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Suite 805A, 1st Floor, Diamond Complex, Bangi Bussiness Park,
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Selangor Darul Ehsan.
E-mail: irjes@masree.info

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- Publish high quality manuscripts that are of international significance in terms of design and/or findings
- Encourage collaboration by international teams of researchers to create special issues on these topics

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# Planning Writing Lesson Using Proposed Sequential Planning Model (PSPM) in the Limited Proficiency Writing Classroom

**N. A. Matakim[1,*], S. Swanto[2]**

[1, 2]University of Malaysia Sabah
*Corresponding Author: maalnaim@gmail.com

**Abstract** The proposed model represents a strategy for addressing the need for second language writing lessons to be divided into discrete stages dealing with a specific language focus in each lesson. This proposed model helps in the planning of writing lessons as the process of learning to write in a second language classroom among limited proficiency English language learners (LEPL) whose motivation is affected negatively due to language barriers resulting in their inability to express their ideas in English. Due to this, there is a need for teachers to plan and provide the required tools for LEPL to be able to write well. The proposed Sequential Planning Model (PSPM) provides ESL teachers with a mean to help learners in these aspects. The preliminary study was conducted in 5 secondary schools in a rural district in Sabah to test out the PSPM. The respondents (five TESL teachers) were teachers teaching English in Upper forms. Primarily data collected is derived from a questionnaire with all ESL teachers in the district as a form of need analysis. Data was raised in the way of document review, pre and post-semi-structured interviews with the respondents. The supporting data was derived from student's performances in their writing tasks before and after the intervention. The findings of this research suggest a potential strategy for teachers to use in planning their lesson and indicate that this approach is operational in helping teachers effectively plan their lessons.

**Keywords** Sequence, Lesson Planning, Mind Mapping, Writing Process

## 1. Introduction

In recent years, the Malaysian Education Ministry has introduced *Dasar Transformasi Pendidikan (DTP),* as an attempt to transform and reform the teaching profession in Malaysia by 2025. Hence, teachers must now be aware that lesson planning must be taken seriously to fulfill the Malaysian Education Blueprint (MEB), where 21st-century teaching and learning (21st T & L) is being emphasized. Planning a lesson helps teachers to set goals for classroom teaching, therefore lesson planning should be based more on teacher reflections on learners need and based on lesson observation in class rather than just trying to finish the syllabus without considering learners' weak points or learners' need for learning (Peterson, Marx, & Clark, 1978). How a teacher plans and controls the classroom as well as the delivery of the lesson determined the learners' success in learning (Mutton, Hagger, & Burn, n.d., 2010)

Methods of learning English for EFL/ESL varies depending on the student's level of English proficiency and, the means and setting in which they are taught, which can range from required classes in school to self-directed study at home, but this again depends on the family educational level, background and proficiency level (John, 1991). In some programs, educational materials are provided in a mixture of English and are translated orally in the learners' native language to enable the learners to understand the instructions better. Wright (2010) mentioned that in other programs, educational materials are always in English, but the vocabulary, grammar, and contextual clues adapted so that it becomes more easily understood by learners with varying levels of comprehension(Bernhardt & Krashen, 1989).

Teaching English is not easy for English Language Learners (ELL) as it requires a lot of effort from the learners as well as the teacher particularly in multiracial country like Malaysia especially in Sabah and Sarawak, where the learners' home languages, backgrounds, and cultures are varied, and their exposure to the English language is also significantly affected by geographical areas (Mercer & Littleton (2007), Lantolf, Thorne, & Poehner (2015)) in which, learners can be EFL or ESL or even ESOL. In other words, teachers are faced with learners who walk into their classrooms with a wide range of language abilities. As for the learning of English is concerned, almost all learners in the class have the same problem in the language, i.e., lack of vocabulary, grammatical knowledge, ideas, and also sentence construction ability.

In this study, the research will be mainly on the strategy to plan a lesson for writing using a proposed model which reverses the planning process according to the needs of the learners, and how this relates to how teachers interpret the syllabus to suit their learners hence improving in the learners' ability to write. In the Proposed Sequential Planning Model (PSPM), teachers plan their lesson based on learners' need to achieve the objectives of the writing lesson. In this approach, before teachers decide to have a writing task, they need to first analyze ELLs' need before actually planning the lesson to suit the targeted learners' needs. Based on the need analysis, teachers brainstorm on what is needed to achieve the objectives of the writing

lesson and how. Teachers' mind-map on the needs of the learners and mind mapping on learners' needs for writing English essay in various scaffolded lessons (Bakker, Smit, & Wegerif, 2015) dealing with a specific language focus in each lesson instead of just in one lesson as what teachers normally do. According to Reed and Michaud (2010), lesson planning is a process of allowing teachers as the planner to evaluate their knowledge with regards to the content to be taught.

There has been a concern in the achievement of the English language in Sabah schools being primary or secondary. From the researcher's coaching and mentoring visits to schools since 2014, it was realized that most teachers plan their lessons correctly. Planning a good lesson is crucial in determining the success of teaching and learning (John, 1991, 2006; Pang, 2016; Peterson et al. 1978) but the issue is that almost 30 – 40 percent of learners are still not able to perform well in the English SPM examination paper in the district. Teachers know and do the planning, but the question is why learners are still finding it difficult to write in English, especially the limited proficiency learners. In response to the issue is a need to investigate alternative lesson planning design approach (Slater, 2011) to conform to the LEPL needs.

The English Language Teaching Centre (ELTC) has worked together with the Malaysian Ministry of Education to introduce new approaches in helping teachers in overcoming learners' weakness in writing as well as reading. In 2014, Differentiated Teaching and Learning Approach (DTL) were introduced to all SISC officers (English Secondary schools), then since 2015 to date, it is followed up by School Support Program (SSP) for selected schools in phases. In a way, the SSP is almost similar to the PSPM. The difference between the two is that SSP focuses on remedying after the writing stage, i.e., the ***product***, whereas, PSPM, is the lesson planned towards the writing, i.e., the ***process.*** Murray (1972) has mentioned that teachers need to teach writing as a process and not to teach writing as a product. To do this, teachers need to interpret the syllabus while building the yearly scheme of work. There is a need for teachers' to rethink on the writing lesson itself. Teachers must ask themselves, are learning writing for knowledge or learning writing for the examination. The low achievement of learners in writing is a great concern as various continuous efforts are made to increase the ELL proficiency level among Malaysian learners (Tengku Mahadi et al., 2018). A substantial amount of research has been published on lesson planning; however, there has been relatively little research on planning in a scaffolded and staged manner to construct a writing lesson. A different design of planning is much needed for the limited English proficiency learners (LEPL)(Slater, 2011). The limited research on teacher planning seems to indicate that, in planning, teachers do not use all features of the theoretical model but focus primarily on the content to be taught and rarely consider educational objectives, learner characteristics, or instructional strategies (Pang, 2016; Peterson et al., 1978).

Introducing teachers to Proposed Sequential Planning Model (PSPM) helps teachers to be aware that, in certain cases, the common way of planning a writing lesson is not sufficient for the limited English proficiency learners (LEPL). The dominant way to plan a writing lesson would be by staging the writing process, beginning with the introduction, ending with the conclusion only and teaching the grammar and vocabulary totally out of context to the writing. Despite this structured approach, unfortunately, the problem persists among the ELL in the limited proficiency Classroom (LPC). There is still an unrequited question as to why these ELL aren't performing even though many research has been done to improve ELLs performance in writing, and teachers used the suggested strategies in their teaching. There are studies on vocabulary acquisition and grammar teaching to mention a few, but yet to find one that puts all as one big integrated lesson plan for writing with the same topics and themes in a series of a lesson plan. Despite the importance of the role, lesson planning plays in teachers' development of practical competence, exploration of this essential pedagogical task of teachers seems scarce in language teachers' cognition research, Pang (2016). The PSPM approach creates a less stressful lesson for the teachers as well as for the learners. It opens opportunities for teachers to plan better and in a structured, guided manner corresponding to Communicative Language Teaching (CLT) methodology. Furthermore, this approach offers teachers to apply 21st-Century T & L in their teaching. Teachers are reluctant to use the 21st-Century T & L because they said they do not have enough time to come up with exciting, fun activities.

It is common in a writing lesson that teachers give learners a time limit (*usually in double period lessons which are roughly 80 minutes*) to produce an essay which can be stressful to both learners and teachers. To produce the introduction of an essay can be a time-consuming activity for LEPL. It may take more than one lesson to complete. Pressed for time, teachers may overlook the need to provide learners with the much-needed vocabulary and schemata to help them generate their ideas for writing essays. LEPL struggles to write and ends up copying from their friends. They become demotivated hence affecting their interest in learning the language. Writing difficulties affect LEPL motivation toward writing (Ismail, Hussin, & Darus, 2012). The PSPM approach helps teachers to plan their writing lesson in sequence based on the learners' requirements. Learning to write is scaffolded in a fun and achievable way, especially for the LPEL. This fun achievable approach would motivate ELLs to participate and hence perform better.

## 2. Problem Statement

The problem that this research wanted to explore was if teachers' teaching in LEPL designed their lesson planning to accommodate ESL/EFL learners need for writing. Ideally, if the syllabi consistently followed from year 1 to year 6, all learners should have mastered the English Language by the end of their primary school, and would not have faced problems in secondary schools. The syllabi were built with the objective that by the end of year 6, English Learner (EL) should have mastered a certain

level of the English language. Unfortunately, the reality is, at least 40 percent of Form 1 learners' are unable to write well in English. Why is this so?

In Kudat, a rural district situated at the northern part of Sabah, the English proficiency level is quite low and every year, for the band 4, 5 and 6 schools. In the SPM English papers, at least 10 to 50 learners failed (based on SPM data), and mainly from the LEPL classes. There are two categories of learners in these classes; category 1 are those with 25 above total marks of 85 from paper 1, and category 2 are those with 25 marks below. Item analysis of the results revealed that the ELLs are weak, especially in vocabulary, grammar, sentence constructions or structures, and lack of ideas to respond to the writing task. Teachers normally do pre-teach the writing process, fully guided, and tell ELLs to write essays based on the task given. Unfortunately, ELLs are still weak or still having the same weakness. The worst scenario is when it comes to the examination, some ELLs only manage to write only half the page of a foolscap paper or leave the answer sheet blank.

Many of the LEPLs are in the marks range of 20 to 39. So, there is a need to dig deep on what has gone wrong or what is lacking in the LEPL classroom. Hence, this preliminary research is a reflection of what the researcher found lacking in teachers lesson planning strategies, especially in the limited English proficiency (LEP) classroom. For this research, the researcher focused on English teachers teaching in the LEP class, i.e., learners have some English language background, where most learners lack in the much-needed writing ingredients for writing essays in English. For this study, only category 1 (marks ranging 20 to 39) will be taken into account because category 2 (below 20) learners may have other learning problems which are not studied in this research paper. Class management will be the extraneous variable, while motivation and teachers approach is the confounding variable in this study.

The study aims to propose a research on a proposed Sequential Planning Model (PSPM) for a writing lesson on which if correct guidance and suitable activity or input that is relevant to the needs of the learners, the approach will have an impact on LEPL writing skills. The objective of the preliminary study is to investigate teachers' practices of teaching writing, as well as to explore factors affecting the LEPL writing ability and to discover alternative ways to writing lesson by the integration of various lessons using PSPM approach to guide the learners' writing process based on learners' need.

The research questions based on the objective of the study include:

RQ1: How is the normal practice of teachers writing lesson plan?

RQ2: What are the factors affecting LEPL writing ability?

RQ3: How does the application of PSPM help teachers to plan writing a lesson for LEPL?

RQ4: What is the effect of the PSPM approach on LEPL writing performances?

# 3. Literature Review

Sijil Pelajaran Malaysia (SPM) is the Malaysian final examination before entering tertiary level education. The English paper; teachers' into Paper 1, which is the written work test and Paper 2 on the reading comprehension and literature components. Paper 1, the written test carries a total of 85 marks, in two sections, Section A, Directed Writing (35 marks), and Section B, continuous writing (50 marks). Writing has been a problem for many years for LEPL. The skill to write well is not a naturally taught skill; it is learned or transferred as a set of practices in formal instructional settings or other situations (Myles, 2002). It is necessary to help learners build a positive attitude towards writing in addition to teaching them how to write (Zorbaz, 2015). In empowering LEPL writing skills, a systematic instructional practice need to be followed so that the learners will be directed to progress in their writing tasks (Mahadi. T. et al., 2018)

The normal teaching practice for a writing class would be teaching the writing process within 80 minutes for Malaysian class. There are four stages to cover within the 80 minutes lesson, i.e., pre-writing, drafting, revising, and editing. Most LEPL could not write within the given time. They struggle and end up doing the writing task at home. The majority will not do. LEPL are finding it hard to write because of certain factors such as limited vocabulary which contributes to the difficulty of writing (Tengku Mahadi et al., 2018; Astika, 1993;Santos,1988) grammar knowledge, lack of ideas as well how to construct sentences. During observation in the classroom, it was noticed that LEPL tends to use the first language (L1) in their second language (L2) writing tasks. The reason is that they do not know what word to use and how to elaborate on their ideas in L2. In a study conducted by Tengku Mahadi et al. (2018), it was mentioned that many LEPL uses L1 in their L2 writing practices to make up for linguistic deficiencies. It is necessary to help learners build positive attitude towards writing in addition to teaching them how to write during instruction (Harmer,2004). Data from several studies have identified that writing difficulties affect learners' attitude towards writing(Slater, 2011) therefore it is important that LEPL sees writing the lesson in an achievable, meaningful and purposeful for real-life learning and not just for the examination. The whole process towards writing is important and should be focused on, and not just the product of the writing.

For many years, teaching of writing always focused on the written product rather than the writing process (Harper, 2004). Learners are directed to 'what' rather than 'how.' Process writing is not easy option for ELL of EFL/ESL/ESOL or even for the teachers. In applying product approaches, teachers expect the ELL to only analyse text in terms of what language they used on constructed, whereas if process approach, it's a way of looking at what people do when they compose written text.

Teachers need to see the planning of the writing lesson when looking at the whole process of writing. The writing lesson should be staged in different sub-lessons to fit the needs of the LEPL. Teachers need to analyze and

synthesize the syllabus to fit the writing process planning by reflecting on the LEPL needs. This study is to discover a writing process planning to fit LEPL needs. There are situations in which teachers need to produce a much longer sequence of their lesson (Jeremy, 2007)and the PSPM approach guides teachers to plan the writing lesson in a series of staged sub-lessons. Designing activities based on the lesson plan is crucial for learners' success in learning. In PSPM, instead of looking at one writing lesson, teachers need to mind map on series of sub-lessons to achieve a common goal, i.e., writing an essay according to the topic given in Paper 1. The lesson planning is done in stages of sub-lessons; each lesson is planned according to the dominant linear model. The PSPM lesson plan is the teachers' road map of what learners need to learn and how it will be done efficiently during class time. So, it is imperative before planning a lesson, teachers' first need to identify the main learning objectives from the syllabus and then relate to LEPL needs to plan for the 21st century T & L activities.

Lesson planning is the heart of teaching because it is a plan that correlates between learning activities and assessment practices in classrooms. It is an innovative process that allows teachers to synthesize their understanding of second language acquisition (SLA) (Krashen,1982) and language teaching pedagogy with their knowledge of their learners, the curriculum, and the teaching context. But, experience in classroom teaching is far more complex and differentiated than what the policy-makers would have teachers to believe (John, 2007), growth of teachers have shed light on the importance of engagement in lesson planning in teacher development (Pang, 2016). It is the basis of effective teaching. Experienced teachers learn to juggle the classroom variables almost separately from the planning process (Peterson 1978), but Syed Ismail et al.,(2017), Jason,(2006) mentioned that when planning a lesson, teachers should consider learners background knowledge and should be flexible and reflects form learners' ability. So, teachers need to find out LEPL needs before telling LEPL to write. Different learner types and learners from different backgrounds should be well addressed in the lesson plan to achieve full participation. The lesson plan should include instructions and learner activities that address multiple learning styles and multiple ways for learners to provide evidence of understanding(Anderson, 2015). Differentiating instruction for diverse learners in the lesson plan is as important as one fits all, especially in a mixed-ability classroom. In the PSPM, all this is taken into consideration.

For the preliminary research, the PSPM approach was introduced to selected teachers and was implemented for three months period. Before the training, teachers were requested to do a need analysis for writing in the LEPL written work. During the intervention period, selected teachers were trained to plan using the PSPM approach based on the learners' need analysis for writing. Before the planning, teachers need to decide on the theme or topic for the writing task and find reading materials in context with the theme or topic to be used in PSPM. The reading materials will be the materials used actively in the PSPM. It is in the reading material in a context that learners will be able to get their vocabulary, contents, lexical variety, and use of grammar. Next, teachers ask the learners what they need to fulfill the task, then mind map learners' need and plan their lesson by referring to the mind map (Leinhardt& Greeno (1986)) to guide their planning sub-lesson plans were prepared to fit the learners' need by mind-mapping the main topic/themes for the writing lesson . Each lesson is incorporated with 21st century T & L and infused with HOTS elements, Robyn Collins (2014), using the chosen reading materials. Some of the planned writing lessons were broken to 4 to 6 sub-lessons only; the number of sub-lessons depends on the learners need and ELs level of proficiency. Each sub-lesson is lesson to fit learners need before the real writing task, and a systematic instructional practice needs to be followed so that the LEPL will be directed to progress in their writing task (Tengku Mahadi et al., 2018). Each lesson is scaffolded in an organized manner prioritize the most needed by LEPLs. By scaffolding also ELLs will be able to note areas in which their understanding is lacking and engaging in knowledge (Davis & Linn, 2000). All materials for the lesson must be in context with the topic chosen hence choosing the right reading materials are imperative. After the first cycle, teachers will check learners' work and continues the cycle to use PSPM for other topic or theme as practice and preparation for the SPM paper.

# 4. Methods

For this preliminary study, the name of teachers and schools remained anonymous and represented by Teacher A, B, C, D, and E. The researcher use mainly qualitative approach with quantitative data to support the findings. Data were collected responding to the research objectives and research questions using interviews before and after, documents (lesson plans), and learners marks for the pre and post from Mid-semester and Final exam as well as the SPM results for selected schools.

### 4.1. Samplings

Samples for this preliminary research consisted of 5 English language teachers from 5 different schools in Kudat district. All selected teachers have more than five years of experience in teaching the English Language. The criteria for selecting the subjects are based on the final subject marks after the semester examination. The intervention was conducted in the LEPL class. The number of learners in the class is around 17-35 learners. The learners' marks for writing range from 20 – 39. Data was collected and analyzed by the teachers before and after the intervention. The papers were marked according to the actual SPM paper 1 marking scheme. The training was done individually one to one basis to the chosen teachers at different time. The training began after teachers have done the need analysis of the learners based on their observation and reflection. Teachers were also asked to give learners

need based on the pre-test marks. The intervention was conducted in 3 phases.

### 4.2. Pre-Intervention (Phase 1)

The initial phase is when teachers were interviewed on the teaching writing practices. Teachers were asked for data (marks for paper 1 in the mid-semester exam paper) of chosen classes for the intervention. The objective of phase 1 was to find out what were the learners' needs based on teachers' item analysis and classroom reflection (asking the LEPL). Primary data were taken from all teachers teaching LEPL in Kudat district. Teachers were asked to choose a topic or theme, and then decide on the title of the writing task. The teacher then asked to find reading materials in context with the title chosen.

### 4.3. Intervention (Phase 2)

Training began in Phase 2; the intervention group was trained and exposed to the PSPM. These processes can reach up to 10 related sub-lessons per topic. Each lesson is incorporated with the 21st century T & L. First, teachers' mind map the writing lesson into several sub-lesson which respond to their learners' need, then scaffolded the lesson according to priority on which sub-lesson to be taught first and so on. Teachers' need to be creative in planning their lesson and they need to remember the main product of the intervention is writing. All the sub-lesson will be conducted respectively until the final writing.

### 4.4. Post-Intervention /Reflective feedback (Phase 3)

Data were gathered in Phase 3; teachers' were interviewed. Data were taken from teachers' analysis of their learners' writing (marks).

## 5. Findings

Prior to the study, data were collected from teachers teaching in the LEPL in all schools in the Kudat district. The data below shows the average marks for the LEPL differs in different schools. The average marks for LEPL are more than 20 but less than 35 marks. As can be seen in the data, 53.8% of the LEPL can pass the SPM English paper if given the right approach and guidance.

## 6. Discussion

### 6.1. ESL Teachers' Writing Lesson Plan Practices

The data from the interview with the teachers implied that teachers do plan their writing lessons but only suitable for good ELL. They designed the writing lesson to respond to the exam type of paper rather than for knowledge. Despite learners, limited proficiency in the English language teachers still uses the same approach for LEPL and competent learners. Teachers began to see the needs to have a different plan in their lesson planning for the LEPL classes. Learners began to be more focused and motivated during PSPM intervention. The finding, while preliminary, suggests that the PSPM have potentials in helping teachers in teaching LEPL writing. The Teachers responses in the interview suggest that teachers seem to realize the need to plan differently for the LEPL classes. Obviously, before going deep to the writing process, teachers need to build the foundation of the writing process, to achieve the written product.

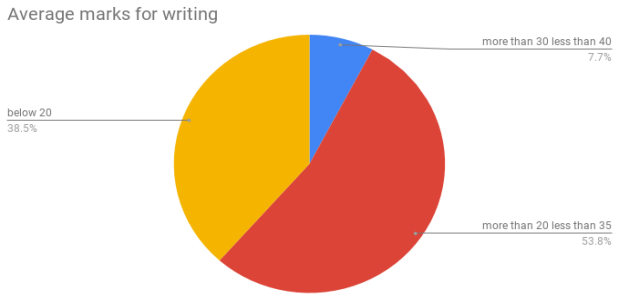


**Figure 1.** Average marks for writing

### 6.2. Factors Affecting LEPL writing Ability

Data was taken from teachers at the beginning of the intervention based on teachers classroom observation and after the writing pre-test.

Teachers need to identify what are learners need to ensure reasonable chances to succeed to counteract the potential problem in writing task. It was evident that the LEPL needs the most help in acquiring vocabulary, use correct grammar, and how to form sentences. These findings suggest that LEPL were struggling to write because they lack words to use to construct good meaningful comprehensible sentences. The findings from the pre-test indicated that LEPL is having a problem in 3 elements, vocabulary, grammar and sentence construction in parallel. What teachers' reflected in class and the data analysis from learners' scripts shows the relationship, and this is the problem learners' were facing in their writing task. The core problems are vocabulary and grammar which make up the sentences. Without sufficient vocabulary, it will be difficult to express their ideas proficiently; writing quality can be enhanced having good vocabulary(Leki & Carson, 1994) and Walters and Wolf(1996) agrees to this notion. The issues such as syntax, concord, and collocation are all parallel to the lack of vocabulary and grammar knowledge amongst ESL/EFL/ESOL. Vocabulary has been acknowledged as L2 learners' greatest single source of problems (Meara, 1980 as cited in (Alqahtani, 2015)) and this can be acquired through reading text in context (Krashen,1989,2003), and retention of the lexical pattern can be applied by the LEPL in their writing (Tengku Mahadi et al., 2018).

Linguist David Wilkins (1972) states that without grammar, very little can be conveyed but without vocabulary, nothing can be conveyed. Vocabulary is very important for LEPL to be able to write better. The question

is how teachers are supposed to plan their lessons based on Wilkin's idea. The preliminary findings agree to the notion that there is a need for teachers to plan a vocabulary lesson in context with the writing task. Vocabulary is largely a collection of items, whereas grammar is a system of rules in writing. Both are important. LEPL are also seen by teachers to have a problem in giving ideas or responding to questions. As proposed by Vygotsky's Zone of Proximal Development (Davydov, 1995), new information should be placed at a level just above the knowledge the learners already possess. Given this, teachers indeed need to take this theory into account. Hence the need for teachers to plan their writing lessons in stages (sub-lessons) to give the LEPL all the tools or ingredients much needed for them to be able to write. Learners get their schematic knowledge from the reading materials, and prior knowledge can be absorbed to written task by giving reading activity in context with the writing task in one of the lesson plan planned using PSPM. As mentioned earlier, an increase in vocabulary and exposure to a variety of lexical syntaxes will help learners to write better.

