The Role of Women in Technical Education Entrepreneurship, Research and Consultancy

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Edited by

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Factors Affecting the Gross Enrolment Ratio (GER) of Women in Higher Education: A Cultural Perspective for Women's Empowerment

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Abstract

Education is a fundamental right and a basic prerequisite for the people of every country. Education is a vital component of a country's socioeconomic growth and is regarded as one of the most effective tools for achieving a more balanced and harmonious process of human development. Poverty, ignorance, and exclusion are all minimised as a result of a well-balanced economy. Higher education, as a preparation ground for a technical, research-based, career-oriented future, must be viewed as a potential tool for achieving social change and ensuring democracy's success.

With 4.3 million students enrolled in 196 university-level institutions, India's higher education is likely to be considered diverse. Girls in rural areas, on the other hand, have limited access to such schooling. Of India's population, 48 per cent are female. The enrolment ratio, on the other hand, suggests that more women are seeking admission to courses typically associated with women, such as MA, M.Com, MSc (nursing), Master of Library Science, Master of Physiotherapy, design, hospital administration, and fashion management. Men continue to outnumber women in courses such as business administration, law, financial accounting, and computer

administration. Increasing access to higher education necessitates legislative support in order to affect cultural shifts.

As a result, this paper aims to investigate and analyse the underlying reasons for women's under-representation in higher education across disciplines in a number of Indian states and at central universities. The study considers the most common reasons for dropping out in relation to government policies and schemes (SARVA SIKSHA ABHIYAN, RAA) aimed at reaching students and proposes need-based solutions to close the gap.

1. Introduction

By removing restrictions and obstacles, education must be made available to all residents. After students have completed their primary and secondary education, the emphasis should shift to increasing the involvement of men and women in the field of higher education to an equal level. Women's access to vocational, technical, and professional education at all levels, breaking gender norms, would ensure better financial security for women and contribute to national growth, according to the Indian National Policy on Education.

Education is a "fundamental human right—one that all persons are entitled to enjoy regardless of their circumstances—that also brings essential benefits to human society as a whole," according to UNESCO (2012, 8). According to De Mcpherson (1999), fair and proportionate participation of men and women is needed to achieve these benefits faster. Preventing women from partaking in all facets of the development process solely because of their gender, in the author's opinion, is a futile attempt to waste valuable resources, particularly when women make up half the population.

2. Women's empowerment: a cultural point of view

Gender inequality has been a significant impediment to women having fair access to higher education. In the education-equality model, it has been described as a critical category that needs attention. Women's education has become a contentious topic in recent years; it has become important to turn the emphasis away from academic advancement and toward women's autonomy in decision-making, freedom of speech, and resource management. Empowerment is the result of a power redistribution that questions patriarchal ideology while also changing the structures that

reinforce or maintain gender inequality. The following are the criteria of empowerment that have been established.

1. Improving critical thinking skills.
2. Using collaborative decision-making and intervention processes to promote decision-making and action.
3. Ensuring that all people have a fair say in the planning process.
4. Raising women's self-esteem and trust.

The time has come to recognise the importance of education for leadership development, especially for women, in a rapidly developing country like India—something that can only be accomplished through higher education.

3. Higher education's concerns and future directions

Education is both a goal in and of itself, as well as a way to achieve other goals. Training has taken on a new significance in our world of unpredictable social and technological shifts as a way of comprehending and dealing with such complexities. The knowledge explosion, aided by information and communication technology, is a driving force in the Indian economy, allowing for a higher standard of living. As a result, Indian higher education must reorient itself in order to become more vibrant, competitive, meaningful, and purposeful. Women must establish a more professional approach to cope with the rapid multiple shifting conditions in the evolving global climate. If higher education is to succeed in today's world, it must move away from relying solely on a masculine-oriented curriculum and toward a more evolved market-oriented position that is suitable for the entire population. Higher education is a way of achieving vertical mobility, which may help to bridge society's deep divides.

In most developed countries, the number of higher education students has risen over the last four decades, and universities have progressed from elite to mass to global higher education (Taylor 2003, 813). The growing rate of female participation in higher education has been a notable aspect of this trend. Women now make up the majority of tertiary students in the vast majority of developed and developing countries, as well as those in transition (Leathwood and Read 2008). According to data from the United Nations Educational, Scientific, and Cultural Organization (UNESCO 2016), the proportion of women in higher education has increased from 39 per cent to 56.4 per cent in North America and Western Europe, 34 per cent to 51.3 per cent in East Asia and the Pacific, 35 per cent to 56.3 per cent in Latin America and the Caribbean, and 21 per cent to 56.3 per cent

in Latin America and the Caribbean over the last forty years. Men still outnumber women in sub-Saharan Africa and South and West Asia, though there are some significant variations between countries and regions. In the Organisation for Economic Co-operation and Development (OECD) countries, women's participation in higher education has also increased from 33 per cent in 1970 to 54 per cent in 2012.

