PEDAGOGICAL KNOWLEDGE OF RELIGIOUS EDUCATION TEACHERS IN BOTSWANA JUNIOR SRCONDARY SCHOOLS

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ABSTRACT

Religious Education teacher trainees just like other teachers are expected to possess some knowledge that is linked to their classroom teaching upon completion of their teacher training. The teaching and learning of Religious Education is aimed at putting students at the center by taking into consideration the differences. This qualitative study sought to investigate the content and pedagogical knowledge of Religious Education (RE) teachers in Botswana junior secondary schools in relation to teaching diverse learners in terms of their academic ability, religious and socioeconomic background. Interviews were used to collect data from two participants in a junior secondary school who were purposively sampled. The study revealed that teachers are aware of the content they need to possess and pedagogies they are expected to use in teaching a multi-faith Religious Education curriculum. The study concludes that the major problem is teachers' failure to broaden their scope about the subject in terms of the approaches they use and shortage of teaching and learning resources.

Keywords: Religious education, pedagogical knowledge, content knowledge, multifaith, teaching techniques, learning styles

INTRODUCTION

Before the missionaries came to Botswana, education was informal and involved some elders in the community who took young boys and girls in their late teens to initiation schools for introduction into the various traditional norms and values where they were taught various cultural practices, for example, how to be future husbands and fathers and wives and mothers. This form of education was a continuation of what all adult members of the community provided to children. It was around the 1800s when the different ethnic groups of Botswana had constant contact with missionaries from Europe that formal education was introduced in basic literacy and numeracy. The main objective of missionary education was to enable converts to read the Bible and was mainly of a religious nature while the teachers possessed content knowledge from the Christian religion and skills to convert. Even after Botswana's independence in 1966 Christian inclined RE was still offered in Botswana schools.

In the 1970s, Bible knowledge syllabus was replaced by Developing in Christ and Christian Living Today at junior and senior secondary school levels respectively. The two syllabuses tended to be more student-centred compared to Bible Knowledge since it recognised and used the experiences of the students (Dinama, 2010). However, this curriculum aimed at conversion because students were to make a confessional statement that Christ was the Lord of their life. The Developing in Christ curriculum was replaced by a multi-faith form of RE in 1996 (Botswana Government, 1996) was a major shift from what has been the practice for more than a century. At senior secondary school level there was no change for a while until 2010 when Christian Living Today was also replaced by a multi-faith curriculum (Botswana Government, 2010). The content of the curriculum entailed a variety of religions hence the name 'multi-faith Religious Education'. The introduction of a multi-faith RE curriculum led

to the need for a particular content knowledge as well as pedagogical knowledge of RE since the goal posts had drastically been shifted.

STATEMENT OF THE PROBLEM

The present RE curriculum in Botswana consists of many religions as its content while teachers do not have adequate pedagogical knowledge to teach various religions resulting in problems in delivering lessons. Teachers' pedagogical knowledge tends to be limited because they do not know which pedagogies to use when dealing with various topics. In developing countries like Botswana, research on content and pedagogical knowledge of RE teaching in a diverse class has not been given the attention it deserves, hence little is known about what is going on in the classrooms and the challenges that RE teachers are facing in terms of imparting knowledge to different students with different intellectual abilities, socio-economic status and cultures. Teachers must be equipped with all the necessary knowledge for them to be able to deliver the content effectively and efficiently in order to build a well-rounded child who can compete successfully in all life adventures.

RESEARCH QUESTIONS

- 1. What pedagogies/approaches do teachers use in RE teaching?
- 2. How do RE teachers use their pedagogical and content knowledge in their teaching?
- 3. How does the content of religious education affect the pedagogical knowledge of RE teachers?

LITERATURE REVIEW

Understanding Content and Pedagogical Knowledge

Pedagogy is central to all educational activities since it is upon which "educational values and principles in action, of plannining, content, strategy and technique of learning and assessment and of relationships both instrumental and affective" (Alexander, 2001, p.4) all converge. The teachers' content knowledge refers to the teachers' knowledge of the subject matter which make up the curriculum and this would include "knowledge of concepts, theories, ideas, organizational framework, knowledge of evidence and proof, as well as established practices and approaches towards developing such knowledge" (Koelher and Mishra, 2009, p. 63). Mastery of the content knowledge is vital since it enables the teacher to confidently and satisfactorily deliver the various concepts as well as plan, implement and assess its delivery to students. This knowledge is of critical importance especially for RE teachers since they cover a curriculum that consists of different religions and are expected to master it perfectly in order to impart some information on religions to learners in an effective and efficient manner.

