

## Exploring Teacher Cognition in Malaysian ESL Classrooms

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### ABSTRACT

*The paper addresses the key question in teaching English language, that is, how does teacher cognition interact with classroom practice. The paper is part of a larger study which was conducted in sub-urban schools in Sarawak, East Malaysia via qualitative case study method involving teachers in actual classroom practice. The teacher participants were video-recorded in two separate teaching sessions to capture as far as possible authentic teacher cognition practice. Each teacher was then asked to review his own recorded lessons and verbally report on his actions in the class via stimulated recall protocol technique. The qualitative data generated were analysed for specific features in relation to three main knowledge types representing teacher cognition namely, knowledge of students, pedagogical content knowledge and general pedagogical knowledge. Several features were identified and categorised according to the knowledge types. As far as Knowledge of students (KS) is concerned, it is important for teachers to be aware of their students' preferred learning styles as well as their proficiency levels. On Pedagogical Content Knowledge (PCK), teachers should allow their students a lot of freedom in choosing the activities they prefer. As regards General pedagogical knowledge (GPK), teachers need to be less dominating in the actual classroom practice but instead acting more as facilitator to help guide and facilitate the students' learning process. For future research, it is recommended that longitudinal studies be conducted to further provide insights into teacher cognition via generation of larger corpus of data on evidence of teacher cognition processes.*

*Keywords: teacher; cognition; pedagogical; knowledge; content*

### INTRODUCTION

In most parts of Malaysia particularly in the sub-urban and rural settings students depend on English teachers as authorities (Normazidah Che Musa, et al., 2012) simply because the students' only formal contacts with English are through English classes. The 'teacher factor' is paramount in determining the success and failure of students in learning and mastering English in rural and sub-urban schools. Ambigapathy (2007) is of the opinion that teachers' attitudes have a notable influence on their professional practices:

*"Teachers have a measure of autonomy over what they teach, what image they seek to portray in their classes, what material and resources they use and how these are handled. The choices they make - or not make will have different implications for working towards better proficiency in English".*

(Ambigapathy, 2007, p. 3)

Hence, teachers are very crucial as a determining factor on the success and failure of any subject in schools because they form a core component in classes and educational settings in general. What teachers know and not do, what they think and not think of in terms of planning their lessons, what they believe and not believe in, in terms of guiding their classroom practice, all of which make up a ‘teacher cognition’ which Borg (2003) defines as “...*what teachers know, believe and think in relation to their work*” (p.81). The main intent of the paper is to address one of Shulman’s (1987) four key questions, that is, “*how do they (teacher cognitions) interact with classroom practice?*”

Based on a meta-review of research investigations (from 2000 till present) on English Language teaching and learning in Malaysia that was carried out by Normazidah Che Musa, et al. (2012), most recent research studies seem to focus more on student perspective and have neglected teacher variables, thus suggesting that one side of the same coin remains almost unexplored. In concluding their review, Normazidah Che Musa, et al. stress that one important aspect that needs to be considered for future research is:

*“Future research needs to continue to investigate the pedagogical practices of teaching English in this country and at the same time, to evaluate and check the development of teachers’ knowledge in the domain as they are significant agents that translate policy into action.”* (p. 47)

These local scholars must have arrived at this conclusion as they realised that investigating student variables per se is incomplete without researching teacher variables and pedagogic practices as well. Teachers being ‘significant agents that translate policy into action’ should as well become the main focus of research on the teaching-learning process in the classroom. Put simply, no one perspective (student’s) is complete without the other (teacher’s), and research investigations on teacher cognition have long been conducted in such country like the United States, growing fundamentally from the discipline of Educational Psychology (Borg, 2003). Calderhead (1996 in Borg, 2003), in a review found in *Handbook of Education Psychology*, highlighted the significant contribution of teacher cognition research to the study of teaching:

*“Research on teachers’ cognitions has highlighted the complex array of factors that interact in the processes of teaching and learning. In particular, research has pointed to the elaborate knowledge and belief structures that teachers hold, to the influence of their past experiences, even experiences outside of teaching, in shaping how teachers think about their work, and to the diverse processes of knowledge growth involved in learning to teach. Research also has begun to unravel some of the pedagogical processes involved in classroom teaching and the different types of knowledge that teachers draw on in their efforts to help children to learn and understand.”* (p. 32)

Calderhead’s premise clearly suggests that teacher cognition research is an area of research about the study of teaching that needs to be conducted in order to understand the processes of teaching and learning. Since teacher cognition research is not common in the Malaysian educational research context involving the teaching and learning of English, could this explain to some extent why the students’ poor mastery of English remains inadequately addressed for far too long? Could it be that research work has been lop-sided in terms of research focus; so much has been done researching student variables per se while disregarding or overlooking teacher variables? This lop-sidedness in research focus might well mean that there can never be a complete understanding of the existing problem of poor English mastery among Malaysian students despite their 11 years of exposure to English subject in schools. Simply, only one side of the story is much known and the other side remains hardly known, making any effort

at recommending any probable solutions to the main problem almost difficult and rather far-fetched too.

Since the demands, expectations and orientations of teaching and learning English change over time due to the complex nature of the phenomenon itself, it is a disadvantage to have overlooked the significance of teacher variables in educational research because a teacher plays a major role in determining the success of students in attaining high level of literacy in English. Borg (2003) points out that it is crucial to investigate teacher cognition and the predominant focus of research on teachers should be on understanding teacher knowledge, its growth and use (p.35). Teacher cognition based on Borg's (2003) view, can be characterised as:

*"...often tacit, personally-held, practical system of mental constructs held by teachers and which are dynamic – i.e. defined and refined on the basis of educational and professional experiences throughout teachers' lives."* (p. 35)

As far as teacher cognition is concerned, ESL research in Malaysia seems to fall far behind and there exists a huge research gap that needs particular attention from Malaysian ESL researchers. Teacher cognition is understood as teacher knowledge, teacher beliefs, teacher thoughts and teacher behaviours (Tan, Philip & Jandar, 2019). Yudi Arifani et.al. (2019) found that there is a positive correlation between teacher creativity and effectiveness. In their study on teachers' creativity involving blended learning, they found that there is a correlation between teacher creativity and effectiveness in terms of students' achievement (p.134). In Malaysia, teachers have very little to contribute to decisions and action plans on curriculum matters. Scant attention is given to the voices of teachers. Consequently, little is known about teacher's belief systems towards English and the teaching of the language in actual classroom practices (Ambigapathy, 2007). Not much is known in such instance as when English teachers in rural/urban schools in Sarawak (a state in East Malaysia) are faced with students from multilingual backgrounds and those of different ability levels. It is a definite gap in the literature that needs to be addressed rather urgently.

This paper reports on a small part of a larger research conducted in the sub-urban/rural secondary schools of Samarahan Division in Sarawak. Deprived of most facilities available to students in urban schools such as abundant reading materials, well-equipped technological equipment and easy access to the internet, the writers realised that the key to helping students in sub-urban schools lies almost entirely on the English teacher himself/herself. Teacher factor is crucial in determining the success and failure of students in learning English in rural/sub-urban educational settings in Sarawak. Hence, the research conducted was to explore teacher cognition among ESL teachers in the Samarahan Division sub-urban secondary schools in order to find out existing issues on the actual practices in English classes; and to find out what went on in the cognition of those teachers as they conducted their lessons.

## LITERATURE REVIEW

### ENGLISH LANGUAGE IN MALAYSIAN CLASSROOM

English is introduced to Malaysian children as early as their pre-school years. It continues as an important subject for Malaysian students until they complete school at either Form 5 or Form 6. It means that each Malaysian student would have had exposure to English for at least 11 years of their primary and secondary school education. However, despite such years of exposure to

English as a subject in school, most Malaysian students still do not seem to have acquired a reasonable level of proficiency in English (Nor Hashimah Jalaludin, Norsimah Mat Awal & Kesumawati Abu Bakar, 2008).

The students' apparent low level of literacy in English has led to some hot debate among teachers, researchers, scholars and policy makers. The teaching and learning of English in Malaysia is a national concern. The government thus far has resorted to some drastic measures to address the problem by formulating and implementing a language education policy which allows English to be used for teaching science and mathematics in schools. The policy, however, was abandoned, and from 2012 onwards the Malaysian Cabinet decided to bring back Bahasa Malaysia to be used fully in schools as the medium of instruction. The Education Ministry introduced the "To Uphold Bahasa Malaysia and to Strengthen the English Language" (MBMMBI) policy in 2012. The aim was to make Bahasa Malaysia (BM) as the main language of communication and science and also a medium of unity and solidarity. Steps and measures to enhance the proficiency in English (BI) were also taken to enable students to compete and explore new knowledge locally and internationally. Both languages are seen as vital in producing human capital with the necessary knowledge, competencies and skills to guide a knowledge-based economy (Thirusanku & Melor, 2014).