4. Present situation

India aims to achieve a GER of 30 per cent by 2020, but it is lagging behind other developing countries in achieving this goal. A glance at the number of students enrolled in different undergraduate and graduate programmes reveals that:

- The HRD ministry's latest All India Survey of Higher Education (AISE) report, the GER in higher education in Karnataka for the 18–23 age group increased to 28.8 per cent in 2018–19 from 27.8 per cent in 2017–18.
- In 2018–19, a total of eight lakh new students were enrolled in the country's universities and colleges, according to the annual survey, which put overall enrolment at 3.74 crore, up from 3.66 crore the previous year. By 2022, the ministry aims to lift the GER in higher education to 30 per cent, and by 2024, it will have doubled.
- The gender gap in higher education is also narrowing, according to the All India Survey of Higher Education (AISHE) report. Men continue to outnumber women "at almost every level," with the exception of MPhil, PG, and certificate programmes, according to the survey. "At the undergraduate level, 51 percent of students are men and 49 percent are women. The proportion of men and women enrolled in diploma level courses is skewed, with 66.8% men and 33.2 percent women."
- Men make up 56.18 per cent of PhD students, while women make up 43.82 per cent, according to the study. With 46.9 per cent, Tamil Nadu has the highest GER in India. Six states have GERs that are higher than the national average (25.2%), with their share of students enrolling in higher education rising twice as fast as the national average. Tamil Nadu (46.9%), Himachal Pradesh (36.7%), Kerala (34.2%), Andhra Pradesh (32.4%), Haryana (29%), and Punjab (29%) are the states in question (28.6 percent). However, eight states, including Uttar Pradesh (24.9%), Madhya Pradesh (20%), Odisha (21%), Bihar (14.4%), Gujarat (20.2%), Rajasthan (20.5%), Mizoram (24.5%), and West Bengal (18.5%), had GER

ratios that were significantly lower than the national average. Bihar has the lowest GER, with just 14.4% of its qualifying population (between the ages of 18 and 23) pursuing higher education.

- According to a survey of international students studying in India, there hasn't been much change in the country's education globalisation. The number of international students has increased slightly, from 45,424 in 2015–16 to 47,575 in 2016–17, with 31,779 men and 15,796 women. The neighbouring countries of Nepal (23.6%), Afghanistan (9.3%), and Bhutan have the largest percentage (4.8%).

5. Change-oriented patterns

In terms of women gaining access to higher education, there has been a significant improvement. Women have outperformed men in grades, evaluations, and degree completion in several fields of study in recent decades, not only because of the steady exponential rise in the number of women receiving tertiary education around the world, but also because women have outperformed men in grades, evaluations, and degree completion in several fields of study (Buchmann et al. 2008, cited in UNESCO 2012; Papadópulos and Radakovich 2005). The democratisation of cultures, as well as shifting standards and attitudes have been credited with this kind of change.

The research also highlights the importance of international gender agendas of organisations such as the United Nations and UNESCO, which have been particularly influential in areas of advocacy and have created normative instruments, resolutions, declarations, and recommendations to ensure and advance gender equality in education, among other things.

6. Impediments to the standard of higher education

As a sign of success, the proportion of girls attending school has been steadily increasing. However, issues such as race, poverty, and lack of inclusivity continue to exist. Many obstacles to quality education exist for women at all levels, including negative gender roles and wrongful gender stereotyping, child marriage and early and unwanted pregnancy, gender-based violence against women and girls, a lack of equitable and quality learning environments, and insufficient funding.

Several factors have made it difficult for women to enrol in institutions of higher education that are recognised for their consistency and excellence.

In 2009, 504 universities and 25,951 colleges showed no signs of being able to satisfy the increasing demand for higher education (India, Government of India, Ministry of Human Resource 2015). The National Knowledge Commission proposed 1500 more universities in the 11th Five Year Plan for the period 2007–12. (NKC). As a result, although the number of people is growing exponentially, the standard of education is not being seriously considered. The standard of higher education is being hindered by a shortage of sufficient facilities in terms of teachers, libraries, and computer lab equipment. It is clear that equality and equitable education, which can help both women and men, are urgently needed. Despite the fact that the HE world used to reproduce gender inequality due to its conception as a space that was not adequately "feminine" (Papadópulos and Radakovich 2005), higher education is now recognised as a human right and an important tool for achieving equality (UNESCO 1995) due to its undeniably large effect on a society's future. However, there are a number of variables that have a significant impact on educational quality:

- Students who complete UG and PG programmes need to be more employable.
- Interdisciplinary expertise and curriculum revision are required.
- Long-term plans and visions are needed to achieve the Sustainable Development Goals.
- Improved performance and a more transparent assessment system are needed.
- Technology should be integrated into traditional teaching methods to replace traditional teaching methods.
- Students and professionals should be inspired to seek careers based on their interests and skills.
- Study and professional development should be encouraged.
- Workplace autonomy is needed to allow people to think big and think creatively.