Pedagogical knowledge refers to the teachers' knowledge of the teaching and learning process in terms of how the content is organized by applying various techniques and how the class is managed (Berling, 2004). As observed by Koelher and Mishra (2009) it entails a "deep knowledge about the processes and practices or methods of teaching and learning. They encompass the overall educational purposes, values and aims" (p.14) and this involves lesson plan development, implementation, student learning ability and teacher's classroom management. Pedagogical knowledge is the intersection of the teacher's knowledge of the subject with knowledge of how to teach and how students learn (Niess, 2005. It entails the teacher's understanding of an educational context, for example, in terms of the composistion of the student population. This knowledge enables the teacher to plan, implement and

evaluate the teaching and learning process while transforming the subject matter into a form that will facilitate student learning (de Berg & Grieve 1999). Pedagogical knowledge entails the teacher's interpretation of the content in terms of finding and using ways to present it and making it accessible to learners (Shulman, 1986). Therefore this knowledge enables teachers to bring in and use students' prior knowledge for a successful understanding of the subject in the teaching and learning process. However, teachers need to have a vast knowledge of pedagogies to draw from in order for them to deliver the content confidently.

The pedagogical knowledge ensures adequate delivery of content by the teacher with the intention of enabling students to master concepts. For example, the choice of teaching and learning techniques such as role plays, lectures, group work, field work and other related techniques. In addition, relevant tasks play a central role in the teaching of a subject and that is why teachers need to have the skills and knowledge of how students will carry out various tasks. Therefore, teachers need this knowledge in order to enable them to understand and use students' existing conceptions and prior knowledge since they provide valuable insight into the implicit knowledge of the latter (Krauss, Baumert & Blum, 2008). It is also important that teachers are aware of typical misconceptions and difficulties that students encounter in the learning process where they are able to diagnose typical errors as well as being able to provide explanations why certain techniques can or cannot work. In this way, it becomes clear that students' construction of knowledge largely depends on the successful support and guidance provided by the teacher in terms of clarifying misconceptions and concepts and in the case of RE the different belief systems and practices. In teaching diverse students teachers need to understand that they can provide a base for easy access of ideas within the subject and other disciplines (Shulman, 1987).

Pedagogical knowledge calls for an in-depth understanding of the content (McDonald, 2008). That is why RE teachers just like any other teachers, need to possess knowledge that enable them to structure and present content in a focused manner by being aware of the common conceptions, misconceptions and difficulties that students may encounter when learning and internalizing a particular content. This also entails teachers' awareness of biases, for example, against minority cultural beliefs that are usually taken for granted. In putting their pedagogical knowledge into practice, teachers encourage and assist students to explore the content against the background of their various experiences. A grasp of both content and pedagogical knowledge is necessary in the understanding and interpretation of the curriculum in various lessons.

Teachers' Pedagogical Knowledge and Curriculum Implementation

In order to help all students learn, teachers need several kinds of knowledge about learning (Shulman, 1986; 1992) and in the case of RE this entails the different pedagogies and teaching techniques and students' learning styles. Furthermore, teachers must be able to identify the strengths and weaknesses of different learners and must have the knowledge to work with students who have specific learning needs, by choosing and using pedagogies that cater for all categories of learners in a mixed ability and cultural grouping. Students learn more and better if concepts have a meaning because of their relevance to them and also capture their interests and in this way they would feel accepted by the education system (Fuller, 1969). This is possible only if teachers have adequate understanding of the intricate processes of teaching and learning as they constantly interact with their students (Cross, 1990).

Assessment too is an integral part of pedagogy especially since it provides information that is important and useful for improving instruction in terms of assessing students' ability to learn various concepts and use their own experiences. This can lead to improvement in the learning process. Similarly, feedback, too, which is credible, accurate and is provided on time, is another component of pedagogical knowledge because it has the potential to have an impact on teaching and learning (Cross, 1990).