The majority of teachers in the study disagree with the notion that their LEPL can write under time constraints. Their LEPL were unable to write within a given time limit. Teachers seem to be contradicting themselves when asked if they spend a lot of time to plan their writing lesson and how often teachers give writing task to the learners. The findings from the interview based on teachers experience in ESL classroom, also implied that writing lesson could not be completed in 80 minutes lessons as teachers claim. In the study, the frequency of writing tasks planned by teachers seems to indicate that LEPL were given sufficient writing practice, but LEPL performances seem to be the opposite.

### 6.3. PSPM Intervention

An important concern emerging from these findings is the writing lesson planning planned by teachers did not match the need and other issues faced in the LEPL classroom. The study set out to find a suitable approach for planning the LEPL writing lessons. Teachers agreed that the PSPM approach indeed has an impact on their learners' writing performances. As mentioned earlier in the literature, studies by (Jeremy Harmer, 2006; Leki & Carson, 1994; Tengku Mahadi et al., 2018)proper planning to cater LEPL needs helping to improve learners' writing performances. The PSPM approach in planning a writing lesson allowed teachers to shape their lessons in a more structured that fit in the LEPL needs. In the process of planning, teachers drew images of the classroom events and the learners' level of proficiency. A teacher's lesson planning is influenced by the ability of the learners, their achievements, their personalities, and their home background (Nieuwoudt & Beckley, 2004:317, as cited in (Slater, 2011). PSPM approach agreed to Slater, (2011), research on lesson planning, where he argued on the importance and need for teachers to consider other issues faced by the LEPL. The PSPM intervention approach was discussed in details in the methodology in this paper. Teachers should structure and organize their lesson plans well, which will translate into a structured and organized presentation to avert confusion for ESL learners (Slater, 2011).

### 6.4. The Effects of PSPM approach in LEPL writing performances

The findings, as pictured in *Table 1*, while preliminary, suggest that, after teachers used the PSPM approach for their writing lesson plan, there is an increase in the number of passes in the LEPL.

**Table 1.** Data to show differences before and after the intervention (3 months)

| Teacher | Form /class | No of learners | Mid sem Pre | | No. of learners | Final Post | |
|---|---|---|---|---|---|---|---|
| | | | Pass | Failed | | Pass | Failed |
| A | 5 | 26 | 2 | 24 | 26 | 10 | 16 |
| B | 5 | 35 | 0 | 35 | 32 | 5 | 27 |
| C | 5 | 17 | 1 | 16 | 17 | 7 | 10 |
| D | 5 | 35 | 6 | 28 | 35 | 9 | 26 |
| E | 5 | 31 | 5 | 26 | 31 | 14 | 17 |

# 7. Conclusion

The sample use for the preliminary research was very small and did not allow for generalization on how teachers accommodate ESL learners in the classroom. The study only included five rural schools with poorer socio-economic areas where there is a larger diversity of mother tongues, and a bigger disparity between the learners' and teachers would have contributed significantly to the findings. Classroom observations to assess how educators present the lesson and how ESL learners are accommodated would have provided more insight.

This research has investigated the effect of PSPMS approach in writing lesson planning to help LEPL improve their performances in writing. The findings in this preliminary study add to teachers understanding that, it is very important that teachers of LEPL, think over their teaching practices to cater for these learners' need (Fullan & Pomfret, 1977). The PSPMS approach helps teachers to reflect on their normal approach to plan and teach the LEPL in their school. The findings suggest that teachers are more aware of using PSPM and finds it very useful in their lesson planning. Although teachers were skeptical to the intervention at first, after trying it out with few lessons, teachers found that this approach helped them a lot in planning their lesson, especially now that 21st century T & L are emphasized in the classroom. It was shown in this study that the intervention will benefit teachers' especially English teachers who are struggling to teach their struggling learners. Competence in lesson planning reflects the quality teaching of the teachers (Brown, 2001; John, 2006). The findings add to our understanding that lesson planning is imperative in teaching and learning process, and the good lesson planning will have a good impact on the learners. In general, the results show that it is important

for teachers to fulfill to learners' need before planning a lesson to have good impact on learners' learning. The PSPM allowed teachers to be more creative in planning their 21st-century classroom. The classes were more learners centered providing a communicative approach and more fun because learners know what to learn and what to produce. Several limitations need to be acknowledged even though the findings showed promising impact using the PSPMS approach. More research is needed to understand PSPMS strategies for LEPL better.

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# Job Satisfaction, Responsibilities, and Colleague Relationship are Catalyst to Educational Transformation

**Zalina Mohd Tahir**

Department of Education, Federal Territory, Kuala Lumpur, Ministry of Education, Malaysia
zalina.mtahir@yahoo.com

**Abstract** Educational transformation is a major agenda in efforts to improve the education level in Malaysia. The 21st century education era requires leaders to play a meaningful role in leading, guiding and encouraging school children under their leadership. In managing schools, it is evident that the Principals and Headmasters (PGB) are faced with various issues and challenges which sometimes are burdensome to other school stakeholders. Despite the great deal of responsibility, the level of job satisfaction and good relationship amongst staff would help solve the problems of the administrators. Thus, this study aims to identify the extent of PGBs' confidence to transform education by looking at responsibilities, job satisfaction and colleague relationship. A total of 212 PGB had been selected as respondents and data analyzed using SPSS version 23 for descriptive analysis, while AMOS 22 is used for advanced statistical *Structural Equation Modelling*. The finding shows that the value of *goodness of fit* model of PGB educational transformation is pretty good with reading *chisquare/df* =2.277, *CFI* =.966, p=0.00 and RMSEA = .078. The relations among responsibilities, job satisfaction and relationship with colleagues directly contributed 43% (R2=.43) to PGB's confidence to transform education at school. This means that the transformation is apparent in spite of the various issues and challenges. It is hoped that this PGBs' confidence level will continue to increase as Malaysia's education system needs to undergo a transformational shift in line with the country's vision.

**Keywords** Transformation, Leadership, Governance, Quality

## 1. Introduction

The 21st Century Education has been implemented at school level throughout the country since 2013 in line with the implementation of the Malaysian Education Development Plan (PPPM, 2013-2025). This education pattern is the main focus of the Ministry of Education Malaysia (MOE) to ensure that every educator is qualified as well as capable of producing excellent students. The desire to produce quality teachers and students with good values and character requires an educational pattern. Therefore, leaders need to have a critical, analytical and comprehensive thinking capability. One of the factors that help towards excellence is when one reaches the level of pleasure and satisfaction in working. Several studies have been conducted on the level of job satisfaction associated with the success of an organization. Among them are Workplace Environment and Administrative Styles (Karim, 2008) or Management Styles in the Education System (Huda *et. al.*, 2004). A leader needs to have a sense of responsibility and high self-esteem to carry out transformation in their respective organizations as they are the key to change. Since education is a very important aspect in a person's life, this should be taken seriously. Education leaders have a heavy responsibility in delivering education to the school community. They should always strive to master new knowledge, introduce new technologies and new techniques to be used in daily tasks to lead educators and shape students' excellence.

In reality, education contributes to the national development, but it needs to be designed and implemented systematically. Therefore, the education system in Malaysia should be strategically planned to produce the best for everyone (Zainudin, 2010). Good planning should be realized by leaders in any organization, including at the school level where the head of department plays a key role in leading the organization. Then, the responsibility is channelled to the middle leaders in the administrative affairs and eventually to educators to mould students in accordance with the intended direction.

In an effort to uphold the education organization, the administrators are faced with various issues including satisfaction and job comfort as well as a conducive environment. The responsibility of the school leaders, PGB is not 'a bed of roses'. If PGB feels uncomfortable at any point during administering the school, it will likely lead to failure to carry out the best responsibility. The implication will not only result in a less condusive ecosystems to all school community, but the impact on student's excellence will also be affected (Zalina, 1997). Thus, every educator is responsible for their role so that the aim for excellence based on mission and vision will come true.

## 2. Problem Statement

PGB's often focuses on school excellence through key areas of academic achievement (Mohd Anuar *et. al.*, 2011). However, the field of extra curriculum and character should be given the same weight as character value is the basis for future students' excellence. Education changes through the delivery of knowledge between the 20th century and the 21st century teaching approach should have arrived at the stage of practiced culture. This is because of the significant changes in knowledge delivery techniques in developed countries such as Finland, United Kingdom and other European countries in line with the pattern of the

millennium generation thought. Therefore, the overall transformation in all areas needs to be emphasized so that education in Malaysia today is able to compete and at same level with those countries. The Malaysian government through the Ministry of Education Malaysia is aware of the need for this action. Thus, the Malaysian Education Development Plan (2013-2025) (PPPM) is a guide for educators to move fast taking into account the current needs and the future.

The transformation of education through the administration of PGB has become one of the ways to accelerate the changing of school ecosystems to become more mature and excellent. PGB is responsible for shaping quality teachers (Azlin Mansor, 2006) and moulding students with admirable values. To enable them to play an effective role, PGB's work satisfaction is also a catalyst factor in changing the overall quality of the school. According to Mayer (1992), the commitment shown by the administrator refers to the governing attitudes and responsibilities in an organization. Therefore, besides fulfilling the existing responsibilities, the sense of job satisfaction should be emphasized because without the feeling of satisfaction in carrying out a good job, the intended transformation is difficult to happen naturally. Feeling confident of making a transformation when leading the school will be more meaningful and successful if PGB can combine several factors such as working satisfaction, improving relationship with school community, focusing on responsibilities, being positive, willing to bear the burden of duty, and always cheering up the surroundings (Zainudin Awang, *et. al.*, 2010).

# 3. Research Objectives

i. Measuring the correlation between the four constructs (Responsibility, Job Satisfaction, Relationship with Colleague and Confidence in Transforming) implemented by the Principal / Headmaster (PGB) in administering the school.
ii. Measuring the level of constructs that contributes to the Principal/Headmaster (PGB) confidence in transforming education in schools.
iii. Measuring the level of confidence of the Principal/Headmaster (PGB) in transforming education in schools.

# 4. Method of Study

### 4.1. Research Design

The nature of this study is in quantitative descriptive and correlative. This method is aimed at obtaining the facts by using objective measurements and statistical analysis of numerical data to clarify what is happening (Yin, 2003). There are two parts of the questionnaires: Part A consists of 10 items related to the information and respondents' background while Section B covers four (4) constructs that include, i) 10 items related to PGB's responsibilities; ii) 9 items related to work satisfaction level; iii) 10 items related to the employees; and iv) 9 items related to PGB's confidence in carry out transformation task. The questionnaire was used the interval level by selecting *Likert* scale (1-as "strongly agree" to 10-as "strongly disagree") to facilitate respondent's choice in making a more accurate assessment (Likert, 1932).

All 38 items of the study from the four constructs showed the total credibility value at alpha Cronbach 0.918 (pilot test) and 0.937 (actual study), as well as explained the strength of the items in each construct. According to Hair, *et. al.*, (2006) the minimum reliability value applicable is 0.60. Thus, this study carried out the same value as the reliability index and found that the questionnaire was considered to be higher than 0.915 and 0.952. Table 1 shows the value of each construct tested during pilot test and actual study.

**Table 1.** Value of reliability and quantity of items in every construct

| **Construct** | ***Number of Items*** | ***Alpha Cronbach (Pilot Test)*** | ***Alpha Cronbach (Actual Study)*** |
|---|---|---|---|
| Responsibility | 10 items | 0.911 | 0.939 |
| Job satisfaction | 09 items | 0.865 | 0.915 |
| Relationship with colleagues | 10 items | 0.952 | 0.952 |
| Transformation | 09 items | 0.944 | 0.945 |
| TOTAL | 38 items | 0.918 | 0.937 |

### 4.2. Analysis Methods of the Study

Statistical analysis for social science (SPSS) (Pallant, J., 2010) version 23 is used for demographic analysis. AMOS 22 analysis is also used for structural measurements with advanced statistical *Structural Equation Modelling* (SEM) divided into three levels. The first stage is the analysis of data Exploratory Factor Analysis (EFA) (Hair *et. al.*, 2010; Zainudin, 2012) or there are researchers using the Principle Component Analysis (PCA) (Hair, *et. al.*, 2006). This analysis was aimed at assessing the psychometric instruments characteristics based on question construction in a variable. This technique is also used to obtain new validity and reliability for each sample.

The second stage is known as Confirmatory Factorial Analysis (CFA) which aims to see the correlation between the variables used. In addition, this factor analysis will also determine the suitability and validity of the item to measure the variables and subsequently to test the covariance structure in each variable. This analysis will occasionally result in data reduction and items to produce more significant data (Hair, *et. al.*, 2010). CFA will eventually produce a measurement model. In the third stage, the SEM analysis is aimed to test how far the constructs contained in the measurement model achieved fitness indexes.

The third stage of the analysis will help researchers to assess the characteristics of psychometric instrument of question formulation in independent variables through constructs of responsibility, job satisfaction, and relationships with colleagues. While the dependent variable involves the 'Transformation' construct. All scales used will be validated before proceeding with the subsequent analysis.

### 4.3. Population Sample Study

Respondents of this study consist of Principals and Headmasters who are currently working in schools in the Federal Territory of Kuala Lumpur. It selects simple random sampling to avoid bias data collection (Shaver and Norton, 1980). A total of 230 Principals and Headmasters agreed to answer the questionnaire in this study. However, only 212 (92.1%) of the completed questionnaires were filled by the respondents and were used as a sample of the study.

This study has gone through the normal data collecting process. In the early stage, pilot test was conducted to 58 selected Principals and Headmasters to respond to the questionnaire. The purpose is to identify their level of understanding of the questions raised. After conducting the fine-tuning of the questions, the researcher has obtained PGB's approval to become a respondent. Respondents were given a week to answer the questionnaire.

# 5. Analysis of Findings

The data were analyzed in two ways: i) descriptive analysis involving frequency and percentage to explain; a) respondents' demographic profile; and b) data of academic qualification level, and PGB's experience; and ii) analysis of *EFA*, *CFA* and *SEM* to identify whether the relationship between variables exists.

### 5.1. Description of Respondents

a) Based on the respondents' demographic profile, it showed that 98 PGBs (46.2%) were male and 114 PGBs (53.8%) were female. Of the total, the division in terms of race showed 185 PGBs (87.3%) are Malays, 19 PGBs (9.0%) are Chinese and 8 PGBs (3.8%) are Indians. Generally, most of the respondents (PGBs) are over 41 years old, with a total of 206 people, a very high percentage of 97.2%. This proves that the post of PGB is indeed held by those who have served long and have vast experience in the education system (Table 2). This view is supported by Clark and colleagues (2009), which states that PGB will be more effective in carrying out their responsibilities if they are more experienced in the field.

b) Changes in the education era and the importance of learning are seen when 104 (49.1%) of all respondents have Bachelor's Degree, while 48 (22.6%) have higher qualifications, namely Master's Degree. A total of 17 (8.0%) PGB holders have Diploma and 43 (20.3%) have graduated with the Malaysian Higher School Certificate (STPM) and Malaysian School Certificate (SPM). Of the total respondents, 46 (21.7%) had first degree and eight (3.8%) had a Master's Degree in education, while 54 respondents (25.5%) had Diploma in Education and the remaining 104 (49.1%) had a Certificate of Teaching.

**Table 2.** Summary of respondents' demografic data

| Demografic | Respondent | Frequency | Percentage |
|---|---|---|---|
| Gender | Male | 98 | 46.2 |
| | Female | 114 | 53.8 |
| | Total | 212 | 100.0 |
| Race | Malay | 185 | 87.3 |
| | Chinese | 19 | 9.00 |
| | Indian | 08 | 3.80 |
| | Others | 00 | 0.00 |
| | Total | 212 | 100.0 |
| Age | 31-35 years | 04 | 1.90 |
| | 36-41 years | 02 | 0.90 |
| | 40 above | 206 | 97.2 |
| | Total | 212 | 100.0 |

A total of 191 respondents (90.6%) were educators who had been teachers between 16 and over 21 years. While 20 respondents (9.4%) had been educators between 6-15 years. Nevertheless, the distribution of administrators with experience leading a school was almost balanced. Respondents with over 10 years of administrative experience are 65 (30.7%), while 86 respondents (40.6%) are experienced administrators between 6-10 years. A total of 61 respondents (28.8%) have experience less than five years of school administration. Table 3 shows the formulation of the qualifications and experience of the respondents administering their respective schools.

Given the size of the Federal Territory of Kuala Lumpur which is small, the ability of the respondents to move from home to school is less than 25 kilometres one way. There was a one-way distance from home to school for 41 respondents (19.3%) ranging from 1-5 km only while 52 respondents (24.5%) live between 6-10 km from school. However, it is found that 119 respondents (56.1%) live more than 10 kilometres away from the school. Although distance factors are not an issue for administrators, other issue such as traffic congestion in the city is the probable reason for a longer time to get to the location.

**Table 3.** Summary of respondents' qualification and experience

| | Respondent | Frequency | Percentage |
|---|---|---|---|
| Academic Qualification | SPM/STPM | 43 | 20.3 |
| | Diploma | 17 | 8.0 |
| | Degree | 104 | 49.1 |
| | Masters | 48 | 22.6 |
| | Total | 212 | 100.0 |
| Professional Qualification | Certificate in Education | 104 | 49.1 |
| | Diploma in Education | 54 | 25.5 |
| | Degree in Education | 46 | 21.7 |
| | Masters in Education | 08 | 3.8 |
| | Total | 212 | 100.0 |
| Experience as Teacher | 6-10 years | 11 | 5.2 |
| | 11-15 years | 09 | 4.2 |
| | 16-20 years | 01 | 0.5 |
| | 21 years or more | 191 | 90.1 |
| | Total | 212 | 100.0 |
| Experience as Administrator | 1- 5 years | 61 | 28.8 |
| | 6-10 years | 86 | 40.6 |
| | 11 years or more | 65 | 30.7 |
| | Total | 212 | 100.0 |
| Distance to school | 1-5 km | 41 | 19.3 |
| | 6-10 km | 52 | 24.5 |
| | More than 10 km | 119 | 56.1 |
| | TOTAL | 212 | 100.0 |

## 5.2. Analysis of EFA, CFA and SEM

### 5.2.1. Exploratory Factor Analysis (EFA)

Based on the sample size (n = 212) it is found that all items have multiple load factor values ranging from 0.24 to 0.95. However, when the statistical analysis of the *Exploratory Factor Analysis* (EFA) is conducted, the results obtained have changed as this analysis yields the strength of each item and its position in the construct. This analysis is also intended to reduce the data through data collection process collected. The loading value of 0.50 or more is considered significant while values greater than 0.70 are considered to be highly compatible and have a clear structure (Hair, *et. al.,* 2006). Figure 1 shows the loading value of 38 items and the correlation between constructs that have not gone through data cleaning process.

During the analysis, any item having a loading value of less than 0.50 was dropped from the construct resulting in good data. Researchers take the stand by using items that meet the features proposed by Hair, *et. al.,* (2010) and Zainudin (2012). As recommended by Zainudin (2012), despite the high loading factor value, Bartlett's, KMO and Communality test values need to be taken into account to ensure the data is good and can be tested. Therefore, all the items in these four constructs need to go through the test and the process of data cleaning through an EFA analysis can be carried out as follows:

#### 5.2.1.1. Construct of PGB's Responsibilities Administering School

One of the key assumptions assessed in this EFA analysis is to test corelation (multicollinearity) of items. There are 10 items tested in the construct of 'PGB's responsibility administering the school'. *Bartlett's test* shows statistically that the item is significant with the values of $\chi 2$ (45) = 1985.509 and p= .000. The resulting *Kaiser-Meyer-Olkin* (KMO) values are above .600 (.893), while the *Measure of Sampling Adequacy* (MSA) values for each item exceeds .60.

The next step is to assess the communality that should exceed the reading .60. During the test on rotated component matrix, factorial complexity occurs on one item (C4). This causes researchers to drop the item from the construct even if the KMO value is high. The same EFA process is executed once again and has resulted in a KMO = .895 with *Bartlett's test* showing statistically that the item was significant with values $\chi 2$ (36) = 1934.017 and p=.000. So, only nine (9) items were carried for further analysis.

Table 4 shows the EFA analysis for the constructs of 'PGB's Responsibilities Administering School'. This construct yields only one implied dimension based on *eigenvalues* data greater than 1.0. This finding also explains that the dimension is capable of explaining more than 72.73% of the nine (9) items contained in the whole construct.

**Table 4.** Eigenvalues and percentage of variance for construct 'PGB's responsibilities administering school'

| ***Initial Eigenvalues*** | | | |
|---|---|---|---|
| **Component** | **Total** | ***% of Variance*** | ***Cumulative %*** |
| 1 | 6.546 | 72.730 | 72.730 |
| *Total Variance Explained:* 72.730% | | | |

#### 5.2.1.2 Construct of PGB's Job Satisfaction in Managing School

There are 09 items in the 'PGB's Job Satisfaction in Managing School' construct. *Bartlett's test* shows statistically that the item is significant with the value of $\chi 2$ (36) = 1666.261 and the value of p=.000. The resulting *Kaiser-Meyer-Olkin* (KMO) values are above .600 (.856), while *Measure of Sampling Adequacy* (MSA) values for each item also exceeded .60. When the values of *Bartlett's* and KMO meet the requirements of the test, the next step is to evaluate the communality that should exceed the reading .60. During the test on the rotated component matrix, factorial complexity occurs on three items (H2, H3, H6). This causes researchers to drop the item from the construct even when the KMO value is high. The same EFA process is executed once again and has resulted in a KMO = .846 with *Bartlett's test* showing statistically that the item was significant with the values of $\chi 2$ (15) = 1094.073 and

p=.000. So, only six (6) items were carried for analysis at the next level.

Table 5 shows the EFA analysis for the construct of 'PGB's Work Satisfaction when Administering School. This construct also produces only one implied dimension based on *eigenvalues* data greater than 1.0. This finding also explains that the dimension is able to explain more than 72.384% of the six (6) items in the whole construct.

**Table 5.** Eigenvalues and percentage of variance for 'PGB's job satisfaction' construct

| ***Initial Eigenvalues*** | | | |
|---|---|---|---|
| **Component** | **Total** | ***% of Variance*** | ***Cumulative %*** |
| 1 | 4.343 | 72.384 | 72.384 |
| *Total Variance Explained:* 72.384% | | | |

5.2.1.3. Construct of PGB's Relationship with Colleagues

There are 10 items in the 'PGB's relationship with Colleagues' construct. *Bartlett's test* shows statistically that the item is significant with the value of $\chi 2$ (46) = 2230.385 and with the value of p=.000. The *Kaiser-Meyer-Olkin* (KMO) values produced are above .600 (.865), while *Measure of Sampling Adequacy* (MSA) values for each item exceeds .60. The value of communality also exceeds the .60 reading. During the test on the rotated component matrix, there was no complexity factor occurring on all items. This leads researchers to use all 10 items to be analyzed on the next level.

Table 6 shows an EFA analysis of the 'PGB's Relationship with Colleagues' construct. This construct also produces only one implied dimension based on *eigenvalues* data greater than 1.0. This finding also explains that the dimension is capable of explaining more than 70.302% of the ten (10) items found in the whole construct.

