

# GOOGLE CLASSROOM IN 21ST CENTURY TEACHING AND LEARNING IN TERTIARY EDUCATION

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## ABSTRACT

**Purpose** – The purpose of this study is to identify the pre-service teachers’ responses in using Google Classroom to learn “English for Effective Communication” in one of the Teacher Education Institute in Northern Peninsular Malaysia.

**Methodology** – A mixed-methods approach was used in this study using a set of questionnaire to survey and semi-structured interview. Quantitative data was collected from 50 pre-service teachers using the 5 point Likert scale questionnaire entitled “Internet Self-efficacy” developed by Eastin and LaRose (2000) and adapted by Shaharane, Jamil and Rod (2016) This questionnaire which consisted 18 items. Ten respondents were selected for the semi-structured interview sessions based on the respondents’ responses in the questionnaire. All the interviews were recorded on a mobile application known as “Voice Recorder Pro”.The questionnaire was analysed using the descriptive statistic in SPSS version 16.0. The interview transcriptions were analysed using the Thematic Conceptual Matrix (Miles & Huberman, 1994) which transformed the data into dominant themes and patterns.

**Findings** – The results showed that 96.2% of the pre-service teachers were satisfied with Google Classroom as an online learning tool, 94% felt that Google Classroom is very useful, 99% agreed that Google Classroom easy to access and 91.65% agreed that Google Classroom facilitate communication and interaction in teaching and learning.

**Significance** – In this twenty-first century, literacy is no longer the acquisition of the basic competencies of reading and writing only as highlighted in the traditional view. Conventional education pedagogy, that takes place in schools, colleges and training centers which solely depends on face to face interaction is considered old fashioned and out-dated (Cox, 2018). In fact, face to face conventional classroom interaction is not practically at times, especially during the emergency movement order control due to COVIND 19. Hence, the findings of this study could act as the eye opener for higher institutions or even schools to turn to more digital and mobile

learning through the use of online learning platforms such as Google Classroom. Google Classroom is an excellent tool in promoting interactive, meaningful, fun learning with more flexible, conducive and holistic classroom management. Google Classroom too save time, space, safe to use, user- friendly, environment friendly and cost effective. It is undeniable that this learning platform enables smart partnership collaboration between lecturers in the same learning institution and lectures from abroad institutions with learners in the same learning platform to aid in facilitating, coaching and mentoring through online intellectual discussion.

**Keywords:** Google Classroom, pre-service teachers, 21st Century teaching and learning

## 1.0 Introduction

In this twenty-first century, literacy is no longer the acquisition of the basic competencies of reading and writing only as highlighted in the traditional view. The rapid development of computer technology has altered the way education is being delivered worldwide (Devon, 2000; Nurul Atikah Abdullah, Mohamad Jafre Zainol Abidin, Wong, Omar Majid & Hanafi Atan, 2006; Tsai, 2006; Saeideh Bolandifar, Nooreen Noordin, Parastoo Babashamsi & Nahid Shakib, 2013). Internet utilisation in education has impacted learners' literacy on reading and writing as well as literacy instruction in the classroom (Karchmer, 2001; Leu, Kinzer, Coiro & Cammack, 2004; Carroll, 2011). The Malaysian Education Blueprint 2013-2025 declared that the Ministry of Education will focus on ICT-competency training for both educators and student in various aspects (Ministry of Education, 2012). This report also confirmed that the Ministry will invest in basic computer devices including low-cost laptops to achieve the 21st century education demands. Additionally, the Malaysian Education Blueprint 2013-2025 supported online content for the English language subject by introducing shared online video libraries. This will enable lecturers nationwide to access even more exemplary online teaching resources to aid in preparing pre-service teachers in line with the for 21st skills.

According to studies done by Khurshid Ahmad, Crbett, Rogers and Sussex (1991), Kim (2008) and Taneri and Seferoglu (2013) reported that many educators, including educational authorities continue to hesitate and show reluctance in using the new technology in their teaching and learning activities. Conventional education pedagogy, that takes place in schools, colleges and training centers which solely depends on face to face interaction is considered old fashioned and out-dated (Cox, 2018). It is undeniable that, we can no longer allow younger generation today to suffer through poor educational measures or selectively pick where learners learn without any proper resources (Cox, 2018). It is clear that there is a significant gap between the potential of modern global education demands and what exactly many local learners are actually learning. The adoption and exploration of innovative ideas in education is often slow. Instead,

many educators still cling to old and increasingly ineffective methods of teaching (McKinney, 2019). Realising this, many tertiary institutions at present have embraced digital and mobile learning through the use of various online learning platforms. Google Classroom has been identified as one of the popular such online learning platform.