In line with MBMMBI policy, the Brighton Education Group, the US Fullbright programme and the Master Teachers programme, all of which the Education Ministry engaged to help improve English proficiency among Malaysian students, indicate clearly that the government considers 'teacher factor' as an important key variable in addressing the poor command of English among Malaysian students at all levels. The government seems to attribute low English literacy to poor quality teachers, hence, the recruitment of native-speaker teachers. Despite the significant role played by teachers, there still remain hardly any research investigations that focus on teacher variables such as teacher knowledge, teacher beliefs, teacher behaviours or teacher cognitions.

While there are but only a few research studies on professional development of teachers (e.g., Muhammad Kamarul Kabilan Abdullah, 2006; Hawa Rohany, 2005), there is still rather limited research to the best of the writers' knowledge, on teacher cognition particularly as regards actual instructional/pedagogical practices in ESL classrooms in Malaysia. The heavy focus made on the up-skilling of English teachers in the Malaysia Education Blueprint suggests clearly that research involving teacher knowledge and instructional practice is needed. It is very important to understand what teachers know, believe, think and do in their classrooms if the overall problem of the declining standard of English among Malaysian students is to be addressed adequately. It is equally important to recognize that teachers are actors who are capable of making room for manoeuvre to carry out innovative intervention via teaching strategies that contribute to the advancement of teaching and learning of English (Ambigapathy, 2007). Saiful and Widodo (2019) conducted a study in Indonesia to assess prospective teachers' beliefs and feelings towards the English language as factors that motivated the favourable intentions of these EFL prospective teachers to perform activities in their language of expertise. They discovered that the positive beliefs towards the language were found to affect EFL prospective teachers' intention to perform in their teaching (p.109). Normazidah et.al. (2012) suggest that future research in ESL educational setting in Malaysia needs to investigate the pedagogical practices of teaching English, and at the same time, to evaluate and check the development of teachers' knowledge as teachers are significant agents that translate policy into action (p.47).

The present research reports specifically on the exploration of teacher cognition within the context of ESL classroom in sub-urban secondary schools in Sarawak. The research was focusing on the other side of the coin, that is, from ESL teacher perspective, which is rarely explored in the Malaysian educational research context.

#### ESL RESOURCES AND ENVIRONMENT IN RURAL MALAYSIAN SCHOOLS

The World Bank (2010) wrote about education in rural Malaysia:

*“A lack of resources is one reason for their relatively poor performance, but other factors also come into play. For example, there is a high turnover of teachers in these schools as well as a shortage of teachers in English, mathematics, and science. Due to the small size of these schools, many teachers in rural schools are expected to cover several grades at the same time (multi-grade teaching), which means that they are unable to impart each grade’s curricula separately. Also, the infrastructure of these schools is often inadequate. Some schools do not have electricity for 24 hours a day or an adequate source of water.”*

(in Marwan, Sumintono & Mislan, 2012, p. 182)

Siti Sukainah and Melor (2014), in their study of rural students, found that several factors might contribute to low proficiency in English. Limited exposure to English is identified as one of the factors that results in a lack of interest to learn the language. Ee Chop Ler (2010) found that rural cultural factors adversely affect English proficiency of the rural students. Students therefore need ample and adequate support in terms of supportive and conducive learning environment and meaningful language experience to help instil interest in English (Normazidah, 2012). Despite being in rural schools, findings from several researchers (Melor and Nur Rashidah, 2011) still suggest that students in rural schools generally have positive attitudes towards learning English. A research done by Noraini and Noorizah (1999) concluded that many students are in fact aware of the significance and benefits of learning English. Those students however do not make adequate efforts to improve their learning. Noraini and Noorizah (1999) recommended that motivating the students should be top priority of teachers to assist students in upgrading their proficiency. Students in sub-urban and rural settings rely heavily on their English teachers to provide sufficient exposure to the language and hence, it is crucial for research to be conducted on teacher cognition in such school settings.

#### TEACHER COGNITION AND INSTRUCTIONAL PRACTICE

According to Foss and Kleinsasser (1996), teacher cognition and classroom practice exist in symbiotic relationships and these relationships have been investigated through an analysis of actual classroom practices which focus on teacher cognition, that is, what teachers know and believe, and how they (teachers) talk about their beliefs and knowledge. Borg (2003) points out that, “teachers are active, thinking decision-makers who make instructional choices by drawing on complex practically-oriented, personalised, and context-sensitive networks of knowledge, thoughts and beliefs (p.81). These teacher’s beliefs or cognitions are explored in the contexts of grammar teaching. According to Borg (2012), grammar teaching is central to the research on teacher cognition because the core of the reform is to change the way grammar is conceptualised and to change the way grammar is handled by teachers. Burgess and Etherington (2002) examined the beliefs about grammar and grammar teaching of 48 teachers in UK universities. These teachers were found to be positive about formal instruction on grammar and that conscious knowledge of grammar played a role in the students’ use of language. Over 90 per cent of the teachers in the study felt that their students expect them to present grammar points explicitly.

This suggests that formal instruction in grammar is viewed positively. In fact, teachers generally reported that attention to grammar was something they valued and promoted in their work (Borg, 2006). This is supported by a research done by Andrews and McNeils (2005) which involves teachers' metalinguistic awareness (TMA) and teachers' language awareness (TLA) about grammar that shed light on connections between teachers' cognitions and practices in teaching grammar. These researchers found that TMA and TLA play key roles in shaping the effectiveness with which teachers can provide appropriate linguistic input to learners.

Borg (2006) states that, while there is evidence that teachers do teach grammar in a way that reflects their stated beliefs, it is also apparent that beliefs and practices are often not congruent. This does not mean that teachers are consciously misrepresenting their real beliefs; rather Borg (2006) believes that the results could be due to the manner in which the beliefs are elicited methodologically. Phipps and Borg (2009) observed the relationships between teachers' beliefs and their classroom practices; they found that there is evidence that the two do not always correspond. A lack of correspondence between teachers' beliefs and classroom practices have been viewed rather negatively but in Phipps and Borg's (2009) analysis of teachers teaching grammar, they viewed tensions or discrepancy between the two rather positively. The reasons underlying such divergences could be due to contextual factors such as prescribed curriculum, time constraints and high-stakes examinations, all of which would mediate the extent to which the teachers can act in accordance with their beliefs. Phipps (2009) further added that teachers' beliefs may differ depending on the manner in which they are elicited. Teachers may be drawing on their 'technical knowledge' when asked to talk about their beliefs, but on their 'practical knowledge' in their actual practice. Alternatively, teachers may be referring to their perception of ideal practice when talking about their beliefs, as opposed to their actual practices (Borg 2006). The point is that teacher's subject-matter knowledge and beliefs can have a clear impact on how they teach grammar.

#### TEACHER COGNITION PERSPECTIVE: THREE KNOWLEDGE DOMAINS/TYPES

The major focus of the paper is on three main domains of teacher cognition namely, knowledge of students/learners, pedagogical content knowledge and general pedagogical knowledge. This focus is in relation to addressing one of Shulman's (1987) four key questions, that is, "*how do they (teacher cognitions) interact with classroom practice?*"

#### KNOWLEDGE OF STUDENTS (KS)

Shulman (1986) defines KS as referring to knowledge of student characteristics and cognitions as well as knowledge of motivational and developmental aspects of how students learn. KS may include such aspects as students' learning preference and styles. Knowledge of students (KS) comprises different elements that include the empirical and cognitive knowledge of students (Fadzilah Abd Rahman et.al., 2010). They elaborate that empirical or social knowledge is a knowledge of what children of a particular age range are like, their social nature, how they behave in classrooms and schools, their interests and preoccupations, how contextual factors such as non-routine events or adverse weather can have an effect on their works and behaviours, and the nature of the child-teacher relationship. Besides that, Fadzilah Abd Rahman et al., (2010) went on to explain that cognitive knowledge of learners is comprised of two aspects. Firstly, there is the knowledge of theories of child development, which informs practice. The second aspect is context-bound to a particular group of learners: the kind of knowledge that grows from

regular contact with these learners, of what they know, of what they can do, and of what they are likely to be able to understand. A teacher needs to have KS because from this kind of knowledge come the skills and processes of adaptation activities and representations to the needs of particular learners. In fact, Wiseman, Cooner and Knight (1999) state that effective teachers not only recognize differences among their learners but also have the capacity and willingness to understand the impact of dissimilar backgrounds and abilities on learning. With understanding and appreciation for diversity, successful teachers will be able to make effective decisions that allow them to respond to their students in appropriate ways.

In the process of learning the language, there are many variables that determine the success of a language learner. Sharp (2004) pointed out that language learning success is associated with a range of factors including age, gender, motivation, intelligence, anxiety level, learning strategies and language learning styles. Normally, a class of students is made up of various learning styles, and it is always necessary for language teachers in particular, to identify, understand, respect and work on the diversity of the learners' differences. It must also be acknowledged that students may have different levels of motivation, different attitudes about teaching and learning, and different responses to specific classroom environments and instructional practices. The more teachers understand the differences, the better chance they have of meeting the diverse learning needs of their students.