**Table 6.** Eigenvalues and percentage of variance of 'PGB's relationship with colleagues' construct

| ***Initial Eigenvalues*** | | | |
|---|---|---|---|
| **Component** | **Total** | ***% of Variance*** | ***Cumulative %*** |
| 1 | 7.030 | 70.302 | 70.302 |
| *Total Variance Explained:* 70.302% | | | |

5.2.1.4. PGB's Confidence in Implementing Transformation Construct

There are 09 items in the 'PGB's Confidence in Implementing Transformation' construct. *Bartlett's* test shows statistically that the item is significant with the value of $\chi 2$ (36) = 1999.63 and with the value of p=.000. The *Kaiser-Meyer-Olkin* (KMO) values produced are above .600 (.867), while the *Measure of Sampling Adequacy* (MSA) values for each item exceeds .60. The value of communality also exceeds the .60 reading. During the test on the rotated component matrix, the factorial complexity occurs on six items (K2, K5, K6, K7, K8, K9). This caused researchers to drop the item from the construct even if the KMO value is high. The same EFA process is executed once again and has resulted in a KMO = .873 with Bartlett's test showing that the item was significant with the values of $\chi 2$ (38) = 1775.436 and p=.000. Therefore, only three (3) items will be carried for the next analysis.

Table 7 shows the EFA analysis for the construction of the 'PGBs' Confidence in Implementing Transformation' construct. This construct also produces only one implied dimension based on *eigenvalues* data greater than 1.0. This finding also explains that the dimension can explain more than 81.42% of the three (3) items in the whole construct.

**Table 7.** Eigenvalues and percentage of variance for 'PGB's confidence in implementing transformation' construct

| ***Initial Eigenvalues*** | | | |
|---|---|---|---|
| **Component** | **Total** | ***% of Variance*** | ***Cumulative %*** |
| 1 | 2.765 | 92.164 | 92.164 |
| *Total Variance Explained:* 92.164% | | | |

In conclusion, although the value of the KMO obtained is greater than .60 and the MSA value for each item is greater than .60, the possibility of an item to be dropped can occur. This is because the test on the rotated component matrix will determine the item in one or multiple dimensions. This finding will cause the number of items to decrease even though the higher the MSA value, the meaning of each variable can be predicted exactly as well as meeting the recommended criteria. Finally, after the EFA analysis process, the total item decreased to 28 items (Table 8).

**Table 8.** Reliability and number of items under each construct

| **Construct** | ***Number of Items*** | ***Alpha Cronbach*** |
|---|---|---|
| Responsibility | 09 | 0.939 |
| Job Satisfaction | 06 | 0.915 |
| Relationship with Colleagues | 10 | 0.952 |
| Educational Transformation | 03 | 0.945 |
| TOTAL | 28 items | 0.937 |

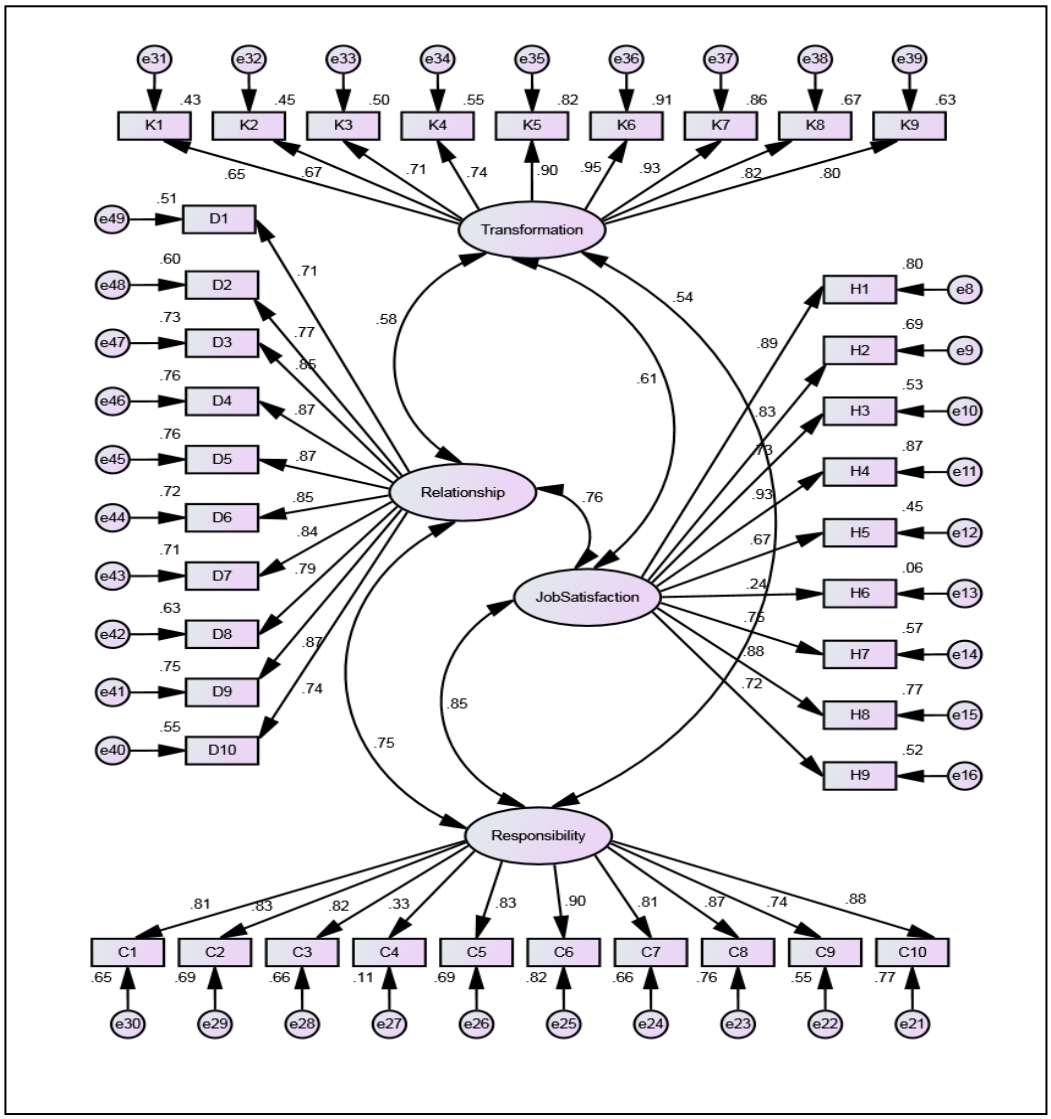


**Figure 1.** Loading factor value and correlation between construct

5.2.2. Confirmatory Factor Analysis (CFA) with the Measurement Model

CFA is used to confirm the construct after the EFA process. This method is intended to test the suitability and validity of the proposed measurement model after the findings that the relationship of all four constructs is strong with a high alpha Cronbach value. Next, the CFA is also used to explore items where significant modifications need to be made before the whole construct is incorporated into a structural model (Hair, *et al.*, 2006).

On the whole, the constructs (Responsibilities, Employment Satisfaction, Colleagues Relations and Educational Transformation) used in this study have resulted in an implied dimension, thus the CFA is used to verify. The construct validity is measured to determine to what extent the item produced really represents the construct generated. CFA analysis is run using the AMOS version 23 software. Each model is considered fit when the

index reading level reaches the recommended level (Hair, *et. al.*, 2006).

Since all constructs have one dimension, then this construct is in the form of first order and the method of combining all the constructs has been done. This combined method is a highly recommended method of measuring the measurement model using CFA simultaneously (Zainudin, 2012). A total of 28 items out of four variable constructs have reached alpha Cronbach above 0.90 with correlation value between constructs less than 0.85. Figure 2 shows an analysis to measure the standardized *hypothesized Measurement Model* that combines all four constructs after undergoing the EFA analysis process.

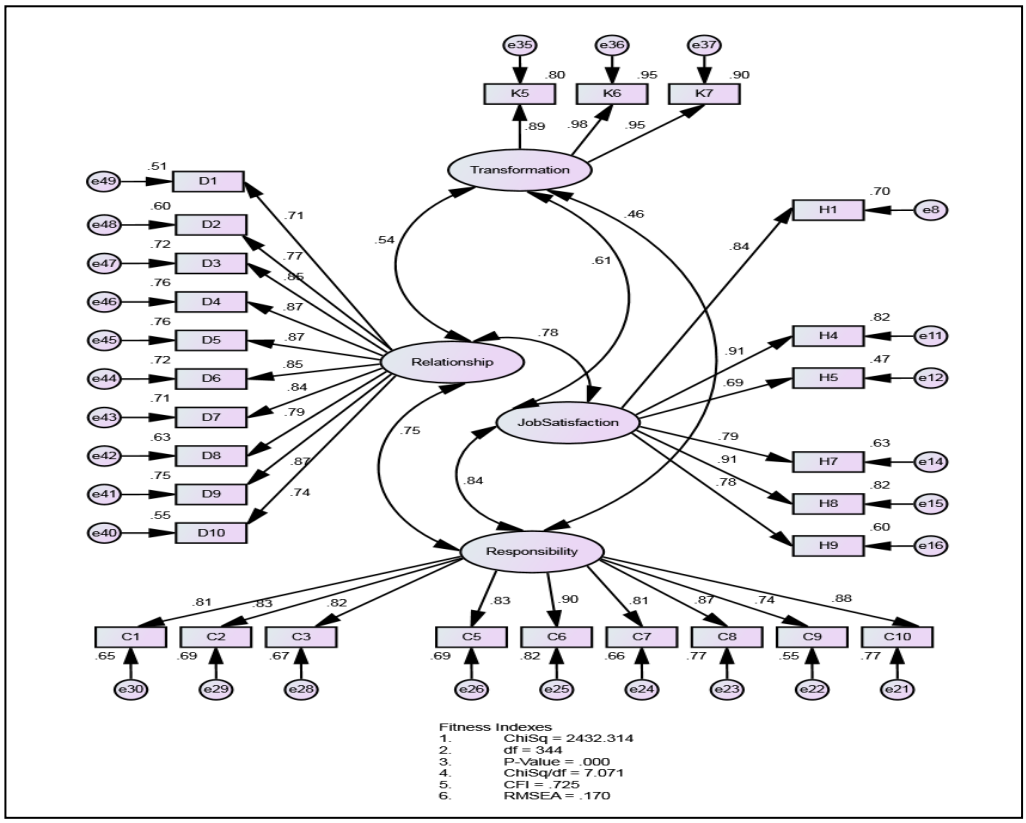


**Figure 2**. *Hypothesized Measurement Model*

The combination of these constructs indicates fitness indexes at Chisquare/df=7.071, CFI=.725, P=.000 and RMSEA=.170 values. It was found that all the compatibility indexes in each construct had not met the proposed criteria although the load factor value exceeds .50, Squared Multiple Correlation (SMC) exceeds .3 (Hair *et. al.,* 2006). Therefore, a revision of the model was performed and the combination through the free parameter estimate carried out to obtain a better covariance reading value. After the test was carried out repeatedly by eliminating item by item, the value of fitness index fit is better with Chisquare/df = 2.277, CFI = .966, P=.000 and RMSEA= .078. The result of the test explains that each item in each constructed test has its own strength and there is no item that is redundant that requires a combination through free parameter estimate except D4-D8, H1-H4 and C5-C8. After the combination of these two items, the value derived from the statistical standardized regression weight test is significant and meets the rules of thumb (Hair, *et. al.*,2006) because the validity of all constructs shows a correlation value of less than 0.85 (Figure 3).

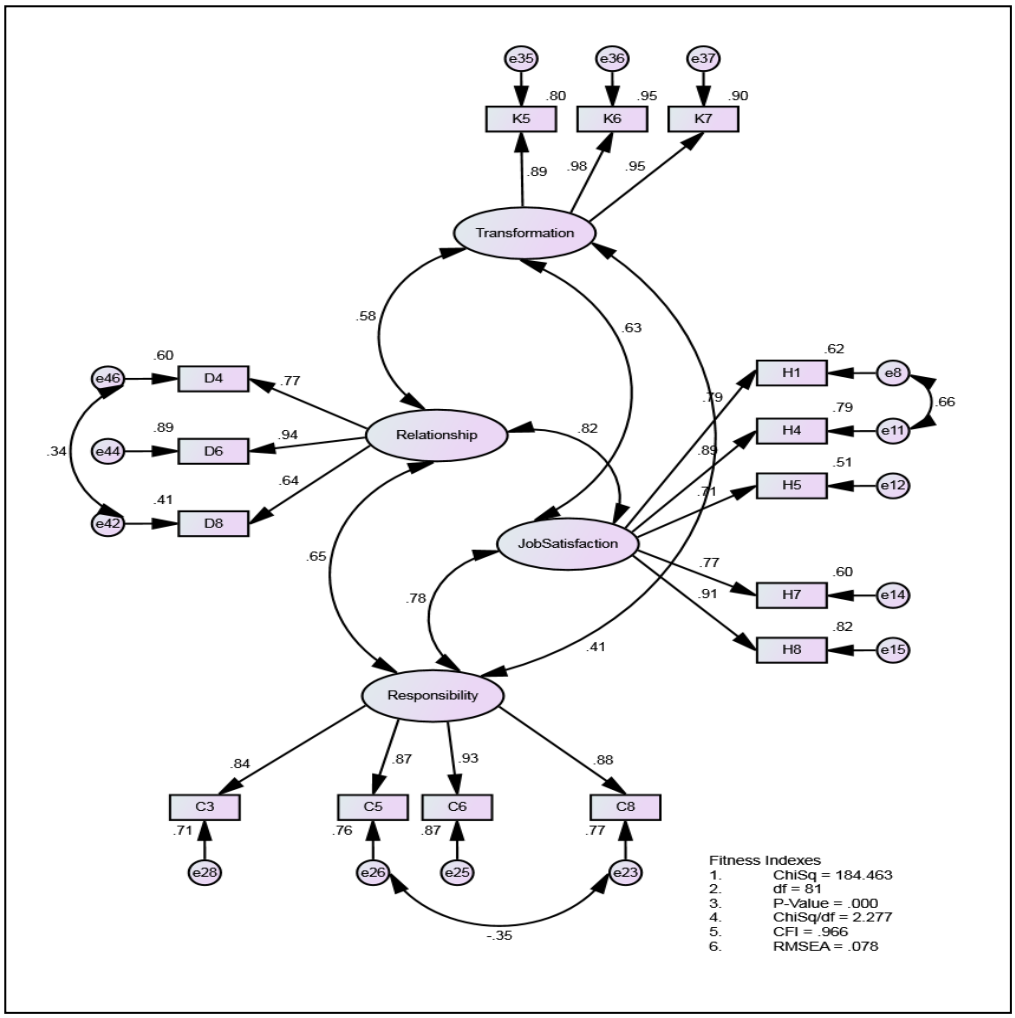


**Figure 3.** *Revised Measurement Model*

The correlation among all the constructs of Responsibility, Employment Satisfaction, Relationships with Colleagues and Educational Transformation is very good as proposed that is between *r*=.41 to *r*=.82. In conclusion, all constructs play their respective roles and contribute to PGB's confidence to step forward to transform education. Table 9 shows the standard error value (SE), critical ratio (CR) and p-value to support the study findings as well as meeting the objectives of the study.

**Table 9.** Value of *regression weights* for each items in the constructs *regression weights: (group number 1 - default model)*

| | | | Estimate | S.E. | C.R. | P | Label |
|---|---|---|---|---|---|---|---|
| H4 | <--- | JobSatisfaction | 1.049 | .044 | 23.593 | *** | par_1 |
| H5 | <--- | JobSatisfaction | .983 | .089 | 11.028 | *** | par_2 |
| H7 | <--- | JobSatisfaction | 1.031 | .084 | 12.248 | *** | par_3 |
| H8 | <--- | JobSatisfaction | .984 | .066 | 14.990 | *** | par_4 |
| K5 | <--- | Transformation | .878 | .035 | 25.301 | *** | par_5 |
| K6 | <--- | Transformation | 1.000 | | | | |
| K7 | <--- | Transformation | .905 | .027 | 33.369 | *** | par_6 |
| D8 | <--- | Relationship | .797 | .079 | 10.130 | *** | par_7 |
| D4 | <--- | Relationship | .837 | .064 | 13.161 | *** | par_8 |
| H1 | <--- | JobSatisfaction | 1.000 | | | | |
| C8 | <--- | Workload | 1.000 | | | | |
| C6 | <--- | Workload | 1.170 | .059 | 19.739 | *** | par_11 |
| C5 | <--- | Workload | 1.175 | .077 | 15.258 | *** | par_12 |
| C3 | <--- | Workload | .923 | .057 | 16.315 | *** | par_13 |
| D6 | <--- | Relationship | 1.000 | | | | |

5.2.3. Structural Equation Modelling Analysis (SEM)

In order to answer the final objective of the study, the *structural* model test involving the analysis of the independent variables (exogenous) with the dependent variable (endogenous) is carried out. Figure 4 is a *Structural Model* constructed to test the level of relationship between independent variable constructs to dependent variables. There are three exogenous constructs, 'Responsibility' construct has four items (C3, C5, C6 and C8), 'Job Satisfaction' construct has five items (H1, H4, H5, H7 and H8) and the 'Relationship with Colleagues' construct has three items (D4, D6 and D8). While the endogenous construct is the 'Transformation' construct has three items (K5, K6 and K7).

Based on *standardized regression weights* measuring *beta estimate* and *standard deviation* found that 'Relationships with Colleagues' construct contributed to PGB's confidence to implement 'Transformation' with reading β=0.20, while 'Job Satisfaction' construct contributed to PGB's confidence to implement 'Transformation' = 0.64. However, it is found that the 'Responsibility' construct does not contribute to PGB's confidence to implement 'Transformation' in their respective schools with reading β = -0.23.

Referring to the value of *Squared Multiple Correlations* (SMC) the 'Transformation' construct is R2 = 0.43 which means that all exogenous constructs have contributed a total of 43% to PGB's confidence to implement 'Transformation' through their governance at school. SMC values for each item are among the lowest values of R2 = 0.41 (D8) to the highest value of R2 = 0.96 (K6). All SMC values indicate that the contribution of each item in the construct is between 41.0% to 96.0% as well as explaining the contribution and strength of the items in their respective constructs.

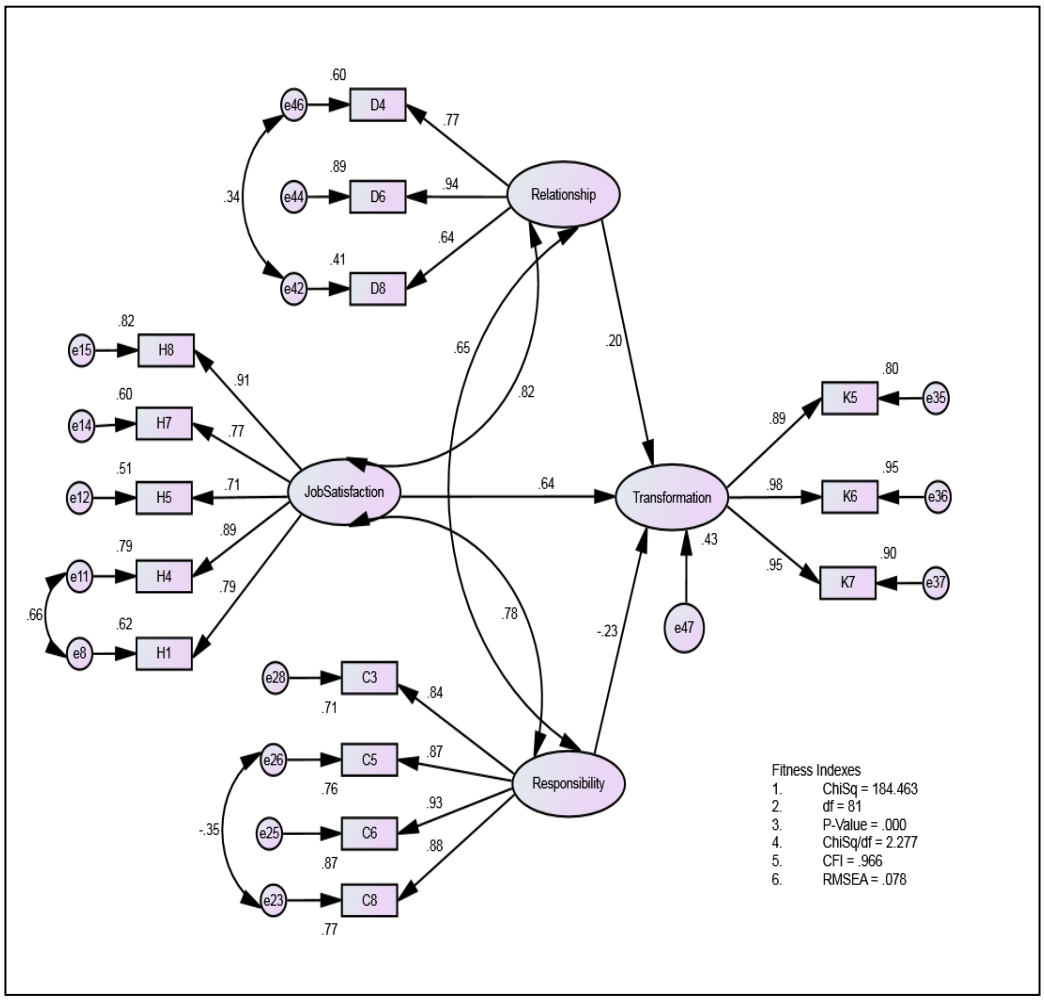


**Figure 4.** *Structural Model –*
PGB's Confidence in Carrying Out *Educational Transformation*

On the overall the value of the suitability index obtained in this structural model is good and achieves the desired level ie chisquare/df= 2.277, CFI= 0.966, p= 0.000 and RMSEA= 0.078. The two independent variable constructs (Relationships with Colleagues and Job Satisfaction) have played a causal relationship contributing their respective strengths to the dependent variables. The findings from the analysis was found that PGB's confidence in the transformation of education in schools is largely influenced by two main factors, namely the relationships with colleagues and the job satisfaction in their administrative capabilities. While the 'responsibility' factor in performing work in school was found to have not contributed to PGB's confidence in carrying out education transformation.

This means PGB's confidence to transform education in their governance is not because of their responsible for the tasks that are considered as daily routines, but good relationships with colleagues and job satisfaction are the external factors that can have an impact on the overall actions taken. These two factors make PGB's more confident in implementing transformations that can also inject the spirit of teachers to equally rise forward towards our national education excellence. The findings of this analysis also answer all the research objectives.

## 6. Summary

In conclusion, although most PGB's are over 40 years old (97.2%) and 71.3% of them have held this position for more than six years, the satisfaction of working and good relations between colleagues strongly encourage every action taken. PGB's action to transform education as intended by all citizens can be a reality with regard to various factors. Positive changes in leadership can change the success of school by practising good working culture, positive attitude, respecting colleagues, working together and putting some confident of their ability.

As a result, job satisfaction and good relationship of PGB's with the school community will indirectly create more future leaders based on integrity and unity. In addition, PGB's opportunities to get guidance from co-supervising colleagues in selected schools should also be seen as a catalyst for a shift towards school excellence. Thus, the District Transformation Program (DTP) conducted by the District Education Office (PPD) and the State Education Department (JPN) in line with the implementation of the Malaysian Education Development Plan should continue to support school leaders. It is proposed that a study on PGB's ability to conduct educational transformation consistently and continuously at the school level can be carried out in the future. This is to ensure continuity of school leadership be realized continuously in line with the government's aspiration through PPPM (2013-2025).

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# Perceptions of EFL Iranian PhD Students on their Situational L2 WTC in Malaysia

**Uranus Saadat[1,*], Jayakaran Mukundan[2]**

[1,2]Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia
*Corresponding Author: uranus.17nov@gmail.com

**Abstract** Study on Willingness to Communicate (WTC) in second Language (L2) has become significant in modern language research and instruction. This study aims to explore the perceptions of a group of international EFL PhD students from Iran studying in a public university in Malaysia about the factors influencing their situational L2 WTC. To conduct this study, a qualitative case study method was applied to gain information from 8 participants by semi-structured interview as the main method, followed by focus group discussion and solicited journal diaries of the participants. The analyses of data derived from the research question showed two major themes: interactional and affective factors.

