

Pre-service Teachers' Voices While Learning to Teach: What Can be Learned from England?

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ABSTRACT

An attempt to facilitate pre-service teachers learning, which is attuned with their learning needs, raises questions regarding how these pre-service teachers learn to teach. Learning to teach is developmental and it is a lifelong process; therefore, it puts heavy demands of cognitive, affective, and performance nature upon pre-service teachers (PSTs). In fact, it is a complex process as information which is useful to experienced teachers may not have the same value to beginners (Arends, 2004). An understanding of the process of learning to teach may help to clarify the role of teacher education programmes especially at the pre-service level (Feiman-Nemser and Remillard, 1996). For instance, what do PSTs come to know about teaching and learning? How in the process of becoming teachers do PSTs replace notions about teaching and learning with practical knowledge of subject matter, pedagogy, learners, contexts, and learning that can inform their teaching judgments and actions? This paper discusses the findings from a study conducted at the Department of Educational Studies of a university in England. The study focused on how pre-service teachers develop their knowledge of teaching throughout their teaching practice period. An in-depth semi-structured interview was carried out with the pre-service teachers who were in their final semester of a one year postgraduate programme and at the time of the study, were in school experience (practicum) placements. Results were summarised into four main categories, namely pre-service teachers' preparations of the lesson, expectations of the learning outcomes, reflections of their teaching and rooms for improvements. Understanding how pre-service teachers learn to teach would be a great help in designing teacher education programme effectively. The knowledge needed by the PSTs should be the guidelines in developing the curriculum of a teacher education programme.

Keywords: Learning to teach, pre-service teachers, voices

INTRODUCTION

One important aspect of research with regards to teacher's knowledge is explaining how pre-service teachers (PSTs) develop their knowledge of teaching throughout their learning to teach phase, i.e. teacher education programme. Conceptions about knowledge of teaching would be the basis for the process of learning to teach of the PSTs. Understanding PSTs' learning to

teach phase is a challenge itself as it involves many aspects since PSTs who enter the teaching field come from a wide variation of knowledge, beliefs and past experiences as students which may have influenced their performances in the teacher education programme (Crespo and Speer, 2006; Abd Rahman and Scaife, 2006; Abd Rahman, 2002a,b). The prior experiences, acquired during their school years, may have

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great influence on how PSTs interpret what they are learning and how they end up teaching (Putnam and Borko, 1996; Lortie, 1975).

Ensuring that beginning teachers received proper training and education before entering the teaching field are crucially important. This is supported by the fact that teachers who learn to teach without guidance often learn merely to cope rather than promote learning for all their students and they can acquire bad habits that are hard to unlearn (Darling-Hammond and Baratz-Snowden, 2005). Therefore, it is important to know how the existing knowledge, skills, and experiences of the PSTs shape their knowledge of teaching to ensure quality teachings in the classroom and help in designing effective teacher education programmes. This study explores how PSTs develop their teaching knowledge based on the prior knowledge and practices in the teacher education programme. It offers opportunities for the PSTs to reflect and learn from their teaching and experiences in the classroom.

STATEMENT OF PROBLEM

Teaching has been considered the act of transferring information from the teacher to the learner who is seen as an empty vessel to be filled with knowledge. This view of learning is due to the popularity of behaviourist learning theories which focus on how the presentation of information affects learning outcomes (Weinstein and Mayer, 1986). Teachers should continue to improve on their own knowledge and skills in order to improve their students' performance (Hill *et al.*, 2005).

As newcomers, it is common that PSTs would refer to their experiences as students to come up with images of how teaching would be. Research findings suggest that many teacher education programmes have minimal impact on PSTs' views about teaching and learning, resulting in most classroom teachers teaching the way they were taught (Anderson and Bird, 1994; Borko *et al.*, 1992; Zeichner and Tabachnick, 1981). Research has also shown that PSTs tend to focus on their own actions within the classroom rather than on what the children are

learning (Darling-Hammond and Hammerness, 2005, p.400).