7. Final thoughts

Women, like their male counterparts, play an important role. They make a significant contribution to human resource growth in terms of productivity and long-term development. Nonetheless, their full potential will not be realised until the voices of all women have been heard, human rights have been developed in favour of women, cultures have begun to democratise

and values have begun to shift, and international gender equality agendas have been set on a path toward development.

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The Role of Reflection, Teacher Beliefs and Decisions in Enhancing Professionalism

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"Revise the past, revisit the present and redirect the future"
—Wilkes (1999, 24).

Abstract

This chapter attempts to highlight the importance of reflection, teacher beliefs, and decision-making in enhancing professionalism. It tries to trace the history and development of professionalism in English language teaching. Then it explains the meaning and importance of reflection, teacher beliefs, and decision-making. Next it presents a brief review of research carried out in the three areas identified and shows the significance of the available literature for the present study. Further, a discussion is provided to help understand the constraints in the use of reflective practices in the Indian context. It concludes with a few suggestions for ESL teachers.

1. Background and introduction

In an attempt to trace the history of professionalism, Leung (2009) observes that the perception of a *good teacher* in primary education in England has changed over a period of thirty years. Until the mid 1970s, there was strong support for the view that a good primary teacher was a generalist; that is, it was enough for a teacher to teach the full range of curriculum subjects. However, in the late 1970s, there was a shift in the perception of the roles of primary school teachers; the ability to teach in a large number of subject areas was no longer regarded as adequate, but a qualification in teacher education was required. Throughout the 1980s this emphasis on subject specialism was maintained and, much later, the idea of language teacher professionalism came to the diverse field of English language teaching (ELT). As a result, different qualificator frameworks for English language teachers emerged in different ways in different states.

Another important need for professionalism in English language teaching is the very nature of the English language in the way it is perceived and used across the world in the context of growing globalisation—the tremendous advancements in science and technology that paved the way for the rapid growth in the use of English as the world's lingua franca (Leung 2009). The next important area associated with professionalism is digital communication technology, which has an impact on the way we use and work with language. For that matter, the notion of literacy itself is constantly reconstituted. Canagarajah (2006) observes that "because of the resources available in computers and the world wide web, texts have become polysemic, multimodal and multilingual [and] diverse dialects, registers . . . now commonly inhabit the same textual space" (26). In general, reading and writing practices have also changed in fundamental ways with developing technology. These challenges for ELT professionals in the new paradigm shift of language functioning suggests that teachers should be professionally dynamic and familiar with emerging social, political, and technological developments.

1.2. Teacher development from knowledge transmission to knowledge construction

Firth and Wagner (1997) in their seminal work on SLA research questioned the traditional assumption that language is a naturally ordered hierarchical system consisting of predetermined characteristics that reside in some deeper psycho-cognitive level in the individual. The dimensions

of this language use call for broadening the definition of language and therefore SLA raised questions about the curriculums and methodologies of traditional L2 instruction. Even the contemporary method of communicative language teaching, which argues that presenting both form and function explicitly or implicitly and creating opportunities for L2 learners to try in communicative contexts, has also come under scrutiny (Karen 2009).

Recent research in applied linguistics suggests that language is a social practice, and it develops in relation with its functions within the sociocultural activity in which the individual participates. Hence, when language is conceptualised as a social practice, there is a shift in teaching L2 toward helping learners develop the capacity to interpret and generate meanings that are appropriate within particular sociocultural contexts (Lantolf and Johnson 2007).

Traditionally, it was believed that knowledge of teaching could be transmitted through a process of organised professional education, but this knowledge consists of subject matter and pedagogy (Freeman 1998). No doubt, existing pre-service teacher education programmes provide teacher-learners with certain knowledge in the form of general theories about language-learning—prescriptive grammatical information about language and pedagogical methods that will be applicable to any teaching context. Learning to teach so far has meant learning about teaching in the context of the teacher education programme, and then actually doing it in another context, which results in a gap between what is learnt and what is actually practiced. Therefore, there are many problems with the knowledge-transmission view (Freeman 2002). According to Tharp and Gallimore (1988), teacher education has to move from a view of knowledge transmission to one of knowledge construction in which teacher-learners build their own understandings of language teaching through their experience by integrating theory, research, and opinion with empirical and reflective study of their own classroom practices. Therefore, there is a need for teacher education to move from the "transmissive model" to the "constructivist model." Further, to help teachers erase the "deskilling of teaching" (Larsen Freeman 1992, in Sharma 2008), the need for development and empowerment can be achieved through "reflection" (Loughran 2002, in Sharma 2008).

2. Reflection in professional development

This section attempts to discuss the three main areas of the paper. It explains the meaning and importance of reflection, teacher beliefs, and

decision-making. The meaning of each concept is provided followed by a sub-section about its importance. The views of various authors are brought in to provide a comprehensive picture.

