



Mathematics Pre-service Teachers'  
Learning Experiences of International  
Teaching Practicum in Indonesia by Jssh-  
4497-2019 Cheng Meng

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**paper text:**

INTRODUCTION According to Comiti and Ball (1999), traditionally there are three key strands in

**7teacher education programmes at tertiary educational institutions**

which aim

**7to develop an integrated competence in pre-service teachers**

(PSTs), namely

**7disciplinary studies, educational studies, and teaching practice. The knowledge components of these strands are referred to**

**7as content knowledge, pedagogical knowledge, and didactical knowledge,**

respectively (Winsløw & Durrand-Guerrier, 2007). Teaching practice or teaching practicum, as argued by Barton, Hartwig, and Cain (2015), is an extremely important phase for PSTs where they get to apply and practise all the

**7content knowledge, pedagogical knowledge, and didactical knowledge that**

they have learnt in their teacher education programmes in the actual school context. Although teaching practicum varies in intent and approach, it has always been integral to teacher education programmes at tertiary educational institutions (Vick, 2006) as it provides opportunities for PSTs to integrate theory and practice in the real school environment (Allen & Wright, 2014). In addition, teaching practicum represents the time during which PSTs are ideally provided with the opportunities to develop and grow professionally and personally in a transition process from a student to a teacher, culminating in the development of their own self-image as a teacher with their own professional identity (Sutherland, Howard, & Markauskaite, 2010). More importantly, Darling-Hammond (2006) and Tatto (1996) emphasise that linking carefully constructed teaching practicum experiences with teacher education courses is one of the most powerful and effective ways of supporting the learning of PSTs to become competent teachers. Conventionally, PSTs undertake their teaching practicum in schools which are located in their home country. Nevertheless, in view of preparing PSTs to face the challenges of the 21st century and the push for globalization (Kabilan, 2013; Kabilan et al., 2017; Larsen, 2016; Mwebi & Bringham, 2009) as well as borderless education (Middlehurst, 2006), a number of tertiary educational institutions are beginning to initiate an ITP with tertiary educational institutions from other countries with the aim of providing opportunities for their PSTs to experience cross-cultural teaching and learning in foreign schools (Cushner & Mahon, 2002; Kabilan et al., 2017). As a result, a number of ITP projects have been initiated in several countries around the world (Velliariis & Coleman-George, 2016), such as in Hong Kong (Bodycott & Crew, 2000, Lee, 2009), Turkey (Sahin, 2008), Australia

(Cinelli & Jones, 2016), Canada (Larsen, 2016), Germany (Vogt, 2016), Malaysia (Kabilan, 2013; Kabilan et al., 2017), Philippines (Anar, Peterson, & Villanca, 2017) and Korea (Kim & Choi, 2018). LITERATURE REVIEW

**5**Bodycott and Crew's (2000) study focused on PSTs specialising in **English as a Second Language (ESL) in Hong Kong**

who undertook short-term overseas language immersion programs in

**5**English speaking countries, in the belief of the benefits and positive results of language and cultural immersion during their teacher preparation degree programs.

The ESL PSTs reported language, educational and socio-cultural

**3**gains as a result of their ITP learning **experiences in Australia and Canada.**

Sahin (2008) examined 289 Turkish PSTs' learning experiences during a two-month ITP in the United States of America which

**6**included an orientation week, six weeks of student teaching in a high school, seminars and projects at Iowa State University and cultural visits. The data were collected

using the PSTs' questionnaire and their reflective journals. The ITP strengthened the PSTs' beliefs about their own educational system. As a result, they became

**1**more optimistic and positive about their own **educational system** which helped them **to** develop professionally **and**

personally.

**3**Lee's (2009) study involved **Hong Kong**

PSTs who participated

**3**in a six-week language immersion programme in **Auckland, New Zealand.** The study found **that the** PSTs **have a** deep understanding **of** various pedagogical

skills, **greater sense of independence and confidence, and** gained **a** higher level **of**

appreciating cultural differences. Anar et al. (2017)

**4aimed to explore the learning experiences of 17 Filipino PSTs in the Science, Technology, Engineering and Mathematics (STEM) Program of Anubanchonburi School in Thailand. The**

data were collected through interviews and focus group discussion and were analyzed using thematic analysis. The findings revealed five major themes of the PSTs' learning experiences, namely pedagogical learning, personal and professional learning, social and multicultural learning, technological learning, and travel exposures. Kim and Choi (2018) investigated the