Therefore, it is important to understand how PSTs' learn to teach to enable them facilitate the learning of the students effectively. However, little is known about the pre-service teachers' learning to teach and how they develop their knowledge in teaching in order to fulfil their aspirations to become quality teachers. Thus, the purpose of this study was to understand how PSTs developed their knowledge of learning to teach. The research question that guided this study is '*How do pre-service teachers develop their knowledge in the process of learning to teach during teacher education programme?*'

UNDERSTANDING LEARNING TO TEACH

An understanding of the various issues implied by the phrase learning to teach (LTT) may help to clarify the role of teacher education especially at the pre-service education level. Although it often has formal beginning and ending in a university-based programme, the informal beginning and ending are virtually impossible to define. Images of teaching go back to the first day at school, or even earlier, and in many aspects, the experience of learning to teach is never complete (Featherstone *et al.*, 1997).

Knowledge concerning LTT can be used to provide guidelines in designing the curriculum for teacher education programmes (Feiman-Nemser and Remillard, 1996). Furthermore, understanding of the development stages in LTT could provide an insight into educating and evaluating PSTs (Stroot *et al.*, 1998). In other words, a better understanding of LTT could serve as a crucial point in examining how PSTs construct their knowledge of teaching (Howey, 1996). Apparently, studies of how beginning teachers learn to teach have attracted increasing attention from researchers in the recent years. Particular points of interest include examination of PSTs' learning regarding what they know, what they believe, how they act, and how they think of themselves as teachers from a variety of perspectives (Putnam and Borko, 1996).

However, it was found that many aspects of those researches were ambiguous and needed further clarification and discussion (Oosterheert *et al.*, 2002; Reynolds, 1995; Carter, 1990; Kagan, 1990), particularly the process and the development stages of learning to teach.

LTT generally refers to the whole activity of teacher education or sometimes acts as a substitute for a concept such as 'teacher learning', or 'teacher development'. Oosterheert *et al.* (2002) claimed that LTT involves a development and change of existing knowledge relating to learning and teaching. Feiman-Nemser and Remillard (1996) claimed that LTT is developing different knowledge and skills at different times and at different places.

Borko (1989), in reviewing studies that explored the thinking and action of PSTs in the process of LTT, claimed that the subject matter has an impact on teaching, i.e. PSTs without knowledge of the subject matter are likely to lack confidence in their ability to teach well. This situation also creates difficulty in learning the skills of teaching, i.e. making the transition from a personal understanding of the subject matter to thinking about the subject matter from students' perspectives. Carter (1990) emphasized that LTT is comprised of, firstly, the outcomes - what the teacher should be learning; secondly, the treatment, or setting - what effect can be attributed to programmes, programme components, or experience in various fields; and thirdly, learning - how change occurs in teaching. Furthermore, LTT is seen as a process whereby the PSTs are provided with knowledge of teaching. I dispute this, as it seems an overly traditional view of the learning process.

In this study, the process of LTT among PSTs involves their understanding of what they believe they can do, as well as their understanding of what they actually do and the awareness of what sources allow them to complete LTT tasks efficiently. This view is based on the constructivist perspective that teaching and learning are activities in which understanding is constructed (Reynolds, 1995). The teacher educator should provide opportunities for PSTs to deepen their understanding by building on

their prior knowledge of and beliefs in LTT. Simultaneously, through reflection on dynamic learning, they should build a new understanding of their practice and thereby learn how to improve it (Reynolds, 1995).

THE STAGES IN LEARNING TO TEACH

LTT is a complex process that progresses in stages (Stroot *et al.*, 1998). The purpose of this section is to discuss professional developmental stages of teachers in order to understand knowledge development of PSTs in the LTT process, and this will also be a useful guide for PSTs to become effective teachers. Knowledge of the stages of development can also help to determine the type of interaction that is most beneficial to the teacher educator to improve PSTs' communication in the classroom (Stroot *et al.*, 1998).

In general, the development of performance usually consists of three levels or stages (Shuell, 1990), as follows:

- A novice stage - where errors are frequent;
- An intermediate stage - where some consolidations of learning take place and knowledge is developed; and
- An advanced stage - for some who work hard at constructing their competency, proficiency will occur.

Fullers and Bown (1975, as cited in Halim, 1997), proposed a four-stage development model which describes the stages of concern that teachers go through as they learn to teach. These are:

- Pre teaching concerns: Fresh from the pupil's role, education students who have never taught are concerned about pupils, that is, about themselves. They are often unsympathetic towards the classroom teacher whom they are observing.
- Early concerns about survival: At the first contact with actual teaching, their concerns about pupils are replaced by their concern about their own survival as teachers. PSTs are primarily concerned

with classroom control, their mastery of the content being taught and the evaluations by their supervisor.