#### PEDAGOGICAL CONTENT KNOWLEDGE (PCK)

Of all Shulman's (1987) seven domains, pedagogical content knowledge seems to attract a lot of research efforts into the field of teacher cognition. Pedagogical content knowledge suggests that teachers transform their knowledge of the subject matter into actual teaching and learning as described by Shulman (1987),

*"...it represents the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented and adapted to the diverse interests and abilities of learners, and presented for instruction."* (p. 8)

Pedagogical content knowledge, being subject-specific, has since generated much research even among most recent works, into the types of knowledge that teachers of specific subjects have especially in science and mathematics as well as technical subjects (Mishra & Koehler, 2006; 2009; Sothayapetch, Lavonen & Juuti, 2013).

Shulman (1986) defined PCK as,

*"...the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanantions, and demonstrations - in a word, the most useful ways of representing and formulating the subject that make it comprehensible to others... Pedagogical content knowledge also includes an understanding of what makes the learning of specific topic easy or difficult: the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons."* (p. 7)

He (1987) further defined PCK as:

*"...the blending of content and pedagogy into an understanding of how particular topics, problems or issues are organised, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction"* (p.8) (in Park & Oliver, 2008 p. 263)

It is also related to subject-matter knowledge that refers to knowledge of the facts of a discipline (Shulman, 1986). Park and Oliver (2008) offer a more comprehensive definition of PCK, that is,

*“teachers’ understanding and enactment of how to help a group of students understand specific subject matter using multiple instructional strategies, representations and assessments while working within the contextual, cultural, and social limitations in the learning environment.”* (p. 264)

It means that it includes an understanding of the type of knowledge on the ways of representing and formulating the subject that makes it comprehensible to others. Smith and Neale (1989) described PCK as having three components: knowledge of typical student errors, knowledge of particular teaching strategies, and knowledge of content elaboration.

#### GENERAL PEDAGOGICAL KNOWLEDGE (GPK)

GPK is defined by Wilson, Shulman and Richert (1987) as knowledge of pedagogical principles and techniques that is not bound by topic or subject matter. While there has been almost non-existent as to a comprehensive definition of what GPK is, it is possible to view it as inclusive of several concepts in teacher cognition research that have surfaced over the years. The first concept is what Thompson (1992) calls ‘conceptions of teaching’ which refers to what a teacher considers to be desirable goals, such as his or her own role in teaching, the students’ role, appropriate classroom activities, desirable instructional approaches and legitimate procedures and acceptable outcomes of instruction.

Shulman’s (1986) ‘pedagogical knowledge of teaching’ is also another related concept that refers to knowledge of generic principles of classroom organisation and management. GPK may also include what Roehler et al (1988) call ‘conditional/situational knowledge’ which refers to knowledge about how to act and react during specific events or situations. Schon’s (1983) ‘knowing-in-action’ which refers to actions, recognitions and judgments which professionals carry out spontaneously and based on their tacit knowledge of the situation may also be part of GPK too. Calderhead’s (1988) ‘practical knowledge’ can also be included under GPK as it refers to the knowledge that is directly related to action, that is readily accessible and applicable to coping with real-life situations, and is largely derived from teachers’ own classroom experience. GPK may well be summarised according to Brown and McIntyre’s (1986) ‘professional craft knowledge’, which refers to knowledge that is embedded in, and tacitly guiding teachers’ everyday actions in the classroom; related to the intuitive, spontaneous and routine aspects of teaching.

#### PURPOSE OF THE STUDY

The main purpose of the paper is to explore teacher cognition among ESL teacher participants in the sub-urban secondary schools of Samarahan Division in Sarawak in order to find out teacher cognition/knowledge related to actual practices in English classes. The research focusses on what actually went on in the cognition of the teacher participants in terms of KS, PCK and GPK as they conducted their English lessons. This paper reports on the thought processes of the teacher participants which were captured via stimulated recall protocols.

TEACHER COGNITION RESEARCH

Language teacher cognition research draws on a tradition of educational research stretching over three decades. In the last 15 years there has been a surge of interest in the study of language teacher cognition, that is, “what language teachers think, know and believe – and its relationship to teachers’ classroom practices.” (Borg, 2006, p. 1, 2009). This perspective on teachers and teaching has provided insights into the processes of teacher education and the nature of teachers’ instructional practices. Borg has become one of the prominent researchers in the area of language teacher cognition over the years. More recently, Kavanagh (2009) views Borg’s review article (2003b) as having constituted a coming-of-age for research on teacher cognition in language teaching, and there has been attempt by Borg to organise an array of terms and concepts in the area of teacher cognition. Defining teacher cognition as ‘what teachers know, believe, and think’ (p. 81), Borg examines the literature, dividing the review into: *teacher cognition*, a) previous language learning; b) teacher education; c) classroom practice; and the *subject areas* of literacy and grammar.

Borg (2003b) mentions some prominent writers in the field on the basis of their early and significant involvement (Burns, 1992, 1996; Johnson, 1992a; 1992b; 1994; 1996; Woods, 1996). More quite recent work has developed from these, and in some cases the writers are currently active (e.g. Burns, 2003; Burns & Knox, 2005; Johnson & Golombek, 2003). Freeman and Richards also feature widely, though in the former case largely in terms of more theoretical deliberations and overviews (Freeman, 1996a; 1996b; 2002), and in the latter, sometimes collaboratively (Richards et al., 1992; Richards & Pennington, 1998; Richards et al., 1996; Richards et al., 1998) or editorially (Freeman & Richards, 1996; Richards, 1998a), as mentioned earlier.

Kavanagh (2009) points out that as far as output is concerned, and by virtue of his major accounts of language teacher cognition (2003b; 2006a), Borg seems to dominate the field of language teacher cognition, particularly in the teaching of grammar, specifically knowledge and awareness of, and beliefs and understandings about grammar, and the pedagogy that teachers employ. More specifically, Kavanagh (2009) outlines Borg’s topics of study as the following: the use of research-collected data to aid teacher development. (1998a); 49 teachers’ use of ‘meta-talk’ (explanatory grammar talk) in the classroom (1998b); teachers’ pedagogical systems and their teaching of grammar (1998c); the contribution that teacher cognition study could make to understanding formal classroom instruction (1999a); teachers’ theories in grammar teaching (1999b); the personal nature of teaching and thinking, analysed by teachers themselves (1999c); factors influencing grammar teaching decisions, focusing on teachers’ self-perceptions of ‘knowledge about grammar’ (Borg, 2001); and teaching grammar: experience, knowledge about language, and classroom experience in teaching grammar (2005).

Among numerous research studies on language teacher cognition, several recent works need review here such as Kavanagh’s (2009), Santiago-Sanchez’s (2010), Nguyen Viet Hung’s (2012), and Akbari and Youran’s (2013). Kavanagh’s (2009) research is on the cognitions of mainland tertiary-level Chinese English teachers. He looks into the teachers’ views about being educators, about how they do and should develop, about language learning and teaching, about their students, the classroom environment, and the institution within which they operate professionally. Kavanagh’s research stressed that it was considered important to discover the teachers’ own perspectives, as given expression through their own words, and so efforts were made to encourage the teachers themselves to expand on what seemed important to them. His exploratory research into the processes by which Chinese teachers learn to teach, their early

teaching experiences, and the growth of expertise marks an important contribution into the field of language teacher cognition in such area as the Chinese Mainland. Kavanagh (2009) points out that:

*“Given China’s unique mixture of cultural heritage and increasing economic power and political influence, and more specifically the growing importance assigned to the teaching of English in China, research in the area of the cognitions of mainland Chinese teachers represents an important gap to be filled”* (p. 2)

Kavanagh’s work has contributed to an understanding of how these Chinese teachers think about their teaching situation, and the richness of the context in which it is set. Apart from Kavanagh’s, Santiago-Sanchez’s (2010) work on teacher cognition with English teachers in Argentina provides some interesting contribution in terms of an understanding of PCK and the subject matter knowledge in relation to teacher knowledge. His study reveals that there exist distinct PCK manifestations in L2 teaching which can provide insights not only into the nature of PCK but also into the way it interacts with other knowledge domains in classroom practice (p.258). He found that it could also be noticed that these manifestations were closely and intricately associated with other types of knowledge (knowledge of learners, knowledge of context, and knowledge of syllabus). These manifestations could be observed in the nature of the teachers’ grammar explanation.

Nguyen Viet Hung’s (2012) contribution to the field of language teacher cognition is in terms of exploring the use of mixed approaches method in his research investigation of teacher cognition within the English language teaching context in Vietnam. He employed mixed-approach method combining both quantitative as well as qualitative methods. Nguyen Viet Hung found that one method can be mediated within another method to provide insight into different levels or units of analysis. When used in combination, quantitative and qualitative methods complement each other and allow for a more powerful analysis, taking advantage of the strengths of each.

