about teaching before formal introduction to it in the Teachers' College. The seminar will assist you in understanding the ways in which *Apprenticeship of Observation* may impede or reinforce particular aspects of reform.

Specific Tasks

Individually or in groups, discuss each of the questions below and present your thoughts to the larger group (or to a colleague if doing this exercise individually).

1. Who was your favorite teacher and why? How much of your teaching now reflects the practices or inspiration you received from that teacher? Explain. How powerful are your beliefs about teaching based on your experiences with that teacher? Explain.

2. Does the college faculty hold a common conception of LTT? If so, describe it. If not, describe your own individual conception of LTT. Make a chart of your thoughts to show to the other groups. Is it important to have a shared concept as an institution of LTT? Why or why not? How might you organize for developing a shared conception of LTT if it doesn't already exist and you deem it is important?

3. In Africa, the predominant mode of teaching is a teacher-centered transmission model of instruction, despite widespread reforms to a learner-centered approach. If, in the apprenticeship of observation, new student teachers have learned this teacher-centered model, and the college is espousing a learner-centered pedagogy, how will the college program address the student teacher held beliefs about teaching?

4. Induction and CPD are important phases in LTT. Yet, resources and existing policies work against the development of a coherent and supportive induction programs as well as truly continuous professional development programs. How might you extend the college programs to both Induction and CPD in order to make them more useful for the beginning and experienced teachers alike?

5. Does your college apply aspects of *situated cognition* in preparing teachers? If so, describe how you make use of situated cognition to improve student teacher learning. If not, how might you enhance student teacher learning by including situated cognition in the way you prepare teachers?

6. Does your college apply aspects of *social cognition* in preparing teachers? If so, describe how you make use of social cognition to improve student teacher learning. If not, how might you enhance student teacher learning by including social cognition in the way you prepare teachers?

7. Does your college apply aspects of *distributed cognition* in preparing teachers? If so, describe how you make use of distributed cognition to improve student teacher learning. If not how might you enhance student teacher learning by including distributed cognition in the way you prepare teachers?

8. Where is pedagogical content knowledge included in the college curriculum? Explain. Are student teachers made aware of pedagogical content knowledge? Is it important that they are aware of it? Why or why not?

Suggested Reading

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Darling-Hammond, L. and Richardson, N. (2009). *Teacher Learning: What Matters?* Educational Leadership, Vol. 66 No. 5.

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Feiman-Nemser, S. (1983) Learning to Teach. In Schulman, L. and Sykes. G. Eds. *Handbook of Teaching and Policy.*

Seminar 2. Teacher as learner

Introduction

Completion of formal teacher certification courses may lead to complacency at times. Some teachers may feel that they do not need continuous professional development. However, the research documented in this chapter claims otherwise. However, given different attitudes towards various stages of LTT, the teacher educators may need to devise strategies to address such attitudes effectively and promote positive perceptions about the need to see LTT as a life-long process.

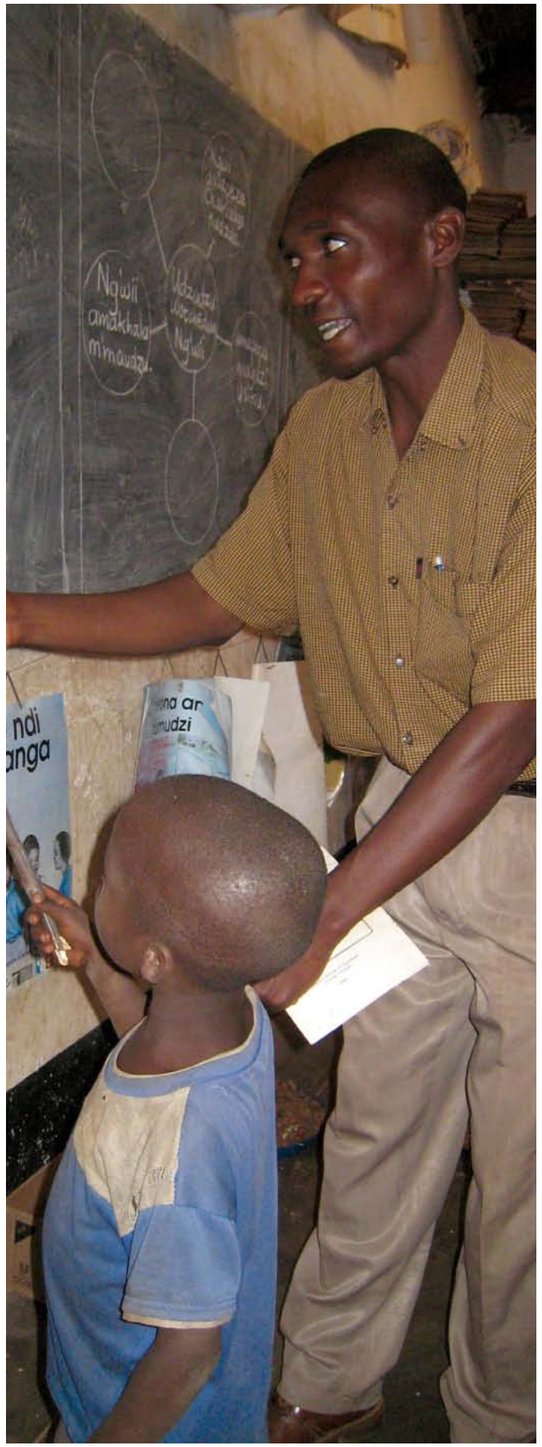
Specific Tasks

Read the following vignette and discuss using the guiding questions that follow.

> *Teachers recently deployed to schools after receiving a diploma disdain participation in school-based professional development due to their perception that they have learned all there is to know about teaching, and they certainly know more than their peers who hold only certificates. The school principal exhorts them to participate in school-based team meetings, but they complain that is not part of their job description, and, after all, they do have a diploma!*

Below are some guiding questions for discussion:

1. Is this situation familiar to you? Explain.
2. How do you suppose teachers in this situation have come to respond to a request to participate in continuing professional development at the school?
3. If you were the principal in this situation, how would you convince the teachers that it is important that they participate?
4. What can colleges of education do in their preparation of teachers to promote life-long learning of teachers and the notion of *teachers as learners?*
5. In the college, what are the attitudes of the teacher educators toward participation in professional development at the college? Discuss.



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Koehler, M., & Mishra, P. (2005). What happens when teachers design educational technology? The development of technological pedagogical content knowledge. *Journal of Educational Computing Research, 32*(2), 131-152.

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Mishra, P., & Koehler, M. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *The Teachers College Record, 108*(6), 1017-1054.

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Shulman, L. (1986b). Those who understand: Knowledge growth in teaching. *Educational researcher, 15*(2), 4.

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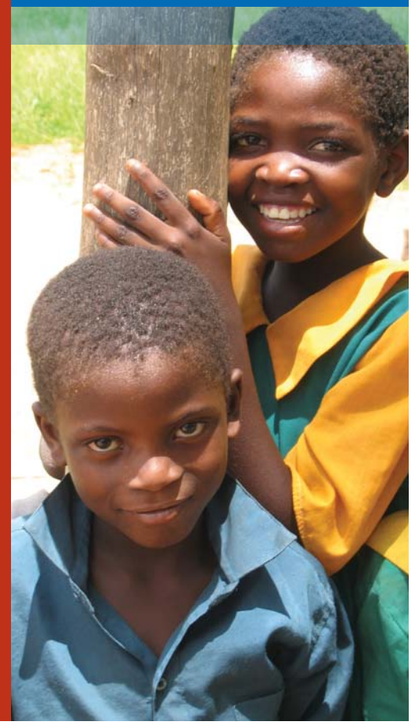
Chapter 4

Learner Centered Education

"…who can question learner-centered education, if by that we discursively mean that the learner is at the center of education? This consensus gets under our skin and becomes taken for granted."

(Dahlstrom and Lemma, 2008)



What is *Learner Centered Education* (LCE) and why is it so prevalent in educational reform programs? What are the underlying principles and theories on which it is based? This chapter will help you understand LCE from multiple perspectives—psychological, philosophical, epistemological, and socio-cultural.

We will also examine the prevalence of LCE in educational reform in developing countries, its critiques as well as the barriers to making it a part of the mainstream educational process of curriculum, instruction, and assessment.

Over the last two decades, major educational reform efforts in many countries have centered on what is variously called learner-centered education, learner centered teaching, learning centered education, active pedagogy, active learning, student centered learning, participatory learning and democratic education. Learner centered education is more than simply putting the learner at the center of educational processes. This reductionist interpretation of LCE does not help us understand the multiple meanings of LCE in different contexts or the underlying philosophical and educational foundations of the term. Further, as Dahlstrom and Lemma (2008) point out, the notion of learners at the center of education is taken for granted over time thus blinding us to its purpose and practice.

This chapter is designed to serve as a primer to LCE. As such, it will first describe some salient characteristics of LCE, followed by its cognitive/psychological and philosophical roots. It will introduce social and emotional learning as integral to LCE. The chapter will end with a discussion of some of the barriers that stand in the way of implementing LCE.

Characteristics of Learner Centered Education (LCE)

Learner centered education as Dahlstrom and Lemma (2008) put forth has become a common, and often misunderstood, mantra in ministries of education. So commonplace is the use of the term that often everybody seems to take the meaning of the term for granted. In this section, we will attempt to reach beyond the common sense notions of learners as "at the center of education" (Swarts, 2003) to other things that educational research tells us about LCE.

There is a large body of international literature on learner-centered education and some relevant literature is listed in the references to this text. For this chapter and throughout *Professional Learning Communities in the Teachers' College*, the instruction under LCE is that in which teachers:

- both provide support to and challenge students.
- value prior knowledge and experience of students and bring that into play in the teaching and learning process.
- provide opportunities for learners to make meaning of new concepts and processes through interaction with others (learners, adults, teachers), with concrete objectives, and the students' own inner reflections.

In LCE mode, the learners:

- are given and make use of multiple opportunities to express their own thoughts as a way of enhancing understanding and exchanging their ideas with others.
- feel safe providing multiple responses to the problems posed to them. The correctness of the answers supplied by the learners is ascertained through a process of dialogue and debate and not through the sole authority of teacher and the text.
- generate knowledge through interaction with others and their environment. LCE highly values innovative thinking on students' part as well as their efforts to make their thinking visible.
- make new information meaningful in relation to their prior knowledge and experience.

Sometimes, mere involvement of students in group work, discussions, and activities is erroneously taken to be a manifestation of LCE. It is important to note that these modes of organizing practices in classrooms cannot be characterized as LCE unless they embody the characteristics listed above. For many reformers, the inclusion of learner-centered education in educational reform packages represents an antidote to transmission mode of education. The latter focuses more on teacher talk, learner note taking, rote learning and learner recall of information. Among other things, transmission or teacher-centered models of education are also blamed for poor learner performance throughout Africa. Please recall that the transmission mode has its roots in behaviorist psychology, which regards the student, not as an active participant in learning processes, but as a passive respondent to external stimuli—a recipient of knowledge and skills. The transmission mode, which is the predominant one in African classrooms and teacher education colleges (Akyeampong, 2006; Dembélé & Miaro-II, 2003; Lewin & Stuart, 2003; Schwille, Dembélé, & Schubert, 2007), focuses on the presentation of subject content, *covering the curriculum* (as opposed to *uncovering the curriculum*) and expects little in the way of critical thinking from learners. The transmission mode of teaching, while somewhat effective in helping learners pass exams, does little to foster critical thinking, robust understandings or habits of mind. Unlike LCE, it sees the learner as the *object of teaching* rather than the *subject of learning*.

Additionally, transmission modes of teaching are steeped in unidirectional norms of communication. Learner participation in dialogue, asking questions, challenging the teacher and other students, active participation, multiple correct answers, problem posing, and the notion of teacher as learner are not common elements of the transmission mode. Some argue (Freire, 1970; Freire & Freire, 2004; Kumashiro, 2000) that the transmission mode embodies unequal power relations and even oppression of the learner by the teacher. Further, learner performance throughout Africa, despite widespread attempts at reform, continues to be poor (EQUIP2, 2008). This poor performance is in part attributed to the unchanging teaching practices that focus on the transmission mode of teaching.

A number of recent studies have pointed to the central importance of *good solid teaching* as the most important factor in achieving good performance of students (Carnoy, 2007; EQUIP 2, Undated; Stuart & Tatto, 2000). Other systemic supports are important and promote quality education, but it is at the level of the teacher and the child that rubber meets the road. If the teaching and learning process are not put right, then no textbooks, furniture, infrastructure, curriculum or other inputs will bear fruit.

What Are the Psychological, Philosophical and Socio-cultural **Roots of LCE?**

The roots of learner-centered education are embedded in the fields of psychology, philosophy, sociology and education. This section examines the foundations of LCE from the perspective of advances in our understanding of intelligence, cognitive psychology, epistemology, social and emotional learning and indigenous knowledge.

Intelligence and LCE: From Unitary to Multiple

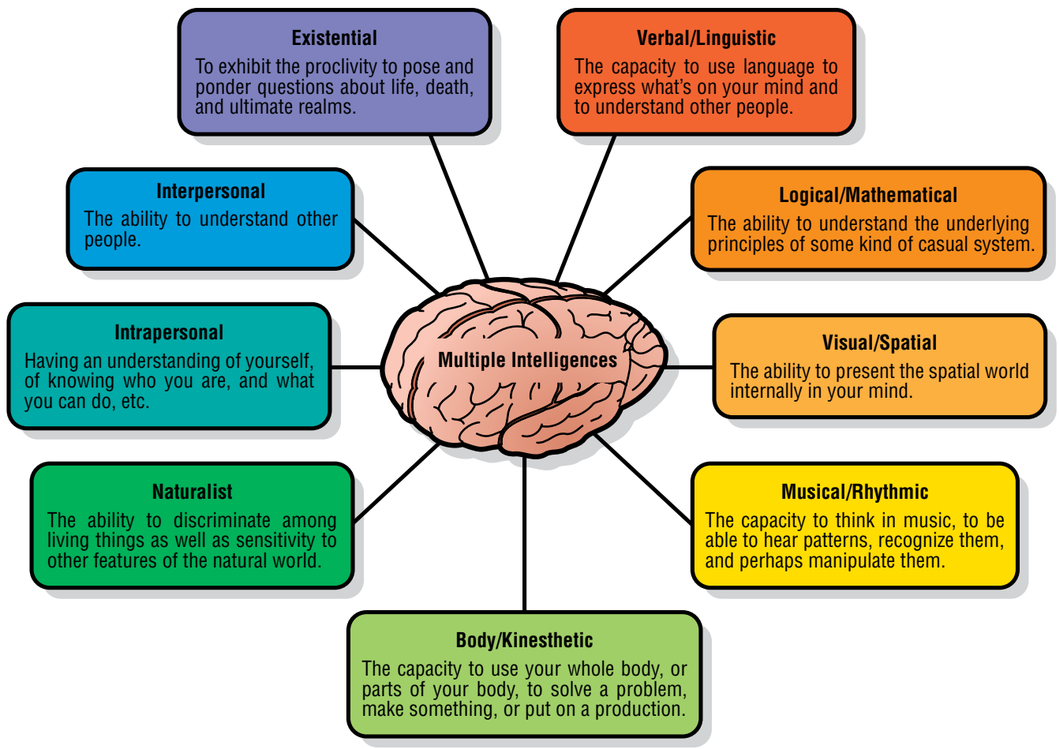
For many years intelligence was framed by the research of psychologists and psychometricians. Spearman's work in the early 1900's provided a breakthrough in thinking about intelligence when he was able to test for and quantify general intelligence called "g." Later IQ (intelligence quotient) tests, which measured a person's performance on tests that were purportedly free of culture bias, were widely used to measure intelligence. In education this often was used to stratify learners into more and less able groups and in some cases provide different educational options for different IQ levels. IQ tests were seen as fixed assessments of one's cognitive ability, and progress in reaching a higher IQ level was unlikely. Additionally, IQ was seen as a unitary measure of one's cognitive and other abilities. The mind, according to Spearman and others, had one unitary quality that could be quantified as the IQ. In education, IQ has been used to rank and sort learners, especially in regard to determining learner groups and educational options (e.g. vocational vs. academic streams).

Critiques of the IQ test in the 1960's focused on the notion that the tests could not be free of bias. Many IQ critics noted that tests were culture-biased in favor of white, urban children (in North America and Europe, where most of the IQ tests were used). The IQ was increasingly being seen as a stagnant measure which erroneously assumed that intelligence could not develop over time and that the tests for measuring IQ measured a narrow range of knowledge and skills.

In the 1980s, Howard Gardner, a Harvard University psychologist in the USA, wrote a ground breaking book that has had a powerful influence in education. The book, *Frames of Mind: The theory of multiple intelligences* (Gardner, 1983), was based on Gardner's work with children and victims of stroke. Stroke victims usually have lost function in parts of their brain while other parts still function. This led Gardner to believe that intelligence is not a function of the mind working as one unit; the mind has multiple functions that are not always dependent on other areas of the brain. In synthesizing the results of his and others' work in the fields of neuroscience, biology, psychology, sociology, the arts, and anthropology, he came to the understanding that intelligence is not a singular quantifiable mental capacity. Rather, he proposed a theory which said that individuals may have varying degrees of multiple intelligences with one or more being predominant. For Gardner, a broader definition of intelligence more accurately captured the human continuum. The different intelligences identified by Gardner are outlined in Figure 4.1.

For educationists, multiple intelligences has led to teaching that is more holistic in nature, structuring classes to provide learning opportunities for all children, nurturing children's emerging talents and providing learning experiences for improving less dominant intelligences.

Figure 4.1: Multiples Intelligences



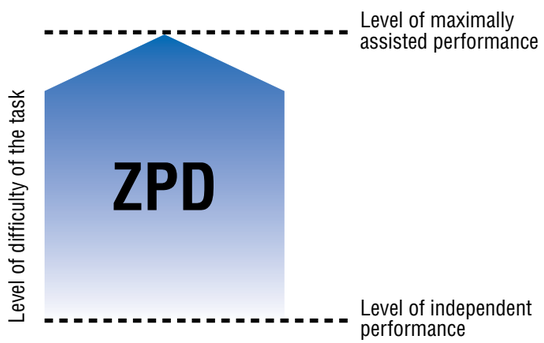
Cognitive Psychology and LCE

Advances in cognitive psychology of the last few decades have also shaped the way in which educators view teaching and learning. Like the work of Gardner on intelligence discussed above, most of these advances have provided support to LCE. Proponents of LCE usually refer to the work of educational philosophers like Rousseau, Dewey, Pestalozzi and psychologists and cognitive theorists such as Vygotsky and Piaget to ground their emphasis on both learners and subject matter. In an overall sense, these scholars provided the basis for an education that involved children in actively experiencing their world, building on these lived experiences and using language and other cultural tools to express their understandings of the world. Here we assume that the work of Rousseau, Dewey, and Pestalozzi are well known to African educators. For readers more interested in this work we will provide references to it at the end of this chapter. In this section, however, we will discuss the idea of a *Zone of Proximal Development* (ZPD) by Lev Vygotsky. Described in more detail below, ZPD's importance to a discussion of LCE is grounded in its simultaneous focus on *proficiency goals* as well as the *current level of knowledge and skills* of a learner. When we associate ZPD with LCE, we realize that *learner centeredness* does not imply simply placing the learner at the center of educational process. Below, we will discuss ZPD and Piaget followed by a brief discussion of constructivism.

Lev Vygotsky and Zone of Proximal Development (ZPD)

Russian psychologist Lev Vygotsky proposed the notion of a Zone of Proximal Development (ZPD) to describe the learning process as hedged between two limits or skill levels, an upper and a lower. The upper limit of ZPD referred to a range of tasks deemed too difficult for the child to master without guidance and assistance by adults or more-skilled children. The lower limit of ZPD referred to the level of skill reached by the child working independently. The ZPD uses the child's cognitive skills that are in the process of maturing, and progress can be made only with the assistance of a more-skilled person. Scaffolding is a concept closely related to the idea of ZPD. Scaffolding is changing the level of support given to a student. Over the course of a teaching session, a more-skilled teacher adjusts the amount of guidance to fit the child's current performance. Dialogue is an important tool in ZPD. In a dialogue, the unsystematic, disorganized, and spontaneous concepts held by the child are met with the more systematic, logical and rational concepts of the skilled helper.