- Teaching situation concerns: Education students who are teaching become competent at classroom management. These teachers are now shifting their concerns to their teaching performances. They start to deal with limitations in the classroom such as inappropriate instructional materials. They also start to realize their own lack of repertoire of teaching strategies.
- Concerns about students: After coping with the survival and teaching situation, concerns then turn to students, in terms of social and emotional needs, as well as the effects of their teaching strategies on their students.

One of the implications of Fullers and Bown (1975)'s model for learning to teach is that it seems to focus on providing general pedagogical knowledge and results in teacher educators maintaining an emphasis on teaching skills in teacher education programmes (Halim, 1997). In my opinion, this view is incompatible with CLT; teacher education programmes should focus equally on knowledge of context, and knowledge of learners and the like, rather than only on teaching skills.

The developmental model discussed above helps to clarify the PSTs' stages of performance in the classroom. They also describe PSTs use of reflection upon what has occurred within the lessons. Overall, it can be said that the stages occur in a hierarchical pattern, and it is logical that teachers in the earlier stages of development will have basic survival needs (Stroot *et al.*, 1998). Thus, it is important for teacher educators to identify a PST's stage of development to provide suitable assistance for the specific needs of the PST.

ASSESSING PRE-SERVICE TEACHERS' LEARNING TO TEACH

According to Carter and Doyle (1996), LTT is fundamentally a negotiated process. This means

that PSTs' knowledge is not simply formed by their experiences prior to, during, or after their initial teacher preparation. Rather, they are highly active participants in interpreting their experiences, searching for and constructing images that capture the essential features of the tasks they encounter in teaching, struggling with the dilemmas and challenges of classroom life, seeking out experiences and exploring opportunities that may enhance their knowledge of teaching, or otherwise navigating the difficult circumstances of their tasks.

Moreover, according to Carter and Doyle (1996), it is important to emphasize that the description of active construction of meaning is not intended only for those who are exceptionally successful as teachers as the same negotiation of self in situation is found among all PSTs, even those who fail to achieve certain standards (Cole and Knowles, 1993). In my view, considering both successful and unsuccessful examples may provide a rich picture of the phenomenon in practice.

Moreover, studies on LTT suggest that considerable emotion, as well as intellect, is associated with PSTs' efforts to understand the particularities of their practice in the classroom (Carter and Doyle, 1996).

This means that examining the process of LTT among PSTs would appear illogical if the issues at hand are not those that they are currently working on. In other words, any judgement about PST's learning cannot assume that the outsider's perspective is necessarily the most important (Gitlin, 1990). Teacher education programmes should therefore use the prior beliefs or pre-conceptions prospective teachers have about teaching and schooling as a direction to facilitate PSTs.

However, there are still some questions about how exactly is PSTs' process of learning to teach and how they learn through a developmental process of the study, preparation, expectation, application, and reflection. Hence, we reasoned that this study was aimed to explore how the PSTs developed their knowledge of teaching, especially throughout their teacher education and internship programmes in the school.

METHOD AND METHODOLOGY

Interviewing is an essential tool in educational enquiry because the respondents' pre-conceptions, perceptions, and beliefs are an inescapably important part of the backdrop of social interaction (Scott and Usher, 1996). According to Johnson and Johnson (2002, p. 192), an interview is a personal interaction between the interviewer and one or more interviewees, to whom verbal questions are asked and from whom verbal or linguistic responses are given. Kvale (1996, p. 14) notes that an interview, as an 'interchange of views between two or more people on a topic of mutual interest, sees the centrality of human interaction for knowledge production, and emphasizes the social situated of research data.'

There are various types of interview, and they differ in term of their openness of purpose and degree of structure (Cohen *et al.*, 2000, p.270). For example, there are structured, semi-structured, unstructured, standardized open-ended interview, close quantitative interview, and many more. Kvale (1996) and Smith (1995) mentioned that the semi-structured interviews attracted interest and are widely used with the expectation that the interviewed subjects' view-points are more likely to be expressed in a relatively open situation than in a standardised interview or questionnaire. The interview questions were developed from other scholars' sample of interview questions (on the knowledge of teaching) such as Grossman (1990), Shulman (1986a: 1987) and Stones (1990).