**2perceptions and experiences of 15 Korean social studies PSTs who participated in an ITP in the United States** of America. Although **the**

PSTs faced

**2difficulties in speaking a foreign language and adjusting to a different culture, they also gained confidence and self-efficacy by negotiating and actively participating in the teaching and learning process.**

It also helped them to understand

**2multiculturalism and the different perspectives of the teachers' roles, teaching pedagogies, and local education systems.**

In Malaysia, Kabilan (2013) investigated six PSTs'

**3experience of professional development during their**

ITP in Maldives for six weeks. The participants comprised four female and two male PSTs specialising in Teaching

**1English to Speakers of Other languages (TESOL).** The data **were**

collected

**3from an open-ended questionnaire, reflective journals**

and face-to-face interview and were analyzed using the Interpretative Phenomenological Analysis (IPA). The study found that the PSTs

**3experienced beneficial and meaningful professional development**

in terms of gaining confidence in

**1speaking and using the English language to communicate,**

enhancing

**3their skills and confidence level in teaching,**

developing useful interpersonal skills, and garnering the

**1understanding and the ability to adapt to new working cultures and the different approaches to teaching and learning that are used in the Maldivian school.**

In another study, Kabilan et al. (2017) examined two PSTs'

**3experience of professional development during their**

ITP in Bangladesh for six weeks. The participants comprised two female PSTs specialising in TESOL. The data were collected from the PST's observations, reflective journals and face-to-face interview and were analyzed using IPA. The findings indicated that the PSTs had enhanced specific and related teaching skills, gained confidence in teaching and using the English language, developed useful interpersonal skills, and experienced and internalized new perspectives on education and culture. In general, previous research has shown that the ITP studies are on the rise due to the increase of collaborations and networking initiated by the tertiary educational institutions globally (Azizah, 2016) which enabled PSTs to experience the diversity of culture in a foreign setting and facilitated them to gain invaluable insights of the host country, its educational system as well as the people and surrounding communities (Dunn et al., 2014; Grierson & Denton, 2013; Kabilan, 2013; Kabilan et al., 2017).

**2Despite the growing interest and importance of PSTs' cross-cultural experiences,**

to date there is no documented research on the ITP learning experiences of Malaysian mathematics PSTs. Hence, the present study attempted to fill the gap by examining Malaysian mathematics PSTs' learning experiences of ITP in Indonesia. It is hoped that the findings of this study will contribute to

**2developing a body of research and scholarship on ITPs from Malaysian contexts that have, to date, been largely underexplored.**

**METHOD** Participants and Setting The participants comprised 3 female PSTs majoring in Mathematics who had completed seven weeks of local teaching practicum in Malaysia. They were in their final year of the 4-year Bachelor of Science with Education programme in the Malaysian university which consisted of 131 units of courses. They were selected based on the following criteria (Kabilan et al., 2017): (a) achieved the requisite CGPA of at least 3.0 at the time of the ITP; (b) have passion and interest for learning, doing research and participating in community engagement project; and (c) have a positive outlook and attitude towards the teaching profession. In addition, they volunteered for the ITP in Indonesia. After the teaching practicum, the three PSTs went for their ITP in Indonesia for eight weeks. During the ITP, they taught mathematics in junior high school (Grade 8) classes. Each class had seven Mathematics periods per week and each period consisted of 30 minutes. Besides teaching mathematics, they were also involved in extra-curricular activities such as club activities and sports. In addition, they successfully carried out a community engagement project called Race Challenge which involved challenging science and mathematics activities in collaboration with the Indonesian university students and lecturers as well as the Malaysian university lecturers. The participants were also assigned a mentor teacher who guided, advised and facilitated their learning and adjusting to teaching in the school. The mentor teachers also supervised and monitored the participants' lessons through observations. Apart from the mentor teachers, a mathematics education lecturer from the Indonesian university and a mathematics education lecturer from the Malaysian university were assigned to supervise and observe the participants' lesson at least once during the ITP. The Malaysian university lecturer held a discussion and meeting with the participants, the mentor teachers and the principal of the school at the end of the visitation in order to acquire detailed information on the participants' overall performance and learning experiences throughout the ITP. In this study,