Figure 4.2: Zone of Proximal Development



Learning in the zone of proximal development is a joint activity in which the adult simultaneously keeps an eye on the goal of fully proficient performance and what the learner, with assistance, is currently able to do. In the case of language development, the process is natural and almost invisible as parents encourage and support their children's increasingly competent efforts. For the teachers, ZPD implies neither turning everything over to the learner to discover, nor providing all knowledge for the child to receive. This approach respects, seeks out and takes into consideration the children's current knowledge and skills in order to facilitate a guided acquisition of knowledge and skills that a child must acquire in order to become independent. This is loosely analogous to the process of taking the crutches away from a person with an injured limb after the injury has been healed. This process creates an enormous challenge for teachers to find the right balance between encouraging children to experience the world and construct their own knowledge of it and providing children with the essential knowledge and skills needed for this to happen.

Jean Piaget and LCE

Jean Piaget was a Swiss psychologist with a background in biology. His natural science background led him to explore cognition, mental processes, thinking and learning from a biological perspective. He wanted to understand how children learn. By studying thousands of children and young people, including his own children, in a systematic way, he was able to identify four main stages of cognitive development. The four stages: sensory-motor, pre-operational, concrete operations and formal operations, were important breakthroughs in understanding learning that had profound impacts on the design of schooling, curriculum, materials development, assessment and teaching and learning.

Piaget's work has been influential in shaping educational theories in two ways. First, his well-known ideas about the developmental stages—also sometimes referred to as genetic epistemology—have provided grounds for many claims about instruction and learning. One such influence is visible in the work of Jerome Bruner (Bruner, 1963). Bruner's account makes use of the idea of Piaget's idea of developmental stages to claim that anything can be taught to anyone at any stage in an intellectually honest but developmentally appropriate manner. As you may have noticed, developmental appropriateness has since become a touchstone for evaluating curriculum and instruction designed for children at various stages. The second influence of Piaget is more critical to the LCE and is referred to as *constructivism.* This will be discussed in some more detail in the next section.

"good solid teaching ...is the most important factor in achieving good performance of students... it is at the level of the teacher and the child that rubber meets the road"

Constructivism and LCE

The ideas of John Dewey, Lev Vygotsky, and Jean Piaget also find expression in the educational philosophy of constructivism. Not surprisingly, therefore, progressive education as it is practiced in the 21st century is regarded by many as largely based on constructivism. Constructivism, as a "theory and philosophy of learning" implies that human beings construct new knowledge through linguistic, experiential and other interactions with the world and individuals (Windschitl, 2002). There are several strands of constructivism including radical constructivism and social constructivism. However, while there is considerable variation in its definition, all versions of constructivism regard students as active constructors of knowledge rather than passive recipients. For this chapter we use constructivism as an umbrella term for various forms of constructivism (For more information on constructivism, see Hausfather, 2001) that all share the principles of constructivism, namely that a) there are multiple forms of knowledge, b) prior knowledge plays a role in the construction of new knowledge, and c) knowledge is socially constructed.

What does constructivism look like in practice? According to Windschitl (Windschitl, 2002, p. 137), teacher and student activity in constructivist classrooms would be characterized as shown in Table 4.1.

When examining the table below, one can readily imagine classrooms that are somewhat chaotic or, at least, very busy. The role of the teacher in a constructivist classroom then is also one of assisting learners to think on their own by providing appropriately challenging learning experiences. This does not mean that the teacher leaves the learner to go 'discover' knowledge. Rather, the teacher has an ongoing challenge of determining just how much support to give learners without 'spoon feeding' them. At the same time, LCE requires teachers to provide learners with intellectual stimulation. Another dilemma for the teacher from the constructivist perspective is that there can be multiple answers to problems, and individuals hold

Table 4.1: Teacher and Student Activity in Constructivist Classrooms

Teachers	Students
• Elicit students ideas and experiences in relation to topics, then fashion learning experiences that help student elaborate on or restructure their current knowledge. • Make their own thinking process explicit to learners and encourage students to do the same through dialogue, writing, drawings or other representations. • Encourage students' reflective and autonomous thinking in conjunction with all of the conditions listed here. • Employ a variety of assessment strategies to understand how students' ideas are evolving and to give feedback on the processes as well as the products of students' thinking.	• Are given frequent opportunities to engage in complex, meaningful, problem-based activities. • Work collaboratively and are encouraged to engage in task-oriented dialogue with one another. • Are routinely asked to apply knowledge in diverse and authentic contexts, explain ideas, interpret texts, predict phenomena, and construct arguments based on evidence, rather than to focus exclusively on the acquisition of predetermined 'right answers.'

different perspectives on knowledge since their prior knowledge and educational experiences are, to a certain extent, unique. While there are multiple solutions to a problem, knowledge construction involves validating those solutions through a process involving debate and interactions between students. Not all solutions are created equal, and some lose out in this process of knowledge validation. Knowledge validation through debate among the classroom community is different from knowledge transmission through the authority of the teacher.

Social and Emotional Learning (SEL) and LCE[1]

How is Social and Emotional Learning (SEL) related with LCE? Clearly, learners exist in social settings and have emotional dispositions. So, apart from having a cognitive perspective, educators also need to be aware of learners' social and emotional learning needs to create a holistic approach to LCE.

Increasingly, teaching and teacher education has recognized the need for a perspective on the teaching of the role of social and affective qualities to learners. Teachers also must handle the demands of teaching, which involve managing a range of stressful situations and a variety of interpersonal interactions with diverse students, parents, and administrators. To do all of this requires good grasp of SEL. SEL is the process of developing the ability to recognize and manage emotions, develop caring and concern for others, make responsible decisions, establish positive relationships, and handle challenging situations effectively. For teachers, social and emotional skills and capacity affects their ability to handle the demands of the classroom, which include managing their own emotions. Whether due to factors outside the classroom such as a fight at home, or inside the classroom such as disruptive student behavior, being able to appropriately recognize and respond to the social and emotional cues of others allows teachers to establish positive relationships with diverse students, colleagues, and parents.

What has been described above boils down to the following: 1) in learning situations, it is the job of the teachers to ensure that learners feel emotionally and physically safe. Being emotionally safe also means that people do not subject those who look different or are disadvantaged in some way, to ridicule and sarcasm; 2) learners often need emotional support, and, when in need of support, they must know where to find it; 3) learners need to learn to manage their relationships positively and be surrounded by peers who also have socially responsible behavior; and 4) children and youth need to be actively engaged in learning endeavors that are relevant to them and enable them to develop the skills and capacities to reach positive life goals.

These four conditions are interdependent and reinforce each other. For example, teachers who have positive relationships with students will find it easier to engage students and to develop their students' social and emotional skills. Similarly, social and emotional learning contributes to safe and challenging learning environments. The upshot of this discussion is that LCE requires a holistic focus on the learners which goes beyond merely learning subject matter.

Indigenous Pedagogies and Indigenous Knowledge

Some scholars in education and sociology argue that learner-centered education will not take hold in traditional societies because it counteracts the role of the elders and the community in mediating knowledge. Traditional pedagogies, they argue (Ngara, 2008), are participatory and collectivist in nature. African children come to school with broad knowledge derived from participation in communities where everyone is a teacher. According to Ngara,

> *In the African sense, a child is a child of every adult in the community. Teaching the child in traditional Africa was therefore not the monopoly of the biological parents. Every responsible adult could teach any child about the community's ways (etiquette, survival, welfare, etc). (Ngara, 2008)*

Does this socio-cultural perspective necessarily work against implementing a learner-centered education? We do not have an answer to this question. It is important, however, for the teacher educators and teachers to attempt to discover what elements of cultural characteristics work for or against efforts to foster more LCE oriented reforms.

[1] This section on Social and Emotional Learning contributed by Dr. David Osher, American Institutes for Research, Washington, DC, USA.

Summary of LCE

Learning to think, learning to be critical, going beyond the recall of facts and the miming of skills are all important outcomes of LCE. Opening up a world of knowledge to student teachers so that they are excited by learning and become passionate about teaching is more likely to be achieved when the student teachers are active participants in their education rather than passive recipients of knowledge. Education is about learning, and learning is a complex cognitive and emotional exercise that transcends mere recall of facts and information. Helping student teachers *make meaning* of LCE through their process of becoming teachers rather than receiving knowledge of LCE is an important component of quality teacher education.

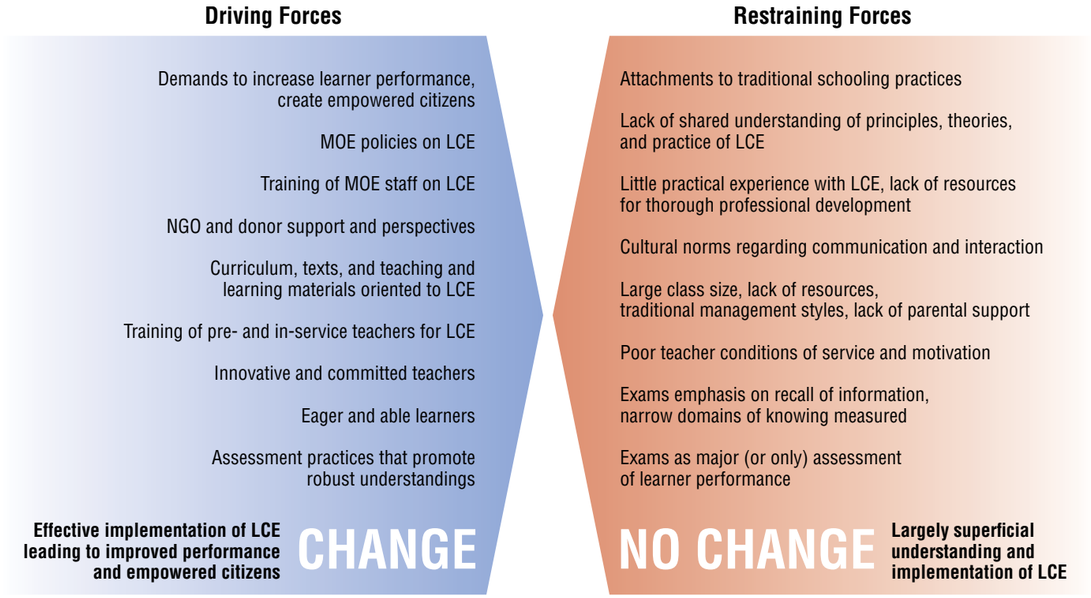
What are the **Barriers** to Effective LCE?

So how is it that, according to a number of authors, despite widespread policy reforms and programs to promote learner centered teaching in Africa, the dominant modes of teaching in teachers' colleges (and primary classrooms) continue to be grounded in transmission modes of teaching? If one understands that learning to teach includes student teachers *experiencing* and *observing* models of learner-centered education, then what accounts for the persistence of the transmission mode (or lack of significant widespread implementation of learner-centered education)?

A number of factors may be involved stemming from a variety of contexts. Swarts (2003) argues that inconsistencies between the rhetoric of what LCE classes *should* look like and what they *do* look like are due to lack of a shared understanding among educational actors and stakeholders as to what the underlying theory and principles of learner-centered education are. Additionally, not all aspects of educational systems are aligned to support LCE in the classroom. Large class sizes, lack of relevant teaching and learning materials, school administrations that oppose innovation and lack understanding of the practice of LCE, overloaded curriculum content and exams which focus on the recall of information all work against LCE being fully taken up at the classroom level. Others argue that cultural norms regarding communication across genders and generations prohibit the types of interaction required in LCE classrooms (Akyeampong, 2006; Kanu, 2007).

A comparison of the forces driving, as well as restraining, LCE from becoming more mainstream in Africa is given in Figure 4.3.

Figure 4.3: Teacher and Student Activity in Constructivist Classrooms



Seminars

Seminar 1. Perspectives on knowledge and intelligence

Introduction

This seminar is designed to help you identify the examples of multiple intelligences at work and relate these instances to your work as a teacher or teacher educator.

Specific Tasks

Read the statements about intelligence in Table 4.2. Circle true or false to represent your view on each statement. When you finish, share your answers with a colleague or group of colleagues. Be prepared to share your thoughts on each of the statements. You may use the text in this chapter and the article by Brualdi (1996) on Multiple Intelligences and their implications for teaching as a reference for your discussion.

Table 4.2: True/False?

Only those who have attended school can be truly intelligent.	T/F
Intelligence is inherited.	T/F
Intelligence does not change over one's lifetime.	T/F
The best way to measure intelligence is with an IQ test.	T/F
People who are not intelligent should be laborers.	T/F
Intelligence can be developed.	T/F
Intelligent people can be found who have never attended school.	T/F
Someone who cannot speak English well is not intelligent.	T/F
School exams are a good measure of intelligence.	T/F
Some people may be considered a genius in some things and completely hopeless in others.	T/F

Some questions for further discussion.

1. As an education student what did you learn about intelligence and how has that shaped the way you view teaching and learning? Share your thoughts with others based on what you have gained from this chapter.
2. How does the college curriculum for pre-service teacher education treat the topic of intelligence? What changes, if any, do you think the college curriculum should undertake regarding teaching future teachers about intelligence? What might a new unit on intelligence look like? Make a draft outline including activities.
3. What are some commonly held beliefs on intelligence in your socio-cultural context? Are there any similarities with Gardner's theory of multiple intelligences? Explain. How will you, as a teacher educator, link new thinking on intelligence from the fields of psychology and education to traditional notions of intelligence?

Seminar 2. Understanding learner centered education

Introduction

Learner-Centered Education, as pointed out in this chapter, is often misunderstood and incorrectly reduced. The seminar will help raise questions that clarify, refine, and contextualize the ideas associated with LCE.

Specific Tasks

1. Prior to reading these articles (and this chapter), what was your perception of LCE? How has your understanding changed? Explain your understanding of LCE to some colleagues. Can you give examples of your own teaching that demonstrate the principles of LCE?
2. How does the conceptual framework for LCE described by Swarts in Namibia differ from LCE as described in policy and program documents in your own context? Can you create a chart showing similarities and differences? What accounts for these differences?
3. Based on the readings, present an example from your own classroom to a group of colleagues that is representative or contradictory to one of the articles. Be prepared to cite the article and its relation to the practice you present.
4. After the presentations, review your understandings of LCE. How has your understanding deepened? What are the ambiguous aspects of your understanding?
5. In Dhalstrom and Lemma (2008, p. 39), the authors argue that learner-centered education…'becomes a way for teachers to escape their educational responsibilities … through meaningless group work that recycles ignorance." What do the authors mean? How can 'group work' not be learner-centered? Explain. What elements of 'group work' that would make it learner-centered? Give an example of learner-centered group work from your subject area. Share your example with your colleagues.
6. Plan a lesson with one or more colleagues. Teach the lesson with one or more of the colleagues making observations. Following the lesson, confer with the student teachers to gain their feedback on the methods and approaches you used in the lesson. Discuss the lesson and student teacher feedback with your colleagues. Was it learner-centered? What aspects were learner-centered? Why? Was the lesson appropriate for the content and the students? Were the students intellectually challenged? How could the lesson be improved?

Suggested Reading

Dhalstrom, L. and Lemma, B. (2008). Critical perspectives on teacher education in neo-liberal times: Experiences from Ethiopia and Namibia.

Hausfather, S. (2001). Where's the content? The Role of Content in Constructivist Teacher Education. Educational Horizons (Fall 2001).

Swarts, P. (2003). *Learner Centered Education in the Namibian Context: A Conceptual Framework.* Okahandja, Namibia: NIED (National Institute for Educational Development).

Seminar 3. African indigenous knowledge

Introduction

The prompts in this seminar will help you identify the local ideas and practices that work against or support LCE. The main text pointed out the need to understand the workings of indigenous pedagogies in relation to LCE. However, we left the task of fully developing this understanding to this seminar.

Specific Tasks

Discuss the following questions.

1. Ngara (2007, p.8) asserts that African elites have promoted the compartmentalization and neglect of traditional African ways of knowing and "measuring success in life by how far one moves from one's indigenous culture." She also argues that many African teachers who are disdainful of traditional African knowledge and ways of knowing ignore students' talents and gifts learned through the community that might be seen as outside of the curriculum. Does your college curriculum include perspectives on indigenous African ways of knowing? If so, how is that perspective framed? Does your college curriculum view indigenous knowledge as something to build on and value? Or is there another perspective on indigenous knowledge? Explain.
2. Owuor (2007), in her article on integrating African indigenous knowledge into Kenyan education, makes some claims about indigenous knowledge and indigenous pedagogy. How does she describe these? Are there any connections that can be made between transmission modes of teaching and learning and indigenous ways of knowing? If so, what are they? Explain. Are there any connections that can be made between LCE and indigenous knowledge? If so, what are they? Explain.
3. Kanu (2007) argues for incorporating the concept of 'Sankofa' into education as a way of retrieving African values and practices from the past to expand education and make it more relevant to Africans. Is this concept consistent with what you know about LCE? Why or why not? Sankofa comes from the Mende people in West Africa. Do you know of any concepts similar to Sankofa? Do you think it is appropriate to include African values and ways of knowing in the training of teachers in a globalized world? Explain. What is the Ministry of Education's policy on incorporating African values in education? If there is such a policy, how is it translated into practice in classrooms? What is the role of the teachers college in this?

Suggested Reading

For this seminar it is helpful if you read the following articles:

Ngara, C. (2007). African Ways of Knowing and Pedagogy Revisited. *Journal of Contemporary Issues in Education.* 2 (2) p. 7-20.

Owuor, J. A. (2007). Integrating African Indigenous Knowledge in Kenya's Formal Education System: the potential for sustainable development. *Journal of Contemporary Issues in Education.* 2 (2), p. 21-37.

Kanu, Y. (2007). "Tradition and Educational Reconstruction in Africa in postcolonial and global times: The case for Sierra Leone." *African Studies Quarterly* 9, no. 3: [online] URL: http://web.africa.ufl.edu/asq/v9/v9i3a3.htm.

Seminar 4. Making sense of learner centered education within the context of your teacher education program

Introduction

This seminar invites you to reflect on your own teacher education program. The reflection here is not meant to be a mere contemplation on your program, but more as a tool to help you think about what changes you would like to see in your program to align it with LCE. Your reflections and responses are not expected to result in comprehensive plans for restructuring and revising your curricula, but to help you describe and explain the major challenges that you might face in recrafting your practice and programs.

Specific Tasks

For this seminar, please read Stuart, J. (1999). *Primary Teacher Education Curricula as documented: A Comparative analysis.* MUSTER. This comparative study of teachers' college curriculum and teaching in Malawi, Ghana, Lesotho, South Africa and Trinidad & Tobago found, among other things, that the teachers' college curricula and its implementation revealed that college curricula tended to follow a traditionalist approach with little adaptation to the local socio-cultural contexts. Read the excerpt below (p.18). Relate this example to what is happening in your college, or the context in which you work. Try to answer the authors' questions that are embedded in the text below. What are some other questions that these findings bring up?

> *An example from Malawi, where we have begun to look at the curriculum in action, illustrates one problematic area. Lecturers did not seem to relate the educational theories to Malawi generally, nor to the student teachers' own experience either at home or in school. It was particularly obvious in the unit on child development; many of the students are married with children, yet there was no discussion of whether these 'stages' correspond to their own understanding of bringing up children. For example, do Malawian children, in the village, engage first in 'solitary' and then 'associative' play, as European children are supposed to do, according to Piaget and others? What happens when 'the child becomes curious and asks questions' in a culture where children are not supposed to ask adults questions?*
>
> *It seems there may be two parallel discourses going on: a theoretical one largely drawn from Western conceptual frameworks and another about the kinds of teaching, learning and socializing experiences that go on in real communities, both home and school, which the trainees 'know' at a different, more practical level. It is the latter which trainees are likely to draw on when they enter the classroom. This brings up such questions as: how relevant is this part of the teacher preparation program? What understandings do the new teachers take with them into schools? What kinds of knowledge are being acquired here?*

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Owuor, J. A. (2007). Integrating African Indigenous Knowledge in Kenya's Formal Education System: the potential for sustainable development. *Journal of Contemporary Issues in Education. 2* (2), p. 21-37.