The participants in this study were PSTs in one of the School of Education at a university in the United Kingdom. They were in their last semester of a one-year post-graduate programme and at the time of the study, were in the school experience (practicum) placements. Based on the analysis of completed questionnaires, the student teachers were observed and interviewed. One of the PSTs is from Science Education programme, while the other two are from English Language Education. The School of Education (SOE), where this study was conducted, has a wide range of teaching and research programmes including Postgraduate Certificate in Education

(PGCE) course. PGCE at SOE is a one-year course designed to prepare PSTs to teach students aged 11-18 in the school. A major aim of the tutors and teachers in the partnership schools who contribute to the course is to help PSTs acquire understanding and competence in the strategies of teaching, learning, assessment, and classroom management.

In this session, the PSTs were invited to reflect on their teaching, both in the observed lessons and more generally. The interviews were recorded and the gathered data were then transcribed. As there were many irrelevant issues in the actual interview, the data had to be reworded so as to address significant issues (the above-mentioned aspects). In order to illustrate the above-mentioned aspects, excerpts from the reworded data interviews, from the responses of participants named Cannie, Garrie and Rossie, would be given. The checklist *matrix* (Miles and Huberman, 1994) was used to help with the coding and themes in the rewording process. The analyses were then related to the components of PCK that PSTs emphasised during their reflections on their teaching. The PSTs were asked about their teaching activities, what they learned, how they performed, and about any difficulties they were still encountering in teaching.

With regard to the interview plan and administration, Kvale's (1996, p. 88) stages of interview were adapted and used as a guideline in this semi-structured interview:

- Planning and designing the study, by taking into consideration all the stages suggested, including conducting a pilot study to test the interview process and amend the interview questions as appropriately possible.
- Conducting the interview and taking the ethical aspects of investigation into consideration.
- Preparing the interview material for analysis, including a transcription from oral speech to written text.
- Deciding, based on the purpose and topic of investigation, and on the nature of the interview material, the most appropriate

methods of analysis to be used for the interviews.

- Assessing the credibility of the findings from the interviews.
- Communicating the findings of the study, and presenting the result as a readable product.

The above guidelines of interview were implemented in this study. In this research, the type of interview used is a semi-structured interview. It is semi-structured because there were several general questions which were outlined to be asked to the interviewees. The interviewees were relatively 'unguided' because the researcher remained as open and adaptable as possible to the interviewees' responses. The interviews were done face-to-face with each of the participants, one at a time. The interview session was held two times during the period of the teaching practices. Most of these interviews were held right after the classroom observations at the school. In some cases, the interviews were carried out after the school session because the PSTs were having another lesson right after the observation.

FINDINGS AND DISCUSSION

Understanding pre-service teachers' learning to teach phase is important to improve the teaching and learning processes in the classroom and provide quality lessons to the students. This research focused on how the PSTs developed their knowledge of teaching throughout their learning to teach phase. Hence, during the interview, the three participants were asked about how they had gained the knowledge and learned to teach throughout their teacher education programme and internship at school. The findings can be summarized into four (4) main categories, namely the PSTs' preparations of the lesson, expectations of the learning outcomes, reflections of their teaching, and rooms for improvements. Coupled by the supporting data from the interviews, each of these is presented in the subsequent section.

Pre-service Teachers' Preparation of Lessons

In each of the interviews, the participants initially talked about their preparations before the lesson, which included preparing scheme of works, lesson plans, understanding the topic that they were going to teach, and planning the methods and activities to be included in the lesson. One participant explained that, "I would prepare a series of lessons, a scheme of work..." (Rosie, P.1, L.8). She also added that she would plan by, "...thinking about what I wanted them to have done by the end of the lesson... jotting down the ways in which we were going to get there, the methods that I was going to use, the activities they were going to be involved... looking at lots of fairy stories and talking about the general features of fairy stories and we'd move on to discuss how fairy stories could be changed for a particular purpose and then by the end I wanted the pupils to have written their own fairy stories with changes" (Rossie, P.1, L.15).

