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Understanding How Malay Language Student Teachers Perceive Their Subject Matter Knowledge

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ABSTRACT

Teachers' subject matter knowledge is believed to be an essential attribute for effective teaching and promoting successful student learning. It is important for teachers to know deeply about the subject they are teaching and how to link the knowledge to other disciplines. Ambiguity remains, however, warranting further research as to how student teachers' view subject matter knowledge. This study aimed to look into student teachers' subject matter knowledge as they are still in the stage of learning to teach. Semi-structured interviews with ten Malay language student teachers were carried out. Six themes emerged from the analysis: subject contents, fluent grammar, current issues, depth of knowledge, method of teaching and importance of the subject taught. The results of this study may help in increasing teachers' awareness of the importance of having deep subject knowledge or in-depth of the subject in their own disciplines of teaching. These would also help in designing an effective teacher education programme that emphasizes on the development of student teachers' subject matter knowledge.

Keywords: Teacher education, Malay language, subject matter knowledge, student teachers

INTRODUCTION

Since the early 1980s, the study of teacher knowledge has received increasing attention from educational researchers of various disciplines and of different school subjects, particularly in the United States, Canada, and other western countries (Shulman, 1986b; Clandinin & Connelly, 1995; Putnam & Borko, 2000). Overall, most studies have focused on the following two broad issues: 'What knowledge do teachers need?' and 'What knowledge do teachers have?' The third important issue in this area, namely, 'How do teachers develop their knowledge?' has received much less attention (Fan & Cheong, 2002). Nonetheless, a number

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of researchers have begun from this third perspective, recognising the need to address this particular issue and calling for more studies in this direction (Shulman, 1986b; Fan & Cheong, 2002). For example, Shulman raised the following questions in his presidential address at the 1985 Annual Meeting of The American Educational Research Association:

1. What are the sources of teacher knowledge?
2. When did he or she come to know it?
3. How are new knowledge acquired, old knowledge retrieved, and both combined to form a new knowledge base? (Shulman, 1986b).

Stones (1992) stresses that it is sufficient for teachers to have a thorough knowledge of subject matter and practical classroom experiences, the former to ensure that they are up-to-date on the product they are to 'deliver', and the latter to ensure that they know how to 'deliver' it. According to Stones (1992), a few would agree that a teacher should have a good grasp of the subject knowledge and should be familiar with schools and classrooms. Although teacher educators may hold differing views about what should be included or emphasized at different points in a teacher's formal education, much of what we know about teaching and learning is common to the majority of teacher education programmes. The following discussion concerns the categorisation of KBT, as proposed by some scholars.

There are a few accounts regarding the categorisation of knowledge base for teaching. In this regard, Putnam and Borko (1996) suggested three categories as shown in Fig.1:

The first category includes general pedagogical knowledge and beliefs. According to Putnam and Borko (1996), the domain of the general pedagogical knowledge encompasses a teachers' knowledge and beliefs about teaching, learning, and learners that transcend particular subject matter domains. It includes knowledge of various strategies and arrangements for effective classroom

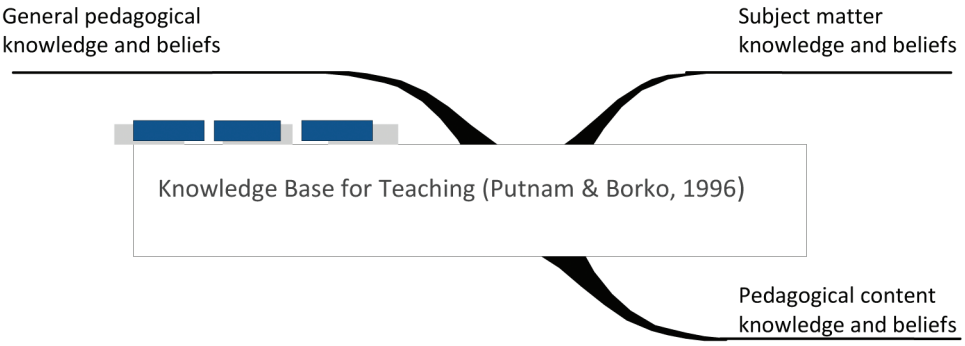

Fig.1 Knowledge Base of Teaching (Putnam & Borko, 1996)

management, instructional strategies for conducting lessons and creating a good learning environment, and fundamental knowledge and beliefs about learners, including how they learn, and how that learning can be fostered by teaching.