**Keywords** Situational L2 WTC, Willingness to Communicate, Second Language, EFL Learners, PhD International Students

## 1. Introduction

Nowadays in line with the globalization, there is an increasing need of learning English language for communicative purposes. Several researchers and English language learners around the world are looking for reliable ways for improving communication in English language. It has been said that looking for opportunities to communicate in a second language (L2) would extensively increase the opportunities of communication practices (Larsen-Freeman, 2007) as well as comprehensible input (Krashen, 2003). In fact, the final goal of L2 learning should generate willingness in L2 learners to look for opportunities to communicate and involve in communicative tasks in authentic settings (MacIntyre, Dörnyei, Clément, & Noels, 1998). Therefore, it is necessary to find elements that could increase or restrain language learners' willingness to communicate (L2 WTC) outside the classroom in authentic settings. In this vein, MacIntyre et al. (1998) proposed a heuristic model of L2 WTC consisting of communicative, linguistic, psychological, and social variables that could influence on a learner's L2 WTC. Subsequently, MacIntyre et al. (1998) defined L2 WTC as a readiness to enter into a discourse at a specific time with a particular person or persons using L2.

In educational contexts, studying on L2 WTC is becoming of significant in decoding learners' communication psychology and enhancing their communication engagement (Peng & Woodrow, 2010). Although the construct of L2 WTC is a new concept to some degree; however, several studies have been implemented to scrutinize related variables influencing on it and its empirical results in L2 communication area. Different variables such as communication, personality, affective, and social psychology were explored in order to understand their relationship with WTC (e.g., Kang, 2005; MacIntyre, 2007; MacIntyre et. al., 1998; MacIntyre and Legatto, 2011; Yashima, 2002). However, still there is a need to unveil further factors which could constrain or enhance language learners' WTC.

## 2. Problem Statement

One of the targeted groups of L2 users who are in demand of improving their English oral communication skills are international PhD students. Qualified international PhD students who study in a country where the medium of instruction is English language must have the ability to clearly and forcefully articulate their opinions in person, using English language. When they make a discovery, they need to convince other experts that they have made a legitimate and meaningful contribution. They also require going to international conferences and participating in presentations to get people known about their research. They are obliged to manage how to balance their clarity and precision, so that their arguments come across without ambiguity.

However, it has been emphasised that barriers in spoken language are more common than problems in written language among international students (Alavi & Mansor, 2011). In other words, international students who undertake PhD studies lack the ability to justify and present their academic argument to the listeners efficiently. This problem could be similar for international PhD students from Iran who study in Malaysia where English is the medium of instruction in majority of universities in this country. According to Shahban (2010), even though international Iranian students have already acquired IELTS or TOEFL degree or passed compulsory English courses provided by their universities, but majority of these students still encounter problems in

communicating successfully and conveying their messages across to the listener.

Although L2 WTC was anticipated as one of the methods to improve L2 oral communication among international students by increasing their interactions in academic areas, but studies conducted on L2 WTC among international students are not enough, particularly in qualitative paradigm (e.g., Cao, 2011; Léger & Storch, 2009; MacIntyre, Burns & Jessome, 2011; MacIntyre & Legatto, 2011). This is an essential issue, because implementing qualitative methodology could help in finding unknown factors contributing to L2 WTC and calls for innovative insights into the nature of WTC (Dörnyei, 2007). For instance, by adopting a qualitative approach and employing in-depth interview and observation, Kang (2005) proposed a multi-layered construct of situational L2 WTC that could change moment-to-moment in the conversational context. However, majority of L2 WTC studies primarily focus on its trait-like aspect and have not mentioned enough about its situational aspects. Situational aspects of WTC unlike its trait-like are not stable or constant across different situations and interlocutors.

Moreover, in spite of highlighting on the importance of WTC as a key concept in L2 pedagogy, related literature review reveals that L2 WTC has not been explored on English as Foreign Language (EFL) learners (like Iranians) sufficiently (Çetinkaya, 2009; Fallah, 2014; Nagy, 2007; Jung 2011; Yashima, 2002). Most of these studies are implemented in contexts where the target language was a second language (like Canada) (Xie, 2011; Yu, 2009). On top of that, L2 WTC has not explored among EFL Iranians adequately (Barjesteh et al., 2012; Ghonsooly, Khajavy & Asadpour, 2012; Zarrinabadi & Abdi, 2011). Majority of these studies are focused on EFL Iranians inside Iran and few of them have been implemented on EFL Iranian students studying overseas (e.g., Cameron, 2015). To the knowledge of the researchers, inadequate research conducted on EFL Iranian university students who live in a country where English is not the first language (like Malaysia).

Based on the knowledge of the researchers, no qualitative case study has been conducted on situational L2 WTC among EFL Iranian PhD students studying at a public university in Malaysia. Through investigating situational L2 WTC among these participants, the mentioned gaps in the existing literature can be addressed and contribute to the scholarship of research in L2 learning and teaching. Consequently, this study implemented a case study in qualitative paradigm using an in-depth interview as the main method in order to investigate and unveil new findings regarding situational L2 WTC among a group of international PhD students from Iran studying in Malaysia.

The current study attempts to answer following research question:

What were the EFL Iranian PhD students' perceptions about the factors influencing their situational WTC orally in English in Malaysian context?

# 3. Literature Review

WTC initially was conceptualized in L1 communication discipline by the work of McCroskey and Baer (1985) grounded by the studies on reticence (Phillips, 1965), communication apprehension (McCroskey, 1970), unwillingness to communicate (Burgoon, 1976), a predisposition toward verbal behaviour (Mortensen, Arntson & Lustig, 1977), and shyness (McCroskey & Richmond, 1982). McCroskey and Baer (1985) defined WTC as the probability that an individual will choose to communicate, specifically to talk, when free to do so. They conducted a study to positively depict the valid measure of personality-trait predisposition toward communication to prove that a trait-like tendency exists in individuals' communication which is stable across different contexts and types of interlocutors. Then, it was brought into second language by the work of MacIntyre and Charos (1996). MacIntyre and Charos (1996) adopted the Goldberg's Five Factor Model (1992) in order to investigate the role of personality traits in L2 WTC construct.

In order to explore L2 WTC extensively by a variety of cognitive, affective, and situational variables, a heuristic model proposed by MacIntyre et al. (1998) to depict the conceptualization of WTC in L2. As mentioned before, the initial conceptualization of WTC in L1 (McCroskey & Baer, 1985), considered it as a personality-based predisposition, but in this model, WTC is treated with more situational variables. This model has both enduring and transitional influences on L2 WTC. According to MacIntyre et al. (1998), enduring influences characterised as long-term and stable properties of a person or environment that could be utilised in any situation. Conversely, transitional influences considered as dependent on a specific setting where an individual communicate at a certain time. As presented in Figure 1, the heuristic model shows the range of possible influences on L2 WTC. The pyramid shape of this model stands for the distal and proximal factors, in other words, the broadest foundational to the most immediate factors respectively, which function as possible influences on establishing a communication in L2.

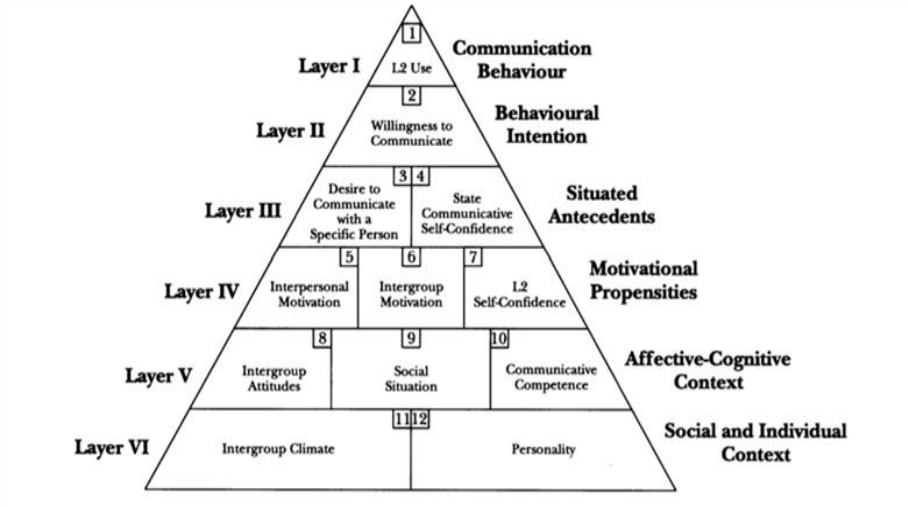


**Figure 1.** Heuristic Model of L2 WTC

In this model, six categories mentioned as "layers." The first three proximal layers that are Communication Behaviour, Behavioural Intention, and Situated Antecedents referred to as situational factors influencing L2 communication within a specific time. The further three transit layers which are Motivational Propensities, Affective-Cognitive Context and Social and Individual Context denote enduring influences on communication in second language process. Thus, from bottom to top of this model (Figure 1), layers signify a move from the most stable, enduring influences to the most immediate, situation-based influences on L2 communication.

Research with the focus on variables relating to situational L2 WTC among EFL learners initiated around mid-2000s. Kang (2005) conducted an important qualitative study in which he provided a new conceptualization of situational variables. Kang (2005) performed a qualitative study among EFL Korean learners studying in a university in the U.S, examining how situational L2 WTC can dynamically emerge and vary during a conversation situation. He found that situational WTC in L2 emerged from the joint effect of three interacting psychological conditions: excitement, responsibility, and security. Each of these variables interacted with situational variables such as topic, interlocutors, and conversational context. Based on these findings, Kang proposed a multi-layered construct of situational WTC (Figure 2) and a new definition of WTC in L2, in which WTC is defined as a dynamic situational concept that can change moment-to-moment, rather than a trait-like predisposition.

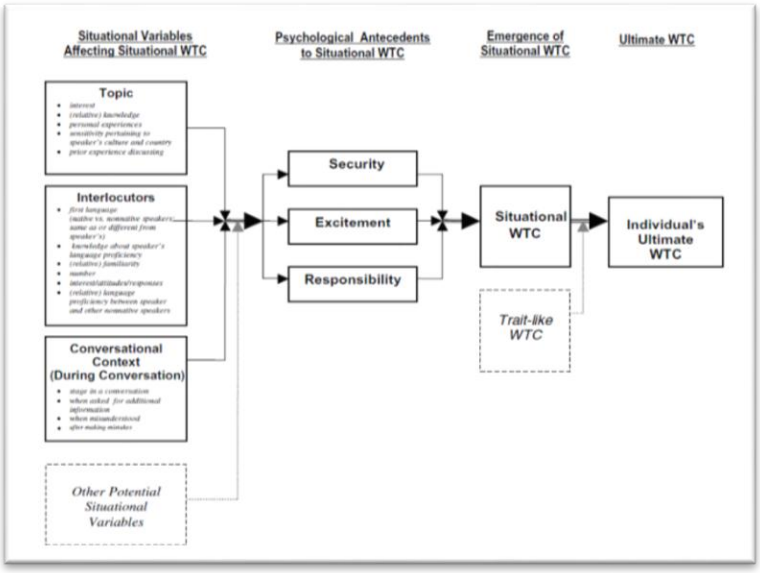


**Figure 2.** Situational L2 WTC

Following Kang's study, a number of important studies were conducted in various contexts through qualitative method to explore situational variables extensively. For instance, Cao (2009) investigated the dual characteristics of WTC in an L2: trait-like and situational WTC among international students in New Zealand. This study revealed a gap between trait and state WTC. While trait-like WTC, as measured by a self-report survey, could predict a tendency to communicate, classroom observation of situational WTC and interviews with individual learners highlighted the actual behaviour of students and the influence of contextual factors on the decision to engage in interaction with other students. The following factors were perceived by learners to influence WTC behaviour in class: group size, familiarity with interlocutor(s), interlocutor(s)' participation, familiarity with topics under discussion, self-confidence, the medium of communication and cultural background.

Compton (2007) qualitatively examined how content and context affects WTC of the international teaching assistants at U.S. University and their participation in the classroom. The study partially supported MacIntyre and associates' (1998) in their claim that perceived confidence increases WTC in an L2. However, in-depth exploration of the results discovered additional significant variables that were not covered under the pyramid model. Regarding the content, shared topical knowledge, while for context, international posture and cultural factors were identified as important variables influencing the participant's WTC, not included in the MacIntyre et al.'s (1998) concept.

Moreover, Aubrey (2010) investigated factors contributed to WTC as it manifested from moment-to-moment in a Japanese EFL classroom for three different sized class types: a one-on-one classroom, a small group classroom, and a large group classroom. A classroom observation scheme, participant interviews (including stimulated recall) and a questionnaire were adopted as methods. Inter-group analysis between class types revealed that class size was a very strong factor affecting WTC. A number of other factors were revealed in interviews: topic relevancy, group cohesiveness, anxiety, the perception of teacher participation, and level of activity difficulty. However, the influence of each factor was found to vary in significance depending on class size. These findings contributed to an understanding of WTC behaviour in different group sizes and point to future research that can be done in this field.

Cao (2014) revealed through observations, stimulated recall interviews and reflective journals that situational WTC in the classroom results from a combination of individual, contextual, and linguistic factors. Cao (2014) traced WTC among six EFL learners in English for academic purposes programme in New Zealand for 5 months. Analysis of the data suggests that WTC construct is best described as a dynamic situational variable rather than a trait disposition. This article argues that situational WTC in class results from the interdependence among individual characteristics, classroom environmental conditions, and linguistic factors. These three strands of factors interdependently exert either facilitative or inhibitive effects on WTC in class at any point in time. The effect of the combinations of factors differs between individuals, and the interrelationship is too complex to be predicted.

Cao (2013) examines dynamism in students' situational WTC within an L2 classroom. This longitudinal study involved twelve EFL participants enrolled in English for Academic Purposes programme in New Zealand for five months. Based on the in-depth analysis of this case study that obtained from observations, stimulated-recalls and reflective journals reveal that learners' situational WTC in L2 classes could fluctuate and dynamically change over time. This involved a process where situational WTC was jointly affected by learners' cognitive condition and linguistic factors, together with classroom environmental factors. The in-depth qualitative analysis of a single case allowed the researchers to see the dynamic nature of WTC.

Taken as a whole, results from the described studies focused on situational variables have two common features. First, they approach the WTC concept from a situational point of view by using qualitative research method. Researchers have investigated how situational variables, such as social contextual variables, can influence WTC. Another similarity between these studies is that they support the pyramid model only partially while in qualitative studies on foreign students, other factors, such as emotional (excitement, responsibility, and security) (Kang, 2005), shared topical knowledge, and international posture (Compton, 2007) are important antecedents of the WTC that were not included in heuristic pyramid model. Besides, in response to MacIntyre's (2007) call for more qualitative studies on situated WTC, researchers have revealed a number of psychological and contextual influences on WTC emergent in classrooms and concluded that L2 WTC can be subject to change according to time and context (e.g., Cao, 2011, 2013, 2014; Peng 2012; Weaver, 2010; MacIntyre et al., 2011; MacIntyre & Legatto, 2011; Yashima, MacIntyre & Ikeda, 2016; Matsuoka, Matsumoto, Poole & Matsuoka, 2014; Zhong, 2013).

Therefore, this review suggests that the MacIntyre et al.'s (1998) heuristic model is not comprehensive enough for L2 learners in the context of target language learning. However, although research has revealed the situated and dynamic nature of WTC, very few studies have combined both enduring and situated influences to describe why a person decides to initiate communication at a particular time and place (Yashima et al., 2016). Clearly, further research is required to describe the process whereby participants decide to initiate (or avoid) communication at a particular moment while taking into account the influence of more enduring learners' characteristics. Given the emphasis on communication in modern language pedagogy, it is important to know more about whether or not a person 'crosses the Rubicon', as represented by the line dividing L2 WTC and L2 use in the pyramid model. Moreover, based on Palwak's

(2015) recommendation, empirical investigations of fluctuations in WTC as learners' are engaged in various types of interactions and contexts are still rare and the knowledge concerning the factors shaping it is quite limited. In addition, most of these studies have been conducted within the classroom context, but other contexts in which learners could manifest other behaviours have been neglected.

# 4. Methods

The qualitative research methodology, case study approach was chosen because this study was related to a group of international PhD students from Iran studying in a public university in Malaysia. These students had gone through experiencing English oral communication in a new foreign context. According to the aim of this study which is exploratory in nature, a qualitative research methodology was the most suitable approach because it allowed the participants to openly explain their related perceptions and experiences that supported the researcher to have an in-depth understanding of their involvements (Creswell, 2013). 8 international PhD students from Iran who had learned English as a foreign language (EFL) were nominated by means of purposive snowball sampling from a public university in Malaysia.

The participants of the study were 8 international PhD students from Iran studying in different fields of study in this public university in Malaysia. For finding the most suitable participants, at first the researchers establish the criteria that direct the case selection, and choose a case which meets those criteria. Gender is a notable criterion which has been pointed out in Literature that female and male are not quite similar in terms of L2 communication, therefore the researchers made an attempt to employ the equal number of males and females from different disciplines. Secondly, participants from specific different disciplines (Engineering, Science, and Social Science,) were nominated as PhD students from these disciplines could have diverse thoughts, perceptions and behaviours relating willingness to communication in English language. Another criterion was that all the participants had to live in Malaysia at least for one year, and lastly they had to first learn English in Iran (as an EFL context) in which they had less exposure to English and their only English communication experiences were limited to English classrooms.

After forming these criteria, the researchers applied snowball sampling to recruit participants holding specific characteristics which are required in this study. The main criterion in selecting the number of sample size was the saturation or redundancy of the information received from the sample. As a result, 8 participants are saturated in this study when no new information emerged from the data collection. Figure 3 indicates the way of snowballing with anonymous names given to the participants.

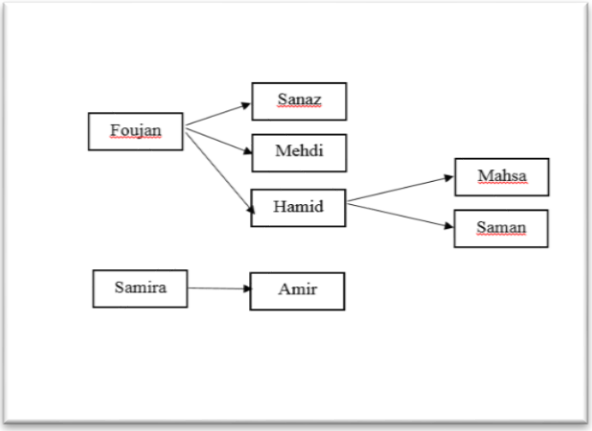


**Figure 3.** Snowball Sampling

In this study, different sources of information were utilised to answer the research question. The primarily source of data collection was semi-structured interviews. Focus group discussion and solicited diary of participants were the subsequent sources of data for this study. The rationale for using different sources of data was to triangulate the findings for finding a better perspective about the L2 WTC the participants. According to Silverman (2000), triangulation has an important role in qualitative research methodology since it enhances the validity and reliability of the results.

As mentioned before the main data collection method in the current study was individual interviewing, in particular, semi-structured interview guides. The concrete format of the interview guide consists of three sections, demographic, background questions, followed by open-ended questions. The open-ended questions are designed based on the research question of the study. Besides, the interview guide was reviewed by three experts to give stronger validity to the questions before conducting the actual interview. The interview lasted approximately for one hour for each participant and it was performed in English language.

The subordinate method in collecting data was the focus group interview. Focus group denotes to an interview on a topic with a group of participants who have the knowledge of that topic (Stewart, Shamdasani & Rook, 2007). According to the maximum variation sampling, participants were divided into two focus groups of 6 and 7 participants in order to manage each session efficiently. In these focus group events, overall, 13 individuals with quite similar criteria were included and participants were free to talk with other group members. As participants were actively encouraged to not only share their own opinions, but also replied to other members questions posed by the moderator, focus groups offered a nuance and variety to the discussion that would not be obtainable through individual interviews and solicited journal diaries. On the other hand, individual interviews and solicited journal diaries formed more in-depth data than focus groups, and brought more insight into a respondent's personal feelings, perceptions, and experiences.

Solicited diaries or keeping journals by the participants of the study considered as another supplementary method for data collection in order to triangulate from the primarily data of the interview. Solicited diaries have a different focus from that of unsolicited, personal diaries. They are created with the researcher in mind (Elliott, 1997). In this situation, the participant completes the diary reflecting on issues that are of interest to the researchers and with the knowledge that the diary will be read and interpreted by another person (Jacelon & Imperio, 2005).

The researchers provided notebooks and journal guidelines for the participants after all being interviewed and participated in the focus group discussions. The researchers collected the notebooks from the participants after 14 days. The average length of handwritten dairies was 18 pages. After examining the diaries, the researchers assigned a follow up session with each participant to clarify the information provided by them was accurate and they are based on their perceptions to avoid any confusion.

In current study, the researchers provided memos at different times during the research process. Writing memos was a way to show their thoughts and feelings in the process of implementing the study and supported them to be conscious about the emerging themes. Besides, the researchers wrote down their questions and interpretations that came up in their minds and the directions for the further data collection.

In this study, the data was analysed through manual analysis of qualitative data. After reading several times and getting familiar with the data, the researchers started processing the coding.

After finishing the coding process for the first transcript, the researcher built up themes by grouping of the produced codes which seem to match with each other. The researcher gave credit to the words that different participants often applied equally to state the same insights. These same repeating insights or ideas formed themes.

Moreover, particular theme labels were derived from the own words of the respondents and some others were derived from the relevant theories based on the researchers' interpretation which future was assessed and verified by supervisory committee as well as the panel of examiners. The creation of categories is increasingly inductive in nature at the beginning of Constant Comparative Method. While the researchers move through the analysis of data, they became more potent to "check out" these tentative themes with the following data sets. When the researchers reached to the saturation point, they were pondering in a more deductive way rather than inductive (Merriam, 2009). In the theoretical triangulation, the researchers have been referred to different theories and models to justify the data such as heuristic model of L2 WTC by (MacIntyre et al., 1998) and the model of situational L2 WTC by Kang (2005). Consequently, triangulation is utilised through this study to provide different sources of information to converge the interpretation of data.

Last but not least, the trustworthiness of this study was guaranteed by triangulation, peer examination member check, the documentation of audit trail and researcher's position or reflexivity. The researchers of this study used different methods for data collection, including individual interview, focus group discussion and solicited Journal diaries, so the collected data was cross-checked and compared from diverse angles.

# 5. Findings

This section presented the findings derived from the research question of this study revealing the perceived factors influence on the situational L2 WTC of the participants in the Malaysian context. Situational L2 WTC refers to a temporary willingness of the respondents to communicate orally in English at a particular place and with a particular receiver. Examination of the data identified two interrelated themes as the factors influencing situational L2 WTC as (1) interactional factors and (2) affective factors. The sub-themes of each theme have been stated as follows and the most repeated response from each sub-theme has been presented in Table 1.