Reflection is a complex concept defined and perceived differently in different situations. Dewey (1933) defined it as the "active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" (9). He points out that reflection is a holistic way of meaning and responding to problems in the process of becoming a teacher, which involves intuition, emotion, and passion. Valli (1997) interprets Dewey's definition to mean that reflective teachers "can look back in events, make judgements about them, and alter their teaching behaviours in light of craft, research and ethical knowledge" (70). Similarly, reflective practice according to Raelin (2002, in Sharma 2008) is "the practice of periodically stepping back to ponder the meaning of what has recently transpired. . . . [reflective practice] privileges the process of inquiry . . . probing to a deeper level than trial and error experience."

2.1. Reflective teaching

Reflective teaching (Dewey, 1933) has two forms of actions: "routine action," which is influenced by factors like "tradition, habit and authority" (Pollard 2006), and "reflective action," which entails self-appraisal, analysis, and development. It means that teaching cannot be confined to classroom activities—what Lortie (1975) called "the egg cartoon profession" because it is influenced by various outside agents like aims, objectives, curriculum, syllabus, technical competence, and so on. Therefore, reflective teaching entails the understanding of aims and consequences of classroom practices as well as the influence of outside variables.

According to Pollard (2006), a reflective teacher plays several roles in a "classroom-based reflective process." The role of a teacher was seen as that of a "researcher" (Stenhouse, 1975), "strategist" (Moore 2004), and "decision-maker" (Reagan, 1993) or as a "reflective practitioner" (Schon 1983). Reflection involves several functions in a cyclical form like planning, making provision, acting, collecting, analysing and evaluating evidence, and reflecting. Thus, the central concern of all these processes is self-monitoring and reflection that has a bearing on one's beliefs, attitudes, and decisions. The cyclical process is represented diagrammatically in figure 1.

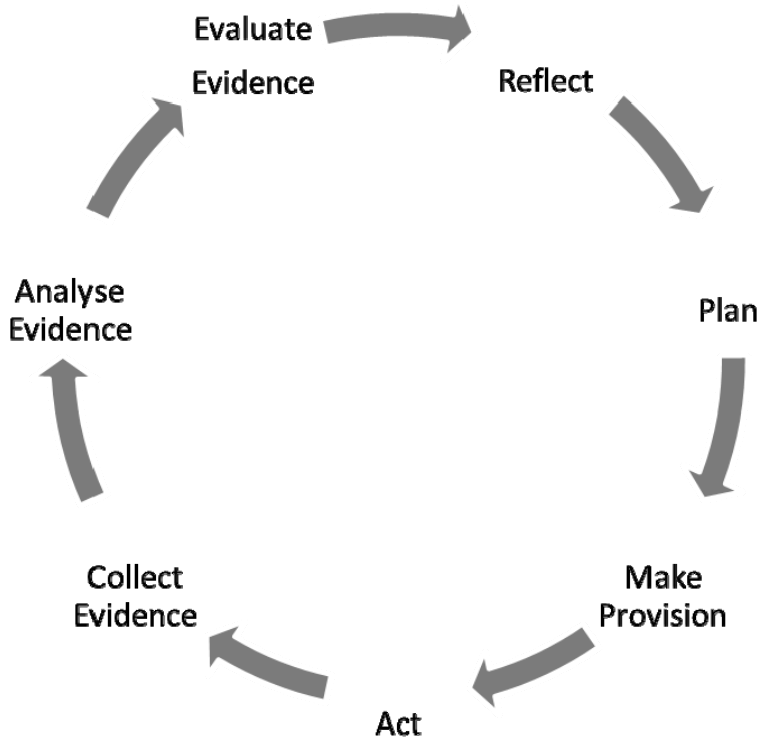

Figure 1. Cyclical nature of the reflective teaching processes (Pollard 2006, 17).

From the diagram above it can be understood that all the aspects in it such as "act," "plan," "reflect," "evaluate," "analyse," and so on, are a result of the teacher's beliefs, attitudes, and decisions (or the beliefs, attitudes, and decisions of a teacher may change because of these). Therefore, reflection and beliefs and attitudes are interlinked. In short, traits like responsibility, open-mindedness, and flexibility to receive data or accept shortcomings are important qualities of a reflective teacher.

2.2. Importance of reflection

Reflection is an "inquiry" into one's own thinking and actions to open up new vistas of learning and seek solutions for what puzzles or perplexes teachers in their profession. A reflective teacher with a conscious thinking develops "learning" in his/her profession. This learning is the essence for

the development and empowerment of every teacher, which thereby leads to enhanced professionalism.

The importance of reflection is as follows:

- Reflection commits teachers to continuous improvement and practice.
- It helps them take responsibility for their own learning—now and throughout their careers.
- It makes them aware of self, others, and surrounding contexts.
- It helps them identify strengths and weaknesses in their teaching practices and improve.
- It helps them involve themselves in their own development through self-appraisal and collaboration with peers and colleagues.
- It helps them discover more about their teaching by understanding the process of teaching and learning in their own and other classrooms.
- It helps them become flexible to change to benefit students.
- It helps them explore learning itself and become a better teacher.
- It helps them stay focused on student learning and development.