Reflection is another integral component necessary in teaching and learning because through it experience is turned into knoweledge (McAlpine & Weston, 2002). Reflection entails what was taught and also how it was monitored in the process of achieving academic goals while the aim is to improve instruction and build knowledge. For knowledge to work effectively it has to depend on the individual's ability to reflect by recognizing patterns within a multiple of experiences. Similarly, teaching also involves creativity which entails using imaginative approaches that make teaching interesting and engaging while aiming at stimulating curiousity as well as raising the self-confidence of the students. This can happen if teachers are themselves confident in delivering the subject matter in a creative manner.

Thus, if a teacher is creative, students too are likely to become equally creative (Loveless, 2002). Creative teachers in terms of pedagogical practices would naturally be flexible, value independence and are motivated by challenges as they encounter different forms of content. They usually have a positive view of themselves and are sensitive to the world around them and have a sense of feeling towards others hence they tend to be aware of the linguistic, social, cultural and religious diversity in their classrooms. That is why it would be easier for such teachers to operate in diverse classrooms that offer a multi-faith RE curriculum. In being innovative these teachers would use their knowledge and experiences to ask new questions. Unfortunately if teachers' pedagogical skills are wanting especially due to lack of creativity they fall back into the comfort zone of teaching in a conventional manner with lack of students' involvement. The other challenge is that generally schools do not nurture and enhance creativity, self-expression and divergent thinking but they promote and enforce conformity while leaving no or little room for unconventional thinking.

Therefore, pedagogical knowledge becomes effective only when teachers adequately understand the structures of their subjects. Shulman (1986) says

The teacher need not only understand that something is so; the teacher must further understand why it is so, on what grounds its warrant can be asserted, and under what circumstances our belief in its justification can be weakened and even denied. Moreover, we expect the teacher to understand why a given topic is particularly central to a discipline whereas another may be somewhat peripheral" (p. 9).

In addition, the teachers' content knowledge has to be deeper than that of students in order to be able to come up with different examples and tasks. Furthermore, that one has been a teacher for a long time does not guarantee that they will necessarily become better teachers in terms of their pedagogical knowledge unless there is a reorganisation of skills (Ericsson, Krampe and Tesch-Romer, 1993) in terms of in-servive training. That is why expertise does not necessarily depend on the number of years that one did a task but it is the motivation that is an important factor in terms of enthusiasm in teaching the subject respect for students' thorough preparation and ability to stimulate students' interests (Cross, 1990). In this way, a powerful learning environment will be created by the teacher since students' learning is the ultimate goal of instruction. That is why "highly specialized professional knowledge of teachers is considered to be one of the main features distinguishing them from laypeople" (Krauss et al, 2008). Teachers with adequate pedagogical knowledge are able to adapt content to the learners' characteristics, interests and abilities since they understand the difficulty or

lack of it of specific concepts. Both pedagogical and content knowledge is likely to grow during teacher training and also when the teacher is in the field provided the environment is conducive for further professional development.

The pedagogy has to be culturally sensitive and congruent to the backgrounds of students and should be at the centre of both teaching and learning in order to reach out to all the students. This has to be the case because in most instances, meanings are culturally constructed at the expense of the disadvantaged as schools socialise the children. This is possible if teachers engage students and invest in their background in relation to their interests and especially family backgrounds. However, students who do not belong to the mainstream culture may find themselves left out while the system expects them to be resilient by conforming to the status quo. It has to be noted that every child is capable of learning especially when knowledge is connected to their culture and that is why educational experience should be purposefully organized in order to provide and strengthen a positive attitude in students and willingness to contribute to their own being as well as the wellbeing of others. Teachers with inadequate pedagogical skills may fail to reach out to some students because they are unable to connect to their lives. This might be a result of teacher training that may no longer be relevant to the contemporary classroom context. Curriculum implementation is highly dependent on teachers' pedagogical knowledge (Fuller, 1969).

METHODOLOGY

Introduction

Qualitative approach was used because it provides in-depth understanding of the participants' perspectives and in this study it was the teachers' pedagogical and content knowledge. The approach emphasises that realities, meanings and interpretations are different and are based on individual experiences (Cohen, Manion & Morrison, 2011). Qualitative research enables the researcher to solicit in-depth descriptions, explanations, narratives, meanings and better understanding on a particular phenomenon (Losido, Spandling & Voegtle, 2006) and it takes place in a setting where experiences of the research participants occur (Chilisa & Preece, 2005). Within this paradigm, the researcher is interested in both the objective and subjective world of the researched in terms of their experiences while the world of the participants is expressed using their own words. For example, in this study RE teachers used their own expressions and language in elaborating what they did in class during the teaching and learning process as they focused on their everyday activities.