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Chapter 5

Curriculum

"…college syllabi appear both outdated and conservative, caught in an intellectual time warp."

Lewin and Stuart , 2003

In a synthesis of a cross national study examining teacher education programs (4 of them in Africa) Lewin and Stuart (Lewin & Stuart, 2003) found that college curricula are outdated, rarely integrate theory and practice, and make few attempts to relate advances in educational theories and strategies to local contexts. Furthermore, college curricula generally place little emphasis on student teachers' prior knowledge and experience, instead treating the future teachers as if they had little experience as students, parents, child minders, volunteer teachers, linguists, musicians, or community members. Some authors also argue that there are often inconsistencies between the curriculum and the reform oriented policies and programs promoting learner-centered education (Swarts, 2003).

This chapter is an attempt to help teacher educators develop an understanding of curriculum design and theories as they relate to LCE. The chapter will assume that teacher educators have knowledge of the processes of curriculum development in Africa and aims to be a gateway into the broader range of ideas about curriculum developed by educational and curriculum researchers as well as reformer-philosopher such as Paulo Freire and John Dewey.

College curricula in Africa are often developed at the national or sub-national level with some flexibility to interpret the curriculum at the college through tutor-designed syllabi and lesson plans. Many college tutors are enlisted to participate in the development of curricula and materials at the national level. However, few college tutors have backgrounds in curriculum development and design. This chapter is structured to provide descriptions of different perspectives on what constitutes knowledge, ways such perspectives influence curriculum, types of curriculum, and major curriculum theories. The seminars at the end of the chapter will prompt the participants to use these ideas to develop a critical understanding of the curriculum in their particular contexts.

"A coherent teaching philosophy is always accompanied... by a philosophy of knowledge"

Perspectives on Knowledge-Epistemological Perspectives

Rene Thom (1922-2002), a French mathematician, once said, "…whether one wishes it or not, all mathematical pedagogy, even if scarcely coherent, rests on a philosophy of mathematics" (Thom, 1973, p. 204). What Thom said about mathematics education is also true of teaching in all subject areas. A coherent teaching philosophy is always accompanied, whether one is aware of it or not, by a philosophy of knowledge. In other words, as teachers or a teacher educators and curriculum developers, you always have an epistemological perspective—epistemology being the branch of philosophy concerned with the nature of knowledge. It is important, therefore, to be aware of and be able to reflect on your epistemological positions.

Epistemologists ask, "Where does our knowledge come from?" To understand the importance of this question for a curriculum worker, recall the exposition on LCE in the last chapter. Imagine being a student in a classroom that implements LCE. In such a classroom, the source of knowledge for students is not only the teacher and the text; students are expected to solve problems and develop knowledge in the process. Clearly, a curriculum that responds to LCE will be based on a different set of ideas about the sources of knowledge than a curriculum that responds to a traditional mode of educating children. *What knowledge is and how it is acquired* become critical questions for the curriculum developers and teacher educators to pose. An understanding of the epistemology is important in guiding the development of curriculum materials as well as teaching and learning. Since this resource book is largely concerned with two different ways of educating children, the transmission mode and the learner-centered, we would like to discuss two epistemological perspectives related to these two modes: *positivism* and *constructivism.*

Positivism

A *positivistic* perspective on knowledge assumes that knowledge is separate from the knower. Knowledge is fixed and waiting to be discovered, as the human mind can only discover knowledge that already exists. John Dewey called the positivistic view of knowledge the "spectator theory of knowledge," because we can only observe the pre-existing reality according to this perspective; we cannot participate in knowledge construction (Dewey, 1960, p. 23; McEwan & Bull, 1991). What are the pedagogical consequences of such a view of knowledge? When knowledge is seen from a positivistic perspective, curriculum materials and teaching and learning also appear as focused on transmission of pre-existing knowledge or information. By careful explanations and paying attention, knowledge can be acquired by the student who is well prepared to receive it. How well the student receives the knowledge is reflected in the grade he or she receives. If knowledge is to be transmitted by the teacher and received by the student, then the curriculum tends to be consistent with a teacher-centered model of instruction and a traditional system of assessment that aims at assessing recall of received knowledge.

Constructivism as an Epistemological Position

Recall from the discussion in chapter 4, a *constructivist* perspective on knowledge regards knowledge as constructed through interaction with the environment, dialogue with others and reflection – all within culture and language. In the constructivist perspective, knowledge is created through a process of new information interacting with the prior knowledge and experiences of learners. Learners are then in a state of what Piaget calls *disequilibrium,* where this new knowledge creates some disturbance. Through dialogue, discussion, practice and reflection, the new knowledge begins to make sense in relation to the learner's previous knowledge and experience. In the process of making sense of the new information in relation to the previous knowledge, new meaning is created. Since every child is different, each child will have different backgrounds and experiences and, thus, will construct different meaning from new information. When viewed from this perspective, new knowledge is always being created.

As discussed below, two different philosophies of knowledge should lead to two different kinds of curricula. Table 5.1 shows an example of how this happens in the particular case of science education.

The theories of knowledge influence the curricula. In the table below, notice how a change in epistemological perspective entails a change in teaching practice. In the next section, we will describe the types of curricula that exist concurrently in any teaching situation, irrespective of its underlying theory of knowledge.

Table 5.1: Comparison-Education from a Positivistic and Constructivist Perspectives

Science Education From a Positivistic Perspective	Science Education From a Constructivist Perspective
Science is broken up into disciplines	Science disciplines are integrated
Science influences society	Science develops within a social context
Science teachers receive instruction in science separate from science education	Science pedagogy integrated with science content knowledge
Teachers, texts and references are authority	The prior knowledge and experiences of learners is a valuable resource as are teachers, texts and references
Theory	Theory and practice are integrated
Teachers are experts	Teacher is facilitator and co-learner
Lectures, notes and recipe format in practical activities are predominant modes of instruction	Teachers create a variety of opportunities in which students can learn including discussion, exploration, problem-solving and lecture.
Students are passive receivers of knowledge	Students actively engage in constructing knowledge
Students answer questions	Students question answers
Assessment is summative and objective	Assessment uses a variety of strategies to allow students to demonstrate what they know.
Assessment looks for the match between what was transmitted to the learners and what the learners are able to give back. Only one correct answer.	Assessment looks at what new knowledge the learner has constructed. Multiple correct answers.

“a curriculum that responds to LCE will be based on... a different set of ideas”

Curriculum **Types**

Posner (1994) identified five types of curricula ongoing at any one time, calling them concurrent curricula. He acknowledged that curriculum is not merely the documents that prescribe what to teach. Curriculum, when looked at broadly, has many aspects. These five main aspects are:

1. The *official curriculum* is the curriculum as written and documented in syllabi, curriculum guides, textbooks and other printed materials.
2. What the teacher actually teaches and the learning for which the student is tested comprises the *operational curriculum* (sometimes called *implemented curriculum*), which may or may not be completely consistent with the official curriculum.
3. The term *hidden curriculum* describes the subtle lessons that schools teach children about appropriate roles and behavior for people of different ages and sexes, who has the right to make decisions for whom (authority and power), and what kind of knowledge is most important or legitimate. These lessons are contained in the structure of the school itself, in formal and informal “rules” which guide teacher and student behavior and are communicated consciously and unconsciously both inside and outside the formal classroom setting. These institutional norms and values are not usually openly acknowledged.
4. Eisner (1985) used *null curriculum* to refer to subject matter that is *not* taught, and urged us to consider carefully why certain subjects are not taught and the basis for deciding what is and is not included in the official curriculum.
5. The *extra curriculum* is made up of all planned school experiences outside the formal subjects. This curriculum is typically voluntary and responsive to student interests, for example, sports teams or drama clubs.

Curriculum **Theories**

The field of curriculum consists of a great multitude of theoretical ideas. We cannot go over each one of them in this chapter, but will survey some of the main ideas without attempting to necessarily draw connections between them. For a teacher educator interested in knowing more about curriculum theory and practice, see the references at the end of this chapter.

A number of scholars have put forth theories on the purposes and organization of curriculum. This section summarizes the perspectives on curriculum theory by some of the more well known educators.

The Tyler Rationale

The dominant model for curriculum development in the West (and adopted throughout the world) is that proposed by Ralph Tyler from the University of Chicago in the 1940’s and 1950’s (Kliebard, 1970; Tyler, 1949). Tyler argued that to develop a rational curriculum one should ask the following four questions:

1. What educational *purposes* should the school seek to attain? (Aims and Objectives)
2. What educational *experiences* can be provided that are likely to attain these purposes? (Subject Matter or Experiences that Lead to Aims and Objectives)
3. How can these educational experiences be objectively *organized?* (Systematic Program Arrangement of subjects and objectives)
4. How can we determine whether these purposes are being *attained?* (Assessment and Evaluation of Students)

To understand the operation of Tyler’s rationale, consider how you may go about designing a mathematics curriculum for, say, grade 6. The first step would be to establish the objectives. Under the current standards based reforms, such objectives are usually statements about what the children will be expected to know and be able to do. Next, Tyler’s rationale would require you to imagine a set of experiences that, once provided, would enable students to acquire the knowledge and skills set in the statements about the objectives.

For example, imagine a mathematical task in which students are required to compare and order positive and negative fractions, decimals, and mixed numbers and place them on a number line. As such, then, the curriculum developer will be required to figure out a set of experiences and activities that must be provided to the students in order to help them accurately compare, order, and place the numbers on a number line. However, this would not be enough. The next step would be to ensure that students understand the concept of rational numbers, have learned to distinguish between fractions, decimals, and mixed numbers and have already acquired the concepts needed to compare and order numbers. This suggests sequencing and ordering the curricular experiences for the students in response to Tyler’s third question. Finally, a number of assessment instruments would need to be designed in order to assess whether or not the students had acquired the knowledge and skills set forth in the objectives.

Influencing the whole process of Tyler’s thinking about the organization of curriculum are the fields of educational psychology, educational history and philosophy. Tyler’s model emphasizes product and behavioral objectives in curriculum design. The Tyler Rationale claims to be objective and impartial, because it is a method or procedure for developing curriculum rather than a description of what should be taught and how. However, critiques of Tyler argue that the curriculum from this perspective does not consider the backgrounds and experiences of the learner (socio-cultural context is given little consideration) and is teacher-centered in that the teachers are focusing on meeting the behavioral objectives rather than focusing on what learners really learn. Tyler’s approach also purports to be a technical one devoid of bias when, in reality, curriculum is always politically determined.

The Tyler approach to curriculum has been adapted in many countries around the world and is characterized by curricula that emphasize content to be acquired by defining behavioral objectives.

John Dewey and Progressive Education

John Dewey (1859-1952) was an American philosopher and educator sometimes considered the founder of progressive education. His influence on education is still felt around the world today.

Dewey thought that education should prepare learners, particularly primary and secondary school learners, to be thinkers and problem-solvers rather than storehouses of knowledge. He believed that students learn best in social situations and through experience. The teacher, according to Dewey, was someone who could provide meaningful learning experiences in and out of the classroom that would help students develop communication and other social skills, problem-solving abilities and habits of mind. He felt that the whole child, including the affective domain of emotions, should be addressed in education. He promoted the idea of education as preparation for citizenship and that democracy should be part of the school experience in order to prepare learners for a democratic society. As a university professor in pedagogy at the University of Chicago, he and his wife established an experimental school to test out his ideas.

Freire’s Emancipation Approach

In the 1960’s Paulo Freire, a Brazilian educator, developed a method for teaching illiterate peasants in the poorest areas of Brazil’s cities how to read and write using what is sometimes called an emancipation approach. According to Freire, curriculum’s main purpose is to stimulate and sustain critical consciousness of the (adult) learners. According to Freire, in order to overcome the perceptions that many poor people have of themselves as worthless, inferior and helpless in relation to the dominant culture, curriculum and learning should teach people to overcome inferior attitudes and increase self-awareness and human responsibility. The job of critical education, thus, is emancipation through self-awareness. The idea of self-awareness and critical reflection and its role in professional teacher education is taken up in more detail again in chapter 8.

Curriculum, according to Freire, should enable learners to pose and solve problems within their particular socio-economic contexts. According to this perspective, groups of educators visit a community and work with its representatives to observe how the people live in order to understand the community’s

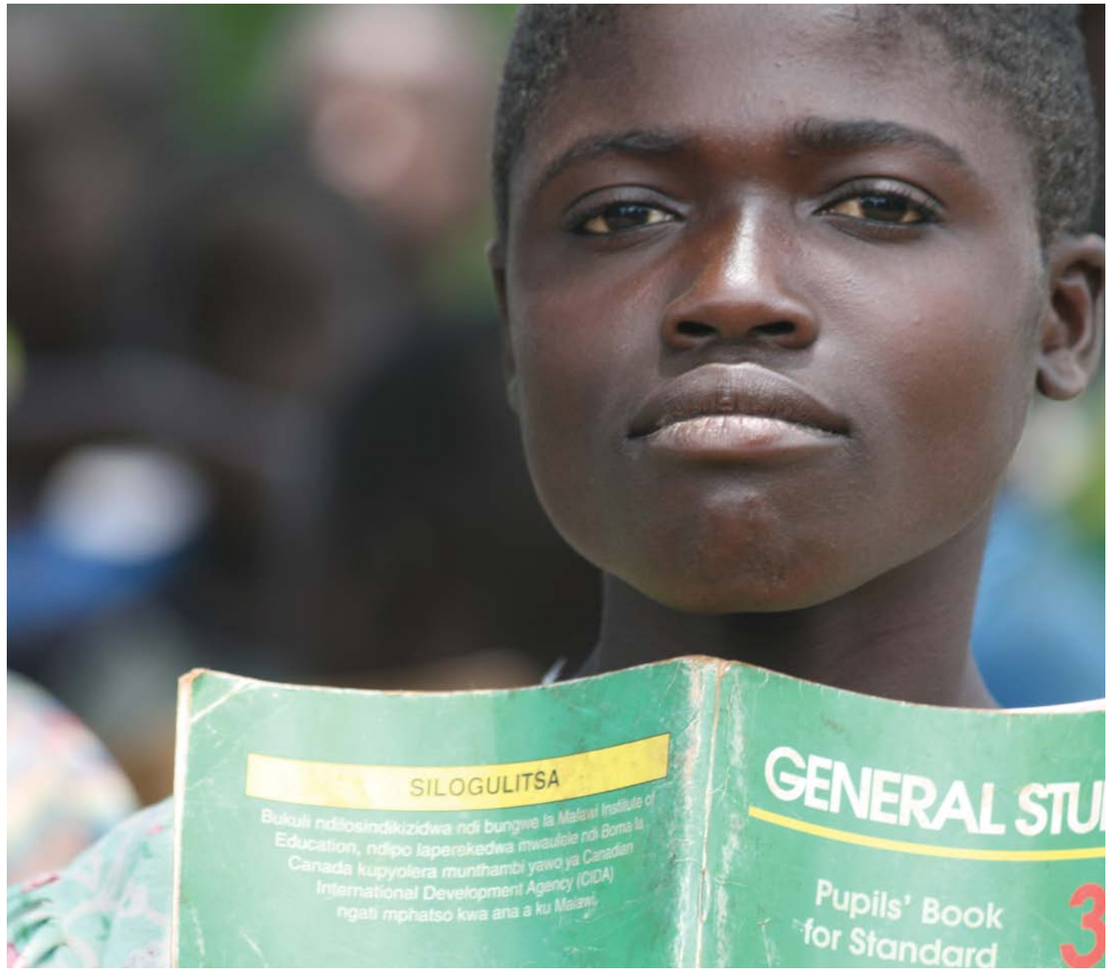
specific context. This team of educators and community representatives develop themes for literacy training such as. alcoholism, poor sanitation, and lack of transportation.

These themes are brought to the community in the form of concrete curriculum materials. Discussions, dramatizations and reading are taught through the use of these themes. The questions raised in the process of naming the world and learning lead to consciousness-raising and changing of the status quo. Curriculum, according to Freire, is transformative in nature as those being educated understand inequalities in the world and are empowered to make changes.

Curriculum in African Indigenous Education

In contrasting western knowledge systems with indigenous knowledge systems, Madjidi and Restoule (2008) suggest that curriculum should include indigenous knowledge and ways of knowing as a means for appealing to the personal dignity of students and the community as well as providing opportunities to validate their lived experiences. Bao (1989) identified the following as characteristics of indigenous education:

1. undifferentiated from other spheres of human activity, involving almost all members of the community, who were "simultaneously educating and being educated"
2. relevant to the needs of the learners and society
3. functional since "learning could and was immediately applied"
4. community-oriented, using locally available materials and the language of the people as the medium of instruction



At the same time, indigenous education has several limitations. It was, and generally remains, undocumented. Since it was prescribed and restricted to locally available knowledge, it was not responsive to individual needs and interests and, therefore, did not always engage the learner's interest. It was not enriched by new ideas or research and lacked the feedback essential for educational progress and growth of knowledge (Pursley, 1995).

Summary of Curriculum Theories

There are a number of educators and theorists who can be associated with three main schools of thought on curriculum theory. This section has highlighted some of the influential thinkers that have contributed to educational theory and practices. A summary of the three main stances on curriculum is presented in Table 5.2. (Some authors argue for more than three main approaches, the fourth most common approach being postmodernism.)

Table 5.2: Perspectives on Curriculum

	Perspectives on Curriculum		
	Conservative (Academic) Represented by Tyler	**Progressive (Humanistic, Child-Centered) Represented by Dewey**	**Radical (Marxist, Libratory, Social Reconstructionist) Represented by Freire**
Principles and Background	Focus on knowledge acquisition; knowledge is known and can be transferred to learners; tries to give learners as much knowledge as possible; knowledge-centered curriculum	Child-centered; emphasis on cognitive and affective domain; child learns best through experiences in the world; participatory and democratic; child as an individual interacting with society; knowledge is constantly changing	Students should be exposed to issues and problems in society, so they can be critical and make positive changes; schools as they are conventionally set up reproduce inequalities in society (rich get richer, poor have few chances to get ahead); radical curriculum transforms individuals who can change society
Purposes	Transfer of cultural heritage through schooling; common culture unifies society; accumulation of cultural capital by individuals benefits society; better communication through common knowledge and thinking	Development of the whole child benefits society; develops healthy attitude of child towards others, self and society; child learns how to think and solve problems; prepares pupils for a changing world	Students become aware of inequalities and how to change them; students understand their own position in society; students become critical so as to change the world
Organization	Focus on basic skills; find ways to increase amount of knowledge students gain; single not integrated subjects; experts select curriculum content; focus on academic subjects	Starts with the child's interests; emphasis on intrinsic motivation to learn; subjects are integrated; thematic approaches allow pupils to better relate to knowledge	Students are active participants in their own learning, as opposed to the 'banking concept" of education; the world of the learner is the basis of knowledge construction; pupils engage in dialogue
Criticisms	Content does not keep pace with social change; not relevant to learners' interests; knowledge selection by experts reflects dominant groups' interests; doesn't attend to affective domain of learners; not adequate preparation for life-long learning	Children learn different things in different places; curriculum too open-ended to create common understanding; loss of cultural heritage	Difficult to put into practice; knowledge is neither sequential nor organized; few clear methods of how to teach; schooling cannot alter fundamental class structure of society

Seminars

Seminar 1. Analysis of college curriculum

Introduction

In this chapter, a variety of ideas about curriculum have been presented. Through this seminar, you are encouraged to use those ideas to examine the curriculum of your college.

Specific Tasks

Think about the "curriculum" in the college in which you work. The following prompts may help you in presenting your reflections:

1. How closely does the operational curriculum follow the official curriculum? If they are not very similar, can you explain why? Do you think it is important for the operational curriculum to follow the official curriculum? If so, which one do you think should be changed? How could this change take place?