**Table 1.** Indicates the main themes and sub-themes derived from the objective of the study

| **First Main Theme** | **Second Main Theme** |
|---|---|
| Interactional Factors | Affective Factors |
| **Sub-themes** | **Sub-themes** |
| 1.1. Topic of the discussion | 1.1. State L2 Self-confidence |
| 1.1.1. Familiarity with topics | 1.1.1. level of the knowledge of the interlocutors |
| 1.1.2. Important topics | 1.1.2. Familiarity/unfamiliarity with topic |
| 1.1.3. Interesting/boring Topics | 1.1.3. Formal/evaluative setting |
| 1.2. Type of Interlocutors | 1.1.4. Evaluative setting |
| 1.2.1. Prefer familiar interlocutors | 1.1.5. Previous experiences on L2 OC |
| 1.2.2. Reluctant toward strangers | 1.1.6. Group size |
| 1.2.3. More knowledgeable | 1.2. State L2 Anxiety |
| 1.3. Size of the group discussion | 1.2.1. Unpleasant prior experience with the interlocutor(s) |
| 1.3.1. Prefer duet/smaller | 1.2.2. Big group size of strangers |
| 1.3.2. Reluctant to bigger size | 1.2.3. More knowledgeable in big group size |
| 1.4. Formality of the setting | 1.2.4. Unfamiliar with the topic |
| 1.4.1. Reluctant to formal setting | 1.2.5. Not prepared enough for the discussion |
| 1.4.2. Reluctant to evaluative setting | 1.2.6. Evaluate and formal setting |
| 1.4.3. Prefer friendly setting | 1.3. Mood |
| | 1.3.1. Tiredness |
| | 1.3.2. Irritation |
| | 1.3.3. Sadness |

## 5.1 Interactional Factors

In this study, one of the major themes emerged from the interview, repeated in focus group discussion, and solicited diaries from the respondents were interactional factors influencing on respondents' situational L2 WTC. Interactional factors refer to the particular conditions that had perceived by the respondents that have the effect on the situational L2 WTC among the respondents. The interactional factors emerged from this study were (1) topic of the

discussion; (2) type of the interlocutors; (3) the size of the group discussion; and (4) formality of the setting.

5.1.1. Topic of the Discussion

The topic of the discussion is one of the categories that has emerged from all sources of findings. Most of the respondents mentioned that important, familiar, and interesting topics were the reasons why they prefer to engage in L2 oral communication.

All respondents asserted that the importance of the topic of discussion was quite important for them and they could have the highest L2 WTC when the topic is important. Mahsa who worked every day at Laboratory said:

"My experiment is on foods' microbes which require very precise attention under the sanitized environment. Therefore, I must communicate with other lab mates every day certainly and let them know that they should not touch my samples or they have to keep the room sanitized. Besides that, I must learn how to work and do the experiments not only from my supervisor but also from other lab mates. This is necessary and I must communicate, otherwise, everything will go wrong."

Amir was from the Economy field of study has recently become a part-time lecturer in a college, he said:

"My job mandates me to communicate with my colleagues to obtain more information from them as they are more knowledgeable than me and have more experience. I need to discuss with them how to lecture in an efficient way."

Familiarity with the topic is important for the respondents. Participants from different disciplines and field of studies pointed out that they preferred to establish or engage in L2 oral communication about the topic that closes to their field of study. For example, Hamid and Saman who were from Science background in the field of Chemistry said that they could have higher L2 WTC when the topic of discussion was about Science. Amir mentioned: "When a discussion is about something unfamiliar to me, like Science or Politic, I stay silent because I have no knowledge about these areas."

Those respondents from the discipline of Social Science, Samira and Amir, mentioned that they had more inclination into conversing in topics related to Humanities. The main reason that they mentioned in their interview, diaries, as well as focus group discussion was that they were more familiar with the topics about their field of study or their discipline, so that they had more confidence to get into communication and discuss the topic.

The interesting topics have also been mentioned by many participants as the reasons they get into a conversation. All male respondents mentioned that they had not liked to participate in conversations that the topic was not interesting for them because they easily got bored. However, females like Mahsa and Samira mentioned that they rarely might find a topic boring. Mahsa wrote: "It is fine for me. I continue if I find the topic boring. Anyway, on a boring topic, I can also find something interesting or I learn something new."

In focus group discussions also, males mentioned that they had very low patience on boring topics and they preferred to pay attention to something else. On the other hand, female respondents mentioned that they had not decreased their situational L2 WTC in boring topics.

In sum, all participants highlighted in all sources of data that the topic of discussion is important for their L2 oral communication production. Important, familiar and interesting topics were the most repeated reasons that they declared about engaging in an L2 conversation regardless of other influential aspects.

5.1.2. Type of Interlocutors

Another sub-theme that has the influence on the situational L2 WTC of the respondents is the type of interlocutors that they intended to communicate. Most of the responses obtained from the participants highlighted that they preferred familiar interlocutors, reluctant with strangers and people that are more knowledgeable.

Most of the participants mentioned that they had more L2 WTC with their friends than with acquaintances (e.g., lab-mates or supervisor) and the least situational L2 WTC with strangers. They mentioned that they had less security and did not know how the strangers might react/respond to them.

The findings also indicated that some of the participants were not willing to communicate with people that were more knowledgeable than them because they mentioned that they did not have enough confidence to discuss with them and most of the time they got anxiety. However, this reason is also in conjunction with other influences like the settings and the group size. The level of L2 WTC fluctuates according to these interactional patterns. On the other hand, some other participants like Amir or Foujan mentioned that they liked to communicate with more knowledgeable people because they could learn something from them and it gave them more sense of confidence.

Overall, same findings also repeated in diaries and focus group discussion that the participants of the study paid attention to the familiarity with the interlocutors and they preferred to communicate with familiar people like friends and avoid strangers due to uncertainty about their responses and reactions.

5.1.3. Size of the Group Discussion

Another factor that affected situational L2 WTC of the respondents based on their perception is the group size that they intended to communicate. All of the participants mentioned that they preferred to communicate in small or duet group size and they were not much ready to communicate in bigger group size.

Most of the participants declared their unwillingness toward bigger group size, due to having less opportunity to

express themselves or communicate, thus, they preferred small or duet group size. Through focus group discussion, some of the participants mentioned that as the group of interaction became bigger, their willingness to communicate in L2 decreased because they got less confidence to express and articulate their message with more interlocutors; therefore, they preferred to stay silent in bigger group size. However, some of the participants like Sanaz mentioned that:

"For me, it does not matter how big the group is. Because for many years, I was lecturing in a university and I have the experience to give lecture and speech for a long time in Persian, so I do not have that much anxiety."

On the other hand, Samira who is from Social Science discipline, lived in Malaysia more than Sanaz, and participated in private English classes in Iran stated that she usually got panic when she wanted to give a presentation or speech in a big group size. She wrote: "My problem is not about the English language, but I have the same problem in the Persian language. And whenever I want to give a presentation, I will get nervous and I do not want to do that at all."

As the researcher probed more about the reason, she mentioned that she had not known the reason and she had this problem since she was in elementary school and her mother had the same condition as hers. As her behavior had been observed during the interview and focus group sessions, she was more relaxed during the interview which was the duet group discussion. However, at the beginning of the focus group discussion although she was smiling, she was quiet and reluctant to talk, however after few minutes when the members of the group discussion knew each other and the environment became friendlier, she started to speak and felt more relaxed.

Overall, most of the participants preferred to communicate in duet group and as the group became bigger, their confidence and anxiety became higher and led to lower L2 WTC or less readiness to communicate orally in L2.

5.1.4. Formality of the Setting

From the findings of the data gathered from the perception of the participants, setting has the important role in conjunction with other mentioned factors in fluctuating the level of situational L2 WTC among the participants. In this study, formality, evaluative and friendly settings have been emerged from the data.

Respondents mentioned that the formality of the environment led them to have less confidence or higher anxiety to communicate orally in English. The formality of the setting, as well as other emerged interactional factors could effect in conjunction with each other to have an influence on the respondents L2 WTC. For instance, most of the respondents declared that in a formal setting where the interlocutors are strangers or more knowledgeable, their willingness to communicate decreased.

The evaluative setting has the same effect on the participants and they stated that this type of setting could make them less confident with higher anxiety since the participants were not sure about the evaluation or judgment of the interlocutors. Size of the group, and types of interlocutors as mentioned before influenced on their level of L2 WTC. At last, participants all preferred a friendly environment where they knew interlocutors or feel secure about the responses or reaction of the interlocutors. In this type of setting, they pointed out that they had higher willingness to communicate.

In sum, participants declared that they have a higher tendency toward the friendly environment where they could express themselves without the fear of being judged and had least willing to communicate in an evaluative setting where they were not sure about the interlocutors' responses and they felt less secure in losing their face. The formal setting also could have anxiety for the responses, as they were not able to show the best performance of their L2 oral communication and fear of losing face.

**5.2. Affective Factors**

Another major theme emerged from the data was the influence of the affective or emotional states on the situational L2 WTC of the respondents. The sub-themes gathered from the respondents' perceptions regarding their emotional or affection when they engaged in an L2 oral communication. According to their perceptions, the following sub-themes were the reasons which could change their situational L2 WTC in conjunction with other interactional factors. The description of each sub-themes mentioned as follows.

5.2.1 State L2 Self-Confidence

State self-confidence refers to the temporary level of the confidence of respondents regarding their L2 oral communication when they have situated in a particular situation for engaging in communication. Respondents mentioned that some issues changed their state L2 self-confidence. These reasons were level of the knowledge of the interlocutor's familiarity or unfamiliarity with the topic, formality or evaluative settings, evaluative setting, and group size.

Regarding the level of the knowledge of the interlocutors, most of the participants stated that they might feel less confident at the moment they intended to engage in a communication. For instance, Hamid who had lived in Malaysia for more than 8 years and had exposure to English due to working in the laboratory with his lab-mates remembered:

"I am a person with enough self-confidence to speak English, because I am in Malaysia for many years, attended different English classes and everyday tried my best to learn something new about English. All these things gave me

confidence more. Besides, I interact with my lab mates in the lab very much or every week we have a meeting with them and my supervisor and other professors in my field. I conduct my presentations or get into a discussion with them easily with no problem. However, one time, I participated in a conference which I knew there were many professors or doctors who were much knowledgeable than me. I lost my self-confidence and I was anxious during my presentation, thinking they might tell me that I was doing a wrong presentation and my work had no worth even I was sure what I was doing on my research."

Familiarity with the topic of discussion was another reason that respondents mentioned that could fluctuate their state L2 confidence. Most of them stated that if the topic was strange and complex for them, they might not know its related vocabularies in English or they did not know how to express their meanings to them, so they might lose their self-confidence. Majority of the participants stated that they might feel less confident in formal and evaluative setting and big group size. These issues already mentioned in previous sections.

State self-confidence was among the sub-themes also emerged from the diaries, focus group discussions of the participants. According to the participants, formality or evaluative settings, knowledge of the interlocutors, group size, and familiarity with the topic of discussion were the reasons that could change their willingness to communicate orally in English.

5.2.2 State L2 Anxiety

State anxiety is another sub-theme regarding the affective factors emerged from the data. Most of the respondents emphasized that their anxiety about L2 speaking is not constant and fluctuate due to unpleasant prior experience with the interlocutor(s), the big group size of strangers, more knowledgeable people in big group size, unfamiliar with the topic, not prepared enough for the discussion, and evaluate or formal setting.

Most of the respondents declared that having an unpleasant experience with interlocutors such as being criticized, ridiculed, and discouraged could enhance their anxiety when they had to encounter again with those interlocutors. For instance, Samira stated that she became more stressful to communicate with those who made fun of her mistakes in English because she believed that they might ridicule her again. Other participants like Amir also mentioned that he did not like to be criticized sternly by others and if it happened, he would stop communicating with those people. He wrote in his diary, "these types of people make me nervous and I try to get away from them unless I had to communicate with them for a purpose. This is same as using my first language too."

All participants agreed that they become stressful when they have to communicate in a big group size of strange people. Mostly they mentioned that more than 4 people made them stressful and as the size of the group became bigger, their stress got higher. They mentioned that they would feel less secure among those who were not familiar with them, as they did not know their reactions, thinking or responses to them. They also had the same situation when they were in a big group of more knowledgeable people as they believed that among them, they had less confidence and they might be worried about their judgments.

5.2.3 Mood

Mood in this study refers to the temporary psychological state of mind that the respondents might feel due to pleasant or unpleasant, internal or external experiences they had before. Respondents highlighted that negative mood could decrease their situational willingness to communicate in English temporarily. They defined their negative moods, as being temporary tired, irritated, or sad due to any prior unpleasant experiences.

Most of the participants mentioned that if they wanted to have efficient oral communication in L2, they had to be in a good mood, meaning that if they felt tired, irritated, or sad due to any previous unpleasant experiences, their willingness to communicate orally got lower and they were not able to have a successful communication. Saman, Amir, and Hamid mentioned that they usually stayed silent or tried to stop the communication if they were not in a good mood. Amir defined his mood as being tired or had some tough or complex day which made him exhausted to have any willingness or readiness to make an oral communication in L2 if it was not obligatory. On the other hand, Hamid said:

"For me, not being in the mood is when I have many problems and I have to solve them or I cannot find any solutions for them, or when I had a quarrel with someone, or when I do not like the person I want to talk with."

For others, bad mood defined as being sad that day due to having any prior unpleasant experiences. Mahsa said: "For me, it doesn't matter if I want to communicate in Persian or English. When I am sad I prefer not to talk, but if I have to then I have no choice." Besides, Samira stated: "Some days I prefer not to talk and stay silent. I don't know why."

In Sum, the findings gathered from the interview, repeated in focus group discussions and solicited diaries indicate that being in negative moods, which defined differently by the respondents could decrease their situational L2 WTC.

# 6. Discussion

Based on the data gathered from the research question of the study, it emerged that the L2 WTC of the EFL Iranian PhD students in Malaysia in this study fluctuates according to the interplay of particular interactional and affective factors. This type of L2 WTC which is not constant in different circumstances is called "situational L2 WTC" in literature.

Situational L2 WTC is a new concept in L2 WTC and has not extensively studied. Therefore, this study brings a new knowledge about the influential factors on situational L2 WTC of EFL Iranian PhD students in a Malaysian university.

This new perspective was also mentioned in MacIntyre et al. (1998) in which L2 WTC was defined as ‘‘a readiness to enter into discourse at a particular time with a specific person or persons, using an L2’’ (p. 547). According to their heuristic model, WTC is influenced by immediate situational antecedents–the desire to communicate with a specific person and the state of communicative self-confidence. Situational WTC, on the other hand, influences the decision to initiate a communication (Cao and Philp, 2006; MacIntyre et al., 1999).

From the first theme which is interactional factors, four sub-themes have emerged based on the data gathered for the research question as (1) topic of the discussion, (2) types of the interlocutors, (3) size of group discussion and (4) formality of the setting. For having the influence on state L2 WTC, these factors are interrelated with other theme found in this study as the affective factors. From the emotional factors, (1) state self-confidence, (2) state L2 anxiety and (3) mood has emerged as the sub-themes. These factors are all interrelated and work together to shape the level of state L2 WTC in the respondents. This is concurrent with the result of Cao (2011) which found that situational L2 WTC of the international students in the classroom from a University in New Zealand is the joint effects of individual characteristics including self-confidence, personality, emotion and perceived opportunity to communicate, classroom environmental conditions such as topic, task, interlocutor, teacher and group size, together with linguistic factors.

This finding is also concurrent with Kang (2005) study. Kang (2005) noted that an individual’s willingness to talk was affected by variables such as interlocutor(s), topic, and conversational context. Kang (2005) proposed that knowledge of the topic under discussion can enormously contribute to situational WTC in the second language. Kang reported that students felt anxious when talking about a subject for which they had the least topical knowledge. In Kang’s (2005) study, students tended to be more anxious while speaking about an unfamiliar topic because of a lack of ideas, not being able to understand specialized vocabulary, and comprehension problems.

Past research also reports that the size of the group influences learners’ WTC (Kang 2005; Cao and Philip 2006). The results show that students tended to feel more competent speaking English in dyads than in larger groups of people and with friends than with acquaintances or strangers. Regarding communication apprehension, students tended to feel least apprehensive in dyadic communication, while most apprehensive in group discussions and public speaking. These communication tendencies were also found in previous studies (Cetinkaya, 2005; Brogan, Jowi, McCroskey & Wrench, 2008).

As shown in other studies (Cao and Philp, 2006; Kang, 2005; Liu, 2005), the interlocutor was reported to be a major factor affecting students’ WTC. In this study, the respondents preferred to talk to interlocutors who were more talkative and outgoing than them. It was found less interesting to talk in English with interlocutors from the same country. Kang (2005) reported that the Korean participants regarded Koreans as the least preferable conversation partners, who would most decrease their interest and motivation to talk.

State L2 self-confidence as an important affective factor which emerged in the data had an essential effect on the situational L2 WTC of the respondents. This is concurrent with what MacIntyre et al. (1998) point out, self-confidence in a second language operates at dual levels, which is the overall belief in being able to communicate in an efficient manner, and state self-confidence, which fluctuates and tends to be reduced or enhanced at particular moments. The respondents situational L2 WTC in the present study appeared to be affected by their state self-confidence, which could be enhanced by increasing familiarity with interlocutors, topic, and small group size and also informal and friendly environment rather than formal and evaluative one. This also found in Cao’s (2011) study related to the influence of ecological factor in students’ state L2 self-confidence in the classroom.

Mood as state affective factor has been found to influence on the state L2 WTC of the respondents. The respondents mentioned that factors like tiredness, having a complicated day and previous emotional state could change their mood. Having a positive mood supported them to have more L2 WTC; on the other hand, being in bad mood reduces their state L2 WTC. Research on emotion like (Cao, 2011) suggests that learners’ emotions impact on the quality of student’s learning and student emotions have a substantial effect on the quality of classroom communication. Students experience a full range of diverse emotions in instructional settings.

Apart from negative emotions such as anxiety that has been widely reported, positive emotions are mentioned as frequently (Goetz, Pekrun, Hall & Haag, 2006; Pekrun, Goetz, Titz, & Perry, 2002). In the present study, a range of emotions was also noted by the students as factors influencing their WTC participation in class, including negative emotions such as anxiety, boredom, frustration, embarrassment and anger, and positive emotions such as enjoyment and satisfaction.

In summary, different studies found that apart from trait-like L2 WTC, there is a state or situational L2 WTC which fluctuate according to the interplay of different temporary factors. In this study, it was found that interactional factors in conjunction with affective factors impacted the situational L2 WTC of the EFL Iranian PhD students in Malaysia. These findings have been mentioned and scrutinize already in the past literature. However, the notion of situation L2 WTC is new and requires more studies to find other influential factors.

# 7. Conclusion

The findings of the research question concluded that the respondents of the study had fluctuation in their situational willingness to communicate in English somehow like other researchers and studies have been demonstrated among other individuals. This fluctuation is caused by the two interrelated themes which have been found in this study as interactional and affective factors impacting on the amount of L2 WTC of the respondents.

It has been concluded that EFL Iranian PhD students could change their amount of willingness to communicate orally in English at a particular circumstance due to the topic of discussion, types of interlocutors, size of the group discussion and the formality of the setting. However, these factors are also interrelated to their temporary affective factors, as their state self-confidence in English, temporary anxiety in engaging or establishing an oral communication or their negative moods like tiredness or irritation.

However, the topic of the discussion and state L2 confidence have been found as the most important factors on EFL Iranian PhD students' situational L2 WTC. Familiarity with the topic brings more confidence for the respondents and lowered their anxiety; on the other hand, unfamiliarity with the topic could be combined with the low knowledge of vocabularies in English about the topic, lowering their L2 self-confidence. Besides, the purpose of the topic is essential for the respondents to establish or engage in a communication, resulting in higher situational L2 WTC due to the importance of the topic because respondents persuade themselves to engage in it.

From a theoretical viewpoint, this study has certainly provided evidence on the heuristic model of L2 WTC (McIntyre et al., 1998), and situational model of L2 WTC by Kang (2005). The main contribution of this study was providing knowledge on the MacIntyre's (2007) call for more studies on situational WTC. This study also demonstrated the influence of interactional and temporary affective factors on the fluctuation in L2 willingness to communicate which was not mentioned in the Literature adequately.

Regarding the practical implications, the result of this study can contribute to the L2 learners' situational WTC in English classes. To increase situational L2 WTC, topics in which L2 learners are interested, about which they have background knowledge, with which they have experience, and what can improve their personal or intergroup motivations are required to be provided in the class. L2 learners' enthusiasm can decrease if they talk about the same topic repeatedly, thus different topics should be discussed both within a lesson and across lessons to make L2 learners' situational WTC. Brainstorming, taking a survey, and letting L2 learners bring in topics are noble methods to identify both the most commonly occurring interests and shared background knowledge of the entire class, and those of individual L2 learners. At this point, arranging the discussion group according to their own chosen topics, supplying different topic preferences among L2 learners, is the best technique to create situational WTC.

Determinations to generate a safe environment, in which students will not feel anxious about making mistakes or making errors, should be made, by listening to them carefully, smiling and giving some active responses. These efforts should be made especially in the beginning, especially for those learners who have the fear of losing face. Besides, it is a good idea that teachers bring different nationalities together in order to make them more familiar with each other and reduce the in-group consistency among the students which can reduce their exposure and willingness to communicate in English. In addition, reducing the number of students in a group can contribute to generating situational WTC by increasing responsibility and security. Essentially, because when more facilitating factors are given, a greater degree of WTC can be made.

The findings of this study have contributed to the understanding and knowledge of situational willingness to communicate in L2 among EFL Iranian PhD students in a public university in Malaysia. There is still a need to conduct further research on this area to improve understanding and benefits of increasing situational L2 willingness to communicate among EFL international students who are in demands of knowing L2 oral communication skills. Further research could confirm further test for the heuristic model of L2 WTC and situational model of L2 WTC by Kang (2005) and provide modifications and refinements for diverse settings. For instance, it would be helpful to conduct similar studies on other EFL PhD students from other nationalities and compare their experience and their L2 WTC changes with this study. Moreover, it could be conducted in another universities, cities or countries and compared with this study. Besides, the future studies could collect data for investigating L2 WTC through applying different data collection methods, like observation, stimulated recalls and so on or attempts to apply other methods in qualitative paradigm to explore L2 WTC and compare their outcomes with this study.

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# An Application of Professional Learning Community Approach to Enhance Language Learning among Students in Higher Education Institution

**Abdul Rasid Jamian[1,*], Shamsudin Othman[2], Azhar Md Sabil[3], Rozita Radhiah Said[4], Rosmaria Omar[5]**

[1]Faculty of Languages and Communications, Universiti Pendidikan Sultan Idris
[2,3,4,5]Faculty of Educational Studies, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia
*Corresponding Author: rasid.jamian@fbk.upsi.edu.my

**Abstract** Educators need to take action in terms of acquiring, creating and transferring their knowledge to students based on the professional learning community approach. It involves building a learning community in their classrooms. Researchers and professional organizations have cited the Professional Learning Community (PLC) process as having the potential to impact student achievement positively. As the current era of high stakes accountability has left educators struggling to improve the quality of teaching and learning, PLCs have been recommended to foster collaboration and make educator practices public. Therefore, the purpose of this study was to examine educator' descriptions of their PLCs to determine if the practice of the principles influenced student academic performance in language teaching. A quantitative research design was implemented to explore the extent to which educator training in PLC principles, the actual practice of PLC principles, and student achievement in language teaching were related. A survey was utilized to collect data regarding 365 educators' perceptions of the existence of three dimensions and seven sub-dimensions of PLCs within their institution. Final years of language course students' data were examined to measure student achievement in language learning, and inferential statistic by Structural Equation Modeling (SEM) approach was used to look for possible relationships between the variables. Statistical examination indicated PLC members who observed peers, provided feedback on instructional practices, worked with colleagues to judge student work quality, and collaboratively reviewed student work to improve instructional analysis were more likely to improve their quality of teaching. Further results indicated positive correlations between the dimensions belonging to values, vision and mission, a dimension of subject to support: relationship and structural and also dimensions of collective learning and applications. Finally, the model achieved the goodness of fit indices which is resulted in Chisq/df= 2.185; GFI=.980; CFI=.991; TLI=.983; RMSEA=.065)

**Keywords** Professional Learning Communities, Student Achievement, Higher Education Institution, Teaching and Learning, Language Teaching

## 1. Introduction

Creating teachers' professional gaining knowledge of communities is an advantageous bottom-up way of bringing innovation into the science curriculum and expert development. The models of professional getting to know societies are primarily based on concepts of mastering that emphasize the co-construction of expertise through learners. Lectures in an expert learning neighborhood meet many times to discover their practices and the learning outcomes of their students, analyze their educating and their students' gaining knowledge of processes, draw conclusions, and make modifications to improve their educating and the gaining experience of their college students (Ruland, 2015). The thought of PLC arose in the discipline of education in the context of workplace-based research carried out in the 1980s. The instructors play the roles were non-stop striving for improvement, targeted on pupil learning, collaborated and explored their work efficiently. Such relationships range from the norms used in the educating of a greater individualistic culture, which commonly characterizes faculties as a place of work (Roslizam, Jamilah, & Yusof, 2018).