Research Design and Sampling

A case study focused on two RE teachers and two religious education classes in order to find out how they taught the subject. The two teachers chosen were implementers of the curriculum in a school with a population of about 800 students. Purposive sampling was used to allow the researcher to select teachers who could provide rich data. The participants were qualified and experienced teachers who specialized in RE during their training in an establishment of four RE teachers (three females and one male). The researcher and the participants agreed that they were to use pseudonyms of Ms Setso and Ms Tibe. Ms Setso was a diploma holder and had five years teaching experience while, Ms Tibe was a degree holder and had three years teaching experience.

The participants were informed about the aims of the study and were also advised that they were free to withdraw from participating in the study at any time without prejudice. They were assured of privacy and confidentiality regarding the information that they provided. All these procedures were borne in mind partly because researching RE can be an emotive

exercise (Du Preez, 2005) since it hinges on beliefs which may be very personal hence the researcher has to react sensitively and respectfully to the participants' emotions.

Instruments

Two data collecting instruments were used and these interviews. Interviews were semistructured and as such they enabled the researcher to probe in order to get clarifications and clear explanations from the participants as the two parties engaged in conversations (Kvale, 1996) about the teachers' pedagogical knowledge in their RE classrooms. In this way, an interview as a method is in essence intersubjective as the interviewer and the interviwee interact (Kvale, 1996) and this allows the researcher to understand a phenomenon from the standpoint of the participant (Kvale, 1996). In addition, semi-structured interview questions do not necessarily follow a particular format nor are they linear in nature but are determined by the nature of issues as they arise in terms of what is said or what is left unsaid. Interviews were audio-recorded using a digital voice-recorder. Pre-lesson interviews were conducted and followed by post-lesson interviews that were done at the end of the lesson. Pre-lesson interviews were carried out in order to understand how each of the teachers was going to teach a lesson including a forecast of the highlights and possible challenges while post-lesson interviews were conducted to determine if all what was planned for had been achieved in the lesson.

DATA PRESENTATION AND ANALYSIS

Introduction

There were various issues that emerged from the data and these were; common techniques used by teachers in RE and what teachers consider important in RE, contribution of RE in the development of young people, the interaction of teachers and students and the pedagogical challenges faced by teachers.

Common Techniques Used by Teachers in RE

Participants indicated that they used various teaching techniques in their classrooms such as group work, lecture, role plays and debate and the deliberate choice of these techniques was to put students at the centre of teaching. Ms Tibe said that different techniques allow students an opportunity to learn by themselves and discover their own environment.

Ms Tibe: I always try to understand my content and attempt to use the different techniques and strategies in my lessons. I prefer the use of role play, group work, lecture and debate. Working in groups helps students share ideas and accommodate differences. I resort to lecturing when introducing new concepts while debates are useful in sharpening students' thinking when they argue over an issue.

Participants agreed that in group work students learn to work together and by so doing developed positive social interactions and interpersonal skills. Role–play was another technique that the participants said they used because they are simulations of real life (Fuller, 1969) and they put students in vicarious religious and social roles.

Setso: In most of my lessons I use drama, group work, lectures, role-play and miniresearch but I prefer role play and drama, because they bring life situations to class something that students may easily identify with. This makes the learning process relevant. Mini-researches also enable students find information on their own. The participants also indicated that they used lectures in laying the foundation to understanding of new concepts. However, the participants did not agree on the importance of independent research done by students. For example, Ms Tibe did not believe in the importance attached to research in RE while Ms Setso was of the view that research could immensely help students to discover important concepts on their own because according to her it empowered students.

Setso: Mini-research may be exciting to students because they work on their own and learn new information and that empowers them. They feel good about it.

Teachers' awareness of the composition of the student population

Participants asserted that their teacher training programme equipped them with the relevant multi-faith teaching approaches that enable them deal with their cultural biases. They agreed that the curriculum and the composition of their students influenced the choice of their teaching techniques and strategies.

Ms Tibe: The curriculum and the nature of students guide me and influence my lesson preparation. I always study the background of my learners and keep a record of this information.