2. Can you identify some "lessons" student teachers learn that are not part of the official curriculum and might be considered hidden curriculum? How do you perceive these lessons derived from the hidden curriculum? Are they positive? Why? Are there negative lessons? Explain.

3. Some argue that the socialization that takes place in pre-service teacher education institutions is a powerful shaper of the beliefs and practices of future teachers. The norms and procedures, the types of relationships between students and teacher educators and others, ways of communicating, expectations about behavior and performance may all be part of the socialization process of a teacher training institution. What types of socialization go on at your college that might be considered part of the hidden curriculum? Do these socialization factors have a positive effect on student development? Give examples and explain. Are there some negative aspects of the hidden curriculum at your institution? Explain. Are there aspects of the hidden curriculum at your college that if made explicit to students (instead of hidden) could benefit students more than if these aspects remain hidden?

4. Are there subjects or topics you consider to be important which are not currently included in the curriculum? Can you suggest reasons why they are excluded? What is the impact of the fact that these things are not taught (null curriculum)?

5. Are there extracurricular activities offered in the schools? How is the content of this curriculum determined? What is the relationship of extracurricular activities to the official curriculum? What is its relationship to the operational curriculum?

Seminar 2. Understanding Paulo Freire

Introduction

Paulo Freire's book *Pedagogy of the Oppressed* gives a perspective on curriculum that is fundamentally aligned with progressive curriculum reforms. Like Dewey, Freire is against the transmission model of teaching and learning. Freire promotes a curriculum deeply rooted in the social, cultural, and economic contexts of disadvantaged and oppressed communities.

Specific Tasks

Before this seminar, read Paulo Freire's *Pedagogy of the Oppressed.* If it is not possible to read the entire book, read Chapter 2. In a group or with a group of colleagues, describe your understanding of what Freire means in each of the following statements. Apply your understanding of his meaning to your own socio-cultural context.

Quotations from Freire's *Pedagogy of the Oppressed*

- Freedom is not an ideal located outside man; nor is it an idea which becomes myth. Rather it is the indispensable condition for the quest for human completion.

- [The oppressed]…call themselves ignorant and say the 'professor' is the one who has knowledge and to whom they should listen. "Why don't you," said a peasant participating in a culture circle, "explain the pictures first? That way it'll take us less time and won't give us a headache."

- A careful analysis of the teacher-student relationship at any level, inside or outside the school, reveals its fundamentally narrative nature. This relationship involves a narrating Subject (the teacher) and patient listening objects (the students)… Education is suffering from narration sickness.

- The "banking" concept of education [is one] in which the scope of action allowed to the students extends only as far as receiving, filing and storing the deposits.

- Authentic liberation—the process of humanization—is not another deposit to be made in men. Liberation is a praxis: the action and reflection of men and women upon their world in order to transform it.

- Liberating education consists in acts of cognition, not transferals of information.

- Dialogue is the encounter in which the united reflection and action of the dialoguers are addressed to the world which is to be transformed and humanized, this dialogue cannot be reduced to the act of one person's "depositing" ideas in another, nor can it become a simple exchange of ideas to be "consumed" by the discussants.

- Founding itself upon love, humility, and faith, dialogue becomes a horizontal relationship of which mutual trust between the dialoguers is the logical consequence.

- Any situation in which some individuals prevent others from engaging in the process of inquiry is one of violence. The means used are not important; to alienate human beings from decision-making is to change them into objects.

- Conscientization refers to learning to perceive social, political and economic contradictions, and to take action against the oppressive elements of reality.

Summary activities for this seminar could include:

1. Develop a chart which shows how Freire views the meanings of *Oppression and Liberation* in the educational context.

2. Explain what Freire means by *dialogue* and what it looks like in the teachers' college.

3. Describe the ideal student-teacher relationship according to Freire.

Suggested Reading

Freire, P. (1970). Pedagogy of the Oppressed, trans. *Myra Bergman Ramos. New York: Continuum.*

Seminar 3. Analyzing the college curriculum

Introduction

This seminar is designed to help you use the ideas in this chapter as an analytic frame to examine the college curricula.

Specific Tasks

1. After reading each of the three examples demonstrating different curriculum theories, review the curriculum summary chart with your colleagues. For each of the examples in the readings, explain how they fit into each of the curriculum theories.

2. Does your college curriculum fit into any of the three theories? Are there elements of different theories in your college curriculum? Where would you place your college curriculum on the chart?

3. As a teacher educator, where would you place your own beliefs about curriculum? Conservative, Progressive or Transformative?

4. As a teacher educator, where would you place yourself in terms of your practice (what you actually do in the classroom)? Is it the same as your beliefs? Explain.

Suggested Reading

Craig, H., Kraft, R., and du Plessis, J. (1998) *Teacher Development: Making an Impact.* Washington, DC: World Bank and AED/USAID (p. 77-91).

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Chapter 6

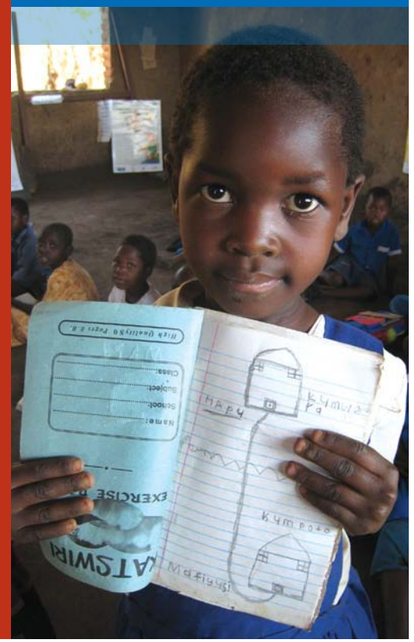
College Teaching and Learning

"Teaching has not improved because teacher educators, frankly, are limited in their pedagogical abilities…"

Howey, 1996

"…our teaching of teachers is frankly, often mind blowingly boring."

Moon, 2007



The first quotation is from a researcher on teacher education looking at teacher education programs in the USA in 1995. There is some evidence that this holds true for teacher education in other parts of the world as well. While the rhetoric of Learner Centered Education is pervasive, even in Teacher Colleges, the practice of teaching continues to be traditionalist in its approach (Kanu, 2007), relationships between student teachers and teacher educators tend to be formal and hierarchical, pedagogy is focused on the transmission of knowledge (Stuart and Tatto, 2000, p. 510), a narrow set of strategies tend to be implemented (CHANGES2, 2006), and reforms have not kept pace with the reforms being promoted in primary schools. As has been discussed elsewhere in *Professional Learning Communities in the Teachers' College*, there are numerous reasons put forward to explain the lack of change in teachers' colleges.

Most authors argue for a change in the practices of teacher educators; faculties of education at universities and teachers' colleges must become models of good pedagogy. This chapter provides some practical ideas for implementing more experiential, participatory and student-centered approaches in the college classroom. It follows the chapters on Learning to Teach, LCE and Curriculum, and it builds on the principles, theories and approaches in those chapters.

The chapter does not necessarily follow the structure of an essay. At the risk of sounding somewhat fragmentary, it exhorts teacher educators to attend to the gaps between the rhetoric of reform and actual practices within teacher education programs, emphasizes the need for a safe environment within which reform ideas can be implemented, and provides some practical participatory methods that teacher educators can use in their classrooms to support LCE.

“a secure environment for learning allows student teachers to try out new ideas and ways of thinking and expressing themselves”

Pedagogical Practices of Teacher Educators: **Gaps** between **Rhetoric** and **Practice**

In Zambia, a series of classroom observations to understand curriculum implementation at the teachers’ colleges revealed that “…only a few tutors were skilled at using dialogue and generative techniques of classroom interaction,” and the range of teaching methods used was narrow (CHANGES2, 2006. P.16). The MUSTER studies of teacher education in Ghana, Malawi, Lesotho, South Africa and Trinidad and Tobago concluded in 2003 that even though the college curricula promote active pedagogical techniques such as project work, field trips, and group work, the predominant mode of teaching in teachers’ colleges remains teacher-centered, direct instruction. This was manifested in student teachers being “*told* about how to handle primary classes, and occasionally *shown,* as when the tutor did a demonstration lesson, or showed a video, but very seldom did they actually *experience* the kind of student-centred methods that were preached” (Lewin & Stuart, 2003, p. 76, emphasis supplied).

The evidence suggests that teacher educators’ classroom practices are not always aligned with the methods promoted by reform proposals. The problem of lack of alignment between rhetoric of reform and practices in teacher education classrooms cuts across different national contexts. Since improvement in teacher education is contingent upon its alignment with the fresh LCE based proposals, the quality remains static. As Howey (1996) puts it:

> *Teaching has not improved because teacher educators, frankly, are limited in their pedagogical abilities, and no major pressures exist to change the nature of their teaching. Fundamental problems of [teacher educator] pedagogy, underestimated by most and ignored by many in the teacher education literature, are nonetheless manifest everywhere. (Howey, 1996, p. 21)*

Previous chapters have presented major ideas that teacher educators are encouraged to articulate in professional learning communities and networks in order to improve their practice. This chapter is about practice. Beginning with an emphasis on theories of adult learning below, this chapter will go over some practical ideas about the kinds of activities that teacher educators can use in their classrooms.

Adult Learning **(Andragogy)**

As adults, student teachers learn differently from primary or even secondary learners. All student teachers come to class with a wealth of prior knowledge and experience. They also come with skills for learning. Most have had some experience with college subjects through their own schooling or their interests outside of school. Many student teachers are parents, have had extensive child-minding experience, and have been teachers in the context of the home and community. Some have had paying jobs; many have skills of organizing, communicating and production, and increasingly many student teachers have computer and internet skills. Awareness of this in teaching and learning demands that student teachers’ experiences, knowledge and opinions are valued and play a central role in the development of new knowledge, skills and attitudes. Rather than ignore prior knowledge and experience, teacher educators should view it as a basis for developing opportunities to make meaning of new concepts and skills. Furthermore, understanding principles of andragogy, or adult learning, can help make teacher education more effective.

According to Knowles, Holten and Swanson (1998, cited in Fidishun, undated) the principles of adult learning (also known as andragogy) can guide the teaching and learning as well as curriculum of adult education, including teacher education. These principles of adult learning are:

- Adult learners are driven more by internal motivation than young learners.
- Adult learners need to know the reasons for learning something and how learning it will be useful to them.
- Adult learners are more able to be self-directed learners than young people if given the right amount of support.
- Adult learners prefer to have a sense of agency in their own learning and can resist attempts by teachers to force new knowledge and information on them.
- Adult learners tend to feel more comfortable about learning when they have a sense of control over what they are learning and how.

For more effective teacher education, it is important that principles of adult learning theory become integrated into the approaches of teacher educators. This means curriculum and instruction at the college should build on the prior knowledge and experiences of student teachers. It should also consider that through the apprenticeship of observation, some unlearning will have to be done by student teachers as they let go of some ideas about teaching and learning that may be unhelpful when trying to learn more participatory methods. Adult student teachers should understand educational theory and practice rather than simply be told what to do. By understanding theory, they gain a better understanding of why particular educational strategies should be used. Involving student teachers in planning lessons and offering choices on what and how to study affords student teachers control over their own learning.

Creating a **Safe** and **Supportive Classroom** Environment

Classrooms and other learning spaces should provide a safe and supportive environment for student teachers to learn, share ideas and grow. This is true for adults and children. In the context of the teachers’ college, where many student teachers are given more freedom and responsibility for their own learning, a secure environment for learning allows student teachers to try out new ideas and ways of thinking and expressing themselves.

Elements of a safe and supportive classroom

- Opinions are welcomed
- Questions are welcomed
- Respect for others
- An absence of ridicule, sarcasm and insults from anybody
- Tutor is a learner
- Tutor is a facilitator
- Tutor is generous in sharing knowledge
- Learning is highly valued
- Expectations for achievement are high for all

A safe and supportive environment should not be interpreted as one devoid of challenges. It may be important to intellectually challenge the student teachers, but it is also equally important that solutions to these challenges expressed by student teachers are not subjected to ridicule, sarcasm, or insult. A safe environment is one in which students have no social obstacles in the way of addressing the problems posed to them.

LCE cannot be implemented without creating a safe environment. If you recall, the reform approaches advocate a shift from teachers’ role as a transmitter to facilitator of knowledge. Such role can only be constituted in a socially safe and supportive environment.

Teaching within a **Pedagogical Milieu**

As teacher educators, *how* you teach matters as much as *what* you teach. There is payoff for using the same teaching practices in the college classroom that student teachers will later be expected to understand and adapt in their own teaching. Using a variety of methods, making the methods explicit to student teachers, reflecting on those methods in the college classroom, and giving student teachers opportunities to adapt and practice those methods is what might be called *teaching within a pedagogical milieu.* Student teachers form beliefs about good teaching from their experiences. The teacher education program would be more meaningful if the prospective teachers attending them were made to experience the pedagogical choices expected of teachers in their future teaching. To enable such experiences, teacher educators might:

- Name, describe and discuss the methods used in the college classroom.
- Point out aspects of teaching methods that might be difficult or need preparation prior to the lesson.
- Ask student teachers to reflect on the methods being used. The idea of *reflective practice* will be taken up in more detail in Chapter 8. Here, it suffices to note that reflection is a thinking process aimed at becoming aware of one’s own professional actions in order to critique and improve them. It may involve, but is not limited to, raising questions such as: What did you think about the methods used in this class today? What aspects of the methods did you like? What didn’t you like? What are the strengths of the method? What are the weaknesses of the method? How is the method learner-centered? How was your participation? Was there full

“Group work prepares us for team work.”

or partial participation? How might the method be adapted for another topic? Do you think it is easy to use? What kinds of preparation are needed to use this method?

- Give student teachers opportunities to adapt and practice the methods (give assignments that include adaptation of the method to primary learners, ask student teachers to demonstrate the methods in the context of the subject being taught, or ask for peer review and reflection of the methods being practiced by student teachers.)

Some **Participatory Methods**

This section provides some examples of the types of activities that could be included in college classrooms across subjects. The methods are based on the principles of adult learning, constructivist learning, progressive and transformative education, and the premise that modeling of these methods and having student teachers participate in and reflect on these methods will foster improved understanding and classroom practices of student teachers. Many of the methods described here are even used in colleges today, yet may not be fully utilized as learner-centered techniques.

Group Work

Where is learning located? Who learns? Is learning an attribute of individual or a group? We learn as an individual, but we cannot make that learning visible without expressing it in a social context. Making learning visible also involves expression, reasoning and justifying one’s conjectures about a problem situation to one’s peers. So, while we learn some things as individuals, it requires a group to solidify what we have learned. You must have experienced the ways in which your understanding is made more robust in the process of explaining something to someone other than yourself. This is just part of the reason why working in groups may be important. The other part is the fact that we live in a world in which societies and economies are run collectively by the actions of many individuals. The individual needs to learn to work in a group in order to be prepared for a society that requires working in large and small teams of people. *Group work prepares us for team work.*

Thus, for most of the reasons given above, group work has become the default LCE method for teacher educators. Good group activities are usually developed around problems that cannot be solved by individuals and require division of labor among more than one individual. While group activities can certainly be opportunities for student teachers to generate new ideas, solve problems together, critique and analyze issues as a group, group work has often been found to have inconsistencies between the espoused LCE method and the actual practice within the group. For example, Stuart (1999, p. 19) notes that in Ghana ‘students discuss in groups,’ but then the book then lists all the points they ‘should come up with.’ In other words, there is a transmission of knowledge model within an apparently constructivist teaching method. In Namibia, where LCE had been in place for several years at teachers’ colleges, Storeng (2001) found that teacher educators’ implementation fell short of its intended participatory purposes as this quote from a teacher educator suggests, “Lecturers just give group work, while students discuss private thing” (Storeng, 2001, p.77).

To ensure that group work does not become “a way for teachers to escape their educational responsibilities … through meaningless group work that recycles ignorance” (Dahlstrom, undated, p. 39), teacher educators should use group work for more than the recall of information and reproduction of knowledge transmitted by the teacher.

Student teachers working in groups benefit from the exchange of ideas, discussion, dialogue, debate and multiple perspectives of participants. Expressing one’s opinion, sharing knowledge, and challenging each other’s assumptions and beliefs all move student teachers to new levels of knowledge. Assigning student teachers to work in groups in order to recall knowledge does not take full advantage of the learning potential of a group.

Good group activities provide a balance between providing student teachers with something challenging and giving them enough support. Support to groups from the teacher educator can help the group stay on track, provide them with new insights, clear up misconceptions and provide suggestions and guidance. Too much direction can be as unhelpful in terms of learning as no support to the group at all. Some questions to ask yourself when designing group activities are listed below.

- What other qualities of good group work can you come up with?
- What is the best size group for this activity to ensure full participation by students?
- Do I want students to recall knowledge? If so, group work may not be the best method.
- How do I expect every student teacher to participate?
- What kind of instructions shall I give so that all understand the assignment?
- What kinds of responses, outcomes or ideas do I expect to come out of the group? What are the aims of the group work?
- What prior knowledge and experiences do the student teachers bring to this activity? Am I challenging them to generate new ideas or concepts?
- How might I expect to provide them with support?
- Is there enough time allocated for the group activity?
- Do the student teachers have the appropriate materials and resources for the assignment?
- Will group work be assessed? Will participation in the group be assessed? Will the group product be assessed? How?

Brainstorming

The term *brainstorm* refers to the flurry of cerebral energy that comes from lots of minds working together. It usually results from free thinking around a particular topic. In brainstorming, all answers are accepted and written down. No critiques of the suggestions are provided during brainstorming. The idea in brainstorming is to get as many ideas out as possible. Usually this freedom of thought and expression helps new ideas emerge.

Brainstorming is not an appropriate teaching technique when students are asked to recall something, analyze something using a given procedure or come up with an application of a concept or skill. It would be inappropriate to ask students to brainstorm the kinetic theory, because this theory is well defined in textbooks and other resources. It would be appropriate to ask students to brainstorm ways of communicating with parents and community members around issues of circumcision and HIV/AIDS, because there can be different ways of communicating depending on the local context and circumstances.

Fertilizing Classroom Communities with Ideas from Outside

Ideas from outside can take the form of occasionally inviting people working in different contexts. Such guest speakers can be very useful in supplementing classroom facilitation. In addition to bringing specific expertise, speakers offer variety in presentation style which can be a nice change of pace for student teachers. However, utilizing guest speakers requires preparation. First, be sure that you know what guest speakers will talk about and what views they will share. If you spend much of the term working with student teachers on the need to teach HIV education in schools, and a doctor who specializes in treatment of HIV comes to your class and tells your students that they should not talk about HIV to young people, this can have a detrimental impact on the attitudes of student teachers. Even though the doctor is not an expert in education, student teachers might listen to her because of her high status. It is good to have a discussion with the guest speakers well ahead of the class to confirm what the speakers would talk about and ensure their views are in line with those of the college and yourself. Even with proper preparation, there may be cases when guest speakers say something incorrect, misleading or controversial. It is up to you to address this tactfully while the speaker is there or to wait and critique the presentation after the speaker has gone. Controversial speakers can be a good opportunity for opening up dialogue among student teachers. It is helpful, however, if the teacher educator is prepared for what the speaker might say.

It is also helpful to discuss an upcoming guest speaker with the student teachers before the guest speaker arrives. Tell them

why the guest speaker is coming, what she will discuss and invite student teachers to start thinking of questions to ask. Be sure to ask the guest speaker to allow plenty of time for discussion with the student teachers.

Guest speakers can offer alternative perspectives of subjects and topics from the local community or beyond. They can also stimulate thought in new ways for student teachers. Ensure that student teachers are prepared for the guest speaker and that they are ready to engage in questions and dialogue with the speaker.

Creating Space for Dialogue

According to Paulo Freire, dialogue is an important tool in developing critical consciousness. What does dialogue have to do with teacher education? True dialogue results in transformation of those engaged in it; it is not unidirectional. In dialogue, all parties are actively engaged in listening, questioning, clarifying, debating, describing and analyzing. New ideas and knowledge are created. The participants are changed as a result of the dialogue. The Freirean sense of the meaning of dialogue moves beyond mutual *telling* to one of generative meaning-making.