Therefore, to "pause" is not simply to wait for things to happen all on their own, but to endeavour to create space in one's teaching by searching for "options between a stimulus and a response" (Covey 1989, in Sharma 2008). Thus pausing and openness to inquiry and thinking resulting in learning and action leads to enhanced professionalism and better student learning.

2.3. Beliefs: definition and importance

Beliefs are a "messy construct" (Pajares 1992) yet to be unveiled completely. Though not much research has been conducted in this area, a few efforts made by researchers reveal some information about this phenomenon.

Beliefs cannot be defined accurately. Throughout the years, researchers (Nisbett and Ross 1980; Pajares 1992; Rokeach 1968; Nespor 1987) in Pajares (1992) have defined the system of beliefs in different ways according to their plan of study. As a result, until now not a single working definition of belief has been reached. As Pajares (1992) rightly puts it:

> defining beliefs is at best a game of player's choice. They travel in disguise and often under [an] alias—attitudes, values, judgements, axioms, opinions, ideology, perceptions, conceptions, conceptual systems,

> preconceptions, dispositions, implicit theories, explicit theories. Personal theories, internal mental processes, action strategies, rules of practice, practical principles, perspectives, repertoires of understanding and social strategy, to name but a few that can be found in the literature. (309)

Generally speaking, our beliefs strongly influence our behaviour. They motivate us and shape what we do. They are like guiding principles, the mental maps that are used to make sense of the world. Beliefs are also defined as "constructs" (Mertz and McNeel 1990), "images" (Calderhead and Robson 1991), "metaphors" (Carter 1990), and "webs" (McDiamid 1990). Bruner (1996) referred to them as "folk-pedagogies" that reflects certain "wired-in human tendencies and some deeply ingrained belief." Holt-Reynolds (1992) defined beliefs as lay theories, which are formed by our personal experiences and cultural values. Sigel (1985) on the other hand, defined beliefs as "mental constructions of experience—often condensed and integrated into schemata or concepts." According to cognitive psychologists, beliefs are one's representation of reality that guides both thought and behaviour (Abelson 1979; Anderson 1985). Rokeach (1968) claimed that beliefs have a cognitive, an affective, and a behavioural component and act as influences on what someone feels, says, and does. Beliefs have also been defined as judgements and evaluations that we make about ourselves, about others, and about the world around us (Pajares 1992).

Beliefs act as filters through which other information is interpreted (Clark and Peterson 1986, in Pajares 1992). In other words, what can be inferred is that beliefs are formed at a very early age—we acquire them unconsciously and sometimes consciously—so they are a product of our upbringing, a reflection of our life experiences or a result of socialisation processes in schools, but the effect of beliefs once formed can have an influence on the whole life of an individual.

Beliefs play a very important role in our lives. They mould our way of thinking and behaving. They serve as our guiding principles and influence all our activities. Kagan (1992), pointing out the importance of such studies, argues that beliefs are "the clearest measure of a teacher's professional growth" and, hence, they need to be studied. Pajares (1992) pointed out that to study beliefs is important as they "play a pivotal role in the acquisition and interpretation of knowledge and subsequent teaching behaviour and the unexplored. Entering beliefs may be responsible for the perpetuation of antiquated and ineffectual teaching practices." He also points out that such studies will also provide teacher educators with important information to help determine the curricula and programme direction. Putnam and Borko (1997) point out that for professional

development and to bring in change, it is essential to study the knowledge and beliefs of teachers. Johnson (1994) argues that it is important to study teachers' beliefs as they influence the perception and judgement of the teachers and make them interpret new information about learning and teaching. Moreover, studies of teacher beliefs are essential in order to improve the standard of teaching practices and teacher training programmes (Johnson 1994). It has been established by research that novice teachers possess a well-developed set of personal beliefs about learning and teaching before they enter the job as teachers (Anderson et al. 1995; Calderhead 1991; Reynolds 1992; Lorka Joram and Bryson 1996; Wubbels 1999; Zeichner and Gore 1990, cited in Sarmah 2005). It has also been established that these prior beliefs influence the construction of new knowledge by teachers (Schuman 1996, in Sarmah 2005).

Keeping in mind the constructivist view of learning, what follows is the argument that if we find out the prior beliefs of teachers, it will be easier for teacher educators to provide them with alternative images of teachers and teaching, so that these images can act as a model for their instructional practices (Johnson 1994). She further adds that since beliefs cannot change, only shift, if there is something to shift (Nespor 1987), it will be useful to find out their beliefs, make them reflect on them, make them question their own beliefs, and try to come up with alternative images. It will also help minimise the gap between theory and practice. Chris Argyris and Schön (1974), also had similar ideas in mind when they argued that in order to merge the gap between espoused theories (theories of teaching) and theories of action (theories in use), teachers should be trained to be more reflective, thereby subjecting their professional practice to ongoing critical reflection and making clear their own particular world view. Further, it has also been established that pre-service teachers' prior beliefs have more influence than formal teacher education in shaping their teaching (Lortie 1975) and positive change can happen if attention is given to teachers' previous beliefs, attitudes, and values (Florio-Ruane and Lensmire 1990). Many years ago, Zeichner and Tabachnick (1981) advanced an explanation that the thousands of hours that prospective teachers spend as pupils in the classroom shape their beliefs. Hence, it becomes important to study their beliefs. Along the same lines, Bird and Anderson (1993) posit the possibility of encouraging teachers to foster alternative beliefs by targeting a study of their prior beliefs.