Meanwhile, the other participant said, "I do a medium term plan, scheme of work first, where I want the entire scheme of work to go and then plan the individual lessons around that" (Garrie, P.1, L.10). He also added that he would plan some active activities in his lesson. He said, "I wanted them to do something more active, which is why we did the acting ...set the learning objectives on the board...made sure that the texts...folders and mark book... flip chart were ready" (Garrie, P.1, L.13).

The third participant mentioned that she would break down the topic that she was going to teach into lessons and focused on the key points in the topic. She also would refer to more experienced teachers so that she could learn something from them.

The first thing I do is largely what the topic that we're doing is ... break it down into lessons ... base my lessons around the key points... look at the resource pack...ask other teachers that had done it because obviously they know better than I do... adapt them to what I think the class is going to work best at. (Cannie, P.1, L.11)

Each classroom has students with different learning abilities and attitudes. One participant mentioned that he thought about students' diversity in his preparation. He said,

... if we're doing writing or a reading activity, I tend to select appropriate resources for different groups. I'll have a planning sheet for writing on, maybe two or three different worksheets that you can give to different pupils... I prefer to take maybe one or two pupils, either pupils that are particularly gifted in that area or pupils who particularly struggle and work more closely with them. (Garrie, P.1, L.46)

The other participant also explained that she took her students' diversity into consideration whenever she was planning her lessons. She tried to plan a lesson which would be the most appropriate covering the differences in terms of social, ethnic, and religious backgrounds among the students. She said,

I try to get a mix of ideas, so if I know there will be children in the class who come from different ethnic backgrounds that they're the ones that I will ask when we're doing questions and that kind of thing, so they can share their ideas, it's not something that should be ignored, it should be embraced and shared around with the rest of the class. (Cannie, P.5, L.201)

These kinds of teaching plans and approaches are a good strategy to be used to attract students' attention in the classroom. They also help to enhance the pre-service teachers' thinking and creativity when planning their lessons.

Pre-Service Teachers' Expectation of Learning Outcome

Expectation of the learning outcomes is very useful to teachers as it helps them to identify the contents, skills, and key concepts on each

topic, according to the grade level. It also assists teachers to assess whether or not the students will succeed in achieving the expected skills and knowledge during the lesson.

A participant mentioned that, "understanding what a particular thing means and it's slightly more a case of understanding an idea or having thought about something...the outcome is often written in some form or another so today it was writing...and I was looking at how they put their ideas together." He further stated that, "in a couple of lessons, when they've written their story, I'll be looking at the outcome in terms of the whole story and how they've put that together, how they use their knowledge of sentences and paragraphs and how they've done that" (Rossie, P.1, L.25 - 31).

Another participant talked about his expectations of the students' achievement in the classroom, stating that

"as many pupils as possible get something out of the lesson...some pupils really enjoyed reading that play, so they have an increased awareness of literature...others may develop their confidence reading aloud...understand more about the social context, different pupils achieve different things" (Garrie, P.2, L.64; 69 - 72)

Meanwhile, the other participant said that,

"...all of the kids understand it to some extent, but how well they understand it obviously depends on how bright they are, how well they do the work in the lesson, and how well they grasp the concept of the extent you work with them in the lesson..." (Cannie, P.2, L.70). She insisted that students need to understand the lesson to some extent, know what they were doing and the reason of doing it. "...my plan is that they all understand it to some extent and they all know why they're doing, what they're doing" (Cannie, P.2, L.74)

Then, she also mentioned about how she assessed the students' understanding of the lesson. She said,

"...by observing what they're doing, by reading their work, by talking to them, by listening to what they say" (Rosie, P.1, L.36)

Through the assessment, she was able to determine whether or not the students achieved the learning outcomes of the lesson.

Pre-Service Teachers' Reflection and Satisfaction in Teaching

Reflection on one's teaching experience is one of the most important processes in developing teacher's knowledge and teaching skills. It also enhances teachers' personal and professional development. It is an opportunity for teachers to reflect on their strengths and weaknesses as a teacher and improve their abilities to deal with various situations in school.