Situated Cognition and Cultural Tools

The use of cultural tools in teaching allows teacher educators to learn within their socio-cultural context and therefore have some mental hooks on which to place new knowledge. Cultural tools could include, song, dance, metaphor, rhyme, role play, music, drama and games.

Information Communication Technology

Using computers, the internet, CD-Roms, DVDs and other media should be common place in teaching at the college level. In resource-scarce contexts, access to computers and the internet may be limited. With improvements in internet speed and access in Africa and the decreasing price of computers, the use of ICT in preparing teachers will take on an enhanced role. Many teacher educators have not fully taken advantage of these media in their teaching, and some are unskilled in their use. It is important to update your knowledge in this area, as it is a rapidly evolving vehicle for communication and learning.

Many student teachers may be more skilled in the use of ICT than teacher educators. You can capitalize on this by having student teachers lead groups and share their knowledge with others, including their teacher educators!

Increasingly, there are more media produced by Africans, addressing African issues that can be used in teaching. There is skill required in using media, and it is important to prepare ahead of time by viewing the material yourself, making relevant connections between the media and the college curriculum and developing relevant and engaging activities and questions for follow up. It is important to be prepared, use time wisely and get as much out of the film or video that you can. Here are some tips for using media in teaching:

- Before viewing the media, provide student teachers with an introduction to the film or media. In some cases you may ask them to look for certain things or follow certain characters prior to seeing the film.
- At the end of the media, facilitate when it is fresh in the student teachers' minds. You can use a funnel approach to the discussion by starting the discussion out with broad question to get people's reactions. You might ask, 'So what do you think?' or 'Any reactions?' Let people express their feeling and thoughts. Then get more specific as you go along, getting to connections between the curriculum and the media.

Structure and Timetabling

The way in which college courses are structured and timetabled can have an impact on the quality of teacher education. In some colleges, student teachers stay in one classroom for most of their classes while teacher educators move to the classroom, rather than the student teachers moving to specialized rooms for each class. Many colleges lack enough space for rooms to be allocated (and locked) to one subject area instructor. Science laboratories may be designated for science lessons, but it is rare to see language arts or social studies rooms maintained and arranged by one or two instructors with all of the materials for that discipline. Another reason for the lack of designated rooms is rigid timetabling that keeps student teachers in one room for most of their classes, resulting in teacher educators moving around with their books and materials to meet the students. The use of block timetabling or other creative ways of grouping teaching time and classes are infrequently used, but could be better exploited to improve program quality.

Concluding Notes

As demands are made on teacher educators to prepare teachers for more learner-centered classrooms, the pressure on teacher educators to improve their own practice also grows. Teacher educators can expand their practice in the classroom towards practices that are more consistent with LCE through experimenting with some of the strategies discussed in this chapter. The discussion of these strategies was not meant to be prescriptive. You can develop your own strategies, plan and implement them, and then reflect upon whether they help constantly refine your professional practice in accordance with its goals.

Seminars

Seminar 1. Examining beliefs and practices as teacher educators

Introduction

This seminar is aimed at assisting individuals to reflect on how they view their own strengths and weaknesses in the classroom as well as their beliefs about what *good teaching* is for future teachers.

Specific Tasks

1. Develop an individual self assessment tool that helps teacher educators at your institution identify their own beliefs and practices as a teacher educator. A self assessment tool might look like the example below. Adapt it to your own context.

   For each of the following statements write true or false as it reflects your views and practices as a teacher educator. When you are finished, discuss your responses to each statement with a group of colleagues. Discuss how your beliefs influence your practice as a teacher educator and give examples.

2. In a study of teachers' colleges in Lesotho, Malawi, Ghana and Trinidad and Tobago, Stuart (2002) found that:

Tutors everywhere are aware of the recommended shift to 'learner-centred' teaching, on which modern primary curricula are supposedly based. They pay lip service to this, in that they teach their students about participatory and active learning methods. But very few of them appeared to be able to put these into practice in the college classrooms. (Stuart, 2002, p. 375)

- What are the reasons that Stuart found in those colleges why learner-centered teaching was not practiced by college tutors?

- As college tutors, do you practice learner-centered methods in your classes? Explain. Do you see any similarities in what Stuart found at colleges of education and your own practice? Explain.

Statement	T/F
My job as a teacher educator is to provide as much information as possible to student teachers. This means that I don't have time for practical activities, because I have to 'download' so much information.	
I like to give test questions that surprise student teachers. Often, I provide questions on topics that were not covered in the unit under study. Student teachers should not feel too good about what they know. They can get overly confident.	
I believe more in 'covering' the curriculum than 'uncovering' the curriculum.	
Our status as teacher educators means that we cannot say "I don't know" to student teachers.	
Learner-centered education means that students should find things out on their own and present their findings to other students.	
As a teacher educator promoting learner-centered education, I should not give out information as that is considered 'teacher-centered.'	
Group work and other activities are a waste of time. I need to cover the curriculum.	

Suggested Reading

Moon, B. (2007). *Keynote Presentation to the 12th Cambridge International Conference on Open and Distance Learning.* New Hall, Cambridge.

Stuart, J. (2002). College Tutors: a fulcrum for change? *International Journal of Educational Development.* 22 (2002) 367-379.

Seminar 2. Principles of adult learning

Introduction

Understanding principles of adult learning and applying these principles to college teaching can have a positive impact on student teacher learning and teacher educator effectiveness and satisfaction. To understand adult learning in more depth, read the suggested article and carry out the specific tasks with some colleagues.

Specific Tasks

Read the article by Fidishdun on adult learning and hold a discussion with colleagues. Here are some guiding questions:

1. Summarize the demographics of the students at the college in chart form. Some characteristics of the student body that you may want to summarize are:
   a. % male, % female
   b. Average Age
   c. Age Range
   d. Average number of years in workforce prior to college
   e. Average number of years as a teacher prior to college
   f. % Married
   g. Average number of children of those who are married
2. How would you characterize the way that teacher educators view student teachers? What examples can you give that shows this characterization? Is the way teacher educators view student teachers consistent with principles of adult learning? Explain.
3. Which principles of adult learning are applied in your teaching? Give examples. Is there any way that principle could be strengthened? Explain.
4. Which principles of adult learning are not applied in your teaching? How can you explain that? Do you think it is worthwhile to consider trying to apply those that you do not now apply? If so, how might you apply them?

Suggested Reading

Fidishdun, D. (undated) *Andragogy and Technology: Integrating Adult Learning Theory as we Teach with Technology.* Malvern, PA: Penn State Great Valley Graduate School of Professional Studies.

Seminar 3. Teaching within a pedagogical milieu

Introduction

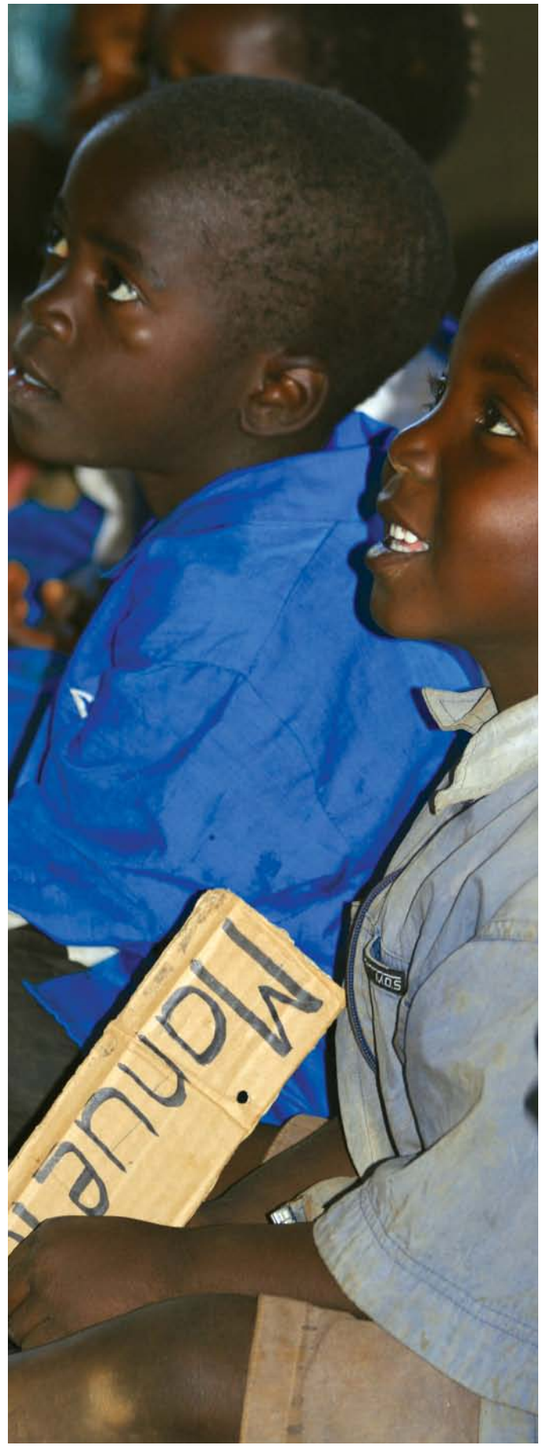
Make a plan with a colleague to emphasize teaching within a pedagogical milieu in one of your classes. Either team teach, or one teach and the other observe, especially for aspects of teaching within a pedagogical milieu. Some questions for reflection after the lesson might be:

1. What methods were used in the class?
2. Were those methods made explicit to the student teachers? How?
3. Did the student teachers have a chance to ask questions, make comments or reflect on the methods used? If so, how did they perceive the methods?
4. Were student teachers asked to apply or adapt the methods to primary lessons? If so, how was this structured?
5. What were the weaknesses in the lesson in terms of teaching within a pedagogical milieu? How might the lesson be strengthened in this regard?
6. What were the strengths of the lesson in terms of teaching within a pedagogical milieu?
7. Is it possible to teach within a pedagogical milieu all the time as a teacher educator? Explain.

Seminar 4. Expanding classroom teaching practices

With a colleague or group of colleagues, read through the list of teaching activities in Appendix A. Discuss the following:

1. Add other activities to the list that you or your colleagues use.
2. Discuss those activities that are listed that you were unaware of. Research those methods in your college library, internet or by asking local primary teachers or in-service teacher trainers about them.
3. Which of the methods in the chart do you use in your classroom?
4. How often do you use group work? How would you describe group work in your classes? Offer examples of your group work for your colleagues to discuss. Some possible discussion questions could be:
   a. What is the purpose of having student teachers in groups?
   b. How big are the groups? Is the group size appropriate for this activity? Explain.
   c. How are the groups formed? Why was that formation of groups used?
   d. Who participates in this group activity? Are all expected to participate? If so, how?
   e. What kind of interaction is expected in the group?
   f. What kinds of outcomes are expected of the group?
   g. Are there any hidden curriculum items in the group work? If so, explain.
   h. Are students fully engaged in the group work? Explain.
   i. Was the group work a good use of teaching time? Explain.
5. How would you characterize the variety of methods that you use?
6. Do you think it is important to expand your methods? If so, how might you expand the types of methods you use in your classroom? How might student teachers benefit from you expanding your methods?



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Fidishdun, D. (undated) *Andragogy and Technology: Integrating Adult Learning Theory as we Teach with Technology.* Malvern, PA: Penn State Great Valley Graduate School of Professional Studies.

Lewin, K., & Stuart, J. (2003). Researching Teacher Education: New Perspectives on Practice, Performance, and Policy, Multi-Site Teacher Education Research Project (MUSTER), Synthesis Report: Association: Department for International Development (DFID)(UK)> Education Research Papers.

Moon, B. (2007). Research analysis: Attracting, developing and retaining effective teachers: A global overview of current policies and practices.

Stuart, J. (2002). College Tutors: a fulcrum for change? *International Journal of Educational Development.* 22 (2002) 367-379.

Chapter 7

Expanding Assessment Practices

Classroom assessment is arguably one of the least understood but integral elements of any coherent teaching and learning process. Reforms intended to improve instruction and curriculum have not succeeded largely because of their lack of alignment with the assessment processes. Assessment has always come packaged with curriculum and instruction. However, traditionally, final examinations—or summative evaluations—were the primary means of measuring success or failure at the end of a school year. Working as a gate keeping and sorting mechanism, such examinations were not used as a basis for constructive feedback to the learners, but only as an announcement of their success or failure in a prescribed course of study. The recent reforms in assessment have, however, tended to expand the process of assessment to cover the entire course of studies. The notions of authentic and continuous assessment have challenged and, in many instances, replaced the earlier emphases on summative tests and examinations.

In many educational systems around the world, however, final end-of-the-year exams are still the norm. In such systems, the teachers usually have little firsthand experience or training in meaningful classroom assessment. Because of the high stakes attached to them, teacher-directed assessments tend to become mirror images of and preparation for final examinations. When this happens, teaching to tests becomes the norm. Moreover, if the tests are aligned less with active learning and more with direct instruction, they push the teaching practices to be more teacher-centered. Under such circumstance, the changes introduced in instruction and curriculum to promote learner-centered education are less likely to bear fruit. Recognizing the critical role that teacher educators can play in helping teachers change their assessment practices, this chapter is designed as a survey of relevant knowledge on assessment.

This chapter will also invite you to consider a repertoire of assessment techniques and strategies to help inform your own assessment needs as a teacher educator as well as model best practices for student teachers. This exposition on assessment is not intended to be comprehensive. It is accompanied by a set of prompts and suggested seminars in which teacher educators and prospective teachers will be encouraged to clarify and articulate these ideas to their particular contexts. The list of further readings appended at the end of this chapter will also help you further explore this topic.

"Classroom assessment is arguably one of the least understood but integral elements of any coherent teaching and learning process."

Influence of Assessment on Pedagogy

Recent developments in cognitive psychology and learning theory have had major implications for all the critical elements of educational processes, such as instruction, curriculum and assessment. On the one hand, as discussed in earlier chapters, these changes have influenced the underlying assumptions about learning and teaching in reforms aimed at instruction and curriculum, emphasizing a shift from being didactic and teacher-centered to more learner-centered. On the other hand, these shifts in curriculum and instruction have also demanded parallel changes in the assessment processes seeking to broaden the scope, frequency and methods of assessment.

Recent developments in cognitive psychology and learning theory have had a major impact on our understanding of classroom-based assessment practices. In the last two decades or so, assessment researchers have been increasingly questioning traditional testing practices (Anderson, 1998; Resnick & Resnick, 1992; Shepard, 2000, 2001; Wiggins, 1989). The overall impact of these developments has been a profound shift from traditional end-of-the-year examinations to a system of continuous assessment throughout the school year. Continuous assessment has become an important aspect of many efforts to reform educational systems.

As often happens in the case of reforms, the new proposals for assessment are gradually finding a place side by side with traditional and well entrenched methods of assessing learning. Beginning teachers, therefore, are likely to find themselves confronted with a mix of suggestions about assessment. In the case of instruction, we have already discussed the ways in which apprenticeship of observation influences teachers' perceptions of what constitutes good teaching. Likewise, the student teachers' perceptions of assessment are also influenced by the narrow range of assessment practices to which student teachers were subjected as students. Furthermore, many countries have existing formal systems of assessment that, more often than not, privilege the traditional end-of-the-year examinations. The beginning teachers are confronted with a dilemma when faced with the challenge of simultaneously responding to the competing demands of existing testing requirements and the more comprehensive techniques that include formative as well as summative assessments. Teacher educators have a responsibility to help the student teachers anticipate these challenges in their particular contexts.

What are **Traditional** Assessments?

Generally, the term traditional assessments has come to be applied to most exams, paper and pencil tests, quizzes and other *selected response*[1] type assessments. Although constructed response questions, such as essay questions, are sometimes also used in traditional assessments. We can call these assessments traditional simply because they are part of a tradition of scientific measurement of human learning that dominated assessment of learning achievements throughout the 20th century (Shepard, 2000). The term *traditional* does not refer just to the form of testing instruments, but also to the behaviorist and associationist models of learning that underpin them. According to this perspective, knowledge is broken down into bits and pieces. On this view, then, learning implies accumulation of those bits of knowledge in a sequential manner (For a detailed exposition on associationist and behaviorist perspectives on learning, see, Skinner, 1996; Thorndike, 1922). Tests are used to ensure that students have mastered a certain level before proceeding to the next level in the hierarchy of knowledge. Also, the traditional view of assessment does not distinguish between the tests and learning. As Shepard (2000) puts it, "tests are isomorphic with learning (test = learning)" (Pg. 5). That is to say, the test scores are assumed to be representative of their learning.

It is beyond the scope of this manual to include a detailed analysis of the functions of national examinations and traditional assessment methods. However, a brief description of some salient characteristics of examinations and traditional assessment as they apply to teaching and learning in the classroom is in order.

The Divide Between Learning Processes and Assessment

Traditional assessment is based on an interrelated set of philosophical beliefs and theoretical assumptions (Bintz, 1991). These are further outlined and compared with the philosophical beliefs and theoretical assumptions of continuous assessment.

[1] The Selected Response (or SR) assessments usually consist of items with a fixed and structured response—e.g., the so called Multiple Choice Questions (MCQs). In contrast to the SR, the Constructed Response (or CR) items do not present a set of visible responses to select from, but require the students to typically use higher order thinking skills to construct their responses.

Emphasis on wrong [and right] answers

Typically, traditional assessments are used to sort students who know the right answers from those who do not get it right. In other words, traditional assessment creates a system of classification based on *right* and *wrong* answers.

Some critiques of examinations focus on their emphasis of wrong answers. In traditional assessments, the amount of wrong answers in an exam are juxtaposed against correct answers. When classroom assessment uses traditional assessment tools, feedback to students is often centered on wrong answers, and the right answers are barely acknowledged. When going over multiple choice tests teachers often look at and discuss the wrong answers rather than focusing on what students *do* know. Furthermore, since the right answers are also mostly selected responses, they do not typically permit a wholesome discussion enabling the students to deeply understand the worthwhile ideas.

How does this emphasis on right and wrong influence instruction? Most teachers are aware of the pressures to cover a syllabus before examinations. Believing they are helping students to learn, teachers provide students with opportunities to practice answering possible test questions. Most teachers feel the students understand a concept if they get it right on the test. Shepard (1997, pg. 12), however, found that varying the ways in which some questions were asked often reduced student scores, thus indicating a lack of understanding of the concept and an efficient grasp of only a particular solution. Students, through classroom preparation for tests (teachers teaching to the test), were only able to get the right answer if the questions were sufficiently close enough to the practiced items. When the test items were configured differently but aimed at gathering information about students' knowledge of the same concept, the students' performance plunged. In other words, the students were unable to demonstrate a thorough understanding of the concepts being tested. This research confirms what you may know from experience that teaching to the test, and 'cramming' for tests does not always lead to deep understandings of the subject. Students often note that after exams, what they have memorized is easily forgotten.

So while the emphasis on the wrong answers reinforces the feeling of not getting it right among the students, even getting it right does not guarantee deeper understanding of the subject matter. Furthermore, due to the high stakes associated with summative assessments, the instruction is reduced to teaching to the test. As Burkhardt, Fraser, and Ridgway (1990) put it, *What You Test is What you Get* (WYTIWYG). As such, then, the testing has important consequences for what goes on among the test takers themselves, in the classroom and in society. So profound are the social consequences of testing that some argue for including the consequences of testing in measures of validity (Shepard, 1997). The familiar documented consequences of traditional end-of-the-year examinations on classroom learning are: reduced time for practice and reflection because of test preparation (which can include teaching to the test), an emphasis on learning tasks that simulate test questions rather than on more authentic learning experiences, an orientation toward knowledge as something that is acquired rather than constructed, a focus on external motivators to learning (passing or getting good grades) and reduced class time for more meaningful learning tasks .