Akbari and Youran’s (2013) explore Kurdish EFL teachers’ beliefs in Iran by means of quantitative and qualitative approaches. Their research managed to encourage these teachers to acknowledge their own beliefs and become aware of their own teaching. By working with an awareness of their own beliefs, these teachers have had an effective means to help them gain insights into their own teaching, into how they give meaning into what they do and the reasons that underlie their practice (p.114). Research on teacher cognition has gained currency in many parts of the world. In Malaysia however, language teacher cognition research has not actually gained ground as there has been very few research studies involving teacher cognition thus far.

#### TEACHER COGNITION RESEARCH IN MALAYSIA

Yeoh Poh Wha (2003) explored teacher cognition in the use of L1 in Malaysian ESL classroom. Yeoh’s research focusses on how teachers’ use of specific patterns of L1 being influenced by their knowledge, assumptions and beliefs about learning and teaching and their attempt to reconcile what they believe with competing internal and external pressures of their teaching contexts. From the exploration of the five teachers’ cognition in his study, Yeoh found that teacher cognition also interacts with various contextual factors to influence their use of native tongue translation patterns. Some of these contextual factors include those within the classroom, that is, language and socio-economic background of students and discipline problems as well as those beyond the classroom, that is, social and cultural expectations about teachers’ and learners’

roles, which are unique and specific to the Malaysian classroom context. Yeoh's study contributes to the field of teacher cognition in such a way that the data generated can become a source of reference for teachers and trainee teachers about authentic accounts of thinking and action, which later may allow teachers to examine, reflect and question their own practice. One weakness of the study is that there is no attempt to establish correlation between teacher's beliefs and actual practices. Teacher's beliefs or cognition are not explicitly outlined so much so that there is no clear relationship between teacher cognition and contextual factors, and also, the extent to which teacher's beliefs or cognition are affected by contextual factors.

Suhaida Omar (2010) explored the cognitions and practices of teaching reading among different groups of English language teachers in Malaysia. She found that Malaysian English teachers are more concerned about their students' performance in the examination and that reading is seen as an input to prepare students for writing essays in anticipation of the examination (Selvarajah & Tan, 2019). Most teachers practised intensive reading for the purpose of preparing students for examination. It was also found that teachers did not emphasise the use of reading strategies due to their students' low proficiency and negative attitudes towards reading in English. Some teachers claimed that their students were at average level and hence they were not interested in reading. Based on the teacher cognition accounts obtained from interviews and observations, it seems that reading is an instrument for preparing students for examinations and that the teachers' instructional practices seemed to be influenced by contextual factors such as students' level of proficiency and interest. One obvious aspect that seems neglected in this research is that there is no clear identification of features that form the *teacher cognition* under investigation. The focus seemed to be more on teacher's practice rather than relating teacher's beliefs and thinking to practice.

Judy Ng (2012) investigated lecturers' beliefs about the value of feedback on their students' written work in a private university in Malaysia. Her concern was more on the methodological issue as to whether her mixed-method approach could capture the essence of her research intent. She has the concern that her questionnaire might not be rigorous enough to obtain the data that she needed but eventually she concluded that her research did manage to compare and contrast lecturers from two different disciplinary areas on the value of feedback on the students' written work. She believes that her investigation is a valuable exploration of the beliefs and practices of lecturers. However, her research is more quantitative in nature as she was trying to employ questionnaire to collect her data but there is an obvious neglect against using qualitative method to collect data on teacher's thinking which in fact should have been more apt because each individual teacher subscribes to different beliefs and assumptions about teaching.

A rather recent teacher cognition research on the teaching of pronunciation in Malaysia is the one carried out by Shanina Sharatol Ahmad Shah (2014) for her doctoral thesis. Her research is theoretically grounded in Borg's (1997) teaching framework as well as Burgess and Spencer's (2000) Strategic Pedagogic Model. Her research found out among others, a correlation between teacher cognition and practice but rather in a negative manner. For example, her two participants were familiar with Communicative Language Teaching method, and with such knowledge their practice was closely guided by that method's principles, so much so that the key principle that emphasises communication role (getting message across) rather than the need for good pronunciation, is transferred into their classroom practice. This study has proven that the participants have limited knowledge on the pedagogical aspects of pronunciation. Thus, the activities and tasks that those teacher participants used in teaching pronunciation were mostly based on what they believed as what pronunciation should be. This indicates their limited

knowledge about pronunciation content and instructions. Thus, the amount of emphasis that pronunciation instructions should be conducted is trivialized. It seems that the findings of this study reveal that the teacher participants have trivialized pronunciation in their ESL classes. When asked if they could recall any pronunciation lessons during their schooling years, they had difficulties in remembering. This explains that pronunciation was even neglected when they themselves were still in school. As a consequence, these teacher participants tended to build a negative belief towards the need for pronunciation instructions. Hence, Shanina Sharatol Ahmad Shah (2014) found that these ESL teachers' beliefs about pronunciation were negatively developed from their early formal exposure to the language. This was later then brought along into their own classrooms when they themselves became teachers. Most of the participants in this study did not demonstrate an understanding of the appropriate ways to integrate pronunciation. Some participants who attempted to integrate pronunciation were unable to decide the level of explicitness and implicitness of the stages in an integrated lesson which made the focus of the integrated lesson unclear. Her doctoral work seems to be useful in some ways in leading the way into teacher cognition research in Malaysia. Nonetheless, research work on language teacher cognition in Malaysia is still rather rare making it quite difficult to look for research studies in Malaysian contexts that explore language teacher cognition and practice.

One most recent study into teacher cognition is a doctoral research by Zuraidah Ismail (2017) which looks into the evolution of newly-qualified English teachers' cognition in Malaysian primary schools. Employing a qualitative multiple-case study in exploring the evolution of newly-qualified teachers' beliefs about teaching and learning during their first year of teaching, the outcome of Zuraidah's study is rather suggestive in terms of providing real support systems for those newly-qualified teachers. But still, the outcome of her study can be adjusted to the curriculum structure and content and pedagogy to better prepare those teachers for classroom reality.

#### THEORETICAL SUPPORT ON TEACHER COGNITION

##### BORG'S (2006) SCHEMATIC CONCEPTUALISATION OF TEACHING

Borg's (2006) conceptual framework locates teacher cognition in the context of school and classroom. Borg explains factors such as the teacher's own schooling background as among the first factor to define early teacher cognition and shapes their perceptions of initial training; these include such elements as beliefs, attitudes, assumptions, conceptions and perspective; and their cognition is further influenced by their professional coursework that comprises how to teach, student characteristics, subject matter, curricula, materials and instructional activities. Teacher cognition is also influenced by contextual factors that include educational curriculum, goals and policies. Borg's (2006) conceptual framework also shows how teacher cognition may be influenced by the interaction of teacher's cognitions with contextual factors, and how classroom practices and experiences may also define and shape teacher cognition as well. What Borg's framework shows is the relationship between teacher cognition and the various elements that define, influence and shape teacher cognition as it grows, develops and transforms in actual school environment and classroom practices. It shows that teacher cognition is not a static cognitive knowledge but one that is dynamic which may be characterised as personal, practical, tacit, systematic and dynamic (Borg, 2006). Borg clarifies and justifies the meaning of teacher cognition based on his analysis of concepts used in teacher cognition research as:

*“Teacher cognition can thus be characterised as an often tacit, personally-held, practical system of mental constructs held by teachers and which are dynamic – i.e. defined and refined on the basis of educational and professional experiences throughout teachers’ lives.”* (p. 41)

Borg’s schematic conceptualisation of teaching framework focuses more on factors that build, develop and transform teachers’ subject-matter/content knowledge in the act of teaching itself. Borg identifies such factors as teacher’s schooling background, teacher’s professional education and contextual factors that comprise different institutional environment, different curricular aspects of language teaching and different instructional patterns. There has been a proliferation of specialised terminologies in reference to teacher knowledge or cognition but what it (teacher knowledge/cognition) really is, is explained rather clearly by Wilson, Shulman and Richert (1987) as, “Teachers have theoretical, as well as practical knowledge of the subject matter that informs and is informed by their teaching: any portrait of teacher knowledge should include both aspects (Borg, 2006, p. 19).

## METHODOLOGY

### DESIGN

Qualitative case study was employed to explore teacher cognition in relation to their reported and actual practices in the ESL classrooms. The data were taken from a larger study and the paper focuses only on one participant teacher whose pseudonym was given as Ken. The two separate teaching sessions of the teacher participant lasted for an approximately five hours (two hours per session), were video-recorded which generated a reasonably reliable amount of qualitative data. After each session, the teacher participant was asked to watch his own video session and report via stimulated recall protocols of his practice. These were done so as to understand and to know more about teacher cognition; teacher’s knowledge that influences instructional practices. Yin (2014; 1989, p.82), for example, looked at case study as a suitable research approach because through the process of describing, explaining, evaluating and predicting they (studies) will be able to “*reveal the multiplicity of factors [which] have interacted to produce the unique character of the entity that is the subject of study.*” Such qualitative technique helps to unravel teacher cognition in actual classroom context.