2.4. Decision-making: importance

Decision-making is viewed as an essential teaching competency. Shavelson (1973, in Lockhart and Richards 1996) observed that "Any teaching act is the result of a decision, either conscious or unconscious . . . what distinguishes the exceptional teacher is not the ability to ask, say, a higher order question, but the ability to decide, when to ask such a question" (143–45). From this perspective, it can be understood that teaching is a thinking process. According to Lockhart and Richards (1996) teachers are constantly confronted with a range of different options and are required to select from among these options the ones they think are best suited to a particular goal. The option the teacher selects is known as a decision (Kindsvatler, Wilen, and Ishler 1988, in Lockhart and Richards, 1996). According to Prahlad (1995) "decision making is intimately connected with the teacher's role, in both the broader context of the institution in which the teacher works and the narrower context of the classroom." Calderhead (1984) states that "it is difficult to find any one account of decision making which is both detailed and realistic." Decisions lead to actions, which when carried out result is classroom events—ultimately in the form of a series of verbal and non-verbal events involving students and the teacher. Woods (1996) expresses that "decision making is thus the cognitive work which culminates in a course." Research states that teaching has been viewed as a decision-making process traditionally. Woods (1996) quoting Lienhardt and Greeno (1986) states that teaching is a "complex cognitive skill requiring the construction of plans and making of rapid on-line decisions." Borko, Cone, Russo, and Shavelson (1979, cited in Woods 1996) state that "Teaching, then can be characterized as a process of decision making: sometimes teachers are aware of their decisions, and sometimes they make them automatically."

According to Prahlad (1995), teaching activities can be broadly classified into three types: planning activities, implementation activities, and maintenance activities.

- Planning activities are those activities that the teacher engages in when deciding on learning objectives, sequences, and outcomes.
- Implementation activities are those activities that relate to how the teacher implements a plan of action in an actual setting.
- Maintenance activities are the activities the teacher engages in to keep the classroom environment suitable for learning to take place.

From the discussion above, it can be concluded that decisions provide bridges between thought and action. They also link the ways in which we understand the environment and our actions in it.

In schools and classrooms, to carry out their professional functions and interact meaningfully with pupils and colleagues, teachers must develop ways of understanding the environment that enables them to make decisions and guide their everyday actions.

Decisions are important because in the classroom, teachers meet with a variety of unexpected situations. For example, lessons do not go as well as expected, children experience unforeseen difficulties, or the activities of the class are interrupted by sudden events. Such situations demand immediate and appropriate responses from the teacher in order to minimise classroom disruption, pupils' loss of interest, and failure. Other types of routine problems like noise in the classroom, children finishing their work at different times, and the need to provide feedback on pupils' performance may demand immediate and apt decision-making from the teacher.

As Woods (1996) rightly puts it, "Decisions are based on knowledge and beliefs about the current state of the world (such as students' knowledge and abilities, the contents of the curriculum, and what is happening in the classroom)." Quoting Borko, Cone, Russo, and Shavelon (1979), Woods (1996) states that "when teaching is viewed as a decision making process, the teacher is seen as an active agent who selects a teaching skill or strategy in order to help students reach some goal." The ability to make appropriate decisions is essential as it enables teachers to assess students' response to teaching and to modify their instruction in order to promote optimal learning. Park (1984) in Lockhart (1996) observes: "Teaching-learning contexts change, and teacher behaviours must change accordingly. The basic problem for teachers is, therefore, to acknowledge that there is no one best way to behave, and then to learn to make decisions in such ways that their behaviours are continually appropriate to the dynamic, moment-to-moment complexity of the classroom." Though the teacher is powerful enough to take decisions in the classroom, he or she has to think twice before taking a decision since it is a complex process that involves important questions like what, when, who, and where.

Despite the complexity involved, the wonder is that it all happens unconsciously or consciously within the classroom in a short or long time when encountering all the classroom constraints like time, disturbance of other students, and so on. Although we can observe teachers at work, engaging in continuous and various actions and interactions, we cannot understand the real nature of teaching and what it involves underneath. Therefore the tacit and inherent notions like beliefs and decisions that play a crucial role in teaching need in-depth analysis and investigation. In light

of this perspective, my study attempts to understand teacher beliefs and decision-making as part of the empowerment process.

3. Review of the related literature

This section attempts to review the available literature in the area of the present study. The review is divided into three categories identified in the paper—reflection in professional development, teacher beliefs, and teacher decision-making.