This article discusses the conceptual bases on which a professional learning community (PLC) has been set up involving a university lecturer and students itself. The objectives of this research were:

2. To identify the correlations between shared vision & mission, leadership & supportive sharing, collective & learning application toward language learning.
3. To identify the relationship between shared vision & mission, leadership & supportive sharing, collective & learning application toward language learning
4. To determine the mediating effects of leadership & supportive sharing between shared vision & mission, collective & learning application with language learning.

Hence, to answer the objective two and three of the research, there are seven hypotheses were tested as follow:

H1: There is a significant relationship between shared vision & mission with leadership & supportive sharing among the lectures through a student's perception.

H2: There is a significant relationship between collective & learning application with leadership & supportive

sharing among the lectures through a student's perception.

H3: There is a significant relationship between shared vision & mission with achievement in enhancing language learning among the students in a higher education institution of Malaysia.

H4: There is a significant relationship between leadership & supportive sharing with achievement in enhancing language learning among the students in a higher education institution of Malaysia.

H5: There is a significant relationship between collective & learning application with achievement in enhancing language learning among the students in a higher education institution of Malaysia.

H6: Leadership & supportive sharing is a mediator between shared vision & mission with achievement in enhancing language learning among the students in a higher education institution of Malaysia.

H7: Leadership & supportive sharing is a mediator between collective & learning application with achievement in enhancing language learning among the students in a higher education institution of Malaysia.

# 2. Literature Review

### 2.1. The Concept of PLC

Mohd Faiz, Muhamad Rozaimi, & Jamal@Nordin, (2016) explains that teachers in such a situation are no longer encouraged to 'give an account of themselves in terms of pedagogical aspects of what they do' other than that officially sanctioned through policy. Instead, policy constraints narrowly circumscribe the purposes of schooling within a climate of teaching to the test, which in turn foreclose on broader process-orientated commitments to educational and democratic transformational goals. The current curriculum reform approach leaves lecturers with little conceptual space to meaningfully engage students in life world or socially generated knowledge that will engage and stimulate students within the institutions (Tan et al., 2017). Leveraged via PLC activity, pedagogical commitments require an academic focus and approach to impact student learning that augments the narrow curriculum orientations implicit in the curriculum.

Pedagogical techniques are the one factor that can contribute the most significant to improving student achievement Ruland, (2015) as they are crucial to 'changing the practices and relations that directly shape learning'. PLC function as a collaborative, collegial space where professionals use an inquiry-based approach to address daily teaching practices as they emerge within specific school contexts. Such a collaborative inquiry allows lecturers to 'reflect on practice, examine the evidence about the relationship between practice and student outcomes, and make changes that improve teaching and learning for the particular students in their classes' (Muhammad Faizal et al., 2013).

A collaborative inquiry is one of the approaches that 'has the potential to create big conceptual change, and dramatic changes in practice include ongoing and challenging engagement. It becomes with new ideas, rethinking existing beliefs, unlearning past habits and practices, and going through the process of learning how to do things in new ways' (Mohd Faiz & Jamal@Nordin, 2015). The PLC within this collaborative space engages participants in a conversation about their pedagogic learning and lays the foundation for possible shifts in their pedagogic habitus (Badru Hisham & Mohd. Nasaruddin, 2016). Communications within the PLC are, therefore, based on mutuality, trust and respect. The technique will create a safe space that engages lecturers as they expose their implicitly held beliefs and practices to scrutiny and debate. Due to the level of implied risk of lecturers presenting their teaching styles to critical examination, the PLC emphasizes the need to create a respectful and enabling dialogical atmosphere where honest engagement and reflection are encouraged, as well offering an opportunity for the lecturers to talk about their uncertainties and conceptual weaknesses; to admit their mistakes; and to expose their vulnerabilities (Dehdary, 2017). PLC participants will need to give a voice in generating possible imagined responses to the problems they encounter during their classroom practices (Smith, 2010).

Fundamental to the success of a PLC is a formulated and communicated focus that differentiates among the various needs and choices of the individuals involved in the group (Intanam & Wongwanich, 2014). An engaging discussion challenges lecturers to 'reconceptualize, unlearn, or make changes to existing practices and structures, legitimating the change process by making the status quo more difficult to protect' (Jones, Stall, & Yarbrough, 2013). The focus of the PLC is to be problem-based within a socially just pedagogical orientation. The participants of the PLC have been invited to identify and share educational problems that they are faced with in their classroom setting, opening these up for critique and conversation (Ratts et al., 2015). The emphasis on pedagogical change underscores the PLC as a conversation that unpacks these problems and focuses on the opportunity to infuse a more socially just educational approach to the issues under discussion. Lecturers who engage in reflective practices are better able to respond to contextual circumstances in their teaching and in so doing, refine their teaching practice (Chauraya & Brodie, 2017).

Such practices support the continuous development of effective pedagogy in response to the changing field of education, specifically as found in the South African schooling system. As lecturers engage in critical reflection and conversation, a community of practice (CoP) is formed (Ezwafahmey, 2018). This CoP serves as a way of providing a 'common conceptual framework for action' (Lee, Yuan, & Leng, 2017) which for our PLC involves deliberative encounters with the notions of a socially just orientation that will inform lecturers' pedagogical engagement. Their learning that takes place through a CoP involves active participation and engagement within a community of lecturers. Hargreaves & Fink, (2008) suggests that the reflexive nature of the CoPs would likely lead to the construction of attenuated and adaptively identities that are better able to connect to the imperatives associated with productive teacher learning. It is thus learning in a community that the PLC is intended to achieve.

Personal experiences of lecturers are affected by an external policy and internal organizational. Beliefs and values about their role as a lecturer, and the type of teaching approach that they aspire to be within the political, social, institutional and personal circumstances within which they find themselves; all affect their identity as a lecturer (Hord & Hord, 2003). (Roslizam et al., 2018) defines lecturers' characters as how lecturers make sense of themselves, their knowledge and beliefs, 'dispositions, interests and orientation towards work and change'. Lecturers' identities also encompass 'the way they feel about themselves professionally, emotionally and politically given the conditions of their work' (Khairul Anuar, Walsh, Mallaburn, & Brundrett, 2017). New experiences influence and lead to the modification and formation of new belief systems for lecturers or a shift in their pedagogical approach, and it is at the intersection of these beliefs and experience that lecturers make professional instructional decisions and open themselves up to new pedagogic possibilities (Abdul Rasid, Shamsudin, & Khuzaini, 2014). These professional identities can, therefore, be 'complex and dynamic constructions, never fully or finally achieved but continually re achieved and re-defined'.

# 3. Methodology

### 3.1. Participants

This study is using a quantitative approach. The sample includes five universities in Klang Valley, Malaysia. The samples are students from the language course at the university. The selection criteria for the case study are: (1) to be a university student at degree level; (2) are willing to provide information and to participate in this research; and (3) to be at an organization that adheres to a professional learning community approach. Data collection was undertaken to respond to the objectives of this study.

### 3.2. Data Collection and Instrument

All participants completed the research surveys assessing their perception of how well the PLC's dimension has been implemented in the university setting in a language course. The Professional Learning Community Assessment (PLCA) questionnaire (Olivier, Hipp, & Huffman, 2003) was employed in this study. The survey that consisted of 56 items was combining five Likert's scales in measuring three dimensions of PLC, i.e. shared values, vision & mission; collective learning and application and leadership & supportive sharing.

# 4. Findings

The data were analyzed using correlation and regression analysis by the method of structural equation modelling. The correlational study was applied to test the assumption of whether there is a statistical relationship between the variables. Hence, a bootstrapping analysis using structural equation modelling was used to test the mediating effect on the relationship between shared vision & mission and collective learning application with language learning through leadership & supportive sharing.

### 4.1. Correlation between Shared Vision & Mission, Leadership & Supportive Sharing, Collective & Learning Application toward Language Learning

Based on Table 1, the correlation analysis showed a significant relationship between enhancing language learning and collective & learning application ($r$= .719, $p$=.000). The relationship between the two variables was positive, indicating that the dimension of collective & learning application was directly related to the achievement of language learning among students. It also provides the perception that lecturers were having collaborative with their colleagues and implement the PLC, whose outcomes directly impact the students' language learning. Similarly, the relationship between shared vision & mission and language learning outcomes ($r$=.601, $p$= .000) also showed significant and positive values. It means that the higher understanding of the lectures about the vision, mission of the organization and shared the excellent values than the better the learning outcomes of the student's language. Meanwhile, a significant positive relationship was also shown between PLC implementation of leadership & supportive sharing and student language learning outcomes ($r$=.719, $p$=.000).

**Table 1.** Correlation between variable

| Variable | LL | SVM | LSS | CLA |
|---|---|---|---|---|
| LL | 1 | | | |
| SVM | .625 | 1 | | |
| LSS | 713 | 7.00 | 1 | |
| CLA | .683 | .601 | .719 | 1 |

Note:
LL – Language Learning, SVM – Shared Vision & Mission, LSS- Leadership & Supportive Sharing, CLA- Collective & Learning application

Models tested are displayed in figure 1 in which it is presented by the relationship between shared vision & mission, leadership & supportive sharing, collective & learning application toward language learning. The result showed that there was a significant positive relationship between shared vision & mission with achievement in enhancing language learning among the students ($\beta$=.40, $p$<.001). Secondly, there was also a significant relationship between leadership & supportive sharing with achievement in enhancing language learning among the students ($\beta$=.91, $p$<.001). And, there was a meaningful positive relationship between teacher competence and achievement motivation ($\beta$=.56, $p$<.001). This hypothesis testing H1, H2 and H3 were supported. The findings concluded that when an application of PLC dimension of shared vision & mission, leadership & supportive sharing and collective & learning application value is higher, it will increase of the value in language learning among the students' achievement.

Further analysis for direct relationship showed that there was a significant relationship between shared vision & mission with leadership & supportive sharing dimension ($\beta$=.16, $p$<.001). Finally, there was also a meaningful relationship between collective & learning application with leadership & supportive sharing dimension ($\beta$=.78, $p$<.001). Hence, these results also were supported by hypothesis testing for H4 and H5. It also means that an application of PLC dimension of SVM and CLA will increase the value of LL among the students. It can be concluded with the right approach chosen by the lecturers will give a significant impact on students' performance in future. Therefore, all the dimension of PLC, providing the feedback that these new pedagogical approaches must be applied in teaching students especially in improving the students' language learning base.

**Table 2.** Summary of the hypotheses testing related to direct effects

| Hypothesised Path | Standardised Estimate | t-value | Result |
|---|---|---|---|
| **$R^2$ (LL)= 0.591** | 0.404*** | | |
| SVM → LL | 0.914*** | 0.726 | Supported |
| LSS → LL | 0.562*** | | Supported |
| CLA → LL | | 0.941 | Supported |
| | | 0.517 | |
| **$R^2$ (SE)= 0.841** | 0.164*** | 0.254 | Supported |
| SVM → LSS | 0.781*** | 0.896 | Supported |
| CLA → LSS | | | |

Note:
LL – Language Learning, SVM – Shared Vision & Mission, LSS- Leadership & Supportive Sharing, CLA- Collective & Learning application

### 4.3 Students' Performance on Language Learning

To identify the achievement in enhancing learning language among the students, inferential analysis through Structural Equation Modeling (SEM) showed that 59 per cent of R2 value was determined by shared vision & mission, leadership & supportive sharing, collective & learning application. While the results from the direct relationship also indicated that 84 per cent of R2 value for leadership & supportive sharing dimension was contributed by shared vision & mission and collective & learning application dimension. The model was also indicated a good fit between the data and the model (Chisq/df= 2.185; GFI=.980; CFI=.991; TLI=.983; RMSEA=.065) (Hair et al. 1998; Kelloway, 1998; Kline, 1998).

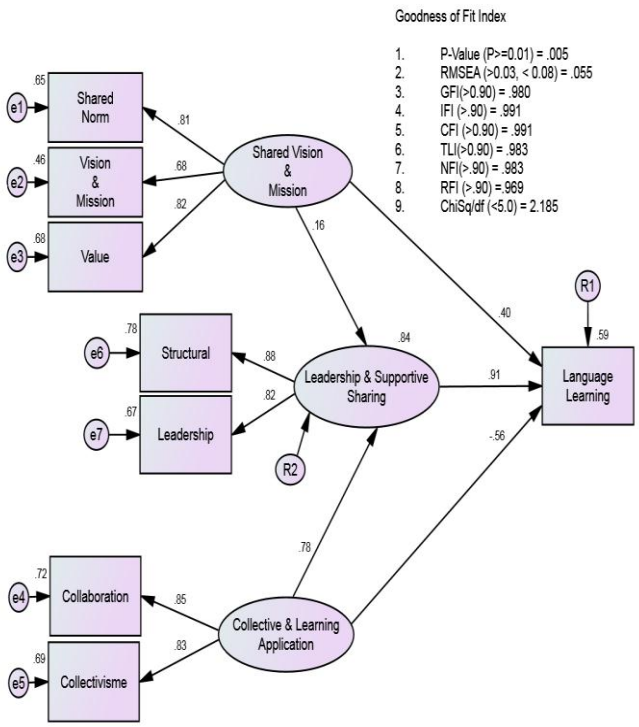


**Figure 1.** Results of hypotheses testing for direct relationships

Findings from both equations' analysis were predicting students' performance in enhancing their language learning were increased highly through the application of PLC by the lectures. It showed that's PLC dimensions indeed played an important role to improve students' performance in learning the language.

**Table 3.** The fit indices of the hypothesized model

| Model | P-value | RMSEA | GFI | CFI | TLI | Chisq/df |
|---|---|---|---|---|---|---|
| Hypothesize model | .000 | .065 | .980 | .991 | .983 | 2.185 |

Acceptable values: significant $\chi 2$, $\chi 2$/df within 1-5, CFI > 0.9, TLI > 0.9, RMSEA < 0.08, *** p < 0.001

### 4.4 Mediating Effects of leadership & supportive sharing between shared vision & mission, collective & learning application with language learning

Based on Table 5, the results reveal the significant direct effect of shared vision & mission (SVM) on language learning (LL) ($\beta$ SVM→LLB=0.401, p<0.000), and indirect effect of the relationship via self-efficacy ($\beta$ SVM→ LSS → LL = 0.146, p<0.000). Given that, the direct and indirect effects between SVM and LL are significant, and the results show that LSS act as a partial mediator in the relationship between SVM and LL. Accordingly, H6 is supported.

The results further show the significant direct relationship of collective & learning application (CLA) and language learning (LL) (CLA→LL=0.561, p>0.000) and meaningful indirect relationship through LSS (CLA→LSS→LL=0.708, p<0.000). Hence, the results indicate that no mediation is observed because the β value indirect model was increased in the mediation model. It is, therefore, H7, which hypothesise the partial mediating role of LSS in the path from CLA to LL, was rejected.

**Table 5.** Summary of the hypotheses testing related to mediating effects

| Path | Standardised Estimate | | Indirect Effect | Conclusion |
|---|---|---|---|---|
| | Direct Effect | | | |
| | On Mediator | On LL | | |
| SVM→LSS→LL | .160*** | .401*** | .146*** | Partial Mediation |
| CLA→LSS→LL | .781*** | .910*** | .709*** | No Mediation |

Note: LL – Language Learning, SVM – Shared Vision & Mission, LSS- Leadership & Supportive Sharing, CLA- Collective & Learning application
*** $p < 0.001$

Overall, only one path proposing the partial mediating role of shared vision & mission to enhancing language learning. One hypothesized relationship offered in H6 was supported, and H7 was rejected.

# 5. Discussion

According to the results of this study, three new issues can be discussed. First, to build a professional learning community in university, the research concerns with creating a society based on the professional learning community approach to understand the vision, mission and finally shared the values. Second, the conditions for supporting the successful building of a professional learning community in university by playing a good model as a lecturer and show the leadership skills to students and organizations. Third, the obstacles to building a robust professional learning community in the university by common and learning application. In this case study, it was necessary to gain an understanding of how learning activities were taught, especially in learning language classes. As a result, one can say that these classrooms are professional learning communities of lecturers and students. In other words, learning language classes are a community of practice (Dehdary, 2017; Dima Mazlina@Siti Aishah & Abdul Rasid, 2015; Dufour, 2004; Y. Mohd Faiz et al., 2016; Siti Nafsiah Ismail, Zuraidah Abdullah, Abdul Jalil Othman, & Salwati Shafie, 2018).

In teaching languages, lecturers as core members of such a professional learning community, engaged in the process for the mutual analysis of projects and activities held at a professional learning community within the university. It was found that the lecturers wished to develop students' learning processes to enhance their learning achievement. It may imply that the lecturers intend to promote, not only their instruction but also the expected learning achievement of students by focusing on continual learning development (Khairul Anuar et al., 2017). Further, the lecturers also agreed that the most suitable form of education, for the development of learning, was the research-based teaching technique. It showed part of the credibility, responsibility and leadership characteristics applied by lecturers.

As a result, all lecturers agreed in principle to apply the research-based teaching technique in formulating the learning plan. It may reflect the fact that the professional learning community, in this university, pursued projects and activities, which are regarded as necessary, and are of interest to lecturers. Therefore, lecturers can perform well and are encouraged to make changes to improve their performance by collaborating with the members and students. The gradual progress of individual lecturers can evidence it. Consequently, one can claim that the professional learning community in this university is a so-called 'Better Practice Community'. That the development, inspection, and dissemination of a process for a specific purpose, is pursued based on sharing and learning good practice between the members themselves.

Furthermore, concerning conditions that support the successful building of a professional learning community in the university. The research found that lecturers were used the research-based teaching technique, which revealed a core instruction consisting of three issues: (1) lecturers examine students' understanding towards a teacher-specified problem base; (2) lecturers urge students to apply obtained knowledge with the explanation of a problem similar to the problem base; (3) lecturers assess students' performance, and allow students to evaluate the performance of their group and carry out a self-assessment.

These issues may be the key indicators in accounting for the success of driving lecturer's development and reaching the expected learning outcomes of students. However, lecturers may have weaknesses that should be continually developed, such as urging students to apply the knowledge they obtain from learning in their daily lives, activities, projects, tasks and assignments. Hence, to achieve higher learning language outcome, lecturers need to have leadership skills to encounter any problems related to students' achievement. That is why leadership & supportive dimension (LSS) become a partial mediator in the relationship between SVM and LL. The students' performance becomes higher when the lecturers put an effort to share what they know, what did they understand and give a good example to students, especially in sharing the aspiration from the university.

# 6. Conclusion

As a conclusion, the research-based teaching technique as part of PLC dimensions applied in LLS, which is the most suitable one for the development of students' learning process in university. An educational service area may use these findings in the promotion of lectures' self-assessment and self-analysis to enhance the efficiency of the teaching and the learning process. In terms of the problems or obstacles associated with building a professional learning community in university instead of school, this research revealed that these involved the learning activities and the mutual learning process of lecturers and students. Thus, a university should include the social sector in the management process, so that they can collaborate in educational provision towards the encouragement of high efficiency in terms of educational goals based on students' qualities and the professional proficiencies of lecturers.

For future research, the investigation of the professional learning community in university addressing other subjects may allow reflection on the results and possible methods needed to build good practice involving the mutual development of lecturers and students in each issue. It may become a benchmarking process for the holistic development of an excellent professional learning community in the university not only in school, and into motivation for the exchange of knowledge among the lecturers and within educational networks. It is also regarded as socialization, allowing lecturers, as core members of a community, to improve the quality and efficiency of their instruction.

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# Systematic Review of Secondary School Biotechnology Teaching

**Kok Kean Hin[1,*], Ruhizan Mohammad Yasin[2], Latifah Amin[3]**

[1]Institute of Teacher Education (Islamic Education Campus), Malaysia
[2,3]National University of Malaysia, Malaysia
*Corresponding Author: khkok76@gmail.com

**Abstract** Various best practices of teaching biotechnology have been reported in many countries. However, the best practices of teaching biotechnology that could be appropriate for Malaysian education system was seldom reported. The aim of this study is to review the practices of teaching biotechnology in secondary school systematically. The procedures of systematic review are based on review methods developed by the EPPI-Centre for systematic reviews of educational research literature. The sampling time line for this study is all relevant studies from 1985 to 2018. The authors went through the abstracts of 2524 studies from scientific articles, journals, theses and scientific reports. As a result, 122 studies were successfully identified as potential samples. However, only 19 studies accepted in this systematic review after filtering the articles according to the inclusion and exclusion criteria. The criteria included instructional practice of teaching biotechnology in secondary school only, published between 1985 to 2018, languages that understood by the authors, involved ordinary secondary school students of pure science, agriculture & technology background and had not been included more than once in any publication. The authors found that using module, laboratory active-based learning, online learning platform and workshop were the common practice. However, the development of an appropriate module integrated with e-learning would enhance the learning of biotechnology among the secondary school students. The approaches used in the biotechnology teaching also cultivated the 21st century skills, such as problem-solving skills, inventive skills, technological literacy and effective communicative skills.

**Keywords** Teaching Biotechnology, Systematic Review, Inclusion and Exclusion Criteria, Best Practices

## 1. Introduction

Explosive development of biotechnology had an increasing impact on our society. The application of biotechnology in medicine, agriculture, industry and nutrition would be significant in the future. As the biotechnology industry grows, the government and the related agencies need to collaborate with the industries to provide the sufficient related workforces for the job market (Nugent & Lindburg, 2015). The proper information about biotechnology and its application in various area should be informed to the society (Josefsson, 1987). The responsibilities of educators especially in secondary schools is important to impact the basic knowledge to the secondary school students. Various studies have been introduced to teach biotechnology in schools.

## 2. Problem Statement

Systematic review of the practices of teaching biotechnology in secondary school is very much lacking in the literature compare to science subjects such as elementary science, secondary science and biology. The authors managed to find one literature of meta-analysis on the research trends and issues regarding biotechnology inclusion in technology education by Wells & Kwon (2009) in the open platform of literature search excluding grey literature, fugitive literature and closed platform that could not be accessed by the authors.

Wells & Kwon (2009) wanted to investigate current research trends in biotechnology education and to better understand the issues regarding to its implementation in the technology education classroom. They reviewed the findings from 28 prior studies to document research trends and issues related to the inclusion of biotechnology in technology education. It also provided insight into the current lack of classroom implementation.

Using evidence from reliable research to inform various instructional activities in teaching biotechnology in secondary school has the potential to ensure the best practice of teaching biotechnology. However, incorporating research into practice is time-consuming and make it impossible for most social scientists to keep abreast of primary research except within a few topic areas of special interest to them, so we need methods to help researchers easy access to evidence. Systematic reviews form a potential method for overcoming the barriers faced by clinicians when trying to access and interpret evidence to inform their practice (Cooper, 1986; Green, 2005).

Systematic reviews are of particular value in bringing together a number of separately conducted studies, sometimes with conflicting findings, and synthesizing their results (Green, 2005). Systematic reviews may include a statistical synthesis called meta-analysis but not necessarily used as part of this process, depending on whether the studies are similar enough so that combining their results is meaningful (Chalmers, Hedges & Cooper, 2002; Clarke, 2015).

The questions underlying the discussion of this study are as follows:

1. What are the best approaches of teaching biotechnology in secondary school?

2. What are the model been used in the approaches of biotechnology teaching in secondary school?
3. What are the 21st century skills cultivated in the approaches of biotechnology teaching in secondary school?