### PROCEDURE

The participants’ teaching sessions were audio-taped and the researchers who acted as non-participant took down and recorded field-notes as well. The teacher participant was allowed to conduct his classes as he preferred. The participant conducted two teaching sessions with each session being recorded for later viewing by the participant himself while simultaneously reporting via stimulated recall protocols.

### DATA COLLECTION AND ANALYSIS

#### TEACHER’S STIMULATED RECALL PROTOCOLS (SRP)

The teacher participant was asked to view his own recorded lessons, and during the viewing session he was asked to comment on the activities and actions that occurred during the lessons (what was he thinking and why). The teacher was allowed to pause the recorded lessons and give

comments at whatever point of the lesson is necessary to elaborate and explain clearly what was his thinking underlying those activities and actions. As the teacher was doing the stimulated recall, the researcher audio recorded the session. Stimulated Recall Protocol has most often been used to explore aspects of cognition that lie behind the participant’ decisions and actions. For example, SRP has been used to explore teacher cognition (Polio, et al., in Borg, 2006).

#### QUALITATIVE DATA ANALYSIS

The data collected were used to examine whether there was consistency between the teacher participant’s stated beliefs and their observable instructional practices during the lessons. To analyse the data, they were put in categories. The contents of the text from the verbal protocols were then analysed to look for themes and common patterns. The analysing process involved reading all the transcribed verbal protocols to identify any general patterns from the data and to specifically identify instances/occurrences of teacher cognitive knowledge types (KS, PCK & GPK).

### RESULTS AND DISCUSSION

In view of the limitation of this paper, only one participant’s qualitative data were reported and analysed below. The teacher participant is identified with a pseudonym, Ken. The use of the symbol **XX** is to indicate parts of identified spoken words that are not relevant as evidence of the feature categories of the three knowledge types. The evidences that contain features of the three knowledge domains were **emboldened** to indicate clearly that the features were discovered and identified.

#### STIMULATED RECALL PROTOCOLS (SRP)

##### KNOWLEDGE OF STUDENTS

The qualitative analysis of Ken’s SRP on KS is displayed in Table 1. Actual excerpts of Ken’s SRP are extracted and illustrated in the table where emboldened parts of the excerpts indicate evidence of the feature categories that were discovered.

TABLE 1. Participant’s teaching session - Knowledge of Students (KS)

<b>Analysis of Actual Stimulated Recall Protocols (SRP) Of Knowledge of Students (KS)</b>	
<b>Features of KS</b>	<b>Excerpts containing features on Knowledge of students (KS)</b>
1 Activating & establishing students’ previous knowledge	First I’ve given them the handouts and also giving them a few sentences as examples <b>XX to establish their background knowledge</b> because XX I make an assumption that when they were in lower secondary they were taught XX subjects and verbs and so on I meant to establish XX background knowledge and <b>to refresh their memory about what they have learned</b> Sometimes students they learn and then they forget, so here I’m giving them chance <b>to recall what they’ve learned</b> and then slowly I will proceed with my lesson.

- 2 Making simplifications by giving examples when I was going through the rules XX I was a bit worried because it's quite a lot for them to remember, so at that point I was trying to XX **thinking about ways to simplify it for the students**, so I thought the best way I could illustrate the SVA was **to give them a set of rules and follow up with examples** so that they could see and remember
- it's not easy when you have 20 rules and XX it's quite heavy for the students to go through but of course in a part the most important thing at that point what I wanted **to stress was the universal rule...**
- 3 Giving explanations and examples I try to draw from the previous teaching experience XX before this **I was teaching pronoun that when you have more than two persons, you can simply group it with the word 'they'**. 'They' indicates that it's more the one already, so by grouping it 'they', **students can see it more clearly that XX 'they' means plural**, so they know that the subject they have to use 'are, so **that's why I used that example and I draw from the previous learning lesson.**
- I was drawing from another example, so that the student would not get confused** because sometimes in quantity it'll always come in plural, so the subject that they have to identify is what is being measured, so that is the subject not the measurement, So here **I was establishing with my students XX if they have two subjects which is nearest to the verb and that is the one that decides the verb whether it is singular or plural.**
- 4 Explaining clearly on teaching points it was confusing because **we have to go through so many rules but with SVA (subject-verb agreement) XX you have to first introduce your students to the different rules first before you can proceed so that they have a background knowledge...**it's always at the back of their head and their mind...yea...it's not...not easy...you know...realising that.
- 5 Giving priority to focus on weak students There were some students who find it difficult and these were the weaker students and for the better students with good foundation in English XX they can do this quite quickly and they weren't my major concern XX **it was the poorer students that I worried about**, thinking about **how I could reinforce what they have learned that day.**
- 

As far as the KS is concerned, Ken reflected that he attempted to first provide his students with examples that helped trigger the students' previous/background knowledge on the subject matter. Ken believed that by helping the students through giving some relevant examples, they should be able to recall what they have learned previously. This teaching move shows that Ken was thinking of engaging the students mentally to prepare them for his teaching point (subject-verb agreement) at the beginning of the lesson. Ken's concern for his students' ability to cope with the number of grammar rules presented in the lesson was obvious through his reflection which indicates that he was trying to simplify as much as he could to help ease the students' understanding of the grammar rules. Ken's strategy was not just making simplification of the grammar rules for his students but he was also stressing on universal grammar rules. Ken recalled that his students were in his best interest as he delved into their mental ability in trying to cope with his grammar teaching.

PEDAGOGICAL CONTENT KNOWLEDGE

The qualitative analysis of Ken’s SRP on PCK is displayed in Table 2. Actual excerpts of Ken’s SRP are extracted and illustrated in Table 2 where the emboldened parts of the excerpts contain evidence of the feature categories that were identified.

TABLE 2. Participant’s teaching session – Pedagogical Content Knowledge (PCK)

<b>Analysis of Actual Stimulated Recall Protocols (SRP) Of Pedagogical Content Knowledge(PCK)</b>	
<b>Features of PCK</b>	<b>Extracts containing features on Pedagogical Content Knowledge (PCK)</b>
1	<p>Assessing students’ understanding via exercises</p> <p>So, here I was trying to establish to see how much the students can absorb and <b>I think the best way of reflecting on whether they have managed to get XX grasped what I’ve taught them would be through the exercises</b></p>
2	<p>Re-explaining concepts via recalling what was taught earlier, giving examples and making clear illustrations</p> <p><b>I try to illustrate it clearer for the students by referring back to the rules</b>, it says that XX the verb is determined by the subject and not what comes after that I was a bit worried that they might not be able to grab these concepts but <b>after a few examples given to them they were able to remember.</b></p> <p><b>I use a little bit of facial expression to indicate the word ‘cruel’</b> because XX what ‘cruel’ means a little bit of facial expressions would help. So you see that the students could actually call out names because <b>they’re beginning to relate the characteristics to some of the characteristics of their friends.</b></p>
3	<p>Giving specific examples</p> <p>Here <b>I wanted to let the students to see clearer that ‘salt and pepper’ is not considered two separate things but one entity, XX they are two different things but if you put it in such a way that ‘bread and butter’, ‘salt and pepper’, it’s easier for them to see that or even thought with an ‘and’ these two things is considered as one entity.</b></p> <p>Okay with a group of words like that XX I was highlighting the fact that you use ‘a herd’, <b>so it’s one herd even though it’s a group of horses, XX it’s clearer for the students.</b></p>
4	<p>Explaining how to apply grammar rules in actual usage</p> <p>Because here sometimes you see there are the rules as to XX the subject nearest to the verb, so the subject here was ‘goods’ but and yet ‘the cost of goods’ XX <b>I needed to tell them that they sometimes you have to apply two rules at one question because it says ‘the cost’, so which one is the subject XX ‘goods’ is next to the verb so I didn’t want the students to get confused XX I think I would have done better if I told them we had to apply two rules and the first universal rule will still stand.</b></p>
5	<p>Drawing students’ attention to specific learning points</p> <p>Here <b>I highlight back once again the answers so that the students would be able to follow just in case they get confused along their way.</b> When I was reading this, <b>I was giving the students the options of plural and singular so that they don’t give other answers other than singular or plural verb</b> going through it like this..I hope to...</p>
6	<p>Using technique of familiarity</p> <p>Okay <b>I used the example of CSI</b> because I assumed students have known, they’re quite familiar with this kind of show in which every episode we have to eliminate the suspects and then come out with the murderer so on and so forth. <b>So by using this kind of example, I was hoping that the students could draw from their previous experience</b> and of course to engage them in the lesson for the day. .</p>

Ken revealed in his SRP of PCK that over time he tried to gauge the extent to which his students had absorbed from his lessons; and he did the assessment of his students’ learning by giving them exercises. Those exercises were used by Ken as a form of measurement of what the students would have acquired from his teaching points. Ken also stated in his SRP that in the

instance that his students did not manage to absorb much of the learning points, Ken would re-explain the concepts by making clear illustrations and examples which were meant to enable the students to recall what they would have learnt earlier. Ken gave examples that the students would have found familiar in order to make it easier and clearer for the students to grasp the concepts being taught at hand. Ken’s reflection in SRP shows that he was very thorough and specific in giving examples to the students; this is a very useful teaching strategy because it should be able to help the students to grasp the concepts that are being presented in the lesson. Not only was Ken being specific with his examples, he was also sharing clearly with the students on how to actually apply the rules of grammar in actual sentences.