Summative in nature

Traditional assessments such as tests, quizzes, short answers and true or false are mostly summative in nature. They often don't provide the teacher or student with feedback that is meant to inform instruction. One may argue that students learn when preparing for tests, yet learning sometimes involves revisiting the same topic again and again until it is fully understood. The summative nature of the assessments, however, prevents both teachers and students from revisiting the topics in a meaningful way. Used in this way, the summative assessment can be used for rewards or punishments but not as diagnostic tools to improve learning of all students.

Aligned with transmission modes of teaching and learning

The emphasis on recall of information in traditional assessments provides only a partial picture of what students may know. Since the students are expected to select or construct brief responses, the traditional assessments are easy to score but more aligned with transmission modes of teaching. In most cases there is only one correct answer – that which was taught and hopefully memorized in a way that it can be recalled on the test. This type of assessment sets up a strong expectation for teachers to follow transmission modes of teaching.

Teacher as the source of knowledge

This model of assessment does not assume students to be active participants in the process of learning. Since all knowledge is assumed to be pre-existing bits of facts which must be transmitted through the process of education, students must be prepared to faithfully receive this knowledge from the teacher. In Freire's critique of banking education, the role of the instructor is to 'fill' the students minds with what is believed to be true knowledge (Freire, 1990). Since the teacher is always positioned as the transmitter and the student as a receiver, and since the assessment is typically focused on regurgitating the bits of knowledge so received, a hierarchical mode of control is set up. Such models of assessment thus privilege an arrangement in which the teacher alone has the prerogative to make decisions about the form of learning as well as assessment (Anderson, 1998).

The **Alternative Model** of Assessment

Educational processes essentially involve bringing together of the subject matter to be learned—encapsulated in the official curricula—and the learner. According to the traditional perspectives, the process of instruction transmits pre-existing bits of knowledge to students. Yet, this is not how humans have produced knowledge in the first place. Construction of knowledge in myriad branches of learning involves an arduous process of problem solving. It is in the process of addressing the problems posed by natural and social circumstances that natural and social sciences have developed. Thus, the traditional methods of education deprive learners of the knowledge of experience and engagement that gave rise to it in the first place.

The alternative views of teaching and learning attempt to integrate the processes of knowledge construction and discovery with teaching and learning in general. As Grundy (1987, p.37) states:

> *The notion that atomistic pieces of learning can be identified and measured is an assumption that trivializes the teaching-learning act. Education consists of more than a list of separate pieces of knowledge or behaviors which can be identified and measured.*

This involves articulating a view of teaching and learning that puts premium on sharing, discovery, dialogue and debate as opposed to a unidirectional flow of knowledge from the teacher.

This shift in perspective also creates the need for re-articulating the purposes and requirements for assessment. The term 'authentic assessment' has also been used by many assessment scholars to represent this shift. Learning tasks that are authentic are real instances of performances as opposed to proxies of the learning objectives. In authentic tasks, the student solves real world problems and performs real world tasks. Table 7.1 summarizes some of the shifts that have taken place in the understanding and practices of assessment.

Expansion and Diversification of **Assessment Strategies**

If learners are active participants in a continuing process of learning, then the assessment instruments also need to be expanded to obtain meaningful information about multiple aspects of student learning. Furthermore, it must be conducted not just at the end-points but throughout the process of learning.

Table 7.1: Shifts in Assessment

FROM	TO
Paper and pencil tests, exams	Authentic and performance
Aims at monitoring achievement	Aims at improved student learning
Summative in nature	Formative in nature
High stakes	Low stakes
Separated from learning tasks	Integrated with learning tasks
Focus on wrong answers	Focus on getting it right
Sorting and selecting	Informs teaching

The purpose of assessment under this regime is not just to sort students into high and low achievers, but to provide constructive and continuous feedback aimed at improving their learning. Continuous assessment has become an important aspect of many efforts to reform educational systems. It emphasizes the inclusion of formative assessments in defining the overall repertoire of assessment. Furthermore, it also pushes the educators to expand the nature of testing items to cover various classroom experiences. In a nutshell, this emphasis considers the traditional division between instruction and assessment problematic.

Expanding classroom assessment beyond summative assessments and diversification of the nature of assessment tasks allows students to be engaged in a wider variety of learning experiences. As was discussed in the preceding section, traditional assessments tend to narrow the curriculum to learning tasks that emphasize recall, accumulation of knowledge and a unidirectional flow of information (from teacher to student). Assessments that emphasize recall of information are consistent with a transmission and teacher-centered approach to teaching and learning.

Why Expand on Classroom Assessment Practices at the Teachers' College level?

Teacher education institutes are incubators for reform and change. Modeling a broad range of assessment practices will help student teachers gain authentic experiences of authentic assessment. This is consistent with the general approach of teaching and learning that aims to provide students with enabling experiences. As with LCE, for student teachers to get a robust understanding of what continuous assessment is and how to use it, they must experience it firsthand. As teacher educators model good continuous assessment in the college classroom and make their assessment practices explicit, student teachers gain a deeper understanding of the practices and purposes of continuous assessment. When teacher educators ask student teachers to reflect on the assessment practices used in the college classroom, they also gain a deeper understanding of the types of continuous assessment practices that could be used in the primary school classroom. Good practices in continuous assessment at the college also help student teachers learn and provide teacher educators with a well formed picture of what student teachers know, understand and can do.

Assessment Strategies for the College Classroom

This section describes some strategies that could be used in assessing student teachers. The strategies or methods described here are of three types. The first are strategies that help teacher educators assess the knowledge, skills and attitudes of student teachers prior to the introduction of a topic or a subject. The second set of strategies emphasizes assessing higher order thinking skills. Lastly, you will find examples of assessment that focus on gathering student teacher feedback on instruction. These techniques are easily administered, can be adapted to many subjects, give student teachers opportunities to show what they know, provide the teacher educator with valuable information about his or her instruction, and include student teachers in reflecting on the assessment methods being used.

Assessing Prior Knowledge

Teachers often feel constrained by time and content when trying to cover the curriculum. Adding an assessment at the beginning of a unit or topic feels like a luxury to most teacher educators. Many simply hold oral discussions with students to find a springboard for introducing a topic or subject. As a result of the limited and somewhat unsystematic methods of gathering information, many teacher educators might begin their lessons with assumptions about student knowledge that is could be quite inaccurate. Making false assumptions about students' knowledge and competencies can lead to wasted time. When students do not have the prerequisite knowledge or skills for

> "...apprenticeship of observation influences teachers' perceptions of what constitutes good teaching."

what is taught and the teacher assumes the opposite, students may feel frustrated and confused and may be unable to keep pace with the lessons. Conversely, if student teachers have a firm grasp of the topics being presented, they may be bored and feel they are not being challenged intellectually. In both cases precious teaching and learning opportunities are lost.

Assessing prior knowledge in a systematic way can include lengthy and elaborate written, practical and performance tests, or it could be short, easily administered tasks designed to gather relevant information from students in a short period of time. The strategies described here are easy to administer and score, and provide useful information that can feed back into the teacher educators' lessons.

It is important to keep in mind that assessing students' prior knowledge is not usually an opportunity for grading. Marks can be given for the purposes of indicating where a student is in relation to stated criteria and making comparisons at a later date. One of the main purposes of assessing prior knowledge in the classroom is to inform instruction. Teachers need to be prepared to have the feedback from the assessments influence how, what, and when they will teach.

The following strategies require some categorization of the data (answers) in order to make the exercise more useful to the teacher. Simple sorting procedures and more elaborate rubrics may be used.

It is not always necessary to include all of the students in an assessment of prior knowledge. In some cases taking a random sample of 20% of the students may serve the purpose of finding out what students know prior to teaching a subject or topic. This is especially true for large classes and when assessing practical skills that may require a lengthy administration and preparation such as a science practical test.

Many of the assessment methods used to determine the level of prior knowledge of student teachers can also be used at the end of a topic in a more summative type of assessment. A comparison between the starting and ending assessments can provide valuable insights on student growth.

Background knowledge probe[2]

Background knowledge probes are short, simple questionnaires prepared by the instructor and administered prior to the start of a unit or new topic of instruction. The probes are directed at finding out specific information on students' prior knowledge. The feedback can be used to help determine the starting point for instruction and where prior knowledge and experiences of students can be woven into the lessons. The probes can be in the form of a questionnaire, short answer questions, multiple-choice questions, or list making. For example, in an introductory art class, you might ask the students to list and illustrate the elements of drawing.

Profiles of Admirable Individuals[3]: Assessing Attitudes and Values

In teacher education, the first image that comes to mind for this activity is to ask student teachers to describe their favorite teacher. Community members, friends, colleagues, national and international figures can all be the focus of such a task if it is relevant to the attitudes you want to know about. Reading the profiles helps the teacher get a sense of the values of the student as they relate to a topic or subject. The teacher can list the characteristics that students most admire.

The purpose of this exercise is to give students the opportunity to articulate their beliefs and values. They must describe the characteristics of the individual they are writing about and tell why those characteristics are admirable. If attitudinal development is part of the course, the teacher can use the profiles as a springboard for teaching about the relevant attitudes.

Responding to cases

Another method of assessing students' values and attitudes is by having them respond to cases or case studies. In this technique the teacher develops a scenario in which attitudes and values play a central role in responding to the case. For example, students may be asked to write a short essay describing what they would do in the following context:

> *You have just started the school year with your new class of 60 grade four learners. The principal has just informed you that one of the students in your class is HIV positive. Although you are aware of the deadly nature of the virus, you know that with proper considerations for safety the student poses no major threat to the other students in the class.*
>
> Would you tell the other students in the class of the HIV positive student? Why or why not? Would you let it be known to the whole school that the student is HIV positive? Would the student receive special attention from you? Why or why not?

Practical skills test

It is not unusual for teacher educators in almost any context in the world to wish for their incoming students to possess more skills than they have. Having more skilled students usually equates with getting more accomplished in the course. Writing, mathematics and science skills are often the weakest areas of incoming student teachers.

Pretests of skills can provide specific information about students' entry-level skills. The results of the pretests can be used to inform teaching. Well-designed pretests of practical skills can help verify what we might know intuitively about students. In addition, these tests can help to identify the level of gaps in student knowledge and skills and what areas specifically need to be addressed. In science, for example, teacher educators may suspect that student teachers are very unskilled in using basic science equipment because of their lack of exposure to equipment at secondary school. A practical test of student skills in measuring might be set up at the beginning of the year to test student skills in this area. Using a thermometer, measuring cylinder, voltmeter, balances and such could be part of the test. Analyzing the results of the tests would indicate to teacher educators students' weak areas. Preparing instruction to address those weak areas would be the next step in using the results of the tests.

Practical skills pretests usually take a lot of time to set up and administer. Taking a random sample of about 20% of the students to participate in the tests would be sufficient for the purposes of generalizing to the whole cohort. If time permits, an assessment of all incoming student teachers could be carried out and matched with student performance at the end of the semester or course to get an indication of student growth in those skills.

Assessing Higher Order Thinking Levels

As described in an earlier section, one of the weaknesses of exams, tests and other selected response assessments is that they often are unable to adequately assess students' thinking at higher cognitive levels. One of our aims as teacher educators is not only to present information to student teachers but to also engage them in thinking. The assessment strategies described in this section encourage students to think instead of merely recall facts by memory.

Portfolio assessment

Arts and design fields have long used portfolios to record a series of products and track performance. Portfolios contain a selection of student work collected over time. Many of the pieces in the portfolio enter with a mark. That is, the portfolio may include some or all of a students' graded work. Exhibiting or showcasing student work for other students, teachers or the community allows student teachers to synthesize knowledge in order to discuss their work with others. For student teachers, portfolios can be compared with tool kits. Materials, teaching aids and information from reports and essays developed as part of coursework become part of the kits that student teachers take with them to the field.

Concept maps

Concept maps, sometimes called word webs, are diagrams of words or concepts that show relationships between and among concepts. Phrases are written on connecting lines between the concepts which are inside circles. Concept maps help organize knowledge through a visual representation of the relationships among ideas.

Concept maps are often useful when done at the start of a unit or topic to gain an understanding of what students already know. At the end of teaching and learning in that topic students are given a second opportunity to demonstrate their understanding of the concept(s) by drawing a second concept map. The teacher compares the two concept maps and, based on predetermined criteria set out in a rubric, assigns a grade. Students can also be asked to compare their own before and after concept maps. After some time for reflection, students can discuss the progress they made as evidenced by the maps. This could be followed by having students analyze their own learning by writing a short narrative. Teachers can also ask students to explain how they learned what they did. In this way we ask students to think about thinking. This metacognition improves thinking about learning by student teachers and helps them understand their learning process.

Concept maps can be used in any subject, but they require that students know how to make them. By first demonstrating to the students and then practicing concept maps with familiar topics, students soon learn the skill. Because concept maps are graphic representations of knowledge, the task may disadvantage students who have difficulty expressing themselves visually and spatially. Care should be taken not to use the technique too frequently.

[2] Adapted from Angelo and Cross (1993).
[3] Adapted from Angelo and Cross (1993).

Projects

Projects are long-term tasks in which students have the opportunity to carry out in-depth study of a particular topic, usually of their choice. Projects may be composed of a variety of activities and tasks focused on finding out answers to one broad question or set of questions. They also foster knowledge creation and learning the organizing concepts and skills of a particular field.

Projects are time intensive. Teacher educators must be willing and skilled at giving guidance. They have to be willing to put in the time to provide support where it is needed. Student teachers often need help formulating and narrowing a question or topic, accessing information, synthesizing information, integrating book knowledge with personal experience, opinion or relating the book knowledge to a particular local context. Parts of the project may be assessed separately and an overall grade given to the whole. Displays and exhibits of projects provide opportunities for students to vocalize their understandings.

Analytic memo

In an analytic memo students are asked to be in a position in which they have to communicate information to others. Students simulate memo or letter writing to a client, community member, parent, principal or other stakeholder. In writing the memo, the student has to analyze the topic under consideration and communicate that to others who may not be as familiar with the topic. The student is required to write in concise and clear language on the topic. The role of the student in writing the memo can vary with the context.

Some examples of analytical memo writing are:

- As a principal, inform parents of new assessment policy at school and parents' role in it.
- As a school board member, notify the community of the nature of upcoming readiness tests and parents' role in assisting children prepare for going to school.
- As the town or village leader make the case for district support for improved village sanitation.
- As a language specialist, send a memo to other teachers in the school to advise them on ways to improve student writing in their subject.

  Often the analytic memo requires the student to analyze a situation and inform someone about a situation in order to assist the person making a decision. The communication of the information takes on a greater role in this type of assessment as opposed to a short constructed answer to a question.

Invented dialogues

In an invented dialogue, students are asked to develop an imaginary conversation between two people or things. It is helpful to focus the dialogue on a particular topic. Students write the dialogue and then it can be presented orally. The process helps students synthesize knowledge of people, events, processes and historical contexts. Examples would include:

- A conversation between a tourist and a health worker about HIV/AIDS
- A discussion between the moon and the sea about tides
- A dialogue between Kwame Nkhurma and Barack Obama about globalization
- A conversation between roots of a plant and the soil

Making models

Models are physical representations of concepts, processes, events or systems. They are usually constructed in three dimensions. The process of model creation involves synthesis of prior knowledge, analysis and creativity. Models can be made of recycled or throw away materials. Examples of topics for models are timelines, sentence structure, statistical concepts, geometrical and science objects and concepts.

Human tableau/role play/dramatization/mime

Most good teachers use drama or role play to depict historical events, controversial contemporary issues or future scenarios involving people. Human tableaus, role-plays and mimes are all types of dramatization that are sometimes powerful vehicles for self-expression and learning. In addition to playing human roles, the characters in these dramas may represent inanimate objects and processes. By having students dramatize erosion, for example, they must discuss and analyze the process in order to assign roles and script their parts. A human tableau of the water cycle might require students to come dressed up as clouds, rivers, plants and rain. In preparing for the presentation, students have to analyze and make appropriate decisions on the actors' scripts, actions, background and costumes.

Discussions following the dramas are important to ensure that analogies made in the presentation are clear and accurate. It is also an opportunity to see how analogies do not apply. One type of questions following a dramatization is "What did you see?" or "What did you learn?" These questions allow different perspectives to bubble up to the surface and create a platform for dialogue. Criteria for assessing a role-play would include aspects of communication, creativity, accuracy of content and depth of analysis.

Journals

We often think of journal writing as the domain of language teaching. Journals can be very powerful tools for synthesis and reflection for all subjects and levels. In subjects other than languages, and even in languages, journal writing is not meant to focus on the language used in the writing but rather the process of writing and what is revealed in the process. The process also contributes to improved writing skills.

Assessing journals can be time consuming and difficult. Their purpose is to provide practice in communicating their understanding through the written word. For most journal writing, feedback from the teacher is usually more important than assigning marks for accuracy and neatness. When it is appropriate to assess particular entries, it may be helpful to create model answers and a rating scale or rubric to be applied to student work. Some journal entries may be given marks on predetermined criteria.

Interviews

Interviewing students to find out what they know is time-consuming. This is why it is not a favored assessment method. The value in the method is, however, very high. Students can be interviewed individually, in pairs or in small focus groups by the teacher educator. For many students, the opportunity to have a direct dialogue with the teacher in a context other than in the class setting provides unique opportunities for self-expression. Using equipment, resource materials and other regalia from class can help focus the discussion. By talking to students individually or in small groups, a teacher educator can gain insights that may never be revealed in other assessment situations.

In primary schools this technique is actually used extensively by some teachers. It is most often carried out by a teacher having a student come up to the teacher's desk or to a corner of the room while other students are carrying out individual silent tasks at their seats. Spacing interviews over time prevents the teacher from being overburdened.

Scoring and **Grading** Tools

Most assessment tasks can be scored, given marks or graded. It may not, however, be appropriate to assign marks or grades to some assessment pieces. The nature and purpose of the assignment will help determine if an assessment receives a score. Tasks that focus on attitudes or that are meant for practice may require feedback to the student. In most cases, however, setting criteria for how something should be assessed is sometimes a difficult task. Here are some general guidelines for scoring:

- Decide whether giving a grade is appropriate or not.
- Set criteria for grading.
- Criteria can be general or specific.
- Let students know the criteria.
- Develop the scoring tool.
- Keep it simple.

Rating Scales

Rating scales can be useful when a range of responses are expected from an assessment task. Rating scales include quantitative (numbers) and qualitative (words) descriptors. Because of their simplicity, they are relatively efficient for focused tasks. An example is given in Table 7.2.

Some guidelines for using rating scales:

- Use a quantitative scale and qualitative description.
- Use 4-7 divisions. We are not very good at discriminating the differences as the numbers increase.
- Keep descriptors simple.
- Group items on the scale in the order in which they will likely be rated.

Table 7.2: Rating Scale

An Example of a Rating Scale				
1	**2**	**3**	**4**	**5**
Below Class Standards	Acceptable	Good	Very Good	Outstanding

Analytic and Holistic Rubrics

Gallagher (1998, p.224-226) delineates scoring rubrics into the holistic and the analytic approach. The holistic approach is a more general approach to scoring student performance and is more subjective and less reliable. Criteria are stated in broad terms and could apply to other tasks and activities as well as the one being assessed. Holistic rubrics are often used to assign marks to portfolios, projects and other multi-faceted assignments. See Appendix A for more information on holistic rubrics.

The analytic approach details more of what is expected in a perfect answer and assigns point values to each. In an essay, an analytic rubric specifies all the aspects and components of an answer that should be included if the student is to get full credit. Partial credit is given according to what is specified in the rubric. The analytic rubric, when constructed properly, allows for greater objectivity in scoring. For more information on analytic rubrics, please see Appendix B.

Checklists

Checklists present a dichotomy of performance. The checklist indicates if the student can do the particular task (or knows the material) or is unable to do the task. The checklist is useful for a range of tasks that students are required to perform regardless of the level of skill demonstrated. Checklists can often be used when there are a large number of elements or tasks to be assessed. In science, for example, a checklist could be constructed to determine if students are able to perform an array of laboratory tasks such as using various instruments and apparatus, follow a number of safety procedures, and measuring some objects. Table 7.3 is an example of a checklist.