**1for the purposes of identification and data analysis, the**

first participant is referred to as A while the second and third participants are referred to as B and C, respectively. Methods of Data Collection and Analysis The researchers employed two main sources of data in this study: (a) reflective journals (RJs) that were written by the participants on a daily basis about their learning experiences of ITP in Indonesia; and (2) an interview session with the participants that focused on their learning experiences of ITP in Indonesia. The RJs of A, B, and C were labelled as RJA, RJB, and RJC, respectively. For the interview, the responses of A, B, and C were labelled as IA, IB, and IC, respectively. Prior to the ITP, the participants were given a briefing on how to write their RJs. They were encouraged to make as many entries as possible on their learning experiences of ITP in Indonesia. After the ITP, an individual interview session was carried out with each of the participants in the Malaysian university. Each individual interview session took approximately one hour and the participants were asked to respond to their learning experiences during the ITP in Indonesia with further explanations and examples. The interviews helped to provide sufficient amount of information in supporting the data from the participants' RJs. The data from the RJs and interviews were analysed using IPA to ensure the accuracy, reliability and trustworthiness of the information obtained from both the sources of data of the study (Kabilan et al., 2017). According to Pietkiewicz and Smith (2012), IPA procedures consisted of multiple reading of the data, making notes, transferring the notes into themes, determining the relationship and clustering the themes. Thus, the

accuracy, reliability and trustworthiness of the information obtained from the RJs and interviews were attained as a result of multiple readings of the data and comparing the data from the three participants in order to search for similarities. Based on the readings and comparisons, notes were made whereby the recurring ideas identified during the process were clustered into several major themes according to their conceptual similarities (Kabilan et al., 2017). FINDINGS As a result of the IPA analysis, the four major themes of the mathematics PSTs' learning experiences of ITP in Indonesia are mathematics lesson planning, mathematics teaching and learning, guidance from mentor teacher and others, and contributions to the school. Mathematics Lesson Planning A wrote in one of her reflective journals that the learning objectives of the lesson plans in the Indonesian school are quite similar to the those in the Malaysian school because the two syllabi are quite similar. But, she clarified in her individual interview that the two syllabi differ in terms of topic arrangement: The objectives used in the lesson plans in Indonesia are not much different from Malaysia because the syllabus used is almost the same, only the topic arrangement is different (RJA). For example, the topic of Function in Mathematics in Indonesia is the fourth topic but in Malaysia it is the first topic (IA). But, for both B and C, the Indonesian learning objectives are more focused on the noble values as compared to the Malaysian learning objectives. These noble values (Core Competencies) are being emphasized throughout the teaching process. B further explained that there are four types of Core Competencies: The objectives are more on noble values which are applied throughout the process of teaching which is labelled as Core Competencies (RJB). They are divided into 4 types; K1, K2, K3 and K4. K1 relates to religion, K2 relates to noble values concerning self which is applied through group work, while K3 relates to students' own attitudes and efforts about knowledge, and lastly K4 relates to students' ability to apply in school and out-of-school learning (IB). Appreciate the teachings of the religion, honesty,

**9discipline, responsibility, caring, tolerance, and mutual cooperation. Be polite, and confident in interacting effectively with the social and natural environment (RJC). Both A and**

B wrote that the steps and activities of the lesson plans in the Indonesian school are still teacher-centred and the teachers are still less exposed to the 21st century learning environment as compared to the Malaysian school. A explained that the teachers mainly teach mathematics in the classroom based on the textbooks provided by the school: The steps and activities used in the classroom in Indonesia are still 'teacher-centred' which focused only on teachers. Teachers are still less exposed to the 21st Century Learning used in Malaysia (RJA). In the classroom, teachers mainly teach based on the textbooks given by the school (IA). The steps and activities used in the classroom in Indonesia are still more teacher-centered (RJB). In addition, B wrote that the steps and activities comprised three main parts: introduction, core activities, and closure. But, for C the steps and activities comprised five parts and she provided an example for each part: observation, asking questions, gathering information, reasoning, and communication: In writing the lesson plans, the steps and activities are divided into three parts: introduction, core activities and closure (RJB). In the lesson plans, the steps and activities are divided into five parts: 1. Observation - students observe the picture of the net of a cylinder shown on the LCD. Students write down their observation. 2. Asking questions - students are encouraged to ask questions based on their observations. For e.g., What is the formula of the surface area of the cylinder? 3. Gathering information - students discuss about the formula of the surface area of the cylinder and write down their discussion in the worksheet. 4. Reasoning – students deduce the formula of the surface area of the cylinder. 5. Communication – students present the results of group discussion and reasoning (RJC). Both A and B mentioned about teaching aids typically written by the Indonesian teachers in their lesson plans which are Mathematics textbooks and exercise books. Besides, the teachers also prepare student worksheets containing questions for students to work on in the classroom. B also highlighted that another source of teaching aids is the Mathematics