GENERAL PEDAGOGICAL KNOWLEDGE

In Table 3, a qualitative analysis of Ken’s SRP on GPK is shown. The feature categories were deciphered and identified from the actual protocols; the emboldened parts of the actual excerpts as shown in the table contain evidence of such categorial features of GPK.

TABLE 3. Participant’s teaching session – General Pedagogical Knowledge (GPK)

<b>Analysis of Actual Stimulated Recall Protocols (SRP) Of General Pedagogical Knowledge(GPK)</b>	
<b>Features of GPK</b>	<b>Extracts containing features on General Pedagogical Knowledge (GPK)</b>
1	<p>Making in-class decision on how to teach grammar clearer</p> <p>This was also a very hard...at that time when I was teaching them the subject XX was teaching this rule, I was also thinking about XX <b>how I could make it clearer for the students because at that time when I was trying to recall back how I was taught, I was drilled basically when I was in the high school when I was learning English.</b> So at that moment it did occur to me that XX just giving them example it wasn’t gonna be enough XX that <b>I have to do a lot of practice and drill with them so that they could see clear XX clearly all the different sets of rules and how to apply it in their exercises.</b></p>
2	<p>Reflecting on his teaching in search of better techniques</p> <p>When XX I was looking at them I was quite happy with a few who could get the answers right, so and if they didn’t get the answer right I was worried why XX <b>where did they go wrong, was it the rule, was it the question, was it my teaching method.</b> I have to sit down there and reflect on it..then only then I’ll take corrective measures..but usually this kind of thoughts would come after the lesson..maybe after I’ve <b>sat down and then you know..think back and reflect..you know..i’ll slowly come back to me..but then there it’s a bit different because there’s so many mental processes going on at the same time.</b></p>
3	<p>Resorting to Bahasa Melayu to make his explanation to weak learners clearer</p> <p>Okay. Here I used a little bit of Bahasa Melayu I was just to XX get them to know XX when you’re learning English or Bahasa Melayu XX when you learn about the characters, it’s the same thing, there <b>I was just trying to explain to the students the the meaning of characters.</b></p>
4	<p>Encouraging collaborative learning</p> <p>Okay. <b>I arranged them into groups because I wanted to encourage collaborative learning,</b> by working together and I’m not sure I was actually aiming that but I think in a way by doing this kind of activities, it’s a task based ..aa..sort of lesson in which the problem solving they have to solve the problem. So I wasn’t actually..going towards that..it was more to then solving XX the problem. XX it was more <b>to allow the students to communicate among each other.</b></p>

5	Personalising examples for clearer understanding	Okay <b>by using one of the students as an example, I was bringing the lesson closer to the students</b> because when we talked about characters, it's something that we can see, we can feel. So it was just in a storybook you know XX they won't be able to relate it. So first I bring the students in as an example <b>XX by using an example in the classroom and then they can relate it back to the lesson.</b>
6	Teaching vocabulary through technique of word matching	Okay when <b>I was writing the lesson plan I thought of this idea</b> because one if I were just (to) <b>ask them to draw me words about the characters So I went through the references book and then picked up a few and then what I did was I jumbled it up. So students with better vocabulary, they would be able to help the weaker ones in rearranging the words and coming up with the characteristics that I've listed in the paper, in the worksheet.</b> Anytime you know...every time when we do this kind of collaborative aa...exercise you know...having them work in group...sometimes I do worried that aa..one or two of them might not participate fully...that is my primary concern. <b>But you know aa..it takes a lot of um...background work or groundwork to actually find out activities that (??). So, I've done this kind of activities before and I find it to a certain extent it involves a bigger amount of students.</b>
7	Using prompting technique to help shy students to participate	So <b>there's a lot of prompting as you can see XX when teaching a mixed proficiency like that you want to prompt</b> because one some of (them) are just too shy and two, not everyone wants to participate <b>by prompting by calling out names I was hoping to get the students involve in the lesson.</b>

Ken related his SRP of GPK by revealing how he actually engaged his thinking regarding some of the most suitable approaches to be employed through several techniques to make his teaching points clearer to the students. Ken described that it was quite difficult for him to think, teach and respond to students' mistakes simultaneously. He related that he needed some time to reflect on his teaching before he could think of better techniques for teaching grammar in particular to students with different abilities. In his SRP, Ken admitted having to resort to *Bahasa Melayu* (Malay language) to explain meanings of characters in the literature lesson in order for his students to understand better. Ken was aware of his students' limitations in English so much that if the students were to understand some meanings of characters in English better they needed to be given some explanation in the language that they were familiar with, that is, Bahasa Melayu.

SUMMARY OF KEN'S REPORTED CLASSROOM PRACTICES

Ken's reported classroom practices in terms of KS, PCK and GPK as obtained via SRP are summarised in Table 4.

TABLE 4. Summary of Reported Classroom Practices - Teacher Cognition Perspective

Knowledge Base Categories	Teacher Cognition Perspective
Knowledge of Students (KS)	<ul style="list-style-type: none"> <li>• Activating &amp; establishing students' previous knowledge</li> <li>• Making simplifications by giving examples</li> <li>• Giving explanations and examples</li> <li>• Explaining clearly on teaching points</li> <li>• Giving priority to focus on weak students</li> <li>• Taking into account of students' diverse learning styles</li> <li>• Using fun activities to teach grammar</li> <li>• Using drama technique to avoid boredom of learning grammar</li> </ul>

Pedagogical content knowledge (PCK)	<ul style="list-style-type: none"> <li>• Assessing students’ understanding via exercises</li> <li>• Re-explaining concepts via recalling what was taught earlier, giving examples and making clear illustrations</li> <li>• Giving specific examples</li> <li>• Explaining how to apply grammar rules in actual usage</li> <li>• Drawing students’ attention to specific learning points</li> <li>• Using technique of familiarity</li> <li>• Correcting students’ mistakes directly but comforting students not to feel embarrassed</li> <li>• Integrating listening and speaking skills</li> <li>• Using questioning technique to encourage student participation and to prompt students’ responses</li> <li>• Teaching listening by dictation</li> <li>• Integrating reading and writing</li> <li>• Using group reading to teach reading</li> </ul>
General pedagogical knowledge (GPK)	<ul style="list-style-type: none"> <li>• Making in-class decision on how to teach grammar clearer</li> <li>• Reflecting on his teaching in search of better techniques</li> <li>• Resorting to Bahasa Melayu to make his explanation to weak learners clearer</li> <li>• Encouraging collaborative learning</li> <li>• Personalising examples for clearer understanding</li> <li>• Teaching vocabulary through technique of word matching</li> <li>• Using prompting technique to help shy students to participate</li> <li>• Encouraging students to recall what they have learnt previously</li> <li>• Giving a myriad number of tasks to students even outside class time</li> <li>• Giving students opportunities to discuss in groups</li> <li>• Facilitating students’ group discussion</li> <li>• Introducing topics that students can relate to and identify with</li> <li>• Still believing in the ‘chalk-talk’ approach in relation to meeting exam requirements</li> <li>• Encouraging students to speak despite making mistakes</li> <li>• Making modifications to items in the syllabus to suit students’ learning styles</li> <li>• Incorporating literary materials to help students become creative in their thinking</li> </ul>

As far as KS is concerned, Ken’ reflection of his lessons reveals that he was in cognizance of his students’ language limitations which prompted him to modify and simplify his teaching approaches to accommodate for such limitations. Ken tried to create a non-threatening atmosphere for his students whom he knew were mostly weak in English. As regards GPK, Ken’s review of his lessons demonstrates that he was engaging largely in group work and task-based activities to enable the weak students to learn from the better ones. His students were also given freedom to voice their opinions and points of view on topics at hand. However, Ken did admit that there were times he had to resort to the chalk-and-talk method when teaching grammar rules in particular. In respect to PCK, Ken’s review and reflection indicate that he attempted to provide examples and thorough explanation on grammar points to help ease the students’ understanding of the complexity of grammar rules. Ken also related his approaches of teaching the four main language skills. Overall, Ken’s reviews and reflections in the SRP provide some indication of teacher cognition in actual instructional practices in ESL lessons but there might be a lack of congruence between what Ken reported on and what he actually did in the classroom.

It may be possible to explain that a lack of congruence here could be due to the fact that actual practices can be influenced by contextual factors like teaching-time factor, students’ performance below expectation or institutional policy (Farrell & Lim, 2005). Although KS, PCK

and GPK can be understood discretely, Johnston and Goettsch (2000) acknowledge that, in reality these knowledge categories are melded together in complex and inextricable ways. This is evidenced by the actual data obtained from classroom practices of the teacher participants whereby, it was very difficult to extricate and single out each domain without it being melded together with the other two domains. Hence, again, according to Johnston and Goettsch (2000), “in reality, these categories are melded together in complex and indeed inextricable ways” (p. 461).