# 3. Literature Review

As biotechnology is important for the progress of future economy, education systems around the world have introduced biotechnology in their secondary school curriculum framework (Australia Education Council, 1994; Conner, 2000; Solomon, 2001). Biotechnology education is not a single subject in school but integrated into the curriculum of science, agriculture, biology and technology education in Australia, New Zealand, South Korea, USA and Malaysia (Moreland, Jones & Cowie, 2006; Nurnadiah, Evi & Kamisah, 2014; Rashidah, Norlidah & Dorothy, 2014; Wells & Kwon, 2009). In some countries, biotechnology have been proposed to be taught in primary school (Karadon & Sahin, 2010; Rota & Izquierdo, 2003). Lui and Chan (1999) also emphasized that the biotechnology education should begin as earlier as in secondary school, not from college onwards in Hong Kong. The understanding of Hong Kong secondary school students in biotechnology is still very far behind compared to USA, United Kingdom and Japan although the Hong Kong Industrial Support Fund had allocated HK$222 million for the development of biotechnology project in Hong Kong. Chaudhari (2013) also proposed that the instructional practices in biology should begin in primary school till secondary school where biology is part of the science textbook. From the exposure of biology since the primary school, it will help the students to learn biotechnology much easier in secondary school later. Biotechnology as one of the new branches in biology education involved some difficult terminology, study of complex organism in depth, molecular biology and genetics.

In this study, the practices of teaching biotechnology in various secondary schools, high schools, colleges and universities have been highlighted However, most of the studies found are of particular ways of teaching biotechnology in school. For example, Dunham, Wells & White (2002) introduced introductory activities and a problem-solving methodology in biotechnology education. Students must generate solution for the activities. From these activities, the constructivist learning environments would be promoted. In the other end, Negrin et al. (2007) introduced popular teaching in biotechnology such as using the television-based infrastructure with the presence of teacher. Furthermore, everyday images that related to biotechnology in students daily environment were used to substitute abstract elements in the diagrams.

# 4. Methods

Systematic review is a summary of the research literature that uses explicit, replicate methods to identify relevant studies, and then uses objective techniques to analyse those results (Card, 2012; Valentine, 2015).The goal of a systematic review is to limit bias in the identification, evaluation and synthesis of the body of the relevant studies that address a specific research question (Harden, 2010; Valentine, 2015).Therefore, systematic reviews aim to provide an objective of the best evidence (Petticrew & Roberts, 2006).Systematic reviews have been in use in one form or other in the social sciences for many decades, and are increasingly being used to support practice and policy.It also directs new research efforts(Egger, Smith & Altma, 2001; Petticrew & Roberts, 2006).

In this study, the authors used the Core Key-wording Strategy by EPPI-Centre (2001). Review methods developed by the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) for systematic reviews of educational research literature is carried out in four phrases:

i. Searching and screening
ii.Keywording and generating the systematic map
iii.In-depth review and data extraction
iv.Synthesis

(Bennett, Lubben, Hogarth & Campbell, 2004; EPPI-Centre, 2001)

The selection of studies used in this systematic review was began by searching several databases and hand-searching in the library. The databases searched including *EBSCOhost, Springer Link, Science Direct, ERIC, The Canadian Center of Science and Education, Dissertation Abstracts International, Australia Digital Theses, Google Scholar*. A variety of keywords was used to locate the relevant studies such as "best practice", "biotechnology teaching", "biology teaching", "science teaching", "biotechnology instruction", "biology instruction", "science instruction", "secondary school" and "systematic review". Systematic study was conducted on six journals, namely *Education in Science, Journal of Research in Science, Journal of Biological Education, Science Education, School Science Review* and *Science Teacher.*

The sampling frame for this study is all relevant studies from 1985 to 2018.According to Bennett, Lubben & Hogarth (2003), the years from 1983 to 2003 or so has seen a number of changes in science teaching, of which one of the most significant has been the development of a wide range of materials to develop and understand scientific ideas. The last 15 years till 1980 parallels the implementation period for modern science curriculum projects (Sweitzer, Howe, Helgeson & Blosser, 1982). However, some interventions may have in use or in development for long before the first trial was published in an academic journal, so it is best to allow a wide margin of error around the start date (Petticrew and Roberts, 2006).

The process of systematic review was conducted from 22 October 2015 till 8 November 2018. According to Allen & Olkin (1999), the average amount of time needed for a systematic review was 46.25 days, however this figure ranged widely from 9 days to 105 days depends on the amount of reviews conducted. The authors went through the abstracts of 2524 studies from scientific articles, journals,

theses and scientific reports. As a result, 122 studies were successfully identified as potential samples. However, only 19 studies qualified for use in this systematic review after filtering the articles according to the following inclusion and exclusion criteria:

1. It should focus on the instructional practice of teaching biotechnology in secondary school or high school whether it is taught as a single subject or as part of the science, agricultural and technology education curriculum.
2. It should be published between 1985 to 2018.
3. It should be published in the English and Malay languages which were understood by the authors.
4. It should involve normal secondary school or high school students only. The blind and other handicapped students are not the subjects of the study. The college school students and the unknown students background are not included in the study although they may be in the same range of ages.
5. It may involve secondary school students that is not from science stream such as agricultural and technology background.
6. It had not been included more than once. For example, the same study reported in a conference paper and a journal article.

Each study was carefully read and information collected based on the inclusion and exclusion criteria. Full reports were obtained and descriptive mapping was conducted. The inclusion and exclusion criteria was re-applied when in-depth review was conducted.

# 5. Findings

After thorough screening and in-depth reviewing, a total of 19 studies were selected as samples in this systematic review. All studies are in the form of refereed journal article except one dissertation and two conferences. The 19 articles were accepted following the selection criteria above. This has caused a very limited number of studies to be used. Three of the studies were presented with limited statistical data. The other sixteen studies provided various incomplete and inappropriate statistical data. Therefore, meta-analysis was not conducted in this study.

The results in Table 1 showed that the study is contributed mostly from the USA and Israel. The interest to conduct research in biotechnology instructional began actively from the year of 2000 and onwards. Most of the publication type are referred journal article that the authors searched through the databases and hand-searching.

**Table 1.** Frequencies of variable characteristics for included studies

| Independent variable | Number of studies | Percentage (%) |
|---|---|---|
| **Countries** | | |
| USA | 7 | 36.85 |
| Pakistan | 1 | 5.26 |
| Norway | 1 | 5.26 |
| New Zealand | 1 | 5.26 |
| Netherlands | 1 | 5.26 |
| Malaysia | 1 | 5.26 |
| Israel | 3 | 15.79 |
| Denmark | 1 | 5.26 |
| Brazil | 1 | 5.26 |
| Indonesia | 2 | 10.54 |
| | | |
| **Publication year** | | |
| 1985-1989 | 0 | 0 |
| 1990-1994 | 0 | 0 |
| 1995-1999 | 1 | 5.26 |
| 2000-2004 | 2 | 10.54 |
| 2005-2009 | 4 | 21.04 |
| 2010-2015 | 6 | 31.58 |
| 2016-2018 | 6 | 31.58 |
| | | |
| **Publication type** | | |
| Referred journal article | 16 | 84.20 |
| Dissertation | 1 | 5.26 |
| Conference paper | 2 | 10.54 |

The results in Table 2 showed that the various instructional approach that could be used in teaching biotechnology in secondary school. The use of module and e-learning platform are the preferred approaches as the instructional practice in this study. Another approach that becoming popular in school nowadays is game-based activities. This study also found that learning workshop is still a preferred option for learning about ecology, environmental biotechnology and technical skills in biotechnology. Besides, the authors found that the learning of biotechnology could be integrated in other subjects such as English languages and Arts. The use of modelling instruction, which is adapted from the physics instruction, could be another possible option for biotechnology teaching in the future. The other traditional instructional practices used are cooperative learning, problem-based learning, project-based learning and active learning based laboratory work.

**Table 2.** The instructional practices in biotechnology teaching in secondary school

| Approach | Format group | Target model | Integrative | Learning outcome | Studies |
|---|---|---|---|---|---|
| Module about environmental biotechnology | Case study | Grade 10-12 students ; non-science major | STS | HOTS, scientific & technological literacy | Dori, Tal, & Tsoushu (2003) |
| Writing assignment about issues in biotechnology | Indoor | Grade 7 and 10 students | STS; English | Effective communication skills;reasoning skill;basic literacy | Hohenshell, Hand & Staker (2004) |
| Drawing | Indoor | Second year secondary students | Art | Multicultural literacy; effective communication skills | Lannes, Flavoni & Demeis (1998) |
| Active learning based laboratory | laboratory kit | Secondary school students | ICT | Science process skills;attitude towards science/ biotechnology; technological literacy;problem-solving skill; inquiry-based learning | Taraban, Box, Myers, Pollard & Bowen (2007) |
| Online learning platform, "Viten.no" | VLE | Secondary school students aged 17 and 18 | STS | Problem-solving skills | Lyngved (2009) |
| Modeling instruction | Scientific investigation | Secondary school students | STEM research process | Problem -solving skills; HOTS; inventive skills;reasoning skills; effective communication skills | Jackson, Dukerich & Hestenes (2008) |
| Gamified laboratory simulation, "Labster" | VLE | Secondary school students | ICT | Non-routine problem solving skills; technological literacy; attitude towards biotechnology | Bonde et al. (2014) |
| Module | Indoor | Secondary school students | STS | Attitude towards biotechnology | Klop, Severiens, Knippels, Van Mil &Ten Dam(2010) |
| Animated online learning, "BrainPoP Model". | VLE | Secondary school students | ICT | Technological literacy; non-routine problem solving skills | Rosen (2009) |
| Electronic note-taking | Indoor | Grade 9 secondary | ICT | Student engagement in lesson;no | Duhon(2015) |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | school Students | | | significance in academic improvement; scientific process; inquiry-based learning | |
| Cooperative learning | Indoor | Secondary - school students | | | Effective communication skills | Parveen & Batool(2012) |
| Learning workshop via video teleconferencing and virtual laboratory, "School-Scientist Partnership Model" | Combination of case study & virtual laboratory | Secondary school students aged 13 | STS | | Effective communication skills | Falloon (2012) |
| Learning workshop about Environment in the nature | Outdoor | Secondary school students | STS | | Effective communication skills; society & civic responsibility | Mohd Wahid, Rusli, Azlan, Tamby & Lilia(2013) |
| Project-based learning | indoor | Grade 9 students | | STS | Effective communicative skills, inquiry-based learning | Nurlaely, Permanasari & Riandi (2017) |
| 3D visual molecule dynamics of protein | indoor | Grade 9 & 10 students | | - | Technological literacy | Burgin, Oramous, Kaminski, Stocker & Moradi(2018) |
| Jmol (software visualization of molecular structures) | indoor | Grade 11 students | | - | Technological literacy | Levkovich & Yarden(2017) |
| Problem-based learning | indoor | Grade 9 students | | - | Inquiry-based learning | Jefriadi, Ahda & Sumarmin (2018) |
| Hands-on activity (patterns of genetics inheritance) | indoor | Grade 12 students | | - | Effective communicative skills | Finch & Vieira(2018) |
| Biology cloud experimentation on phototaxic Euglena cells | indoor | Grade 7 & 8 students | | - | Scientific inquiry | Hossain et al.(2016) |

*Notes:* HOTS-Higher order thinking skills; ICT-Information Communication Technology; STEM-Science, Technology, Engineering & Mathematics; STS-Science, Technology & Society; VLE-Virtual learning environment

# 6. Discussion

The results of this study showed that researchers began to show interest in biotechnology teaching in secondary school since 1998.When we looked back into the year of 1953, James D. Watson and Francis Click described the structure of DNA which started the revolution of biotechnology (Mathews & Van Holde, 1996; Biotechnology Innovation Organization, 2016). It was not until 1990s when researchers in sciences in general and social sciences in particular saw the need to include biotechnology and biochemistry in school curriculum seriously. Professor John G.Wells and his fellow researchers have been working hard to promote the rationale of biotechnology inclusion in technology education since the 1990s (Wells, 1994;Wells, 1999; Dunham et al.,2002; Kwon, 2009; Wells & Kwon, 2009). In the year of 1997, British scientists, led by Ian Wilmut, from the Roslin Institute, Scotland, reported the cloning of

Dolly, the sheep using DNA from two adult sheep cells. In 2002, rice becomes the first crop to have its genome decoded. In 2003, the Human Genome Project is completed, providing information of the locations and sequence of human genes on all 46 chromosomes (Biotechnology Institute of Washington, 2016; Biotechnology Innovation Organization, 2016). These three events motivated and propelled social scientists to promote the rationale to include biotechnology in school curriculum.

From this study, the use of module and online learning had been the most favourable instructional practice to teach biotechnology in school. Biology is considered a difficult subject since there are many complicated biological processes about life and its interaction with environment (Wan & Zanaton, 2014). In the past, the focus in class was rote memorization, teacher-centered lessons and conduct laboratory works with cookbook guidelines that did not motivate secondary school students to study science subjects (Bonde et al., 2014). Moreover, the lacking of pedagogical content knowledge among the teachers and the lacking of course manual and module in biotechnology have to be considered (Rashidah et al., 2014; Wan & Zanaton, 2014). Therefore, a module could be used as a resource, a reference to assist the teachers and students to learn project-based learning.

In science and biology education, the information communication technology increasingly became an important element in holistic and integrated teaching. The animation-based online learning has a high potential to enhance students' understanding and learning motivation. The teachers acted like the mediators in the learning process. The psychological-educational dimensions of teaching and learning with animations lead to construction of knowledge transfer ability (Rosen, 2009). Besides that, more and more free and open accessed learning platform have been available in the the virtual world. For instance, the Virtual Science Hub (ViSH) provided scientists, teachers and their pupils a package of activities, materials and tools for enabling the integration of e-infrastructures into school curricula (Barra, Gordillo & Quemado, 2014). The Virtual Science Hub (ViSH) could provide e-infrastructure resources as content units that can be individually adapted and integrated into existing teaching materials and curricula of teachers (Barra et al.,2014).

Game-based activities have since gain popularity in teaching and learning. Games and learning can be successfully developed and implemented in the learning environment by combining both game design and instructional design approaches (Syamsul & Norshuhada, 2010). A gamified laboratory simulation, "Labster" can significantly increase both learning outcomes and motivation levels compared to traditional teaching (Bonde et al., 2014). Currently, simulations and games are used sporadically in biotechnology education as institutions still focused on delivering instructions. To fully explore the potential of gamified simulation in biochnology education, policymakers and end users, researchers and companies must work together to develop new gamified simulations to reap benefits of modern technology for the improvement of science education.

The field experiences provide a range of learning opportunities that laboratory cannot supply. If a workshop about environmental biotechnology and ecology is carried out in the field, the students will be placed in the real world as they can observe the nature themselves. They can explore the plants such as lichen themselves (Mohd Wahid et al., 2013). The workshop could also be conducted in the hall. The school may attach itself to the universities and research institutes to collaborate the exchanges of new knowledge in biotechnology. According to Falloon (2012), a series of video-conferencing teaching workshop and virtual laboratory, which formed a component of a school-scientist partnership was effective as an interactive medium for developing content knowledge among students. However, it was also expensive and time-consuming.

From this study, the authors found that arts and drawing could stimulate the students' verbalization about scientific activities (Lannes et al., 1998). Comics could be used as a pedagogic tool. Comics are pictorial images and graphics juxtaposed in a deliberate sequence destined to transmit information to produce an answer for the reader. The association between fiction and comics stimulated the students' imagination. The teachers in general considered the use of science fiction and comics as a very effective tool for teaching biotechnology (Rota & Izquierdo, 2003).

The authors also found that it was suggested that biotechnology could be integrated into English language teaching when teachers wanted to teach issues related to biotechnology. According to Hohenshell et al. (2004), writing was instrumental in learning difficult concepts in biotechnology. Written work provides a record of understanding. Students explained biotechnology concepts to a real-life audience. Before they could do the explanation, they are compelled to use simple language to construct their own understanding. As emphasized by Moore (1994), writing is important for success in biology. Therefore, teachers must teach students to write effectively.

From this study, the authors also found that cooperative learning is still one of the appropriate ways to teach biotechnology. Cooperative learning occurs in classrooms where students work in small groups on learning activities (Ornstein, Pajak & Ornstein, 2011; Ornstein & Hunkins, 2013) Cooperative learning could involve laboratory work, group discussion and other activities where students find their ways to the answers. It is a more effective way than traditional teacher-centered teaching in science.

Laboratory work based on active learning could provide a meaningful learning for students (Taraban et al., 2007) The active learning-based laboratory units designed and developed collaboratively by high school teachers and university faculty could lead to increased use of student-centered instructional practices as well as enhanced content knowledge and process learning for their students.

Modeling Instruction is an effective model for science education. Modeling Instruction program places an emphasis on the construction and application of conceptual models of physical phenomena as a central aspect of learning and doing science (Hestenes, 1987; Jackson et al., 2008). Modeling Instruction produces students who engage intelligently in public discourse and debate about matters of scientific and technical concern. Students could confidently

debate the controversial topics like cloning or genetically modified organisms in biotechnology. In modeling instruction, the first stage is to establish understanding of a question to be asked through a demonstration and class discussion. Then, in small groups, students collaborate in planning and conducting experiments to answer the question. The students present their conclusions. Next, the students applied their newly-discovered model to new situations to refine and deepen their understanding. Students work on challenging worksheet problems in small groups, and then present and defend their results to the class.

The overall results from this review showed that teachers still preferred indoor activities compared to outdoor activities. The studies that conducted in the room including 2 case studies, 1 laboratory assignment and 7 activities using virtual learning environment (VLE). The only outdoor activity carried out outside the classroom was the learning workshop related to the environment topics. The setting that decided by the teachers was related to the purpose of the learning topics. For instance, if the learning topic related to some non-routine activities, teachers would prefer the assistance of technology such as virtual learning platform to describe the abstract concepts to the students. When the topics related to daily issues, teachers preferred science-technology-society model (STS) to teach the students in class. Besides, biotechnology teaching could be integrated with subjects such as English language and art to teach students about the abstract concepts in biotechnology which were not easy for the teacher to explain verbally.

There were three integrative models mainly used by the teachers when they taught biotechnology; Science-Technology-Society model (STS), biotechnology lesson integrated with information communication and technology (ICT) and STEM research process. Science-Technology-Society model (STS) is based on ideas of incorporating social, cultural, environmental, political an ethical aspect into the curriculum (Pedretti, 2002). STS curriculum incorporates into the learning materials issues such as genetic engineering, genetic testing, genetically modified foods, stem cell research, climate changes and sustainable development. Socio-scientific issues can serve as the organizers for science education and pose many advantages in using them. These issues allowed further inquiry, encourage the search for new information, represent examples for interdisciplinary topics, and foster the emergence of continuous discourse (Hughes, 2000). Besides, the students are expected to apply moral reasoning and critical skills while acting towards the improvement of their environment. Incorporating controversial issues such as, cloning and genetic modified food and science and technology conflicts is also a recommended method for enhancing students' interest, motivation and improving their system thinking (Chen & Stroup, 1993). Furthermore, teachers and students can acquire both intellectual and ethical skills, which are instrumental in perceiving the political and social forces that drive scientific and technological development when they applied the STS approach in class.

Biotechnology lesson integrated with information communication and technology (ICT) is another favourable integrative model preferred by teachers. The concepts of biotechnology are mainly abstract to our students. The concepts of biotechnology is hardly described in the daily life of the students. As internet protocol desktop systems, Web 2.0 video based collaborative tools and high speed data networks become commonplace, using ICT to synchronously connect students to knowledge and experience worldwide will become a viable option for many teachers. The teachers may use the ICT tools such as advanced organizer and YouTube to explain the concepts of biotechnology more explicitly to the students. The ICT-based approaches also provide an opportunity for increasing the skill level of students and motivate young people to pursue studies within the STEM (Science, Technology, Engineering & Mathematics) fields (Bonde et al., 2014). According to Vebrianto, Kamisah & Lee (2012), information communication and technology (ICT) is raising the bar on the competencies needed to succeed in the 21st Century.

Compared to Science-Technology-Society model (STS) and biotechnology lesson integrated with information communication and technology (ICT), STEM research process is seldom applicable in biotechnology teaching although it is another effective way to teach biotechnology. STEM research process refers to experiment conducted to solve problems in STEM (Science, Technology, Engineering & Mathematics) fields. In STEM research process, inquiry-based scientific process is used to assist students to understand the natural phenomena (Harland, 2011).The integrative of STEM disciplines will foster the scientific inquiry that emphasize on the students questioning, data collection, explanation and presentation of the results found in the research (Bryan, Moore, Johnson & Roehrig, 2016).Engineer, scientist and mathematician always use the engineering design and scientific inquiry routinely to solve the real-world problems (Sanders, 2009).They used to conduct experiments to test the hypothesis and make conclusions. Besides, the integrative of STEM disciplines provides opportunities for the K-12 students to build on their 21st century skills such as cognitive skills, intra-personal and interpersonal skills and the abilities to secure a job in the near future (Bryan et al. 2016). In order to prepare students to meet the challenges in 21st century skills, teachers must instil and cultivate the skills in their lessons.

In 21st century, our children live in a global, digital world. Many of today's youngsters are comfortable using laptops, instant messaging, chat rooms and cell phones to connect to friends, family and expects in local communities and around the globe.Given the rapid rate of change, the vast amount of information to be managed, and the influence of technology on life in general, students need to acquire different, evolving skills sets to cope and to thrive in this changing society(NRCEL & Metiri Group, 2003).According to NRCEL & Metiri Group (2003), 21st century skills involved digital-age literacy, inventive thinking, effective communication and high productivity.

In this study, the authors found that many of the approaches used to teach biotechnology promoted 21st century skills such scientific and technological literacy, basic literacy, multicultural literacy and language which is

essence to digital-age literacy. When teachers use ICT in their lessons, students must have knowledge what technology is, how it works, what purpose it can serve, and how it can be used efficiently and effectively to achieve their learning goals. For teachers who used laboratory kit or conducted laboratory in virtual environment, science process skills and scientific literacy were synchronously helping the students to understand the knowledge and master the skills. According to NCREL & Metiri Group (2003), students with scientific literacy knowledge and understanding of science concepts and processes required to engage in the digital era society. Students can ask questions, get or determine answers from daily experiences. Then they have the ability to describe and explain the natural phenomena. Students also can assess the quality of scientific information on the sources and methods used to produce it. In the other end, science process skills help students to progress from concrete thinking levels to more complex thinking levels that promotes higher order thinking skills in 21st century skills. Through hand-on activities like experiment, students use different senses such as touching, observing and listening in controlled manner. With good communication skills, students will be able to describe the natural phenomena in science class.

The authors also found that inventive skills are instilled in the modelling instruction approach. The elements in inventive thinking involved adapt and manage complexity, self-direction, curiosity, creativity, risk taking, higher order thinking and sound reasoning (NCREL & Metiri Group, 2003). Inventive skills are one of important components in 21st century skills that encourage students to think critically, examine problems, gather information, collaboration communication, creativity and innovation required for success in their future.

The other learning outcome that related to 21st century skills is effective communication. Effective communication including teaming and collaboration, interpersonal skills, personal responsibility, social and civic responsibility and interactive communication (NCREL & Metiri Group, 2003). During the learning process, students cooperatively interact with others to solve problems. They also need to manage their own behaviours and emotions when interacting with others. They will also demonstrate their in-depth knowledge and responsibility before they exchange information through communication tools. Beside the inculcation of 21st century skills, the use of inquiry-based learning and non-routine problem solving skills also generate positive attitude among the students towards biotechnology.

## 7. Conclusion

The findings of this study showed that module combined with e-learning is a possible option for instructional in biotechnology teaching in secondary school. It may possible enhance the practice with the inclusion of virtual-learning and game-based activities. Most of the approaches are study-centered learning where students engagement in learning is a foremost concern. The findings of this study also implied that there is a need for increasing further empirical research on the practices of biotechnology teaching in secondary school. There might be some fugitive literature and closed reports that could further give the researchers more insight about the instructional practices in biotechnology teaching.