There were evidences that the pre-service teachers learned from his reflection of his own experience handling the students who had learning difficulties or problems during the class. During the interview session, a participant explained about one of the situations he had encountered with his students. He said,

...if somebody came up to you and said, 'Sir, I'm really struggling with this', you'd like to be able to say 'right, half an hour of my time, there you go, I'll sit with you and we'll work together on it until we're happy with it'. And you do try and do that, but obviously you've got the demands of 26 other pupils saying 'Sir, I need you to do this, I need you to do that'. So again it's a case of balancing, trying to give you time to improve, to work on the difficulties, but also ensure that you're not neglecting anybody else. ... I've said 'right, the rest of you get on with your task, you know what you're doing and I'm going

to work with these four pupils and for this lesson I'm just working with these four pupils'. And then next lesson I go and work with a different four and you can do that, but that depends on the sort of class you've got, because it does rely on everybody else getting on. So you've got to know your class and be able to trust them to get on with the other stuff. (Garrie, P.4, L.177 - 189)

It showed that the participant learned from his experiences when dealing with the students who were having problems in the class and from that, he could come out with a better way of handling such situations in his next lessons.

During the interview, the participants were also asked to talk about their satisfaction of their teaching. Mostly, satisfaction came from their strengths in teaching and good relationship with the students. From their previous lessons, the teachers were able to identify their strengths and other things which motivated them to do better in the next lessons. For example, one participant said,

I'm really interested in the individual pupils that I'm working with... I think that I can communicate with the pupils quite effectively... both in a whole class setting and also one to one and in groups, that I can encourage them and motivate them. (Rosie, P.2, L.58)

Her confidence while dealing with the students could be an advantage to her when conducting the lesson. Students will feel more comfortable and motivated while learning and this can lead to a better learning environment in the classroom.

Another participant also mentioned that he had a good relationship with his students. He said, "I generally get on well with most pupils, which is a good thing. So I'd say that's my strength, relating to the kids, relating to the pupils...I seem to be able to have a good relationship with most of the students." (Garrie,

P.4, L.155). Meanwhile, the third participant said that she got the satisfaction in teaching from her clear explanation and good planning in teaching. She mentioned, "I think a clear explanation and good planning are strengths because I've taken the time to review the syllabus" (Cannie, P.3, L.115).

Room for Improvement

During the interview sessions, they also identified their weaknesses that could help them to improve themselves throughout the teaching period. A participant mentioned that one of the weaknesses in her teaching was in the transition time in the lesson, from ending one activity and starting another. She explained that,

...even though my plan is quite good, I've got a time line, for instance. Sometimes, even though I plan to keep to it sometimes I find that I don't and that's not always my fault but sometimes when I set an activity to last five minutes then I need to make sure it lasts five minutes and not any longer and then we can talk about it and go onto something else so I think that's an area that I really ought to look at. (Cannie, P.3, L.132)

She managed to identify her weakness on the timing in her teaching and since then, she has always tried to improve herself in each of her coming lessons. Meanwhile, the other participant mentioned that he learns all the time in every lesson, and he learned something. Nevertheless, he also said that he needed to specifically improve on his knowledge, saying "I need to develop my knowledge of the specific requirements for exams and coursework" (Garrie, P.3, L.100). However, the third participant mentioned that she had noticed that she needed to improve on her questioning skills. Based on her experience, she said, "I think I need to often be clearer about what exactly I'm asking, how long I'm giving them to do it in, exactly what outcome I expect" (Rossie, P.3, L.102).

Therefore, from the reflections and weaknesses that they had identified throughout their teaching period, the teacher basically managed to find rooms for them to improve themselves, especially on their knowledge of teaching, skills and classroom management. From the findings, we can see the overview of PSTs' process of learning to teach during their teaching period.

In terms of what involved in learning to teach of the PSTs, we found evidences in the data that they developed the knowledge of teaching from the four main categories, namely the PSTs' preparations for the lesson, expectation of the learning outcomes, the reflection of their teaching and rooms for improvement of the PST throughout the teaching education programme.

All the participants agreed that having a proper preparation before entering the classroom is important to ensure the smooth progress in the teaching and learning processes in the classroom. All of them stated to have done the lesson plans, mastered the topic that was going to be taught and also carefully planned the methods and activities which were to be carried out beforehand. It made them prepared both mentally and physically before starting the lessons.