The qualitative data analysis also suggests that the three knowledge types/domains are not distinct from one another and they are in fact inextricably intertwined. It is not easy to categorise each knowledge domain in a discrete manner without overlapping with the other two knowledge domains.

## CONCLUSION

In addressing the significant question of: *What is ESL teacher cognition perspective as regards English language teaching and learning in sub-urban/rural secondary schools in Malaysia?*, it is possible to draw certain understanding as to what constitute ESL teacher cognition perspective. One major recommendation for future research especially in the context of Malaysia is the need to conduct longitudinal studies. Borg (2012) stresses that longitudinal studies are valuable because such studies would provide insights into teacher learning and cognition over time. Research into teacher cognition involving specific language skills such as reading, writing, speaking and listening can also be carried out in the Malaysian ESL context to explore how teachers actualise their lesson plans in the classrooms. There is also a possible area of research which involves pre-service teachers or teacher trainees in Teacher Institutes as well as local universities in Malaysia to determine the nature of teacher cognition and beliefs as they are in the course of being trained as teachers. A comparative study may also be conducted to explore the similarities and differences of teacher knowledge between pre-service and in-service teachers and also between experienced teachers and novice teachers.

## REFERENCES

- Ambigapathy Pandian (2007). *Teaching English in Rural Schools: Reflections and Best Practices*. 2007 Southern Thailand English Language Teaching/Cultural Change Conference.
- Ambigapathy Pandian (2005). IT Challenges: Practice and Views of Language Teachers In Ambigapathy Pandian et al, (Eds.), *Strategies & Practices for Improving Learning and Literacy*, Serdang: Universiti Putra Press.
- Akbari, M. & Youran, M. (2013). Local EFL teachers' beliefs: A preliminary report in Iran. *The International Journal of Language Learning and Applied Linguistics World*. 3(2), 101-117.
- Bartels, N. (1999). How teachers use their knowledge of English; In H. Trappes-Lomax and I. McGrath (eds), *Theory in Language Teacher Education* (pp. 46-56). London: Prentice Hall.
- Borg, M. (2001). Teachers' beliefs. *ELT Journal*. 55(2), 186-188.
- Borg, S. (1998a). Data-based teacher development. *ELT Journal*. 52(4), 273-281.
- Borg, S. (1998b). Talking about grammar in the foreign language classroom. *Language Awareness*. 7(4), 159-175.
- Borg, S. (1998c). Teachers' pedagogical systems and grammar teaching: A qualitative study. *TESOL Quarterly*. 32(1), 9-38.
- Borg, S. (1999a). Studying teacher cognition in second language grammar teaching. *System*. 27(1), 19-31.
- Borg, S. (1999b). Teachers' theories in grammar teaching. *ELT Journal*. 53(3), 157-167.
- Borg, S. (1999c). The use of grammatical terminology in the second language classroom: A qualitative study of teachers' practices and cognitions. *Applied Linguistics*. 20(1), 95-126.
- Borg, S. (2001). Self-perception and practice in teaching grammar. *ELT Journal*. 55(1), 21-29.

- Borg, S. (2003a). Teacher cognition in language teaching: A review of research on what language teachers think, know, believe, and do. *Language Teaching*, 36, 81–109
- Borg, S. (2003b). Teacher cognition in language teaching: A review of research on what language teachers think, know, believe, and do. *Language Teaching*, 36(2), 81-109.
- Borg, S. (2005). Experience, knowledge about language, and classroom experience in teaching grammar. In N. Bartels (Ed.), *Applied linguistics and language teacher education* (pp. 325-340). New York: Springer.
- Borg, S. (2006). *Teacher cognition and language education: Research and practice*. London: Continuum.
- Borg, S. (2009). *Introducing language teacher cognition*. Retrieved October 20, 2013, from <http://www.education.leeds.ac.uk/research/files/145.pdf>
- Borg, S. & Burns, A. (2008). Integrating grammar in adult TESOL classrooms *Applied Linguistics*, 29(3), 456–482.
- Burgess, J. & Spencer, S. (2000). Phonology and pronunciation in integrated language teaching and teacher education. *System*, 28 (2), 191-215.
- Bryman, A. (2001). *Social research methods*. Oxford: Oxford University Press.
- Calderhead, J. (1988). The development of knowledge structures in learning to teach. In J. Calderhead (ed.), *Teachers' Professional Learning* (pp 51-64). London: The Falmer Press.
- Canagarajah, A.S. (1999). Interrogating the “native speaker fallacy”: Non-linguistic roots, non-pedagogical results. In G. Braine (Ed.), *Non-native educators in English language teaching* (pp.77-92), Mahwah, NJ: Lawrence Erlbaum Associates.
- Celce-Murcia, M. (2014). Teaching English in the context of world Englishes. In M. Celce-Murcia (Ed). *Teaching English as a Second or Foreign Language*. (4<sup>th</sup> Ed., pp.63-70). Boston, MA: Heinle and Heinle.
- Chua Yan Piaw (2006). *Kaedah dan statistik penyelidikan. Asas statistik penyelidikan. Buku 2*. Kuala Lumpur: McGraw-Hill Education (Malaysia) Sdn. Bhd.
- Clark, C. & Yinger, R. (1997). Research on teacher thinking. *Curriculum Inquiry*, 7, 279-304
- Clark, C. M. & Peterson, P. L. (1986). Teachers' thought processes. In M. C. Wittrock (ed), *Handbook of Research on Teaching* (3<sup>rd</sup> edn, pp. 255-296). Newyork: Macmillan.
- Collie Graden, E. (1996). How language teachers' beliefs about reading are mediated by their beliefs about students. *Foreign Language Annals*, 29, 387-95.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, California: SAGE Publications, Inc.
- Da Silva, M. (2005). Constructing the teaching process from inside out: How pre-service teachers make sense of their perceptions of the teaching of the four skills. *TESL-EJ*, 9, 1-19.
- Davis, M. M., Konopak, B. C. & Readence, J. E. (1993). An investigation of two Chapter I teachers' belief about reading and instructional practices. *Reading Research and Instruction*, 33, 105-118
- Ee Chop Ler (2010). Cultural Factors Affecting English Proficiency in Rural Areas: A Case Study. *International Journal of Arts and Sciences*, 3(10), 26 - 55
- Farell, T.S.C. & Lim, P.C.P. (2005). Conceptions of grammar teaching: A case study of teachers' beliefs and classroom practices. *TESL-EJ*, 9, 1-13.
- Foss, D.H. & Kleinsasser, R.C (1996). Pre-service elementary teachers' views of pedagogical and mathematical content knowledge. *Teaching and Teacher Education*, 12, 429-442.
- Fukami, R. (2005). Teacher cognition in context: what's on their mind?. In Neal Snape (Ed). *Essex Graduate Student Papers in Language and Linguistics*, 7. Retrieved September 7, 2007, from <http://www.essex.ac.uk/linguistics/pgr/egsp11/volume7/PDFs/Fukami.pdf>.
- Gatbonton, E. (1999). Investigating experienced ESL teachers' pedagogical knowledge. *The Modern Language Journal*, 88, 35-50.
- Golombek, P. P. (1998). A study of language teachers' personal practical knowledge. *TESOL Quarterly*, 32, 447-464.
- Hawa Rohany. (2005). A personal perspective of an ESP teacher's professional development. *Journal of Language Studies*. Vo. 1. 53-62.
- Johnson, D.M. (1992). *Approaches to research in second language learning*. New York: Longman.
- Johnson, K.E. (1992a). Learning to teach: Instructional actions and decisions of pre-service ESL teachers. *TESOL Quarterly*, 26(3), 507-535.
- Johnson, K.E. (1992b). The relationship between teachers' beliefs and practices during literacy instruction for non-native speakers of English. *Journal of Reading Behavior*, 24(1), 83-108.
- Johnson, K.E. (1994). The emerging beliefs and instructional practices of preservice English as a second language teachers. *Teaching and Teacher Education*, 10(4), 439-452.