Laboratory. In addition, C gave examples of ICT teaching aids in her individual interview: Teaching aids used mostly are Mathematics textbooks and exercise books. Teachers also prepare student worksheets that have questions for students to do in the classroom (RJA). Teaching aids used are Mathematics textbooks and exercise books. Teachers also create their own questions for use in the classroom labeled as student worksheets. Other source of teaching aids is the Mathematics lab (RJB). The teaching aids are Mathematics textbooks, exercise books, computer, laptop, and Internet (IC). Mathematics Teaching and Learning A wrote that the induction set used by the teachers in the Indonesian school generally focuses on the religious aspects and the importance of learning a mathematical topic. The teachers also relate the topic with everyday life so that students can understand what they are learning in the lesson. B added that the set induction generally comprises six steps by providing an example as evidenced in the excerpt: Teachers begin their lesson with focus on aspects of religion and also the importance of learning the topic. Teachers also relate the topic to be learned with everyday life so students are more clear about what they are learning (RJA). Induction set consists of 6 steps:

**1. Students respond to teacher's greeting; 2. Students pray**

before study (increase religious values); 3. Teacher checks student attendance; 4. Teacher review previous topic and relate to today's topic; 5. Teacher introduces the learning outcomes that should be

**5 achieved at the end of the lesson; 6. Teacher motivates students**

by relating the topic to everyday life (RJB). Interestingly, C gave a different and more detailed example of the induction set used by the teachers which generally also comprises six steps: Example of set induction which consists of 6 steps: 1. Teacher greets the students and asks one of the students to lead the singing of Indonesia Raya song by standing up. Then they were invited to sit down and pray. Next, teacher checks the attendance and ask about students' health; 2. Teacher asks students to take out their books, tools and materials to take part in fun learning; 3. Teacher revises previous lesson; 4.

**8 Students listen to teacher's explanation about the benefits of learning the**

surface area of cylinder in everyday life; 5. Students write down teacher's explanation of the learning activities that will be carried out by forming groups of 4-5 students; 6. Students write down teacher's explanation of the assessment techniques that will be used in the lesson (RJC). For time management, B noted that it is particularly emphasized where teachers have to efficiently adhere to the allocation of time for the teaching and learning activities so that students can learn effectively. C and A elaborated that time management is very effective because the students can understand the lesson well and thus students can practise more questions: Time management is particularly emphasized in Indonesian school, where teachers have to adhere to time during teaching. When the bell rings the teacher should immediately enter the class and continue the teaching and learning session and have to wait until the bell rings then the teacher is allowed to leave the class. The time division for the activities is reasonable with the efficient use of time (RJB). Time management is very effective because students can understand the topics learned and save time for the teacher (IC). The activities provided also correspond to the time given by the teacher. The students usually get the questions given quickly, so the teacher can give the students more questions as practice (IA). With regard to lesson delivery, both B and A mentioned that the teachers deliver lessons in a clear and organized manner integrated with effective teaching and learning activities according to the syllabus stipulated in the 2013 Mathematics Curriculum. Notably, C explained that the teachers generally