The second category is subject matter knowledge and beliefs. Putnam and Borko (1996) argue that having a flexible, thoughtful and conceptual understanding of the subject matter is critical for effective teaching. In this manner, they claim that teachers need to know more than just the facts, terms and concepts of a subject matter. The knowledge of organizing ideas, connection among ideas, ways of thinking and arguing, as well as knowledge growth within the discipline is an important factor in how a teacher will teach the subject.

The third category of knowledge base for teaching is pedagogical content knowledge and beliefs. According to Putnam and Borko (1996), pedagogical content knowledge serves as an important catalyst for considering ways of representing and formulating the subject matter knowledge to make it comprehensible to students. It is seen as an integration of knowledge from several domains, such as subject matter knowledge and general pedagogical knowledge.

On the other hand, the Malay language is an Austronesian language spoken not only by Malaysians but by all Malays who reside in the Malay Peninsula, southern Thailand, the Philippines, Singapore, central eastern Sumatra, the Riau islands, parts of the coast of Borneo, as well as Cocos and Christmas Islands in Australia (Asmah Hj. Omar, 2005). It is spoken natively by 40 million people across the Malacca Strait including the coasts of the Malay Peninsula of Malaysia and Southern Thailand, the eastern coast of Sumatra and the Riau Islands in Indonesia and has been established as a native language of the part of western coastal Sarawak and West Kalimantan in Borneo (Asmah, 2005). In Malaysia, the language is officially known as Bahasa Melayu, which is translated as the "Malaysian language." In the Malaysian Education System, the importance of maintaining the Malay Language as the national language is endorsed in Article 152 of the Federal Constitution. Malay Language is not an obstacle to the emergent, development and expansion of knowledge; instead, it serves as a successful link to the knowledge of different disciplines. Therefore, effective teaching and learning of Malay Language is currently a fundamental issue in enhancing Malay language competency in the Malaysian education system. In line with that, one important aspect is the preparation of Malay Language student teachers towards the application of subject knowledge in the classroom as a key element in the reform of knowledge of subject matter. Internationally, such as in Britain and the USA, policy makers are promoting student teachers' knowledge of subjects and their teacher education programme. The educational arguments which support this policy are reviewed together with the recent studies which have investigated the ways in which students' knowledge

of subjects may inform their teaching. Issues emerging from the discussion which need to be addressed by teacher educators responsible for the main subject study and application which include the scope of students' knowledge and coverage of subject matter, an appreciation of the manner in which students' application of subject matter is shaped by classroom practice, and the need to ensure that knowledge of the subject is combined with an understanding of the child (McNamara, 1991). However, this is not an exception in the teaching and learning of Malay Language. The lack of research on the subject matter knowledge to enhance the quality of teaching and learning of Malay Language must be overcome.

In order to help students understand ideas in subject matter knowledge (SMK), teachers need to understand the facts, procedures and the concepts of the subject they teach, and also how these ideas relate to other ideas in the discipline. This is known as the *substantive* structure of the discipline (Borko & Putnam, 1996). According to Turner-Bisset (2001), substantive knowledge is the fact and concepts of a subject. Clearly, the substance of a discipline is the framework used to organise the facts, concepts, ideas, understandings, principles, and propositions that characterise the discipline.

The other kind of SMK is s*yntactic* knowledge. This knowledge is the ways and means by which prepositional knowledge has been generated and established. It refers to the way in which scholars accept new knowledge. It, therefore, involves more than procedural knowledge and routine enquiry. Syntactic knowledge means the 'scientific method', whereas in history, it is the investigative and interpretative procedures of enquiry, or in literature, the analytical tools of criticism.

One example of substantive knowledge in physics is that the concepts of atom, electron, and subatomic particles are understood in terms of an organizing framework called the Kinetic Theory. The study of the latest developments in Kinetic Theory is a form of syntactic knowledge. Also in language, writing structure such as metaphors or similes, using dialogue to develop characters or particular words to set a mood (categorised as literary techniques/ author styles) are considered as substantive knowledge. However, criticism or study of the literary techniques/author styles of a certain novel is syntactic knowledge.