- Johnson, K.E. (1996). The vision versus the reality: The tensions of the TESOL practicum. In D. Freeman & J.C. Richards (Eds.), *Teacher learning in language teaching* (pp. 30-49). Cambridge: Cambridge University Press.
- Johnson, K.E. & Golombek, P.R. (2003). 'Seeing' teacher learning. *TESOL Quarterly*, 37(4), 729-737.
- Johnston, B. & Goettsch, K. (2000). In search of the knowledge base of language teaching: Explanations by experienced teachers. *The Canadian Modern Language Review*, 56, 437-68.
- Judy Ng. (2012). Questionnaires. In R. Barnard and A. Burns (eds). *Researching language teacher cognition and practice*. Canada: Multilingual Matters. 30-47.
- Kachru, B.B. (1985). Standards, codification and sociolinguistic realism: The English language in the outer circle. In R. Quirk & H.G Widdowson (Eds.), *English in the world: Teaching and learning the language and literatures* (pp 11-30). Cambridge, UK: Cambridge University Press.
- Kavanagh, M.C. (2009). *Teacher cognition among tertiary-level Chinese English teachers*. Unpublished PhD Thesis. Macquarie University.
- Kalantzis, M. & Cope, B. (2005). (Eds) *Learning By Design*, Australia: Common Ground.
- Kirkpatrick, A. (2007). *World Englishes: Implications for international communication and English language teaching*. Cambridge, UK: Cambridge University Press.
- Lortie, D. (1975). *Schoolteacher: A Sociological Study*. London: University of Chicago Press.
- MacDonald, M., Badger, R., and White, G. (2001). Changing values: what use are theories of language learning and teaching? *Teaching and Teacher Education*, 17, 949-963.
- Mackay, S.L. (2002). *Teaching English as an international language*. Oxford, UK: Oxford University Press.
- McMurray, A. J., Pace, R. W. & Scott, D. (2004). *Research: A commonsense approach*. Southbank, Victoria: Thomson/Social Science Press.
- Mangubhai, F., Marland, P., Dashwood, A., & Son, J.B. (2004). Teaching a foreign language: One teacher's practical theory. *Teaching and Teacher Education*. 20, 291-311.
- Melor Md. Yunus and Nur Rashidah Khairunnisa Ranjeeta Abdullah. (2011). Motivation and Attitudes for Learning English Among Year Six Students in Primary Rural School. *Procedia Social and Behavioural Sciences*. 15, 2631-2636.
- Ministry of Education Malaysia (2013). *Malaysia Education Blueprint 2013-2025 (Preschool to Post-Secondary Education)*. Putrajaya: Kementerian Pendidikan Malaysia.
- Mishra, P. & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A new framework for teacher knowledge. *Teachers College Record* 108 (6), 1017-1054.
- Muhammad Kamarul Kabilan Abdullah. (2006). English language teachers' professional development: Opportunities, practices and constraints. *Journal of Language Studies*. 2, 143-156.
- Naashia Mohamed. (2006). *An Exploratory Study of the Interplay between Teachers' Beliefs, Instructional Practices & Professional Development*. Unpublished PhD Thesis. The University of Auckland, New Zealand.
- Ng, J. & Farrell, T.S.C. (2003). Do teachers' beliefs of grammar teaching match their classroom practices? A Singapore case study. In D. Deterding, A. Brown and E.L. Low (eds), *English in Singapore: Research on grammar* (pp.128-37) Singapore: McGraw Hill.
- Nguyen Viet Hung. (2012). A mixed approaches method used to investigate teacher cognition of English language teaching. *English language teaching, Canadian Center of Science and Education*. 5(11), 161-180.
- Noraini Md. Yusof & Noorizah Noor. (1999). Breaking Down the Barriers: The Social and Cultural Interferences in Learning the English Language in Malaysia. In: *Selected Proceedings of the International Conference on English is an Asian Language – the Thai Context*, pp: 108 - 116.
- Normazidah Che Musa, Koo Yew Lie & Hazita Azman. (2012). Exploring English language learning and teaching in Malaysia. *GEMA Online Journal of Language Studies*.12(1), 35-51.
- Park, S. & Oliver, J.S. (2008). Revisiting the conceptualisation of pedagogical content knowledge (PCK): PCK as a conceptual tool to understand teachers as professionals. *Research Science Education*. 38, 261-284.
- Peacock, M. (2001). Pre-service ESL teachers' belief about second language learning: A longitudinal study. *System*. 29, 177-195.
- Phipps, S. (2009). *The relationship between teacher education, teacher cognition and classroom practice in language teaching: A case study of MA students' beliefs about grammar teaching*. Unpublished PhD thesis. University of Leeds: Leeds, UK
- Phipps, S., & Borg, S. (2009). Exploring tensions between teachers' grammar teaching beliefs and practices. *System*, 37(3), 380-390
- Rohler, L.R., Duffy, G.G., Hermann, B.A., Conley, M., & Johnson, J. (1988). Knowledge structures as evidence of the personal: Bridging the gap from thought to practice. *Journal of Curriculum Studies*, 20, 159-65.

- Saiful, J.A. & Widodo, P. (2019). Indonesian EFL Prospective Teachers' Intention to Perform (ITP) in the English Language: A Preliminary Study. *3L: The Southeast Asian Journal of English Language Studies*. Vol 25(1): 100 – 114, <http://doi.org/10.17576/3L-2019-2501-08>
- Sato, K. & Kleinsasser, R.C. (1999). Communicative language teaching (CLT): Practical understandings. *Modern Language Journal*. 83, 494-517.
- Selvarajah, S. & Tan, K.H. (2019). Rural ESL Teacher's Acumen in Teaching Idioms: Traditional and Modern Methodology. *International Journal of Innovative Technology and Exploring Engineering*. 9(2), 2594-2601.
- Shanina Sharatol Ahmad Shah. (2014) *Secondary school ESL teachers' beliefs and practices in the teaching of pronunciation / Shanina Sharatol Ahmad Shah*. PhD thesis, University of Malaya. Malaysia
- Sharp, A. (2004). Language learning and awareness of personality type in Chinese settings. *Asian EFL Journal*, 6(2), 1-13
- Shavelso, R. J. and Stern, P. (1981). Research on teachers' pedagogical thoughts, judgements and behaviours. *Review of Educational Research*. 51, 455-498.
- Shulman, L.S. (1986). Paradigms and research programmes in the study of teaching: A contemporary perspective. In M.C. Witrock (ed.), *Handbook of Research in Education* (pp.3-36). New York: Macmillan.
- Shulman, L.S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*. 57, 1-22.
- Singh, M, P.Kell & Ambigapathy Pandian. (2002). *Appropriating English: Innovation in the global business of English language teaching*. New York: Lang Publishers
- Siti Sukainah Che Mat and Melor Md. Yunus (2014). Attitudes and motivation towards learning English among FELDA school students. *Aust. J. Basic & Appl. Sci.* 8(5), 1-8.
- Suhaida Omar. (2010). Exploring teachers' cognitions and practices in teaching reading in English as a Second language (ESL). *International Journal of Arts and Sciences*. 3(17), 30-37.
- Tan, K.H, Philip, B. & W. Jandar. (2019). *Teacher Cognition in ESL Context: A Pedagogic Perspective in Malaysian Classroom*. Bangi. UKM Press.
- Thiyagarajah, P.M. (2003). *Learning English in Malaysian Rural Secondary Schools: Difficulties, Learning Styles & Strategies and Motivation*. Unpublished paper at The Learning Conference 2003: What Learning Means: Institute of Education. University of London 15-18 July 2003.
- Thirusanku, J. & Melor Md Yunus. (2014). Status of English in Malaysia . *Asian Social Science*. 10(14), 254-260.
- Urmston, A. (2003). Learning to teach English in Hong Kong: The opinions of teachers in training. *Language and Education*. 17, 112-137.
- Verloop, N., Van Driel, J. & Meijer, P.C. (2001). Teacher knowledge and the knowledge base of teaching. *International Journal of Educational Research*. 35, 441-461.
- Wilson, S.M., Shulman, L.S. & Richert, A.E. (1987). '150 different ways' of knowing: Representations of knowledge in teaching. In J. Calderhead (Ed.), *Exploring Teachers' Thinking* (pp. 104-24). London: Cassell.
- Wiseman, D.L., Cooner, D.D. & Knight, S.L. (1999). *Becoming a teacher in a field-based setting: An introduction to education and classrooms*, Belmont, CA: Wadsworth.
- World Bank. (2010). Malaysia Economic Monitor, Inclusive Growth. *World Bank: Bangkok, Thailand*. Retrieved October 12, 2012, from [http://siteresources.worldbank.org/INTMALAYSIA/Resources/324392-1288897994959/mem\\_nov2010\\_fullreport.pdf](http://siteresources.worldbank.org/INTMALAYSIA/Resources/324392-1288897994959/mem_nov2010_fullreport.pdf)
- Woods, D. (1996). *Teacher Cognition in Language Teaching*. Cambridge: Cambridge University Press.
- Yeoh Poh Wha. (2003). The mother-tongue-a forbidden tongue? Exploring teachers' cognition in the use of the L1 (First Language) in Malaysian ESL classrooms. *IPBA E-Journal*. Retrieved December 1, 2008, from <http://apps.emoe.gov.my/ipba/rdipba/cd1/article69.pdf>.
- Yin, R. K. (2014). *Case study research: design and methods*. Newbury Park, CA: Sage Publications.
- Yudhi Arifani, Farah. N.M.K, Sri Suryanti & Wardhono, A. (2019). The Influence of Blended In-service teacher Professional Training on EFL Teacher Creativity and Teaching Effectiveness. *3L: The Southeast Asian Journal of English Language Studies*. 25(3), 126 – 136. <http://doi.org/10.17576/3L-2019-2503-10>
- Zuraidah Binti Ismail (2017). The evolution of newly qualified English teachers' cognitions in Malaysian primary schools. Unpublished PhD Thesis. University of Leeds, Unite.