Providing Constructive and **Timely Feedback**

Marking and scoring student work in both quantitative and qualitative ways should be aimed at providing student teachers with timely and constructive feedback. One of the purposes of continuous assessment is to guide students to improvement. Providing fair and constructive feedback guides student teachers in addressing the areas in which they need to focus and indicates to them areas where they have been successful. This is why rubrics, scales and other criteria for grading are important in giving student teacher feedback. What is generally not helpful are negative comments such as *'this is pathetic!'* meaningless marks such as check (✓) marks throughout a composition, and general statements such as 'good work!'

The feedback should be timely. Waiting weeks or sometimes not receiving marks at all for work completed is frustrating and de-motivating for student teachers, yet there is a practice in some colleges of not marking student work, returning marked work back to students weeks or sometimes months after they have completed the assignment, and giving meaningless or even destructive feedback to student teachers. A study of teacher educators' practices in Zambia (CHANGES2, 2006, p.18), revealed that "students complained of assignments not being marked. When student work was marked, it often contained no constructive feedback, or came too late to have an impact student preparation for the next assignment."

Table 7.3: Examples of a checklist of assessment

A Checklist for Science - Measurement

0 = Unsuccessful attempt √ = Successful attempt

STUDENT NAME	Thermometer	Triple Beam Balance	Pan Balance	Ruler	Timer	Ammeter/Voltmeter	Measuring Cylinder	Force Meter	Other
Desta Berhane	0 ✓	00		0 ✓	✓	✓		✓	
James Kahando	✓	0 ✓	✓		✓	✓		✓	
Edward Mutembo	✓	✓		✓		✓		✓	
Veronica Mwanza	✓	0			✓	✓			

Some **Concluding Remarks**

Continuous assessment may offer some support to LCE, particularly if it is not high stakes continuous assessment or continuous testing. There are many reasons for using continuous assessment in the college classroom. Some of them are described below. As you will see most of the reasons for implementing continuous assessment build strong support for the implementation of LCE.

The field of educational assessment is large and complex. This chapter barely skims the surface by presenting ways for college teachers to expand on their classroom assessment practices. As teachers and teacher educators, we have often neglected the area of classroom assessment because of constraints of time, workloads and large classes. The importance of assessment in the teaching learning process, however, is gaining a wider acknowledgement from educators and other stakeholders. It often appears that some of the work of assessment is highly technical and rule bound. What is perhaps more important to consider is the role creativity plays in developing and implementing good classroom assessment. You are encouraged to experiment with new assessment techniques and develop some on your own. It is also important that you explain and reflect on your assessment methods with your student teachers. This helps them to gain a deeper understanding of the assessment they will ultimately use in their own classrooms. Here are a few suggestions for trying new assessment techniques:

- Use professional judgment and intuition.
- Don't let it be a burden.
- Try the technique out on yourself first.
- Allow ample time for assessment and feedback.
- Provide feedback to students about it.
- Discuss it with your colleagues.

Seminars

Seminar 1. Aligning assessment with instruction

Introduction

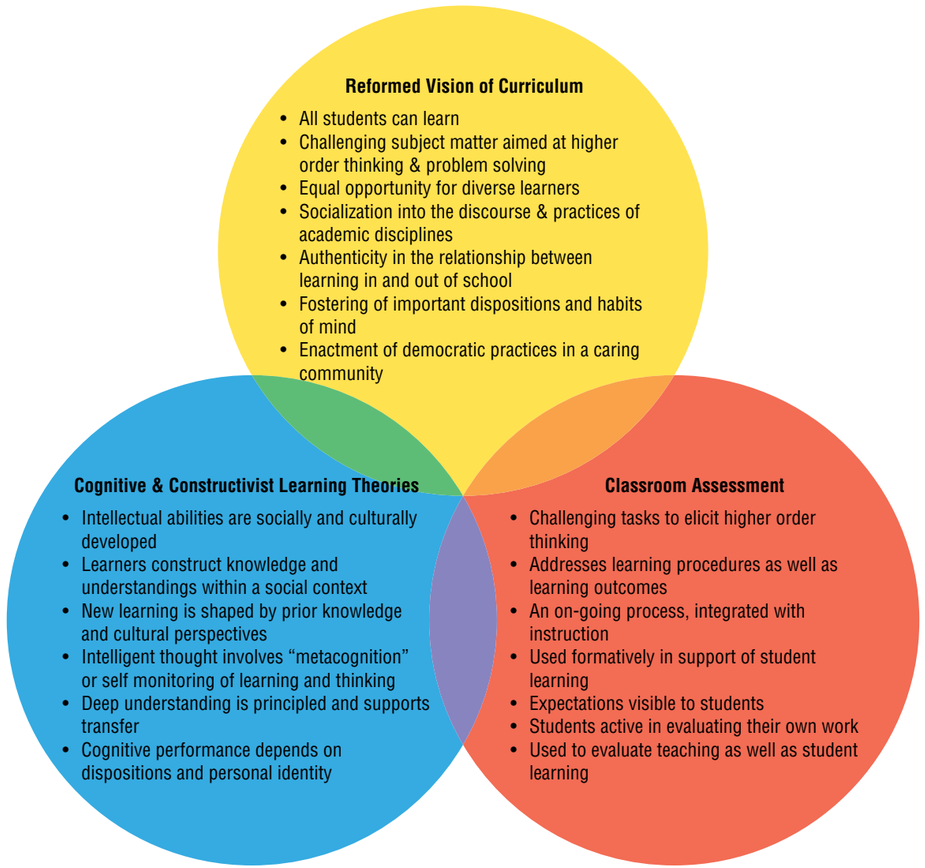
Teacher-centered education is sometimes referred to as a transmission model of education, because teachers, through lecture, note-giving and classroom activities, focus on recall of information. While thinking skills may be important to teachers, in the teacher-centered mode, the emphasis remains on students' passive reception of pre-existing knowledge. Assessment that emphasizes recall of information, selection of one right answer and other short answers is in line with teacher-centered education and the transmission mode of teaching.

Learner-centered education, with the emphasis on students making meaning implies that assessment would have more open-ended questions, multiple correct answers and multiple ways of assessing what learners know, understand and can do. This is more in line with constructivism and knowledge creation. See Figure 7.1 (Shepard, 2000).

Specific Tasks

1. In a group of teacher educators, take a survey of the types of assessment used by each person in the group. Make a list of the types of assessments used and what they measure. Develop a set of criteria to determine if the assessments are more in line with LCE or transmission modes of teaching. What is the predominant type of assessment used in the college? What are the reasons for this? Explain.

Figure 7.1: Shared Principles of Curriculum Theories, Psychological Theories and Classroom Assessment



2. Is there room for expanding the type of assessments used in college teaching? What would be the benefits of expanding classroom assessment practices? What would be the barriers?

3. Make a plan for improving assessment practices at the college.

Suggested Reading

Shepard, L. (2000). *The Role of Assessment in a Learning Culture.* Presidential Address Annual Meeting of the American Educational Research Association. New Orleans, LA. USA.

Seminar 2. Robust understandings 1

Introduction

This seminar is focused on raising questions about what it means to develop robust and deep understanding of the subject matters. The question spontaneously pushes the participants to consider ideas about the assessment tools used to encourage the development of robust understanding

Specific Tasks

1. Read the article by Shepard on Robust Understandings ahead of the seminar. What does Shepard mean by robust understandings? In Figure 7.2, there are different ways of assessing a learner's understanding of multiplication. In a group, discuss how these alternative ways of assessing indicate a learner's robust understanding of multiplication.

2. From different subject areas, develop multiple ways of assessing that show robust understanding on the same concept. Present your assessments to colleagues for review and critique.

3. Does assessing for robust understanding help student teachers pass exams? Explain.

Suggested Reading

Shepard, L. (1997). Measuring Achievement: What does it mean to test for robust understandings? Third annual William H. Angoff Memorial Lecture. Princeton, NJ: Educational Testing Service.

Figure 7.2: Multiple Ways of Assessing for Robust Understanding of Multiplication.

A Typical Multiple-Choice Question:

$59 \times 12 =$

a. 608
b. 698
c. 708
d. 798

A Question to Check for Understanding an Algorithm:

In the following multiplication problem, what goes in the ▭ ?

$$\begin{array}{r} 59 \\ \times\ 12 \\ \hline \square \end{array}$$

a. 708
b. 128

Observation and Interview:

Draw as many diagrams as you can that represent the multiplication fact:

$59 \times 12 = 708$

Explain to me what each means.

Having Students Apply the Multiplication Fact:

Write a word problem that would involve multiplying 59×12 to find its solution.

A Performance Task:

(with blocks, beans, balance scales, tiles, graph paper, and other materials available)

You are going to teach a second grader what multiplication is all about.

Seminar 3. Robust understandings 2

Introduction

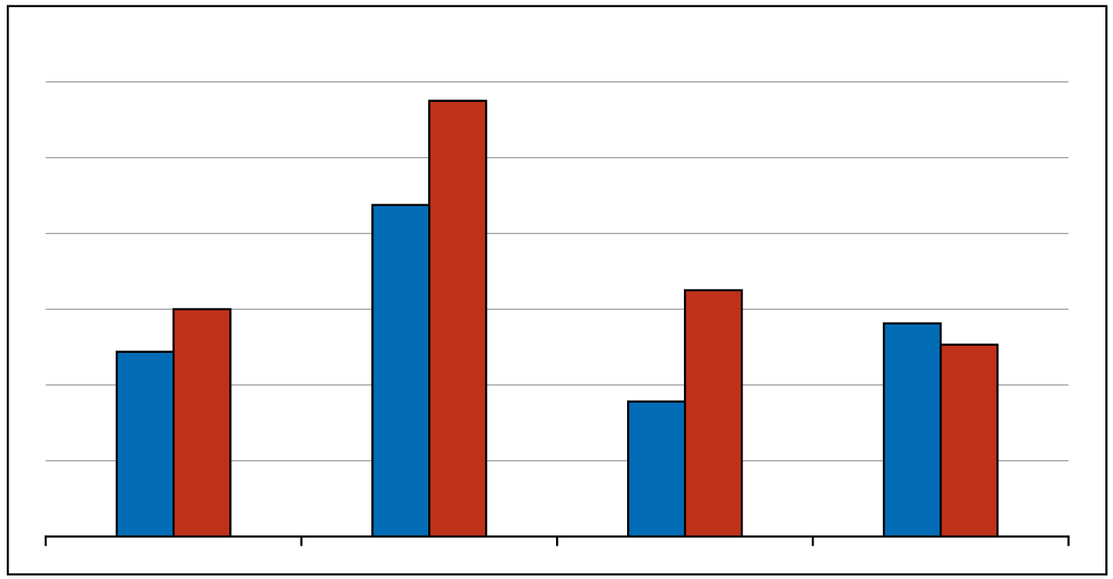
Following the first seminar on robust understanding, this seminar provides the participants with a specific example of a mathematical task and invites them to reflect and comment on students' understanding.

Specific Tasks

A mathematics teacher had been teaching graphing for two weeks. The students had practiced with various types of data tables and graphs. For an assessment of students' understandings of graphs, the teacher gave the students the following graph with these instructions:

- Label the graph with a title.
- Label the vertical and horizontal axes.
- Add a key to the graph.

1. Complete the assignment as if you were a student. Share your answers with others. How many different responses were there among the different staff members or groups? What does this say?
2. What do you think of this assessment? What kinds of skills or thinking were required? Would this type of assessment reveal robust understandings? Why or why not?
3. How would you characterize this assessment?
4. Develop a similar assessment with the same characteristics for a different subject or topic. Share it with others.



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Appendix A

The following example is a holistic rubric that teachers may use to tell learners about the progress in reading at the end of a term. When using a rubric such as the one in the table below, a teacher indicates a learner's overall level of performance. The learner can read where he or she is on the chart as a summary of the kinds of tasks the learner is able to perform. The learner is also aware of what he or she will need to work on to move up to the next level.

Example of Holistic Scoring Rubric[1]	
Reading Rubric	
RATING SCALE	**Evaluative Criteria**
4	Learner reads fluently with expression. Learner has extensive sight vocabulary. Learner readily determines meaning of unfamiliar words using context clues. Learner reads a wide variety of materials with understanding. Learner independently monitors comprehension; appropriately applies comprehension strategies.
3	Learner reads familiar material comfortably. Learner has large sight vocabulary. Learner uses context clues to figure out meaning of unfamiliar words. Learner actively constructs meaning. Learner regularly monitors comprehension and self-corrects.
2	Learner reads work-for-word; struggles with unfamiliar material. Learner has limited sight vocabulary of one- and two-syllable words. Learner attempts to pronounce and figure out meaning of new words. Learner demonstrates comprehension of simple text. Learner occasionally monitors comprehension and self-corrects.
1	Learner follows along in the text when adult reads. Learner is aware of relationship of printed text to oral language. Learner uses picture cues when recalling story. Learner pretends to read; memorizes favorite story.
0	Learner makes no evidence of text comprehension or identification of written words and symbols.

[1] McTighe, J., Ferrara, Steve (1998). Assessing Learning in the Classroom, NEA.

Appendix B

Here is an example of how a teacher educator uses an analytic rubric to assess Parts of Speech Picture Books made by student teachers. A picture book has a lot of elements and each element has a description of different levels of quality. If a student teacher gets a 4 on her picture book then she knows how the book was assessed in four areas - *application* of the parts of speech ideas in the book, use of *categorization* of words, *creativity* and *industriousness* and the level she reached in each area as defined by the text in each box. This is more instructive than giving a number without describing what that number means.

Example of an Analytic Rubric				
Parts of Speech Picture Book Rubric				
RATING SCALE	**Application**	**Categorization**	**Creativity**	**Industrious**
4	The story demonstrates a superb understanding of the part of speech and its function and ways it is used.	Learner is able to categorize all of their words correctly. She/he recognizes that some words do not fit the categories we have studied so far.	Highly creative, very original work.	Leaner was on task during all allowed class time.
3	The story demonstrates a very good understanding of the part of speech and its function.	Learner categorizes about 80% of the words correctly. She/he recognizes that not all words can be categorized.	Learner is creative.	Learner was mostly on task and did not disturb others.
2	The story demonstrates that the learner knows the part of speech but cannot apply it well to new situations.	Learner categorizes about 60% of the words correctly. She/he categorizes many words that are not nouns, verbs, adverbs, or adjectives.	The story is not very original in nature.	Learner was sometimes off task and distracted at least one other learner.
1	The learner does not understand the function of their part of speech.	Learner incorrectly identifies more than half of the words.	Learner borrowed all of their ideas from somewhere.	Learner distracted others and was off task most of the time.
0				Learner was a distraction, did not work in class, and did not complete assignment

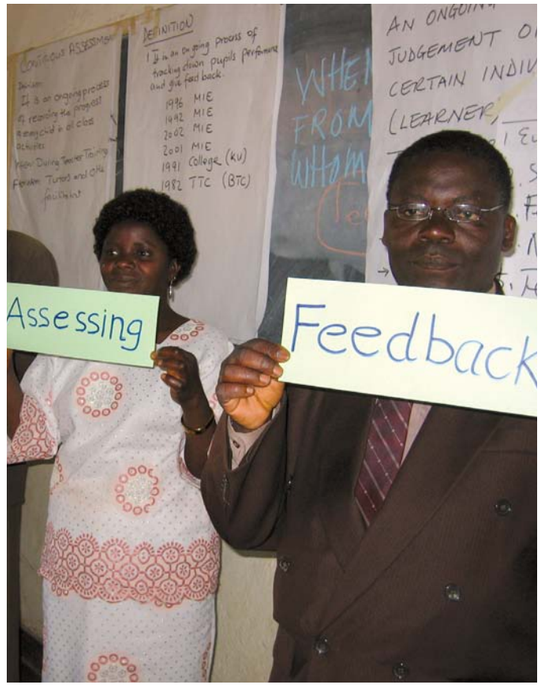
Chapter 8

Reflective Practice

This chapter is designed to make explicit what has been implicit throughout this resource book—the idea of reflective practice. This resource book began with the suggestion that reform and change required forming and working in professional learning communities. The professional learning communities, however, were assumed to be engaged in a process of continuous improvement of teaching practice of teacher educators in teacher colleges. Each chapter consisted of appropriately summarized scholarly literature on the selected topic of importance and ended with an invitation to reflect on this literature in relation to your practice as teacher educators in your own unique context. Reflection, therefore, is a central element of this undertaking. The aim of this resource has not only been to propose the establishment of professional learning communities as a strategy for reform but to also encourage engagement in reflective practice as part of such communities.

After its introduction in the mid 1980s, the use of term *reflective practice* has spread like jungle fire in discourses of teacher preparation. The past two decades have seen an enormous popularization and uptake of the idea of reflective practice as a strategy for continuous improvement of teachers' professional practice. Educators' interest in it can be loosely judged by the fact that a simple search in the internet based databases of scholarly papers that apply the idea of reflective practice to teacher education returns over 13,000 items, of which 10,200 are written in or after 1991. However, with such widespread usage also come the fears of reflective practice becoming a rhetoric that is widely used but seldom practiced.

Those who are engaged in critical examination of the use of the idea of reflection have observed that it is not sufficiently clear as to how systematic reflection is different from other modes of thinking. If reflective practice is not adequately defined, it remains difficult to assess—often, any narrative about ones practice is called a *reflective journal*, resulting in the misuse of the term in practice. Furthermore, teacher educators and teachers have not attempted to clearly visualize what reflective practice must look like. As a result, many teacher educators are unable to see it when it is in practice and are likely to misconstrue any thinking practice as reflective (Rodgers, 2002). While it is well and good to emphasize reflective teaching as a central aspect of what it means to be a practitioner, a careful



"The purpose of such reflection is not simply to study one's practice, but also to be able to act on it in order to improve it."

analysis of reflection—one that helps us understand the nature, aim and process of the activities associated with a particular view of reflection—is needed if this alternative to technical training is to be viable .

With these cautions in mind, we will proceed to define reflection and reflective practice, delineating it from ordinary thought, providing examples and also linking up with discussions in previous chapters where appropriate.

Notwithstanding its many merits, reflective practice, however, is a word that loses its proper relation with professional practice if not properly understood and delineated from other modes of thought and practice. This chapter elucidates the ideas of reflection, reflective practice and reflective practitioner. It also discusses some strategies that can support reflective practice within teacher colleges.

What is **Reflection?**

The meaning of *reflection* has multiplied over time. The term has its philosophical roots in the work of English philosopher John Locke (1632-1704) who spoke of reflections as actions of the mind. He used verbs such as, *perception, thinking, doubting, believing, reasoning, knowing, willing,* and so on to describe these mental actions. Locke contrasted reflections with sensations, which were supposed to be actions related to external senses. How does this distinction between reflection and sensations help us understand knowledge creation as a human activity? Consider, as an example, Newton's contemplation on the simple observation of falling bodies. While the observation of falling produced a sensation, it alone could not result in the law of gravitation. The latter was produced through reflection—in this case manifested as contemplation of the falling bodies.

The objects of reflection do not have to be physical objects or phenomena. In social sciences and humanities, depending on one's discipline, the objects of reflection are human social, economic, political, cultural and psychological phenomena. In the realm of professional education, with which we are largely concerned in this chapter, the object of reflection is one's professional practice itself. In this case, reflection begins to resemble introspection.[1] Notice that self-awareness is much like looking at your image in a mirror or any other reflective surface. Thus reflection requires production of images [or records] of practice. These images of practice take many forms, such as teaching journals, essays on one's own practice, multi media recordings, or any other tool to enable one to step back from one's practice to reflect on it.

[1] Oxford English Dictionary (OED) defines reflection as a mental process "by which the mind observes and examines its own experiences and emotions; intelligent self-awareness, introspection."