A number of studies (e.g., Borko & Putnam, 1996; Schifter & Fosnot, 1993) have suggested that, in general, teachers with greater subject knowledge tend to emphasise the conceptual, problem solving, and inquiry aspects of their subjects. Less knowledgeable teachers tend to emphasise facts, rules and procedures and stick closely to detailed lesson plans or the text, sometimes missing opportunities to focus on important ideas or connections among ideas. Wilson (1989, as cited in Borko & Putnam, 1996), found that student teachers with deeper knowledge of their subject placed more emphasis on conceptual explanations and more often drew connections among the topics within the curriculum than did

their colleagues with less deep knowledge. Grossman *et al.* (1989) noted that student teachers sometimes try to avoid teaching topics that they do not know well. When they cannot avoid teaching the unfamiliar topic, they may rely heavily on the textbook and stick closely to a detailed lesson plan.

In-depth understanding of subject matter knowledge enables teachers to convey their lessons effectively and link the subjects they are teaching to other disciplines, hence, applying the knowledge to real-life situations. According to Wilson (1988), depth of knowledge, while elusive in its definition and measurements, appears to be one of the features of subject matter knowledge that affects instruction. Teachers who understand the larger map of their subject matter, who understand the relationship of individual topics or skills to more general topics in their field may also be more effective in teaching their subjects (Grossman *et al.,* 1989). A number of studies have also indicated that teachers' subject matter knowledge per se undergoes a transformation as they prepare and begin to teach, and as the initial knowledge of content is enriched by the knowledge of students, curriculum and teaching context (Calderhead & Miller, 1985; Feiman-Nemser & Buchmann, 1985; McEwan, 1987; Shulman, 1986, 1987; Wilson *et al*., 1987).

Shulman (1986) indicated that in the teaching field, the one most frequently taken for granted and overlooked is teachers' own knowledge of the subject matter. There is a lack of awareness of the importance of having deep subject matter knowledge among educators, especially for the beginning teachers. Most of those who are still in the phase of learning to teach often neglect this issue. It remains unclear, therefore, as to how beginning teachers perceive subject matter knowledge. Specifically, there appears to be a gap in understanding student teachers' own knowledge and beliefs about their subject matter knowledge. Thus, the purpose of this study was to understand how Malay Language student teachers perceive their subject matter. The main research question that guided the study was 'how do student teachers perceive their subject matter knowledge?'

Understanding how knowledge is structured is important to enable teachers to communicate their subject matter knowledge effectively. Kindsvatter *et al.* (1996) described a simple and useful approach to structuring knowledge by placing categories of knowledge into a pyramid consisting of *facts* (verifiable, specific information about people, events, or objects) at the lowest level, followed by *concepts* (ideas or abstractions based on grouping or categorizing facts) at the next level, and *generalizations* (broad statements or organizing principles that integrate multiple concepts) at the top. Therefore, by structuring knowledge into categories as in the pyramid, it enables teachers to understand the subject matter knowledge better and thus, helps in communicating it more effectively.

METHODOLOGY

A Case Study Research Design

In order to give specific in-depth attention to the nature of subject matter knowledge among student teachers on the teacher education programme within a limited time scale, the case study was chosen as a research design. The design proposed is consistent with an exploration of the development of student teachers' subject matter knowledge and is also consistent with a constructivist perspective. It is appropriate for this research, as it studies behaviour and thought in the contexts in which they occur, and considers multiple forms of evidence (Yin, 1984).

The decision to use a case study research design is also based on the claim that a case study focuses on the meaning in the context of the study and develops an understanding of the case from the perspective of those being studied (Merriam, 1998). These points are in keeping with the intention to explore student teachers' own perspectives, as well as their reflections on their knowledge of subject matter. Furthermore, many educational researchers point to case study as an appropriate method for research within limited time frame to explain particular situations, phenomena or institutions (Yin, 1994).