deliver the lessons using the 5M technique: Teachers deliver the lesson in a clear and organized way with teaching and learning activities that focus on the learning topics (RJB). The contents of the lesson is also clearly presented by the teachers according to the syllabus that was set out in the 2013 Curriculum (RJA). Teaching of the contents of the lesson is by using the 5M Technique: Observing (Mengamati), Asking (Menanya), Collecting Information (Mengumpulkan maklumat), Reasoning (Menalar), and Communicating (Mengkomunikasikan) (IC). For teaching techniques, A wrote that the techniques used are more teacher-centered that is the teachers only teach in front of the class while the students listen and take notes of important contents. After the teaching, students are provided with a worksheet to assess their understanding of the lesson. B added that the selection and effective implementation of traditional teaching techniques are aligned with the lesson objectives. Interestingly, C highlighted that cooperative learning based on the constructivist theory are sometimes used by the teachers to facilitate students' learning and solving problems together: Techniques used are more teacher-centered. The teachers only teach in front and students listen and record important contents. Once the contents of the lesson are completed, students are provided with a worksheet to test their understanding of the topic (RJA). The selection and application of the technique is in line with the objectives of the lesson and the effective implementation of traditional techniques (IB). Sometimes, teachers use cooperative learning based on constructivism to allow students to work together in the form of groups to solve problems. In the constructivist approach the teacher is only as a mentor and facilitator in learning activities (IC). In terms of educational resources, all the participants wrote that the teachers use existing educational resources such as textbooks and exercise books efficiently to enhance their teaching and students' learning. They also provide questions from reference and exercise books for the students to practise: Teachers use existing educational resources such as textbooks and exercise books. Teachers also provide questions from reference books and exercise books for practice (RJA). Teachers use educational resources efficiently which can strengthen the contents of the lesson (RJB). Teachers use educational resources as much as possible to ensure that students can master the topics (RJC). For classroom climate, both A and B wrote that it is less conducive for learning when the teaching process is teacher-centered with one-way communication between the teacher and students. Nevertheless, C suggested that the classroom climate can be improved during the teaching and learning process by questioning students or asking students to give their opinions: The classroom climate is less active when the teacher uses teacher-centered approach because only a one-way communication occurs during class (RJA). The classroom climate is not so active because the teacher did not use the student-centered learning approach as a whole (RJB). The classroom climate can be improved by involving students during the teaching process by asking questions or asking students to give their opinions (IC). With regard to assessment, A noted that the teachers assess their students' understanding of each topic by giving them a test at the end of the topic. They also give exercises to the students for them to practise at the end of each topic. As a result the students are proficient in mathematics because they have done a lot of exercises which further enhances their understanding of the topic. Additionally, B mentioned that the students are required to answer questions in front of the classroom or to do the exercises given in the exercise books and then followed by whole-class discussion. C noted that the teachers usually hold quizzes at the end of the lesson to assess students' understanding of the lesson: Teachers assess students by giving a test after each topic ends. This is to test students' understanding of the topic. Teachers also give exercises after the teaching of the topic. So students are proficient in mathematics because they have done a lot of exercises that reinforce their understanding of the topic (RJA). Students are required to answer questions in front of the classroom or to answer the exercises given in the exercise books and discussions are made afterwards (IB). Teachers usually give quizzes at the end of the lesson to test students' understanding of the topic (RJC). In terms of classroom management, A highlighted that the teachers can easily manage their classes because the students are very well-disciplined, very well-mannered and very respectful of teachers. B further explained that the students pay full attention to the lesson without interrupting the teacher's teaching. C emphasised that the teachers are very much concerned with classroom management and thus the classroom management is very organized so that it is conducive for students to learn: Teachers here can easily

manage classes because their students have high discipline. They also have good manners and very respect their teachers (RJA). Pupils focus completely without any interruption given to teachers during teaching (RJB). Very organized class management and teachers are very much concerned with class management so students can learn in a very comfortable and calm situation (RJC). In terms of closure, A mentioned that at the end of the lesson the teachers usually explain the importance of the topic learned to enhance the students' understanding of the topic. In addition, the students are also guided to summarize what they have learned about the topic. B noted that the teachers should write several important things at the closure of a lesson in their lesson plan and implement them during classroom teaching and learning, such as guiding students to summarize the lesson, informing students about the next topic, and ending the lesson with greetings and prayers. Specifically, C explained that