Other finding gathered in the present study is that PSTs were found to have also learned from their expectations of the learning outcomes of the lessons. When they were preparing the lesson plans for their classes, they also stated the learning outcomes which were expected to be achieved by the students by the end of each lesson. Having early expectations for the students' achievement gave them a clear vision of what they needed to do and achieve in the lessons.

The results also indicated that the PSTs had learned a lot from their experiences in their teaching and in dealing with their students. By reflecting on their own teaching, they could see their strengths and weaknesses when conducting the lessons. Some of them realized their strengths in teaching, while others felt the advantages when dealing with the students. The made the teachers feel more motivated and more positive in doing their work. At the same time, they

also noticed their own weaknesses throughout the teaching period as they encountered various kind of situations involving students' learning, attitudes, classroom management, and many more.

Since it was the first time they entered the real-life situation of teaching in school, they often lacked the skills in handling some difficult situations; however, after some times, they managed to learn something from their experiences and would come out with better solutions the next time. They had improved their skills and abilities in dealing with the students.

Furthermore, from the reflection of their teaching, they managed to figure out many aspects of the teaching which could be improved such as time and classroom management as well as handling students with learning difficulties. They started to develop their own strategies to overcome such situations. It shows that they were not only relying on their 'book' knowledge or their past experiences as a student anymore, but they also learned from their own experiences throughout the teaching period.

CONCLUSIONS

The results of this study provide some insights into the development of PSTs' knowledge in learning to teach, and these have been found to vary based on their preparations, expectations of the learning outcomes, reflections of teaching and the experiences they gain throughout the teaching education programme. These outcomes have expanded our knowledge of the PSTs' learning to teach phase. Moreover, the reflection from this study helps to clarify the role of teacher education, especially at the pre-service education level and also provide useful information in designing teacher education programmes effectively:

The road to knowledge of learning to teach is always under construction...
Gray (1997)

REFERENCES

- Abd Rahman, F. (2002a). Understanding multiple intelligences as a tool to establish Malay language competence (in Malay language). Paper presented at the *International Conference of Malay Language Studies*. Beijing, China.
- Abd Rahman, F. (2002b). The effectiveness of 4mat learning style in teaching reading comprehension (in Malay language). *Language Journal*, 1(2), 45-56.
- Abd Rahman, F. and Scaife, J.A. (2006). Assessing pre-service teachers' pedagogical content knowledge using a 'bricolage' approach. *International Journal of Learning*, 12(10), 81-92.
- Anderson, L.M. and Bird, T. (1994). How three prospective teachers construed three cases of teaching (Research Report 94-3). *National Center for Research on Teacher Learning*. East Lansing, MI. (ERIC Document Reproduction Service No. ED 384569).
- Arends, R.I. (2004). *Learning to Teach* (6th edn.). New York: McGraw-Hill.
- Borko, H., Eisenhart, M., Brown, C., Underhill, R., Jones, D. and Agard, P.C. (1992). Learning to teach hard Mathematics: Do novices and their instructors give up too easily? *Journal for Research in Mathematics Education*, 23(3), 194-222.
- Borko, H. (1989). Research on learning: Implications for graduate teacher preparation. In A. Woolfolk (Ed.). *Research perspective on the graduate preparation of teachers*. New Jersey: Cliffs.
- Carter, C. (1990). Teachers' knowledge and learning to teach. In W.R. Houston, M. Haberman and J. Sikula (Eds.), *Handbook of research on teacher education* (pp. 291-310). New York: Macmillan.
- Carter, C. and Doyle, W. (1996). Narrative and life history in learning to teach. In J. Sikula (Ed.), *Handbook of research on teacher education*, 2, 120-142. New York: Macmillan.
- Clandinin, D.J. and Connelly, F.M. (1995). *Teachers Professional Knowledge Landscape*. New York: Teachers College Press.