3.1. Reflection in professional development

The concept of reflection discussed so far was emphasised by Donald Schön (1983) who contributed to the understanding of what reflection involves and how it can facilitate improved practice. Schön (1983) pointed out the "crisis in professional knowledge" referring to the gap that exists between professional knowledge and actual competencies in practising teachers. He stressed "practitioner-generated, intuitive knowledge" resulting from experience. He further brought the concept of "reflection-in-action" and "reflection-on-action" to teacher development (Schön 1983). "Reflection-in-action" entails thinking critically about one's actions in the midst of actions or as they are occurring in order to make changes in the moment; whereas "reflection-on-action" involves critical thinking about one's actions after they have had an effect. In other words, it is the process of considering past actions and learning from those experiences in order to shape future actions. These concepts help teachers look at their own work while teaching and after teaching in order to examine their underlying beliefs and actions and find better and alternative practices for the future.

Zeichner and Liston (1987, cited in Sharma 2008) explained Manen's (1977) concept of "critical reflection in education" (critical reflection enquires about the moral, ethical, and equity aspects of practice) and stated that it helps in the promotion of professional development of teachers, bringing about social equity towards the realisation of a "just and humane society."

To Schön's (1983) concept of reflection, David Symth (1989) in Sharma (2008) added several forms of action that promote reflection namely: "description, information, confrontation and reconstruction." Clarke (1995, 243) studied the Schön's (1983) perspective and revealed that "thought is embedded in action, reflective practice is grounded in the

immediacy of the action setting and reflective practitioners engage in a process of problem setting as opposed to technical problem solving."

Reflection has been further viewed by Osterman and Kottkamp (1993) as a form of experiential learning cycle that entails problem identification, observation, and analysis, abstract reconceptualisation and active experimentation. Langer and Cotton (1994) introduced a framework for developing teacher reflection that incorporates a cyclical process of gathering information about an experience, conducting analysis, forming a hypothesis, and testing it through practice. Here Stenhouse's (1975) "process-based approach" goes hand in hand with the notion of a practical science laboratory as he states that every classroom is a laboratory for teachers and learners to discover, experiment, and analyse. Valli (1997) also added several forms to Schon's concept of reflection. He pointed out various types of reflection in teacher preparation programmes: "technical reflection" on general instruction and management practices of research; "reflection-in-action" and "reflection-on-action" on teachers' performances and decision-making; "deliberate reflection" on pedagogic practices and concerns; "personalistic reflection" on one's own personal development and relation with learners, and finally "critical reflection" on making judgements based on ethical criteria.

Reflection has been viewed as an integral subject in teacher development by Pugach and Johnson (1990), as an act of "Problem summarization, generation, production and reconsideration." Gagatsis and Patronis (1990) describe it as "discovery, introspection and thoughtfulness." Eby and Kajuwa (1994) studied it as "observation, judgment and action," Lee (2000) as problem identification, experimentation, and judgement, and Rodgers (2002) as experiential, intelligent action (cited in Sharma 2008).

Stanley (1998) confirms that reflective practice consists of a series of phases: (a) engaging with reflection, (b) thinking reflectively, (c) using reflection, (d) sustaining reflection, and (e) practising reflection. She does not consider them in a sequence but stresses that reflective practitioners need to find themselves in any of the phases.

According to her, to "engage in reflection," first a teacher's personal, professional, and contextual factors need to be stabilised; for example, a context in which colleagues are too obsessed with receiving their pay checks and not interested enough in professional growth and development can lead to a lack of reflection. The second phase "thinking-reflectively" is a skill that teachers either have or need to learn. For example, the ability to describe what happened in the classroom and how they feel about it. The third phase, "using reflection," occurs only when teachers understand the

nature and process of reflection. Here teachers sort out things that are useful to them. The fourth phase, "sustaining reflection," is the result of a conscious decision to acknowledge the problems in one's own teaching practice and thought: for example, the ability to engage in reflective discussions with peers and mentors. The last phase, "practising reflection," refers to integrating reflection and practice, whereby reflection becomes part of the teacher's professional life.

In a study conducted by Lee (2007), dialogue and response journals were used to engage pre-service teachers in reflective thinking. The study concluded that the use of journals provides pre-service teachers with a reflective tool to make sense of educational theories while personalising them, applying them and defining their relevance to educational philosophies and practices (Good and Whany 2002, cited in Lee 2007).

3.2. Teacher beliefs

It is important to understand research on belief studies because it throws light on the thought processes of teachers that guide their teaching practices, both inside and outside the classroom. Many studies have been conducted up to now to find out teacher beliefs about issues like learning, teaching, the curriculum, and so on. Studies on teacher beliefs were conducted along three different lines: studies on teacher beliefs (espoused theories of action), studies on teacher practice (theories in use), and studies that examined connections between espoused theories of teaching and teaching practice.