5at the end of the lesson she guided the students to summarize the

lesson on the surface area of cylinder, conducted a quiz to assess the students' understanding of the lesson, informed the students about the next lesson on the volume of cylinder, and give homework to the students to reinforce their understanding of the lesson learned: Teachers usually at the end of teaching tell the importance of the topic so that the students are more clear about the topic. Students are also guided to summarize the lesson (RJA). There are some important things that should be written in the lesson plan and implemented in the class: Teachers help students summarize the lesson, Teachers tell about the next learning topic, and Teachers end the learning with greetings and prayers (RJB). Teacher helps students to summarize the contents of the lesson that is about the surface area of cylinder. Next, teacher gives quiz to test students' knowledge of the topic. Then, teacher tells students about the upcoming topic is about the volume of cylinder and teacher gives home work (RJC). Guidance from Mentor Teacher and Others Both A and B described that their Indonesian school mentor teacher is very helpful both inside and outside of the school. For example, the mentor teacher provides guidance on how to write the lesson plans, what teaching techniques to use, and how to select questioning techniques that are appropriate to the students' ability in the Indonesian classroom. The mentor teacher also keeps in touch with them outside the school. According to C, her mentor teacher is a very committed teacher and her students like her very much. As depicted in one of her reflective journals she learned a lot from her mentor teacher in terms of how to write the Indonesian daily lesson plans, how to communicate with Indonesian students, how to manage and teach mathematics in the Indonesian classroom, and how to ask questions that are suitable for the students' level of achievement. She also helped her to understand the Indonesian mathematics syllabus and mathematical terms, school timetable, and school semester system: The mentor teacher is very helpful in various matters whether in school or outside of school. She gives guidance on how to write lesson plans in Indonesia and teaching techniques used here. She also keep in touch with us outside the school (RJA). Mentor teacher is very helpful in a lot of affairs in and out of school. She guides me to write lesson plans in Indonesia, and use suitable teaching and questioning techniques according to the level of students (RJB). I learned a lot with the mentor teacher as she is very committed and very much liked by her students. She helps me to write daily lesson plans in Indonesian, helped me in communication with Indonesian students, helped me in mathematical teaching while in the classroom, helped me in asking questions that are well suited to the level of student achievement, and helped me in organizing the class. She also help me understand the mathematics syllabus, mathematics terms, school timetable and semester system (RJC). Further, the three participants explained that apart from the mentor teacher, the other teachers also helped them a lot by giving advice and guidance on how to adapt to the new teaching and learning process as well as the culture of the school and the local community, shared some interesting places that they can visit and nice food that they can try in the city of Malang and other cities of Indonesia. All these helped to enrich their experiences both inside and outside of the school: Other teachers also gave advice and guidance to us. In addition, they also help a lot in adapting to new places and food. They also share some interesting places we can visit there.

This helps us to add more experience not only in the school but also outside the school as well. (RJA). Other teachers help us in gathering the information about teaching and learning and culture in the school. They also share with us about the culture of the local community as well as the food and places around Malang and Indonesia (RJB). Other teachers also provide information about school culture and share stories about places and food in Indonesia. They also tell us about interesting places around the city of Malang and Indonesia (RJC). In addition, the three participants highlighted that the lecturers from the Indonesian university had assisted them throughout their ITP in the Indonesian school. For example, A mentioned that they had the opportunity to share with the Indonesian university students on the teaching techniques that they used during their teaching practicum in Malaysia that is the 21st century learning with 'Kahoot', 'Plickers' and 'Tarsia'. They also exchanged views on the education system in Malaysia and Indonesia which helped them to understand the differences in the education system between the two countries. B elaborated that the lecturers had also taught them about the culture of the local communities in Malang. In addition, the Indonesian university had provided some financial assistance for the Race Challenge as their community engagement project in the school. C added that the lecturers helped them to find accommodation and the school. They were very friendly and generous by bringing them to tour the interesting places and eating nice food around the city of Malang: The lecturers from UNIKAMA have helped us throughout the ITP there. We also have the opportunity to share with the students from UNIKAMA on the teaching techniques we used in Malaysia during teaching practicum which is 21st century learning using Kahoot, Plickers and Tarsia. Here, we exchange views on education in Malaysia and Indonesia. This helps to understand the educational differences between the two countries (RJA). The lecturers have taught us much about the culture of local communities in Malang. UNIKAMA has also provided some financial help to carry out Race Challenge as our community project (RJB). lecturers helped us to find accommodation and school there. They are very friendly and generous. They also take us around the city of Malang and show us interesting places and having nice food (RJC). Contributions to the School The three teachers wrote that they had contributed to the school by organizing a community engagement project called the Race Challenge which involved two schools namely SMP Negeri 5 and SMA Negeri 9 as well as students and lecturers of the Indonesian university. This project provided new opportunities for the students to explore and learn more about science and mathematics outside the classroom. Since the project was new and exciting to the students, the school planned to have it again next year: We contributed to the school by having a community engagement project called Race Challenge. This project involves two schools, our own SMP Negeri 5 and SMA Negeri 9, students from UNIKAMA and USM trainee teachers (RJA). My contribution is we organized a community project of Race Challenge which involves students and lecturers of UNIKAMA and students of two schools in Indonesia. For them in Indonesia, such project is very exciting and new and they will be having such project again next year (RJB). Our contribution to the school is we have organized a community engagement project called Race Challenge which involves students of our school and students from another school in Malang and students and lecturers of UNIKAMA. This outdoor project is new and very interesting so the school will organise it again next year (RJC). DISCUSSION The findings are discussed according to the four major themes that emerged from the IPA analysis process. For the first theme on mathematics lesson planning, the participants learned that the learning objectives of the lesson plans in the Indonesian school are quite similar to the those in the Malaysian school because the two syllabi are quite similar. But, they differ in terms of the topic arrangement, the learning objectives are more focused on the noble values which are being emphasized throughout the teaching process, the steps and activities of the lesson plans are still teacher-centred, and the teachers are still less exposed to the 21st century learning environment as compared to the Malaysian school. Interestingly, they learned that the steps and activities of the lesson plans either comprise three main or five main parts, and the teaching aids generally consist of Mathematics textbooks, exercise books, student worksheets, Mathematics Laboratory, computer, laptop, and the Internet. The second theme on mathematics teaching and learning consists of nine sub-themes: (1) induction set - the participants learned that the induction set generally comprises six steps which focuses on the religious aspects, the importance of learning a mathematical topic, and the connection between the topic and