Sample Selection

In this study, research sampling focused on the participants which consisted of final year student teachers from the Faculty of Educational Studies at one Malaysian public university. The sample was further narrowed down to student teachers from a specific Bachelor of Education programme, namely, Teaching Malay as a First Language. The selection of the samples in this study was based mainly on student teachers' willingness to collaborate with this research. Purposive sampling was used in the study to build up a sample that was satisfactory for specific purposes. Ten student teachers were selected and agreed to participate in the interviews. They were in their last semester and at the time of the study, were in the midst of their school experience (practicum) placements.

Data Collection

In the current study, the type of interview was the semi-structured interview. Several general questions were outlined for the interviewees, but the interviewees were relatively 'unguided' as the researcher remained as open and adaptable as possible to the interviewee's responses. The interviews were done face-to-face with each participant, one at a time. These sessions were recorded using a digital audio recorder to "ensure that the whole interview is captured and provide complete data for analysis so cues that were missed the first time can be recognized when listing to the recording" (Mathers, Fox & Hunn, 1998, 2002). These audio data were then transcribed to be analyzed with open coding and systematically searched and arranged to answer the research questions. Handling data was continued by defining themes and lastly interrelating themes were connected

to make sense out of the data, as reported below.

FINDINGS AND DISCUSSIONS

The focus of the current study was on how the student teachers sampled perceived their subject matter knowledge in relation to the importance of the specific subject that they taught in the school. From the data, the findings were summarized into six (6) main themes: subject contents; fluent grammar; current issues; depth of knowledge; method of teaching; and importance of the subject taught. Each of these results is displayed with supporting data from the interviews.

In this section, each respondent excerpt from the interview transcripts is referenced according to the following legend:

S = Respondent number

P = Page

L = Line number

Subject Content

In the conducted interviews, the respondents mentioned important elements in teaching Malay language such as writing, format, comprehension, literature, summary and concepts of the subject. One respondent alluded to this when she said that the Malay language subject could be divided into two categories. She said:

> In teaching Malay language, it is divided into two. One consists of writing, comprehending and grammar and the other one is the literature context. Could be said that one is 'novel' and the other is anthology. In anthology, there are components … such as traditional poems, modern poems such as rhyme and short stories. Verses are included in the traditional poems and then there's drama… (S6, P. 11, L. 328).

Other respondents talked about the important parts of the subject. One male teacher mentioned that:

> They (student teachers) need to know the format in writing, what is needed in composition. Introduction, important contents or when teaching summarizing, need to know the hidden meaning and then the ending. So, have to relate the contents of teaching with the topic. They must know everything and not necessarily know the contents only because when we are with students, they might ask us question that might be out of our expectation. Therefore, the teacher needs to have general knowledge as well (S8, P. 16 , L. 492).

Fluent Grammar

The respondents also agreed that another important element that needs to be mastered by the student teachers is grammar, which is considered as basic knowledge in Malay language. One respondent referred to it as "The basic of teaching Malay Language is grammar. Grammar includes wordings and

building correct and dramatic sentence" (S2, P. 3, L. 80; 81). Respondent S1 elaborated on the importance of being fluent in grammar:

> … the basic concept that a teacher should have is that their grammar should be fluent. This is because, even when we teach composition, we still need to have an understandable language in education. Language is needed for understanding. Therefore, the teacher should be fluent (S1, P. 1, L. 8).

Other respondents also mentioned the importance of grammar in Malay language. One respondent said that grammar is very important because it is critical for use in day-to-day conversations and is needed to achieve fluency in the language (S5, P. 9, L. 273: 275). Meanwhile, respondent S9 talked about his experience in teaching grammar. He said:

> Usually there is not sufficient time when teaching grammar because we have to teach a new passage and then identify the grammar … Through my experience with my teacher, she asked us to include the elements of the grammar in the passage … meaning that it is done orally (S9, P. 17, L. 524).

Current Issues

When it comes to general knowledge, the respondents indicated that it is indeed needed by the teachers when they are teaching. During the interviews, the respondent talked about the importance of having general knowledge and an awareness of current issues. Respondents S6 and S10 agreed that teachers' awareness of the current situations could be very useful to their teaching. S6 explained that:

> Knowledge of the current situation is also important. We have to read newspapers, magazines and refer to Internet as well for our own general knowledge. If we do not have that knowledge it could be difficult because in doing composition, we need to elaborate and explain the main contents. The students will also inquire if they do not understand certain things and if we were unable to answer, that would be difficult (S6, P. 12, L. 366).