- Cohen, L., Manion, L. and Morrison, K. (2000). *Research Methods in Education* (5th edn.). London: Routledge Falmer.
- Cole, A.L. and Knowles, J.G. (1993). Shattered images: Understanding expectations and realities of field experiences. *Teaching and Teacher Education*, 9(5/6), 457-471.
- Crespo, S. and Speer, N. (2006). *Learning to Teach Preservice Mathematics Teachers: The Role of Doctoral Course*. Michigan State University.
- Darling-Hammond, L. and Baratz-Snowden, J. (2005). A good teacher in every classroom: Preparing the highly qualified teachers our children deserve. *The National Academy of Education, Committee on Teacher Education* (pp. 29-36). United States of America: Jossey-Bass.
- Darling-Hammond, L. and Hammerness, K. (2005). The design of teacher education programs. In L. Darling-Hammond and J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do*. San Francisco, Jossey-Bass.
- Featherstone, D., Munby, H. and Russell, T. (1997). *Finding a Voice While Learning to Teach*. London and Washington: Falmer.
- Feiman-Nemser, S. and Remillard, J. (1996). *Perspectives on Learning to Teach in Murray*. San Francisco: Jossey-Bass.
- Fuller, F. and Bown, O. (1975). Becoming a teacher. In K. Ryan (Ed.), *Teacher education* (pp. 25-52). Chicago: University of Chicago Press.
- Gitlin, A.D. (1990). Educative research, voice, and school change. *Harvard Educational Review*, 60(4), 443-466.
- Gray, A. (1997). Constructivist teaching and learning. SSTA Research Centre Report. Regina, SA: Saskatchewan School Boards Association Research Centre. Retrieved on January 26, 2007 from <http://www.ssta.sk.ca/research/instruction/97-07.htm>.
- Grossman, P.L. (1990). *The Making of a Teacher: Teacher Knowledge and Teacher Education*. New York: Teachers College Press.
- Halim, L. (1997). A critical appraisal of secondary science teacher training programmes in Malaysia with an emphasis on pedagogical content knowledge. Unpublished PhD Thesis, University of London.
- Hill, H.C., Rowan, B. and Ball, D.L. (2005). Effects of teachers' mathematical knowledge for teaching on students achievement. *American Educational Research Journal*, 42, 371-406.
- Howey, K. (1996). Designing coherent and effective teacher education programs. In J. Sikula, T. Buttery and E. Guyton (Eds.), *Handbook of research on teacher education*, 2, 143-170. New York: Macmillan.
- Kagan, D.M. (1990). Ways of evaluating teacher cognition: Inferences concerning the goldilocks principle. *Review of Educational Research*, 60(3), 214-222.
- Kvale, S. (1996). *Interviews: An Introduction to Qualitative Research Interviewing*. London: Sage Publications.
- Lortie, D.C. (1975). *Schoolteacher*. Chicago: University of Chicago Press.
- Miles, M.B. and Huberman, M.A. (1994). *Qualitative Data Analysis* (2nd edn.). London: Sage Publications.
- Oosterheert, I.E., Vermunt, J.D. and Denessen, E. (2002). Assessing orientation to learning to teach. *Review of Educational Research*, 62(2), 129-169.
- Putnam, R.T. and Borko, H. (1996). Learning to teach. In R.T. Putnam (Ed.), *Handbook of educational psychology*. New York: Macmillan.
- Reynolds, A. (1995). The knowledge base for beginning teachers: Education professionals' expectations versus research finding on learning to teach. *The Elementary School Journal*, 95(3), 199-221.
- Scott, D. and Usher, R. (1996). *Understanding Educational Research*. London: Routledge.
- Shuell, T. (1990). Phases of meaningful learning. *Review of Educational Research*, 60(4), 531-547.
- Shulman, L.S. (1986a). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4-14.

- Shulman, L.S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-22.
- Smith, J.A. (1995). Semi-structured interview and qualitative analysis. In J.A. Smith, R. Harré and L.V. Langeenhove (Eds.), *Rethinking methods in psychology*. London: Sage.
- Stone, L. (1990). *Managing Difficult Children in School*. Oxford: Blackwell.
- Stroot, S., Keil, V., Stedman, P., Lohr, L. and Faust, R. (1998). *Peer Assistance and Review Guidebook*. Columbus: Ohio Department of Education. Retrieved on November 6, 2006 from <http://education.utoledo.edu/par/Successful.html>.
- Weinstein, C.E. and Mayer, R.E. (1986). The teaching of learning strategies. In M. Wittrock (Ed.), *Handbook of research on teaching* (pp. 315-327). New York: Macmillan
- Zeichner, K. and Tabachnick, B.R. (1981). Are the effects of university teacher education washed out by school experiences? *Journal of Education*, 32, 7-11.