everyday life so that students can understand what they are learning in the lesson; (2) time management - the teachers have to efficiently adhere to the allocation of time for the teaching and learning activities so that students can learn effectively; (3) lesson delivery - the teachers deliver lessons in a clear and organized manner integrated with effective teaching and learning activities; (4) teaching techniques - the techniques are usually more teacher-centered but cooperative learning is sometimes used to facilitate students' learning and problem solving; (5) educational resources - the teachers usually use textbooks and exercise books efficiently to enhance their teaching and students' learning; (6) classroom climate - it is less conducive for learning when the teaching process is teacher-centered with one-way communication between the teacher and students; (7) assessment - the teachers assess their students' understanding of each topic by giving them a test at the end of the topic, students are required to answer questions in front of the classroom or to do the exercises given in the exercise books and then followed by whole-class discussion, or hold quizzes at the end of the lesson to assess students' understanding of the lesson; (8) classroom management - the teachers can easily manage their classes because the students are very well-disciplined, well-mannered and very respectful of teachers, and pay full attention to the lesson without interrupting the teacher's teaching; and (9) closure - the teachers usually explain the importance of the topic learned to enhance the students' understanding of the topic, guide the students to summarize what they have learned about the topic, give homework to the students to reinforce their understanding of the topic learned, inform students about the next topic, and end the lesson with greetings and prayers. For the third theme on guidance from mentor teacher and others, they learned a lot from their mentor teacher in terms of how to write the lesson plans, what teaching techniques to use, how to communicate with Indonesian students, how to manage and teach mathematics in the Indonesian classroom, and how to ask questions that are suitable for the students' level of achievement, how to understand the Indonesian mathematics syllabus, mathematical terms, school timetable, and school semester system. The mentor teachers also keep in touch with the them outside the school. Apart from the mentor teachers, the other teachers in the school also helped them a lot by giving advice and guidance on how to adapt to the new teaching and learning process as well as the culture of the school and the local community, shared some interesting places that they can visit and nice food that they can try in the city of Malang and other cities of Indonesia. All these helped to enrich their experiences both inside and outside of the school. Moreover, they learned a lot from the Indonesian university lecturers who assisted them throughout their ITP. For example, the lecturers helped them to find accommodation and the school, and to organize a sharing session with the Education students of the university in which they shared about the 21st century learning and exchanged views on the education system in Malaysia and Indonesia which helped them to understand the differences in the education system between the two countries. The lecturers also provided some financial assistance for their community engagement project, shared with them the culture of the local communities in Malang as well as brought them to tour the interesting places and eat the nice food around the city of Malang. For the last theme, the participants highlighted that they had contributed to the school by organizing a community engagement project which involved two schools and the Indonesian and Malaysian university lecturers and students. Since this project provided new and exciting opportunities for the students to explore and learn more about science and mathematics outside the classroom, the school planned to organize it again next year. These findings generally support the findings of Bodycott and Crew (2000) that reported

### **1 socio-cultural, language and educational gains as a result of**

the PSTs' learning experiences during the ITP in Australia and Canada. The findings of this study also concur with the findings of Sahin (2008) that the PSTs