The Reflective Practice and its **Practitioner**

It is important to delineate the ways in which the idea of reflection has been applied to education of professionals. While reflection on our observations and sensory experiences of the natural or social world can be readily understood as sources of knowledge in natural and social sciences, it is not, despite its importance, what we are concerned with in this chapter. Neither are we concerned with a simple contemplation on personal experiences. We are concerned with application of the idea of purposive reflection to one's own practice as a professional. The purpose of such reflection is not simply to study one's practice, but also to be able to act on it in order to improve it. Donald Schön, the pioneer of the idea of reflective practice as a method to educate professionals, defined a reflective practitioner as one who does not implement his or her craft thoughtlessly, but is continuously engaged in purposive thinking about various aspects of his or her practice in order to improve it (Schön, 1983a, 1983b). Through this continuous reflective engagement with one's own practice, a professional stands better chances of responding to the challenges involved in particular situations.

This idea implies that professional practices cannot be improved without making them objects of reflection within the particular contexts in which they occur, and that a mere recourse to theoretical knowledge about better practices is not sufficient for reform and improvement. It draws on the insight that professionals have tacit knowledge situated in their practice. As Schön puts it, "There are actions, recognitions, and judgments which we know how to carry out spontaneously; we do not have to think about them prior to or during their performance. We are often unaware of having learned to do these things; we simply find ourselves doing them." (Schön, 1983a, p. 51). Reflection on action involves making the tacit knowledge available for scrutiny. Our tacit knowledge is hardened over time through repetition. For example, we manifest our tactic knowledge, developed mostly through apprenticeship of observation in the case of teaching (See Chapter 3), when we greet our students, open and close the lesson, ask questions, praise and reward students in similar ways. Reflection on action, which will be discussed in more detail in a subsequent section, can help us resurface and critique the tacit understandings that have "grown up around repetitive experiences" (Schön, 1983a, p. 61).

Reflective Practice and **Teacher Education**

Reflective practice in pre-service teacher education was advocated as early as 1904 by John Dewey. Dewey argued that teachers should have an inquiring disposition toward the problems of their practice. An absence of inquiry could lead to intellectual dependence on ready-made solutions for the problems of practice (Dewey & McMurray, 1904). Since the idea of reflective practice is at odds with the knowledge transmission modes of teaching and learning, and given the predominance of the latter in education, it remained peripheral to mainstream teacher education programs until it reemerged in the recent waves of educational reforms across the world. Currently, the use of the idea of reflective practice is frequently encouraged by practitioners and scholars together with a general thrust on LCE. This is because a reflective practitioner can be potentially more attentive to the unique challenges posed by LCE in the classroom settings. If the teachers want students to act as producers rather than consumers of knowledge, then they must also value construction of knowledge about teaching. Reflective practice is widely recognized as a way of creating valid and situated knowledge about the practice of teaching as well as a strategy of its continual improvement.

There has been an explosion of interest in reflective practice as it relates to teacher preparation.[2] In the context of the United States, this popularity is attributed to a growing perception of teachers as professionals, a growing interest in the cognitive psychology about the ways in which thinking can influence practice, as well as the need to improve the quality of teaching in order to improve student learning (Valli, 1997). The idea of reflective practice also finds resonance with efforts to empower teachers to generate their own theories of teaching. Some scholars, such as Van Graan et al. (2005), use their research on reflective practice in teacher education in Namibia to highlight the need for teachers to "reflect on and try out different ways of solving problems and as such invent a theory that works in their particular context." (Van Graan, Pomuti, LeCzel, Liman, & Swarts, 2005, p. 9).

[2] While we will discuss reflective practices broadly with reference to pre-service teacher education, there is a proliferation of literature on reflective practices with references to particular subject areas. For readers interested in *reflective practices in mathematics education* here is a sampling of articles: Artz et al. (Fredrick, 2009), Cobb et al. (2009), Gagatsis & Patronis (1997), Liu et al. (1990), Mewborn (1999), Simon (1999), Skovmose (2004), Smith Senger (1994), and Tzur (1998), and . For Those interested in the use of *reflection in science education,* see, Abell and Bryan (2001), Ash (1997), Farrell (2004), and Nichols et al. (2008). To follow your interest in *language education,* see, Richards and Lockhard (1997) and Gere (1994).

Types of Reflective Practices in Teacher Preparation Programs

Researchers observing reflective practice in teacher education programs have divided the observed reflective practices in five major categories. We will discuss them in some detail below. The classification of reflective practices has appeared in many places in the literature on reflective practices in teacher education. Our description is adapted and borrows heavily from Valli (1997).[3] Our review of literature indicated that it captures most of types of reflection discussed elsewhere. The distinction between these categories will be based on the *object of intervention* in each type of reflection, as well as the ways in which the *quality of reflective practice* is to be judged. As Valli puts it: "Content for reflection refers to what teachers think about; quality of reflection refers to how they think about their teaching—the processes of thinking they go through. These two dimensions of reflection can be used to define and judge what good teaching is and to help teacher candidates determine whether they are making good decisions." (Valli, 1997, p. 74).

Technical reflection

Technical reflection refers to a strictly rule-governed application of research on teaching to the practice of teaching. The sites for intervention for technical reflection are teaching skills and techniques. The object of reflection is practice, as it should be for all reflection. However, in this case, the criteria for evaluating the performance are imposed externally. For example, consider the excerpt below from a paper that describes best practices to teach fractions to children with learning disabilities:

> *One concrete and meaningful way of representing fractions with both parts of whole and of sets is through fair-sharing activities…In fair-sharing activities, students must distribute commodities equally among a group of students. Given eight students and a pie, each student would receive one eighth of the pie. Given eight students and 24 erasers, each student would receive three erasers. In fair-sharing activities, teachers should include both whole units (e.g., pies, pizzas) and sets of units (e.g., erasers, paper clips, pencils, raisins) to be divided among the students. Care should be taken to reinforce that the basic activity is one of dividing or partitioning the original amount into equal subgroups.*
>
> *(Brigham, Wilson, Jones, & Moisio, 1996, p. 5, emphasis supplied)*

[3] We have also selected some articles that provide a broad overview of relationship between reflective practice and pre-service teacher education programs as well as teachers' professional development in general. On strategies for designing, implementing, and evaluating reflecting teaching practice, see Cruickshank (1992); Calderhead (1987); Roth (1989); Zeichner (1989); Schoonmaker (1987); Zeichner & Dahlström (1998). For accounts of teachers transformative experiences through reflective practice, see Swain (1998)

Notice that this is a straight forward advice to a teacher who is teaching fractions to children with learning disabilities. Teachers can reflect on their performances through the criteria being supplied by this excerpt. In technical reflection, the content of reflection is teaching behavior, and desirable performance means implementing the expert advice derived from research. As Valli puts it: "The content that prospective teachers think about are the general teaching behaviors that have been derived from research on teaching. These include things like time-on-task, wait-time, active learning, student engagement, homework review, and prior knowledge. Prospective teachers would think about findings from this research and try to match their performance to those guidelines" (Valli, 1997, p. 75).

Reflection in and on action

We have already discussed these types of reflections as described by Donald Schön. Here we must add that technical reflection described above is also a kind of reflection on action. The difference, however, is in the content of reflection as well as in the criteria for determining the quality of refletive practice. In this type of reflection, the object of reflection is a teacher's own unique problem setting. The quality of reflective practice is determined ultimately by whether the reflective practioner was able to take and defend appropriate pedagogical decisions best suited to his or her own context. As Valli puts it, in this type of reflection, "the teacher's voice is regarded as expert rather than the researcher's. Reflection-in and on-action values practical, craft knowledge" (Valli, 1997, p. 76).

Reflection on action becomes especially important when we attempt to practice new ideas about teaching and learning that come into conflict with our tacit understandings. Consider the idea of LCE (Chapter 3) to understand this point better. We can learn about LCE by reading about, thinking about and discussing it. Through such readings and deliberations, we may become convinced that LCE offers an improvement over knowledge-transmission modes of teaching and learning. However, it is only after articulating these ideas in the unique setting of our professional teaching practice that we experience the challenges and uncertainties entailed by implementing new ideas in our classrooms.

A number of teacher scholars have documented their attempts at re-crafting their practices in accordance with the reform ideas and making sense of unanticipated experiences that follow. These accounts also describe the ways in which these teacher scholars develop ways of managing the uncertainties and dilemmas encountered in their attempts to change their practice (See, for example, Ball, 1993; Ball & Cohen, 1999; Lampert, 2003). Research by teacher educators and teachers on their own practice is sometimes also referred to as Action Research. The relationship between action research and reflective practice as strategies to improve teaching practice is well documented (Gore Kenneth & Jennifer, 1991; Kemmis, 1985; Leitch & Day, 2000; McKernan, 1996). We will discuss it in more detail in a subsequent section.

If reflective practice implies taking our own professional practice as an object of contemplation in order to improve it, then it makes sense to ask what aspects of practice form a setting for reflection. Traditional problem solving processes are reductive in the sense that problem solving refers to selecting some aspects of the situation and bring to bear on them established technical tools for the solution of the problem. Mathematical word problems are an example par excellence of such problem solving. In reflective practice, however, the emphasis is not as much on problem solving as on problem setting. As Schön puts it:

> *From the perspective of Technical Rationality, professional practice is a process of problem solving. Problems of choice or decision are solved through the selection, from available means, of the one best suited to establish ends. But with this emphasis on problem solving, we ignore problem setting, the process by which we define the decision to be made, the ends to be achieved, the means which may be chosen. In real-world practice, problems do not present themselves to the practitioner as givens. They must be constructed from the materials of problem situations which are puzzling, troubling, and uncertain.*
>
> *(Schön, 1983a, p. 40)*

Problem setting is defined as "a process in which, interactively, we name the things to which we will attend and frame the context in which we will attend to them." (Schön, 1983a, p. 40). Please note that problem setting here is not a pre-existing situation, but refers to a problem set by the practitioner. Problem setting refers to methods that teachers use to work their way through the teaching situations riddled with dilemmas (Feldman, 1994). What this may look like in practice may be imagined with reference to practicing LCE in your own classroom. In implementing an LCE lesson, you may become more troubled by the inability of a particular student to participate in the discussions your own ability to manage the discussion or some other aspect of the teaching situation. Whatever aspect of the teaching situation attracts your interest will depend on your unique teaching situation. The process of reflection will focus on the particular aspect of the situation selected by you.

Deliberative Reflection

Deliberative reflection privileges neither expert advice nor the uniqueness of practice context. It is more holistic inasmuch as it encompasses a range of judgments including the expert advice as well as the elements of a practitioners' context (Valli, 1997; Wellington & Austin, 1996). The content of reflection in this type of reflection covers not just one's teaching behavior, but also the knowledge of subject matter, particular relationships with

“reflection...

students, social and cultural elements of the teaching situations, as well as the school organization to name a few. The quality of reflection, however, is judged by the quality of decisions taken by teacher educators and teachers as practitioners to promote the learning of their students.

Personalistic reflection

This type of reflection may be undertaken in addition to the more technical, in and on action, as well as deliberative reflection. Its concern is not just learning, but life as a whole. A reflective practitioner practicing the personalistic reflection will be concerned with the ability of themselves and their students to live a good life as a whole. A consideration of the content of personalistic reflection also pushes the boundaries of the meaning of education and of professional practice.

Critical reflection

Critical reflection pushes the content of reflective practice further, beyond the person, into the social and political arenas. The content of a reflective practitioner practicing critical reflection is the educative actions that can help transform and improve the conditions of life in the society as a whole. Commitment to educational justice, inequities, and social action and reform remains a vital concern in this kind of reflection. Programs that encourage critical reflection will be concerned with implications of behavioral advice to teachers. Consider, for example, the use of questioning skills. A critical reflective practitioner will consider the social consequences of the use of questions, “to consider the way questions and wait time are distributed. Are certain kinds of students systematically ignored? Do some students too often receive negative feedback? What messages are communicated to students who go through the school day without an opportunity to contribute to classroom dialogue or without a positive instructional interaction?” (Valli, 1997, p. 79).

At the end of this brief discussion about the types of reflection, we should also note that these distinctions, especially between the technical and more critical types of reflection, are also contested. Fendler, for example, points out that while dedicated educational researchers are concerned about the role of schooling in the promotion of social justice, the alleged opposition between technical reflection and social reconstructionist reflection is a false dichotomy (Fendler, 2003). For instance, educators engaging in technical reflection may believe that the efficient mastery of subject matter by their students is the most effective means of redressing social inequities. Thus, even when the “reflective practices seem to be technical and instrumental, they may still embody a profound sense of moral and political commitment to improving society.” (Fendler, 2003, p. 21).

Strategies of Reflective Practice

Reflective practices of all types assume that it is possible to turn our own professional practice into an object of contemplation. Reflection is premised on existence of an object of reflection. While reflection on the physical world is facilitated by its objective existence, such is not the case with one’s own teaching practice. Practice consists of the series of purposive actions that we take as teachers. In order to reflect on these actions, they need to be objectified and thus turned into objects of reflection. Objectifying one’s practice into an object of study demands innovative tools that must enable a student teacher or a teacher educator to step back from his or her practice in order to examine it. Therefore, nearly all reflective practice is contingent upon creating records of practice. These records of practice work as the object of practitioners’ contemplation forcing them to assume the roles of reflective practitioners. The records of practice assume different forms such as journals, anecdotes and concept maps of one’s practice. Below we will discuss some popular strategies used for reflective practice.

Reflective journal writing

We share the assumption of many teacher educators that reflective writing can promote reflective thinking (King & Kitchener, 1994; Ross, 1990). With Bolton (2010), we think of writing as an artistic process, which can harness one’s memories and thus produce highly personal records of practice.

Prospective teachers can be asked to make journal entries regularly in order to keep track of their learning. Writing becomes particularly useful when used to record students’ planning of their teaching practices and their accounts of the actual implementation of those plans in the classroom settings. These records are used by prospective teachers to examine both their successes and failures and to identify opportunities for refinement and change (Spalding, Wilson, & Mewborn, 2002; Valli, 1997).

Action research

Action research brings to bear the methods of systematic investigation on one’s own practice. Because the goals of action

a mental process ‘by which the mind observes and examines its own experiences and emotions; intelligent self-awareness, introspection.’”

research, like those of reflective practice, are improvement of practice, some scholars claim that reflective practice and action research are two different names of the same practice (see, McMahon, 1999). Emergence of both reflective practice and action research are widely seen as parallel to the widespread acceptance of constructivist and LCE approaches toward education reforms (Jennifer & Zeichner, 1991). Valli defines action research as a “systematic and in-depth inquiry into some aspect of one’s own teaching practice and context” (Valli, 1997, p. 82). Irrespective of the actual methodologies used, action research can embrace all types of reflections mentioned above (Grundy, 1982).

When teacher educators and prospective teachers engage in action research, they go through the cycle of planning action, implementing it, recording it in order to examine it systematically using the available methodologies and research tools, finding ways of improving it based upon such examination, and, finally, fine tuning and improving the original plans of action (for details of different steps involved in action research as well as examples of its use in pre-service programs, see, Gore Kenneth & Jennifer, 1991; Kemmis, 1985; Leitch & Day, 2000). Valli (1997) refers to the use of problem solving in formulating the problems that student teachers want to address, demining the kind of information needed to understand the problems better and deciding upon the best ways of collecting that information. Based on this information, the student teachers generate ideas about changing practice and are encouraged to defend their ideas. Valli sums up these observations as follows: “By engaging in action research, teachers take a more active role in directing and improving their own teaching. They also work on their observational, data-collecting, and problem-solving skills. Prospective teachers are encouraged to reflect on relevant research as well as on their own situation and to get feedback from mentors and peers.” (Valli, 1997, p. 82).

The use of action research is also extended to blur the distinction between university-based researchers and school-based teachers by turning teachers into researchers. Teacher researchers are, by definition, action researchers whose research is used for improvement of their own practice, but also published and presented in conferences for use by other professionals (Ball, 1993; Lampert, 2003; Parsons et al., 2002; Patterson, 1993).

Using life histories as the basis of reflection

Life histories are defined as “any retrospective account by the individual of his life in whole or in part, in written or oral form, that has been elicited or prompted by another person” (Watson & Watson-Franke, 1985, p. 2, cited by Knowles, 1993, p. 72). If you recall from above, retrospection is one of the meanings of the term reflection. Reflection on action is always retrospective. Furthermore, personalistic reflection, as described above, involves reflection on practice as part of ones overall life context. Records of life histories of prospective teachers can, therefore, potentially be most useful in making sense of ways in which their observations as children, the so-called apprenticeship of observation, influences their choices as teachers. According to Knowles (1993), “life histories are…illuminating windows on the processes of reflection that prospective teachers have utilized through their long experiences of being students”(pg.70).

We believe a reference to life histories is particularly important in contexts in which reform ideas, such as LCE, are likely to conflict with entrenched ideas about teaching and learning. Reflecting on, and becoming aware of, the ways in which teacher educators’ and prospective teachers’ early experiences may be influencing their current perspectives on teaching and learning can go a long way in finding viable ways of changing their practice.

Portfolios

Portfolios are compilations of students’ work. For prospective teachers, these compilations can be designed as records of practice teaching. As such, they can be used as tools for nurturing reflective practice (Sparkes, 1994). The potential for the use of portfolios as tools for reflection has been a major motivation for their use in teacher education (Fredrick, 2009; Wade & Yarbrough, 1996).

Students could use portfolios to record their decisions regarding particular teaching strategies in the process of planning their teaching. They could document and explore issues faced during their practice and describe responses to the problems of practice and justify them. By way of critical

reflection they could also deliberate upon the cultural, social and historical contexts of their practice and ways in which their actions affected student learning (Olson, 1991).

Anderson and DeMeulle (Wade & Yarbrough, 1996; K Zeichner & Wray, 2001) have documented the use of portfolios in 24 different teacher education programs in the context of the United States, Canada and the Netherlands. Their research shows that "portfolios encourage pre-service teachers to reflect and think about their work in deeper and more thoughtful ways than they have in the past" (Anderson & DeMeulle, 1998, p. 26).

Concluding Notes

This chapter has discussed the increasing use and relevance of reflective practice in education, especially as it relates to LCE and constructivism. As professional teacher educators participating in professional learning communities, reflective practice is an essential element of what takes place in these communities. Reflective practice is sometimes overused and not well understood. This chapter describes different types of reflective practice in education and how these types of reflection may come to influence all aspects of one's teaching. Reflective practice is more than just 'thinking back'. It has multiple perspectives, purposes and outcomes. The seminar below may help you understand reflective practice and provide you with the foundation for thinking through reflective practice and carrying it out.

Seminars

Seminar 1. Understanding reflective practice

Introduction

This seminar is designed to help you understand and differentiate between the different types of reflective practice.

Specific Tasks

1. Based on your reading of the chapter, make a matrix which shows your understanding of the different types of reflective practice. You may decide to make groups of two or more teacher educators to develop their own matrix and then compare. Some of the elements of reflective practice you may include are: definition, how practiced, purposes, impacts and relevance for your context.

2. Share you matrices with each other and discuss.

3. What type of reflective practice, if any, goes on within the college? Individually describe if and how you carry out reflective practice in your work at the college.

4. What type of reflective practice are you most interested in and why? Are there any barriers to reflective practice in your college? If so what are they? Are there ways to overcome these barriers?

5. How do student teachers learn about reflective practice in the college? Is it part of the curriculum—either hidden, intended or implemented curriculum? If yes, discuss. If not, discuss whether reflective practice should be made an explicit part of the curriculum and why or why not?

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Professional Learning Communities in the Teachers' College is a hands on, practical guide for teacher trainers. This resource is designed to foster a transformation in the way teacher educators understand their jobs and how they practice their profession. The text is designed to facilitate teacher trainers coming together to engage in professional development activities aimed at meeting shared goals of improved practice and higher levels of expertise. In these communities, teacher educators can transform their practice by 1) updating their knowledge on salient educational issues for teacher education, 2) engaging in critical dialogue about those issues in relation to their personal beliefs and contexts, and 3) developing a reflective approach to their practice. Grouped by pertinent themes in teacher education, each chapter first covers the major theoretical ideas underlying these reforms and concludes with proposed seminars that prompt teacher educators to carefully examine their own system of teacher education and reflect on possible ways of removing impediments to reform. Many related readings are included on the accompanying CD-ROM, and the seminars serve as a tool for implementing theory into practice and allow communities of teacher educators to place salient themes of education reform in relation to the contexts in which they work.

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