The participants emphasised the importance of knowing their students' backgrounds since that assisted them to appreciate especially the belief systems of the latter and enabled them as teachers to develop a sense of cultural competence. However, they expressed the cultural biases that they have as individuals which at times influenced the way in which they presented content. However, they indicated that they attempted to be very professional despite such challenges.

Miss Tibe: I always try to make sure that I am fair to my students even to those who may hold different beliefs from mine. I know all my students and their churches and I don't have favorites even when marking.

Miss Setso: Knowing my students is vital because it enables me to cater for their different needs. In my school we have personal records of our students that show their interests and social backgrounds and I always go over them in order to know my students better. I treat all students in my classes equally and when they are respected they feel empowered and can show what they are capable of doing during lessons. I also try hard to follow what the curriculum demands and not my own beliefs.

The participants emphasised the importance of accepting different students unconditionally especially that they acknowledged their own biases. They were also of the view that as teachers they had to be good role models to the learners because students considered them to be important people in the community and as such deserved a lot of respect hence they need to possess qualities worth emulating by students. Miss Tibe said that "RE teachers should practice what they teach".

RE contributes in the development of the child

The participants emphasied the importance of RE in the development of young people hence they said that they were careful when delivering instruction in RE. For example, Ms Tibe said: "I see RE as the cornerstone of the child's growth in all spheres of his or her life. It is therefore every child's right to learn RE".

Setso: I believe RE should be taught to all children in schools because it makes pupils aware of various existing religions in the world, especially the beliefs, and ethical teachings of the followers. In addition, RE as a subject helps mould people's behaviour, understand the difference between right and wrong and how to conduct themselves since most religions preach good moral conduct.

Participants expressed the importance of Religious Education because it provides a holistic view of life, for example, since it positively moulds students' behaviour because all religions advocate good moral conduct and enables young people to fit into society. They further observed that the subject helps students in decision making, interpersonal and problem solving skills and enables them to reflect on various issues about life. The participants indicated that due to exposure to various moral issues RE students become sensitive to practices such as ethnocentrism, xenophobia and other negative moral attitudes.

Challenges faced by teachers in teaching RE

Even though the teachers were positive about teaching the multi-faith RE curriculum, they expressed challenges that they encountered which affected their pedagogical practices. They cited a congested syllabus, shortage of students' textbooks, reading material and teachers' reference books as some of the challenges.

Ms Tibe: We need more time to cover the content especially since some topics are not easy for students to grasp. We also have a serious shortage of prescribed text books and resource books and stationery that usually arrive late.

Miss Setso: There is a lot of material to cover in a short period of time. The content is just too much. We also have shortage of resources such as text books.

The participants indicated that the time limit accorded to the learning period is inadequate to cover the RE curriculum which they said was congested. They were unhappy that textbooks and stationery supplies came late and that affected their planning of the instruction. Furthermore, they indicated that workshops are rarely held and complained that in a situation where a workshop is held, usually there are no follow-ups. Teachers called for in-service workshops in order to be abreast with the latest teaching techniques and strategies.

CONCLUSION

The findings of this study show that teachers are aware that they need a strong pedagogical and content knowledge in the teaching of multi-faith RE curriculum. The choice of teaching techniques and learning styles need to be student-centred and should be internalized by teachers and students respectively so that educational goals are achieved. There is also need for teachers to be professionally, culturally and religiously competent in RE classrooms in order to deal with differences in an effective and constructive way. Children could be different in terms of who are hyperactive, socially inhibitive or those who are average academically relative to their classmates.

In using their pedagogical knowledge, teachers are expected to be aware of diversity in their classrooms especially those of a religious nature where a culture of inclusion is fostered and a dialogical interaction between the teacher and students is encouraged. However, the environment should not privilege the teacher's knowledge over those of students, but a space need to be created for all forms of knowledge and experiences to be circulated, if the objective is to be empower students. In this way there would be room to acknowledge multiple truths and identities. Furthermore, it is important to emphasize the extent to which students are enabled to become independent learners who are empowered. The traditional roles of students and teachers need to be realigned so that authority and responsibility are shared between teachers and students. In this way, students take responsibility of their own

learning, contribute to learning and are able to generate knowledge. For example, teachers may learn from their students thus removing the chasm that always exists between teachers and the students. In addition, teachers' awareness of students' context and realities is essential in the learning process. The learning environment is thus changed since the conventional classroom is questioned.