Meanwhile, the other respondents mentioned the benefits of having knowledge of the current issues and how to relate these issues to their own teaching:

> Our knowledge regarding the current information is also important. For example, yesterday I taught the subject Education in Malaysia. It is compatible to students who have just sat for their PMR exam. For the text's illustration, I showed them the picture of a graduate student. Therefore, I am able to relate to them, their experience, and their achievement for sitting for their

> PMR exam. It is about relating to the contents of the teaching (S8, P. 15, L. 469).

Depth of Knowledge

There are also many other important forms of knowledge that a student teacher should possess in order to effectively teach their subject. Student teachers need to prepare themselves with all the necessary knowledge about the topic that they are going to teach in order to convey the lessons effectively. In the interview session, respondent S2 mentioned that:

> As a teacher, he has to be ready in terms of having all the necessary knowledge about the topic that he is going to teach. Not by memorizing but by spontaneously using own ideas and make sure that the ideas are compatible to the students' situation … The preparation of teaching tools has to be done according to the students' level of achievement … the teacher needs to have movement in class and not be static at one place only (S2, P. 4, L. 104).

One respondent also mentioned about the knowledge that student teachers should be prepared with before they go into practical teaching. He emphasised that they need to have a deep understanding and mastery of their subject knowledge so that they could deliver the knowledge more comfortably and confidently.

> We have to know all of the aspects of the object matter. For example, in grammar we have to know everything meaning that we master in that field. We also have to master all aspects of composition, all types of composition. Therefore, when our students ask, we can answer and we don't have to question ourselves whether we had answered correctly to avoid situation … (S10, P. 19, L. 590).

Method of Teaching

The respondents also spoke about effective methods of teaching the subject as one of the knowledge areas that student teachers should possess. For example, respondent S1 suggested that the teaching should be done using mind mapping. S1 said, "… the teaching technique should be done using mind mapping concepts to make the students understand easier and main points can be obtained" (S1, P. 1, L. 11).

Another respondent also emphasized the importance of the method of teaching. Respondent S3 mentioned that:

> … the method of teaching is important. Some time we have the knowledge but we are not good or efficient in conveying our knowledge to the students … pedagogue, expertise and knowledge are related (S3, P. 6, L.170).

One respondent also mentioned about her previous teacher's teaching method which affected her interest in learning the subject. It proves that suitable and interesting teaching methods can influence students' motivation to learn in the classroom:

> …my teacher taught us Malay Language and Literature and I was interested because I could understand easily what was being taught. For example, when teaching vocals, she showed the methods of using vocal. That was what intensified my interest and made me want to be like her (S5, P. 6, L. 282).

CONCLUDING REMARKS

The findings of this study could give the student teacher a guide and preparation before they start teaching in school. Teachers have to understand more details about the subject that they want to teach. Teachers have to master the contents of the subject as these can give the teacher confident in their teaching. It is not just understanding the contents of the subject but the student teachers have to know the current issues as well. From the current issues, the student teachers can relate them to their own teaching and help the students understand more in the class.

Student teachers of Bahasa Melayu have fluent grammar which is basic knowledge in Malay language. Make a good composition, the teachers should use correct grammar to express the meaning of the sentence. Grammar includes wordings and building correct and dramatic sentence. The student teachers should be creative in teaching method to attract their students' attention in classroom. Therefore, by knowing the themes, it can help the student teachers to understand the subject matter knowledge better and thus, help them to communicate it more effectively.

Despite the study sample being limited to student teachers from one university faculty in Malaysia, the results of this study may help to increase awareness among teachers, especially student teachers, to strengthen and enrich their knowledge of the subject matter knowledge in order to improve their quality of teaching. With deep knowledge in the discipline they are teaching, teachers can convey their teaching more effectively, use many useful and creative learning activities to get students' attention and interest in the classroom. Moreover, it also can help in designing a better teacher education programme that emphasizes on the development of subject matter knowledge among student teachers.

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