**6expanded their knowledge of a new culture and adapted to a new working environment**

**6through cross-cultural exchanges with their mentor teachers along with other students and their community**

as a result of the learning experiences during the ITP. It also strengthened the PSTs'

**1beliefs about their own educational system, and became more optimistic and positive about their own educational system.**

In addition, it helped the PSTs develop professionally and personally. The findings of this study are also in agreement with Lee's (2009) findings that the PSTs

**1have gained a higher level of appreciating cultural differences, greater sense of independence and confidence, and a deep understanding of various pedagogical skills.**

More importantly, the findings of this study provide another perspective of PSTs' learning experiences during their ITP in a foreign country which generally support the meaningful and beneficial professional development experiences as reported by Kabilan (2013) and Kabilan et al. (2017). For example, Kabilan's (2013) findings revealed that the PSTs had enhanced

**3their skills and confidence level in teaching,**

developed useful interpersonal skills, and

**1garnered the understanding and the ability to adapt to new working cultures and the different approaches to teaching and learning that are used in the Maldivian school,**

and

**1knowing the cultures of school and its students and teachers.**

Kabilan et al. (2017) also found that the PSTs had enhanced specific and related teaching skills, experienced and internalized new perspectives on education and culture, and developed useful interpersonal skills. In general, the findings of this study also support the findings of Anar et al. (2017) that

**4revealed five major themes of the PSTs' learning experiences: travel exposures, pedagogical learning, social and multicultural learning, personal and professional learning, and technological learning.**

Lastly, the findings of this study concur with the findings of Kim and Choi (2018) that despite facing

**2difficulties in speaking a foreign language and adjusting to a different culture, the PSTs also gained confidence and self-efficacy by negotiating and actively participating in the teaching and learning process,**

had a better

**2understanding of multiculturalism and teachers' roles, teaching pedagogies, and local education systems.** However, the findings of

this study seem to disagree with the findings of some studies in the literature. For example,

**1Mahan and Stachowski (1990) found that the US teachers placed in the United Kingdom were not well prepared in many aspects, and thus did not perform well enough during the ITP. Sahin'**

s (2008) findings revealed

**3how Turkish student teachers faced organizational problems whereby they shouldered many responsibilities, and their mentor teachers lacked commitment and did not have a clear expectation of the entire ITP programme.** Pence and

Macgillivray's (2008) study reported unnecessary parental pressure at school, and PSTs'

**1negative perceptions of curriculum of the host school.**

Willard-Holt (2001) found that PSTs'

**3excess enthusiasm and idealism may lead to a negative understanding of local culture.**

Malewski and Phillion (2009) reported that the

**1 culture of the host community and the worldviews of the pre-service teachers may influence and pressure each other negatively. In**

sum, the PSTs of this study experienced the diversity of culture in a foreign setting, and the learning experiences facilitated them to gain invaluable insights of the host country, its educational system as well as the people and surrounding communities (Dunn et al., 2014; Grierson & Denton, 2013; Kabilan, 2013; Kabilan et al., 2017). CONCLUSION ITP is often seen as a means to broaden the world views and enhance the personal and professional development of future teachers (Kabilan et al., 2017). ITP in different countries will offer different kinds of learning experiences and challenges, where teachers and learners will get to learn from and about each other,

**10'creates culturally confident, competent and sensitive world-minded teachers'**

(Walters, Garii & Walters, 2009, p. 156); facilitates PSTs to learn new things and gain new experiences (Kabilan, 2013); and at the same time, be able to

**1'understand the different ideas and philosophies of diverse groups of individuals'**

(Kabilan, 2013, p. 208). Even though there is a growing interest and benefits of PSTs' learning experiences of ITP in another country, to date there is no documented research on the ITP learning experiences of Malaysian mathematics PSTs. Therefore, the findings of this study contributed

**2to developing a body of research and scholarship on ITPs from Malaysian contexts that have yet to**

be explored fully. The findings of this study will also enrich the literature on ITPs and assist tertiary educational institutions in planning a successful and meaningful ITP for their PSTs. More importantly, the findings of this study provide insights to administrators, lecturers and mentor teachers

**4to increase the opportunities of PSTs to be exposed to a multicultural classroom and become globally competent. This will provide avenues to forge stronger collaboration and partnerships with stakeholders in the country and abroad.**