According to researchers (Kagan 1992; Pajares 1992) there are different types of beliefs that a learner holds: "perceived beliefs" and "actual beliefs." The perceived beliefs or the espoused beliefs are the beliefs that a person believes as truth. He or she might not practice them but will still believe that he or she follows them. These are also called espoused theories of action. Heath, Susan, and Ruth (2002, quoting Dunkin and Precians 1992) state that espoused studies did not watch the participants teach to compare their espoused theories of action with their theories in action.

Several studies examined espoused theories of tertiary teachers through semi-structured interviews, surveys, and questionnaires in order to explore their beliefs about teaching and learning. Some of them are Fox (1983), Menges and Rando (1989), Dall' Alba (1991), Gow et al. (1992), Gow and Kember (1993), Pratt (1992), Andrews et al., (1996), Johnston (1996), Singer (1996), Hativa (1997), Ballantyne et al. (1999), Kembers and Kwan (2000), and Kember et al. (2001). On the other hand, actual beliefs are the

beliefs that a person actually follows. They are also known as theories in use. Some studies in this line of research are Trigwell et al. (1994), Saroyan (1997), Willcoxson (1998), Pratt, Kelly, and Wing (1999), Samuelowicz and Bain (1992), Driel et al. (1997), cited in Heath, Susan, and Ruth (2002). The third line of research, "studies on the connections between espoused theories of teaching and teaching practice" attempted to solve the mystery of disjunction between stated theories and theories in practice.

Mertz and McNeely (1990) conducted a study to find out how teachers' think about teaching—their internal, mental constructs—and look at the relationship between teacher thought and behaviour. Fifteen participants were the subjects of the study, whose lessons were noted down in the form of running notes. On the basis of the notes, interviews were conducted and analysed. Mertz and McNeely concluded that teaching consists of four paradigms—transmission of information, communication with students, doing the discipline, and personal development.

Martin and Ramsden (1993) conducted a study to investigate how academic staff understand teaching, and how their understanding is embodied in their practice. Five university teachers were the subjects of the study whose sessions were observed and then debriefed. Interviews and observations were used to report the case studies, which detailed the professional development of the subjects. The researchers came up with a hierarchical model to prove the expansion of awareness among the participants.

Scott, Chovanec, and Young (1994) interviewed fourteen professors to examine the relationship between their philosophy of teaching and their teaching practice in the classroom. They concluded that there is always a negotiation between what one assumes and believes to be true about teaching and the contextual factors.

Saroyan and Snell (1997) examined lecturing styles and concluded that there were no explicit links between the lecturers' aims, conceptions of teaching, and actual teaching practice. In another study, Gibson (1998) conducted a reflexive self-study into her own teaching beliefs and practices and found that she did not act consistently with her espoused beliefs.

Hermes (1999) conducted an action research project with a university teacher and students. She found that though the student teachers tried to be aware of their self-concepts, they were more cognisant of their subject theories.

Martin, Prosser, Trigwell, Ramsden, and Benjamin (2000) examined the relationship between university teachers' intentions and their teaching

practice with respect to the teaching of a particular topic within a specific context. Interviews and observations were conducted to scrutinise their hypothesis. The results of their observational study showed that there was no inconsistency between the teachers' intentions and practices.

Hativa, Barak, and Simhi (2001) researched the relation between beliefs and knowledge of classroom practices among university teachers. Student interviews, teacher interviews, videotaped classroom sessions, and teaching effectiveness questionnaires were used to capture the complexity of teaching. Hativa et al's analysis proved that there is a "far from perfect" gap between teachers' beliefs and knowledge concerning classroom practice.

3.3. Decision-making

Most of the research on the teacher's decision-making comes from "teacher cognition" and constructivism. Peterson and Clarke (1978) conducted a study on junior high school teachers, through a stimulated recall technique, to understand their cognitive processes. They identified four "paths" through a lesson: path 1 was "business as usual," where everything proceeds well and there is no need for teachers to change their plan. Path 2 is where teachers see problems but have no alternative, so they continue with their plans. In path 3 teachers can perceive alternatives but they stick to their original plans. In path 4 teachers choose to change their behaviour and take on-the-spot decisions in the classroom. Peterson and Clark's analysis suggests that when teachers have options for altering lessons, student learning is enhanced.

Leinhardt and Green (1986) describe teaching as a "complex cognitive skill" that requires the construction of plans and the making of rapid on-line decisions." They state that "skilled teachers have a large repertoire of activities which help them to perform fluently" (76).

According to Freeman (1989), teaching is a dynamic decision-making process. He describes how teachers are faced with both macro-decisions and micro-decisions, but the "decision as a unit of teaching remains constant, even though its content is continually shifting" (31).

Westerman (1991) conducted a comparative study into expert teachers' decision-making and novice teachers' decision-making. He concluded that compared with novices, expert teachers were aware of the students in the pre-active phases (before lessons) and monitored students' often during the lesson (the interactive phase).

Nunan (1992) conducted a project to understand the nature of professional decisions made by teachers in planning and implementing