The study highlighted challenges faced by RE teachers which affect their classroom practices one of which is their own personal biases when dealing especially with content which is a result of stereotypes which are assigned to different cultural groups. There are challenges that hinder effective teaching and learning which include the following; insufficient time to complete the syllabus which is too wide and detailed for the time limit and student level. There are limited resource materials such as textbooks for students and teacher references. However, teachers remain central to the learning process as they possess both pedagogical and content knowledge which is essential in enhancing students' performance. The study confirms other studies that show that supportive teachers' behaviours are a defining characteristic of positive teacher-student relationship which has the possibility of enhancing academic achievement. It also found that it is important to stress relationships between teachers and students as a way of bridging the gap between the two parties in order to enhance academic achievement.

REFERENCES

- Alexander, R. (2001). Pedagogy and culture: a perspective in search of a method. In J.M. Soler, A. Craft, & H. Gurgess (Eds.), *Teacher Development: Exploring our Own Practice*, (pp. 4-5). London: Sage Publications
- Berling, J. A. (2004). Understanding other world religions: a guide for inter-religious education. New York: Orits Books.
- Botswana Government (1996). *The junior secondary Religious Education syllabus*. Ministry of Education, Gaborone: Government printers.
- Botswana Government (2010). *The senior secondary Religious Education syllabus*. Ministry of Education, Gaborone: Government printers.
- Chilisa, B. & Preece, J. (2005). *Research methods for adult educators in Africa*. Cape Town: UNESCO Institute for Education.
- Cohen, L., Manion. & Morrison, K. (2011). *Research methods in education*. (7th ed.). London: Routledge.
- Cross, K.P. (1990). Teaching to improve learning. Journal of Excellence in College Teaching, 1, 9-22.
- de Berg, K. C. (1999). Understanding the siphon: An example of the development of pedagogical content knowledge using textbooks and the writing of early scientists. *Australian Science Teachers Journal*, 45(4), 19-26.
- Du Preez, W. (2005) Fashioning the future: tomorrow wardrobe/ Suzanne Lee,; images by Warren du Preez and Nick Thornton Jones. London: Thames & Hudson.
- Dinama, B. (2010). Implementing a multi-faith Religious Education curriculum in Botswana junior secondary schools. *Perspectives in Education*, 28(1), 16-23.
- Ericsson, K.A., Krampe, R.T. & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance, *Psychological Review*, *100*(3), 363-406

- Fuller, F.F. (1969). Concerns of teachers: a developmental conceptualization. *American Education Research Journal*, 6(2), 207-226.
- Kvale, S. (1996). *Interviews: An Introduction to Qualitative Research Interviwing*, Thousand Oaks, Sage Publications.
- Koehler, M. J. & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60-70.
- Krauss, S., Baumert, J. & Blum, W. (2008). Secondary mathematics teachers' pedagogical content knowledge: Validation of the COACTIV constructs. *Mathematics Education*, 40, 873-892.
- Losido, M.G., Spaulding, D.T. & Voegtle, K.H. (2006). *Methods in educational research: from theory to practice*, San Francisco: Josey Rass.
- McAlpine, L. & Weston, C. (2002). Reflection: Issues related to improving professors's teaching and students' learning, In N. Hativa & P. Goodyear (eds.). *Teacher thinking, beliefs and knowledge in higher education,* (pp59-78), Kluwer academic publishers. Retrieved from http://www.springer.com/psychology/book/978-1-4020-0094-2#
- Mc Donald, K. (1995). Evolution, the Five-Factor Model and levels of personality. *Journal of Personality*, 63, 525-567.
- Niess, M. L. (2005). Preparing teachers to teach science and mathematics with technology: Developing a technology pedagogical content knowledge. *Teaching and Teacher Education*, 21, 509-523.
- Shulman, L. (1986). Those who understand: Knowledge growth in teaching. *EducationalResearcher*, 15(2), 4-14.
- Shulman, L.S. (1987). Knowledge and teaching: foundations of the new reform. *Harvard Educational Review*, 57, 1-22.
- Shulman, L.S. (1992). Ways of seeing, ways of knowing, ways of teaching, ways of learning about teaching. *Journal of Curriculum Studies*, 28, 393-396.