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# Animals' Conception in Malay and Uzbek Culture

**Azim, Abdurakhmonovich Yuldashev**

Faculty of Language and Communication, University Pendidikan Sultan Idris, Malaysia
azimupsi@gmail.com

**Abstract** The aim of the study is to compare and contrast the conceptions of animal metaphors in Malay and Uzbek culture that are written in the chosen literary materials. This paper focuses on three animals that are common to both cultures, namely goat, chickens, and fish. This effort would enable readers to understand how environmental, geographical and history factors shaped the culture of a community. This paper employs a qualitative framework through content analysis on chosen texts. Analysis on the chosen texts reveals that the use of these animals has similarities and differences in terms of form, purpose and context. The use of these animals reflects the prevailing f politic, economic activities, custom and aspiration of the community in the era. These facts reveal that both communities had some kind of civilisation and growth in living, knowledge and economic endeavours. This study provides insights to better understand relationship of animal metaphors to the life and culture of the Malay and Uzbeks communities.

**Keywords** Animals' Conception in Malay and Uzbek Culture, Goat Concepts in Malay and Uzbek Culture, Chicken Concepts in Malay and Uzbek Culture, Fish Conception in Malay and Uzbek Culture

## 1. Introduction

This article presents the collected data on animal metaphors in Malay and Uzbek proverbs to demonstrate about three animals' conceptions namely Goat, Chicken and Fish. The researcher will make a description of the animal metaphor found in the proverbs of the two related cultures to highlight about those three animals. In addition, animal metaphors are also examined from the perspective of the Cognitive Semantic Approach, which is how the construction of animal metaphors in both cultures and the formation of metaphorical conception as a result of the interpretation of animal metaphorical concepts in Malay and Uzbek proverb are given in a table. Finally, this finding will make an inclusive and exclusive comparison of animal metaphors in a linguistic perspective to explore some similarities and differences among two different culture.

## 2. Study of the Malay and Uzbek Metaphors

The Uzbek Metaphorical study is defined on the basis of this study to illustrate metaphors in Uzbek culture itself. Yoqub Siddiqovich Saidov (2016), in his study Uzbek Jadids and National Language, have studied the bizarre nature of Jadid Uzbek in poetry. Jadid is the Uzbek natives who sacrifice much for Uzbekistan. The study examines language, contextual characteristics and metaphorical styles. Metaphorical studies in Uzbek language science are judged by the use of metaphorical skill by Jadid Uzbek writer by absorbing words such as homeland, state, freedom and education defined. Jadid's community representatives such as Abdurauf Fitrat, Abdulhamid Cho'lpon, Muhammadsharif Sufizade, Kamiy Karim, Siddiqiy-Ajziy, Sirojiddin Sidqiy, Abdulhamid Majidiy, Ishoqkhon Ibrat, Elbek and Botu have used language meaningfully and effectively in the Jadid literature. They are aware of the uniqueness of the metaphorical language, so they use it in creating high aesthetic poetry. The metaphors used in their literature differ from others with their greatness, unusualness, strength and emotion. They make a contribution to the development of poetry thinking. In their poetry, there are qualities such as subtlety, harmony, unity, meaning, clarity, beauty and portions that make beautiful poems. They find the hidden meaning of words and samples rarely poetry as well as express their desire for freedom and proficiency in using literally the literal way.

Obidjon Karimov Yakubdjanovich (2013), in his study titled Metaphor, Is the Mechanism of Poetic's Thinking asserting that metaphors in poetry remarks represent art figures. Although the metaphor does not mention it clearly, it explains and compares it to events and making artistic forms in thought. It should take into account that, this artistic form is only accepted in poetry speech, around speech means it becomes as important and naturally has deep meaning. When discussing Pushkin's poetic metaphor, the authors should consider taking into account the uniqueness of the function. He argues that Pushkin's poems are difficult to understand the metaphor and the peculiarities of his function, but it is useful to count the views of poets and attributes. Although we see the metaphor, we can see that the metaphor helps the poet to open his inner world and to readers with emotionally. This metaphor is the result of art creation, it is as if the word strengthens the relationship between the two poets and readers. That is the reason, metaphor as the dream of language. So, to visualize the role and importance of metaphor, one needs to see its function.

From the point of criticism, there is still no comparative study between Malay and Uzbek culture. The Malay race and Uzbek culture have the same religion, so researchers are convinced that the Malays and the Uzbek race share the same culture. The study was conducted to investigate the use of animal metaphor in Malay culture and Uzbek language from semantic aspects based on Concept Metaphorical Theory.

# 3. Animals' Conception in Malay and Uzbek Culture

In this section, researcher will explain the conceptions of animal metaphors, namely goat, chickens, and fish in Malay and Uzbek culture to answer the question, "Are there similarities and differences in animal metaphors in Malay and Uzbek culture"? To answer this question, this section will discuss data relating to the concepts of the three types of animals found in the proverbs of both languages. This data section will also try to highlight the metaphorical elements used in the proverbs of the two cultures.

### 3.1 Goat Concepts in Malay and Uzbek Culture

A goat is a kind of two-tailed mammal. Most animals of this group are important agricultural animals to humans. All of these are plant-eating animals and have a suitable set of teeth for grafting, trimming and chewing plants (Soysal, 2003). This kind of thick, sturdy animal nail serves to sustain its weight as it stands almost all the time.

Goats play an important role in the history of agricultural countries. One of the major agricultural activities in Malaysia is goat farming. This effort is intensively aimed at supplying meat, dairy and fur dairy products for human consumption (Siti and Firuza, 2010). The goat feeds on grass and leaves that are widely available throughout Malaysia. However, goats cannot eat wet grass or leaves because it will speed up the production of worm eggs. Goats that feed on grass and wet leaves will experience bloating, warts and diarrhoea (Siti and Firuza, 2010). Therefore, goat nutrition care needs to be taken into account by the shepherd.

In the Malay community, goats are synonymous with the Aqiqah ceremony. Aqiqah is a goat slaughter for a newly born baby for the people who are capable of doing so. According to Islamic law, Aqiqah is a slaughter of certain animals to express gratitude for the birth of a child, especially on the day of shaving or cutting his hair and giving the child a name. Aqiqah may be made on the seventh day, fourteen or twenty-one days of birth. The sum is two tails for a baby boy and one for a baby girl. Since most Malays are Muslims, so this ceremony is something that is synonymous with them.

In a Malay proverb, goats are often used as a symbol for a coward, are in fear, a child of childishness, a lazy person who has no power. This is because literally the goat is often seen in fear and weakness. As an example, the Malay proverb says " *anak kambing tak akan jadi anak harimau* " which means a coward or stupid person will not be a brave or clever person (The Malay Dictionary of Malay Proverbs, 1989). Goats are described as weak animals, while the tiger is a predator that catches other animals for food.

In addition, the other proverb is "*bagai kambing dalam biduk*" which means a person who fears or cannot do anything (The Malay Dictionary of Malay Proverbs, 1989). *Biduk* is a kind of small boat used to catch fish or raise items. When the goat is in the middle of the stream, it is certainly not possible to do anything. Goats are known to the Malay people as animals that are usually not aggressive.

The "*bagai kambing diseret ke air*" proverb which means a lazy person and refuses to do what he has to say (The Malay Dictionary of Malay Proverbs, 1989). Malay beliefs generally say that goats are an animal that fears water. Therefore, if it is dragged to the water, it will not want to follow us. People who have not showered or lazy baths are also dictated as a "goat" or "scented goat" which is gamy and never bathing.

The above is different from the views of Uzbek culture on sheep animals and its use in symbolize who is simpleton furthermore many implications and views on this goat. This is largely due to its long-term presence in human life or a civilization. Goat is one of the first species of animal that was tamed by humans over 10,000 years ago. Hence, legends, traditions and logical myths discuss a lot about the meaning of goats.

The goat is one of the Bovidae groups and is closely related to the sheep as both are in sub-families of Caprinae's antelopes. Today there are over 300 species of goats being bred around the world. Goats are widely used and are the oldest domestic species and most milk, meat, fur and skins are used around the world. The use of goats in Uzbekistan is widespread and it is also implicated in the use of proverbs to illustrate the surrounding communities and cultures.

Goats in the Uzbek community are closely related to the sheep, especially the ram, although there are differences between the two species. The goat is a symbol of freedom. This is because goats look at distance and space. This animal is symbolized as the nature of a traveller who explores the stunning scenery alone aimed at knowing it personally.

From a religious point of view, sheep are usually used as sacrificial animals and aqiqah. The Uzbek community also makes goats as a meal for wedding feasts. The men will send a sheep to bride side before the wedding to be cooked and fed to guests. This act is like helping the man or being called a good deed towards bride side.

The goat loves the high place, and this symbolically symbolizes the ideals of spirituality. Goats are also able to climb the hill and mountain peaks. Symbols of this treatment are characterized by curiosity and questions. From an advantage point, goats have a form of sensory perception. This shows the uniqueness of goats as animals that often observe and identify the world around them. Symbolic from this goat's perspective, reveals the nature of goats as a metaphor for the deeper knowledge of the world around. This is possible because of the different environments between the terrain of the Malay world and the hilly and rocky terrain of Uzbekistan. So, the life of this animal is different between the two cultures.

Meanwhile, the Uzbek community makes sheep as economic and subsistence. Sheep sales price will be capitalized to expand sheep farming. Sheep are sensitive animals and easily disrupted by their health. Therefore, the sheep's owner needs to bear the risk of sheep rearing.

Goats are also associated with arrogance. Every individual in society should always be moderate and that attitude should not be exaggerated through conversation, otherwise, it will manifest itself through deeds. This can be referenced by the proverb "*Boqqaning ikki echki, O'shqirganing yer tebratar*" which means you care for two goats, your voice shakes the ground. This proverb shows that if men do good, better should not show the kindness they do.

In comparison, the differences between the two are summarized in the table of inventory differences as follows;

**Table 1.** Goat concept in Malay and Uzbek culture

| INVENTORY | MALAY | UZBEK |
|---|---|---|
| **Religion** | Aqiqah | Aqiqah |
| **Contribution** | Dairy products, fur, meat | Dairy products, fur, meat |
| **Metaphor** | Coward,<br>Not aggressive,<br>Lazy | Coward,<br>Not aggressive,<br>Independence,<br>Freedom,<br>Individual power,<br>The nature of the traveller,<br>Wish |
| **Communication** | Insinuation | Symbolic<br>Ambition |
| **Life** | Good people | Good people |

### 3.2 Chicken Concepts in Malay and Uzbek Culture

In the Dewan Dictionary of the Fourth Edition, the chickens carry two purposes. The first is a kind of poultry that is usually bred and the second is a kind of fish. Chickens have strong legs, but blunt nails. It is suitable for scratching and scouring the soil to find worms or grain. Chicken as a fish is caused by a chicken being used as the source of the same food as a fish. This is specially derived from the Javanese society who say chicken meat as "chicken fish".

In the Malay community, chickens are not only used as food sources but are also associated with a variety of specific rituals and customs. There is a custom or ritual that is contrary to the Islamic religious law but is still practised by the Malay community until today, the opening ceremony of the defence of self-defence. In Islam, it is strictly forbidden to worship and serve in a power or person that can bring good fortune or labour to a person such as a god, ghost, or *keris* (Muzakarah Fatwa Committee MKI, 1996). In the ritual opening, this court, goats or chickens are used as victims.

This ritual is performed by a *bomoh* so that self-defence training coaches in the court are protected from any injuries during training. The ceremony was performed by slaughtering a goat or black chicken in a new court. Blood from the slaughter will be left flowing around the court. Some groups will sweep the blood at the foot of the trainer. Next, the *bomoh* will call on the name of a certain commander and conclude by applying the incense around the courtroom. The goal is to drive the evil ghosts away from the square.

According to Shazwan Affendy and Satiman (2015), white chicken is used as a dish for the wait before starting another entertainment practice known as the Kuda Kepang dance. The claw horse is a dance of heroes that demonstrates the influence of Javanese society in Islam in ancient society. Usually, this dance is still being performed in the area of Johor village in the community from the Javanese origin. The belief of the Malays of this Javanese offspring, the horseback is a kind of dance dominated by a kind of supernatural power. Without performing special rites slaughtering white chicken before starting the dance, something undesirable is most likely to happen to dancers (Shazwan Affendy and Satiman, 2015). The white colour is often symbolized as something good. Therefore, in order to expel evil forces, white chickens are used.

Chicken is very closely related to the life of the Malay Archipelago. In traditional Malay societies, there is a tradition called chicken scourge. Chicken scourge is a fight between two chickens in one court. Therefore, the chicken especially the rooster is a favourite of the Malay community to be reared (Azman Ismail, 2007). In the Malay proverb, chicken is also associated with the chaos or mouth of a person who speaks a lot. There is a proverb that reads "*Seperti ayam bertelur sebiji tetapi berkokok riuh sekampung*" The behaviour of crowded cock crows, sometimes unremarkable to be symbolic of human behaviour that speaks in its place.

In addition, there is also a Malay proverb that mentions "*Kokok berderai, ekor bergelumang tahi*" which gives poor chronicle to chicken. This proverb carries a rooster symbol of a strong roster, but his tail is often hit by his own. This is likened to someone who is always to show his strength or manliness in front of the crowd through his words and conversations, but there are many disadvantages or weaknesses that cannot be hidden from him behind his great words. The proverb which reads "*Hangat-hangat tahi ayam*" also gives a negative perception, which equates to the attitude of someone to do something serious in the first place but does not continue the endeavour to the end and cause its failure.

For a long time, chickens are associated with something negative for the Malay community either in real life or in proverbs. This is because chickens are often used in worship and religious rituals. However, there is also a symbolic use of this chicken animal in Malay proverbs. Among them, according to Azman Ismail (2007), is "*carik-carik bulu ayam, lama-lama bercantum jua*". In this proverb, chicken feathers are used as a symbol to reduce tension between two parties, especially those who have a close relationship or relationship with one another. According to the proverb, long disputes can be reconciled. Various efforts have been made to change the perspective of the Malay community on chicken. For example, what Muhd did. Juhari Muhd. Said in his solo exhibition, Okir. According to him, chickens are used as a physical chicken that can be attributed to the life of a human being. For example, by looking at only feathers, one can imagine how the chicken looks and character (Azman Ismail, 2007). Therefore, it is clear that even though the Malay community considered the chicken as a reflection of negative behaviour, it was positive. This is because of the behaviour of chickens in the form of symbolic human relations that symbolize bad and good connotations.

From Uzbek's perspective, chicken is seen as a domestic animal. However, the rooster is very concerned with the territorial sovereignty of its power. Hence it is very protective of its subdivision rather than being invaded by other chickens.

That is why, during the day we often see crows roosting often sitting in somewhere tall, four or five feet from the ground, as above the wooden girder or the fence to observe or watch around it worried about being intruded by competitors- who wants to seize it.

In addition, it also monitors the advent of enemies that endanger these animals such as lizards or snakes who want to attack this species, especially chicks. If there are such intruders, he will immediately warn his people to seek immediate protection or to save himself from danger. In addition, the rooster will also crow to tell that the area is a protected area, and do not be trespassed if it does not want to be opposed. However, if we live in villages we often hear rooster crows before dawn.

In the past, this cock was used as a sign of the time, especially the arrival of time indicating the time-out for sultry in the month of Ramadhan and to start the morning prayer daily. The sounds of the cockpit sound vary, there is a loud voice that can be heard loudly in the distance and on the other hand, there is a slight correction. If observed, the rooster can also catch it like a hen if he meets the food and invites the chicken or other chicken to enjoy the meal together.

From the point of view of the Uzbek community, this chicken has its own secret. As with some other animals as well, the rooster is associated with certain beliefs in a traditional society.

Usually, chickens are kept for its meat. However, there is also a rooster that is maintained not to eat meat, but to be used as a cock or chicken. The rooster was not only using the sharp beak but also using the spurs or nuts that were available on his leg as a genuine weapon of defence.

By comparison, the differences between the two are summarized in the table of inventory differences as follows,

**Table 2.** The concept of chicken in Malay and Uzbek culture

| INVENTORY | MALAY | UZBEK |
|---|---|---|
| **Customs** | Ritual / worship, Dish prepared for the spirits | Rooster crows telling something will happen.<br><br>Rooster crows calling the hen to eat. |
| **Contribution** | Meat, feathers, Chicken / fight | Chicken / fight, Supervisors, Warner |
| **Metaphor** | Disputes, Bad behaviour | Great man, Male power |
| **Communication** | Talks a lot without interest | |

### 3.3 Fish Conception in Malay and Uzbek Culture

The jaw fish is in a group of animals labelled in the Gnatostomata species. In general, fish are animals that can adapt to life in the water. Most have scaly and slimy skin and have a shape like a drum. These features can help reduce resistance while moving in the water. Fish can detect any changes in the surroundings by using sensory lines (Hasan, 2005).

In addition, fish, especially the type of Osteichthyes, which are bone-based fishes, are able to change their scales to hide from predators and victims according to their residential area (Len, 1985). According to Zainal Abidin (1985), fish living in rocky areas will have bright and shining colours, while fish that live in ponds or beaches will usually have grey or dark scales. The fish survived and dominated the universe, especially in aquatic environments as the earth was two-thirds full of water. There are about 23,000 species of fish in the world and it began to exist 400 million years ago (Zainal Abidin, 1985).

Traditionally, Malays in Malaysia are farmers and fishermen. Residents in remote areas make paddy cultivation as their economic activity, while residents living in coastal areas are involved in fishing activities. Therefore, the fish is very close to the Malay community. Many Malay proverbs and bids are produced from these animals.

According to Junaini Kasdan, Nor Hashimah Jalaluddin and Wan Nurasikin Wan Ismail (2017), there are three types of proverbs that use fish. The first one uses the word 'fish', the second is the one who uses the name of the fish in particular and the third is the name of the fish which is rarely heard.

An example of a proverb that uses the word 'fish' is "*ikan lagi di laut, lada garam sudah disengkalan*" which means to prepare for the outcome of something which cannot be obtained. In addition, "*memancing ikan di dalam belanga*" means to profit from the one closest to us and the "*sungguh besar kawat yang dibentuk ikan ditebat yang diadang*" which means hidden tricks for profit from the one closest to us.

Examples of proverbs using the name of the fish, in particular, are "*belut pulang ke lumpur*" which means things return to the original. Maybe it means good, or maybe not. For example, when a bad person has been released from punishment, then he engages in bad activities again (Abdullah Hussain, 1997). The eel is a long fish like a snake, smooth skin and has a gill in the left and right sides of his head. Because of that slippery skin, it's hard to hold. The animal lives in muddy areas such as swamps and river banks.

Furthermore, the example of the proverbial use of fish that is rarely heard is the "*mengail yu dapat setoka*" which means other things to be desired, the other acquired and "*bagai bujuk lepas dari bubu*" which means too fast moving. *Bujuk* is a type of fish, its scientific name is Channa Striata while *bubu* is a traditional tool used to catch fish. *Bubu* is made of bamboo or netting depending on the place where it will be used (Aristi Dian Purnama Fitri and Agus Suherman, 2003).

Fishing is an economic activity of the Malay community living on the coast. There are some proverbs that demonstrate the Malay community's skills in this activity. For example, like "*jong pecah, yu yang kenyang*" and "*jerung bukan sebarang jerung, jerung tersepit dipagar*" which illustrates the Malay society of ancient times not just a small fisherman, but a sailor in the middle of the ocean. Only skilled and skilled experts in the vast ocean are able to observe and experience big fish such as sharks (Junaini Kasdan, et al., 2016).

According to him too, the sound of flowing water and splinters produced by fish in it can lower the risk of stroke and depression. Additionally, it can be used as a therapeutic medium for schizophrenic patients. Applying fish characters can cause a sense of calm as the life of the fish itself. Therefore, it is not surprising that fish behaviour is often used in Malay proverbs as the Malay community used to

often observe and study fish behaviour to identify what tools are appropriate to be used.

In addition, the Malay community used to use these animals for the purpose of treating various diseases. For example, snakehead, frogs, eels, leeches and worms. According to scientific studies conducted either in Malaysia or other countries, the fish that have been diversified have good nutrition for postpartum, wounds, etc. (Wan Zahari, Mohd Hamim and Abdul Rahman, 2012). Hence, it can be concluded that fish are symbolized by the Malay community as a symbol of peace, action and relationships.

In Uzbek perspective, fish is any member of an animal group consists of animals with gills and aquatic animals. Most species of fish can be found in Uzbekistan. According to the National encyclopaedia of Uzbekistan (2005), there are 106 species of fish in the waters of Uzbekistan. Five types of fish are listed in the Red Book of Uzbekistan. The subject to learn about fish is called *Ichthyology*.

Fish is also used in Uzbek proverbs, its use is symbolic of patriotism, honesty, kindness and friendship. The "*Baliqning tirikligi suv bilan*" proverbs carry the meaning of fish alive with water. It refers to the metaphorical symbols associated with the state and the patriotic nature. It is also likened to fish that cannot afford to breathe without water and likened to a human being who has a country and must also have a sense of love and loyalty to his country.

The proverb "*Yomon baliq suv loyqatar*" also means the evil fish will disturb the water. It is also explained with the patriotic issue of the country and the loyalty of the individual. An individual who does not have that character will harm the country. For example, things like pollution. Individuals that cause pollution clearly do not have any love for their country as the matter will indirectly destroy the country.

In addition, the proverb "*Baliq boshidan sasir*" refers to honesty and carries the meaning of foul fish from the head. This proverb highlights the issue of honesty in community leadership. Each leader who leads is like a fish that heads a group of other fish. If it is a bad step, then the whole society is bad. So, the chairman himself has to show a good move to be an example to his crew.

Fish also showcases friendship. It can be seen when the fish swim in the ocean in groups. Fish that needs water is like humans who need friends or pals. Proverb "*baliq suvsiz yashamas, inson – do'stsiz*" which means fish that need water as human beings need friends. It shows that without friends, human life will not be happy and perfect.

In comparison, the differences between the two are summarized in the table of inventory differences as follows;

**Table 3.** Fish Concept in Malay and Uzbek Culture

| INVENTORY | MALAY | UZBEK |
|---|---|---|
| **Customs** | - | - |
| **Contribution** | Health therapies (splashing water by fish), Treating the disease economic resources for fishermen | Health therapies (splashing water by fish), Treating the disease economic resources for fishermen |
| **Metaphor** | Tricks for profit, Evil people who remain wicked, Fast movement | Profit, Honesty of leadership, Friendship, Patriotic, |
| **Communication** | - | - |
| **Life** | Tranquillity, Recognizing someone's character, Action, Relationship | Luck, Longevity Relationship |

Based on this inventory, it can be generalized that the Malay or Uzbek culture has different perspectives in these animals, namely goats, chickens and fish. Next, an analysis will be done to see the construction of metaphors in the Malay and Uzbek proverbs based on conception metaphorical approaches.

# 4. Conclusion

Generally, these three animals exhibit the animal metaphorical equations in terms of orientation, ontology and structural as discussed by Lakoff and Johnson (1980) from a mapping and metaphorical perspective. However, from the perspective of differences, there is little difference in thinking that can be processed repeatedly through the treatment as discussed by Evans and Green (2006) and Rosalind Ferguson (1983). Researchers see these differences and similarities as a process of taking the opportunity to explore in more detail.

From the cross-cultural perspective, especially the metaphorical proverb of animals between the two cultures, namely Malay and Uzbek, the findings show that both Malay and Uzbek proverbs are unequal. And have different meanings, especially in applying animal metaphors as reported by Krikmann (2007) is also supported by the writing of Wei Lixia (2012) based on the theory of metaphorical concepts.

From the perspective of the two cultural elements, the metaphorical mapping of the Malay and Uzbek metaphorically illustrates the use of a metaphor when speaking of the concept in the use of proverbs as stated by Gibbs (1994), Kovecses (2002) and other authors of the metaphorical theory. For researchers, this situation occurs because the proverb expressed by the two-language culture is different in terms of perceptions and metaphors in describing humanitarian behaviour. With this difference, the purpose of the proverb is to refer to the needs of a society and culture.

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