Google Classroom is an excellent mobile learning platform in promoting interactive, meaningful, fun learning with more flexible, conducive and holistic classroom management. Google Classroom which underpins Vygotsky's Cognitive Development Theory in Zone of Proximal Development is able to enhance and scaffold the pre-service teachers using the educational pedagogy such as Heutagogy, Peeragogy and Cybergogy. In addition, Google Classroom acts as the best medium to fulfill the demands of 21st Century Classroom teaching in line with the 7th and 9th revised Malaysian Educational Development Plan (2013-2025). Hence, the purpose of this study is to identify the pre-service teachers' responses on the use of Google Classroom to learn "English for Effective Communication" in one of the Teacher Education Institute in Northern Peninsular Malaysia.

### 1.1 Google Classroom

Google Classroom is a free web-based platform with various unique functions to facilitate teaching and learning process. Google Apps for Education (GAPE) launched Google Classroom in 2014 (Kaukab Abid Azhar & Nayab Iqbal, 2018). Google Classroom is a tool which facilitates collaboration among learners and lecturers for teaching and learning purposes. There are several benefits of using this online application.

Google classroom has learning features that enables lecturers to create and distribute online notes and assignments for learners for free (Beal, 2017). It is easy to build groups and share notes, assignments and announcements using this Google classroom platform. Google Classroom is a great tool that encourages learners to participate actively in teaching and learning process. According to Nagele (2017), educators can create active lessons which are student-centered, collaborative and unforgettable using Google Classroom, because it provides easy-to-use learning features for students of all categories including adult learners. Google classroom supports paperless policy, can be accessed anywhere and everywhere as long as there is Internet connection. It facilitates easier communication between educators and learners besides learners and their course mates. Google classroom too provide room for educators to give feedback, comments and personalised learning.

According to Chehayeb (2015), Google Classroom Software Engineer mentions that they built this online educational application "to save time". He claims that the features in Google Classroom enable educators to export grades to Google Sheets, easier to update grade point scale, keyboard navigation for entering grades and sort by names on grading page which saves time.

## 1.2 Research Objective

The objective of this study is to identify the pre-service teacher's responses in using Google Classroom to learn "English for Effective Communication" in one of the Teacher Education Institute in Northern Peninsular Malaysia.

## 1.3 Research Question

1. What are the pre-service teachers' responses in using Google Classroom to learn "English for Effective Communication"?

## 2.0 Methodology

A mixed-methods approach was used in this study using a set of questionnaire to survey and semi-structured interview. Purposive sample was used to identify the research respondents. Only the semester 1 students in the preparatory program from a local Teacher Education Institute from northern region, who had used Google Classroom for at least one semester, were selected for this study. All these respondents pursued their course in "English for Effective Communication" a compulsory course in this preparatory program.

In this study, 50 pre-service teachers took part in the quantitative survey. They took part by completing the "Internet Self-efficacy" scale questionnaire. This questionnaire was developed by Eastin and LaRose (2000) and adapted by Shaharane, Jamil and Rod (2016). Alpha Cronbach coefficient was employed to determine the reliability of this questionnaire. The result shows that the questionnaire is reliable with confidence value above 0.90. There are 4 domains in this questionnaire such as "Ease of Access" (4 items), "Perceived Usefulness" (4 items), "Communication and Interaction" (6 items) and "Students' Satisfaction" (4 items). Hence, there are 18 items in this questionnaire. The answers to each of this item used a five point Likert scale.

Ten respondents were selected for the semi-structured interview sessions based on the respondents' responses in the questionnaire. The duration of an interview, on an average, was 30 minutes. The interviews were conducted, primarily, in English language. In order to protect the confidentiality of the participants, special personal codes were assigned to participants at the time of transcription of interviews. This code starts with the capital letter "P" which means "pre", "S" means "service" and "T" represents "teacher". Subsequently, the following digit after these alphabets was to differentiate the respondents by numbering them.

All the interviews were recorded on a mobile application “Voice Recorder Pro”. Field notes were also taken to record observations including any non-verbal gestures that could not have been captured in the digital recording. Interviewees included both male and female pre-service teachers from various age groups from the three main ethnic groups in Malaysia, namely Malay, Chinese and Indian.

The questionnaire was analysed using the descriptive statistic in SPSS version 16.0. The interview transcriptions were analysed using the Thematic Conceptual Matrix (Miles & Huberman, 1994) which transformed the data into dominant themes and patterns.

### **3.0 Results and Discussion**

The finding in this study revealed that the pre-service teachers portray positive responses in all the 4 domains of the questionnaire. The results showed that the 96.2% of the pre-service teachers were satisfied with Google Classroom as an online learning tool, 94% feel that Google Classroom is very useful, 99% ease to access and 91.65% facilitate communication and interaction.

Qualitative data from semi-structured interview is used to support the quantitative findings. Ten pre-service teachers were selected based on their responses in the quantitative data. As mentioned earlier these pre-service teachers were addressed as PST 1, PST 2, PST 3, PST 4, PST 5, PST 6, PST 7, PST 8 and PST 9. The findings of these pre-service teachers were discussed according to 4 domains in the questionnaire namely, “Ease of Access”, “Perceived Usefulness”, “Communication” and “Pre-Service Teachers’ Satisfaction”.

#### **3.1 Ease of Access**

This domain surveyed the easiness to access Google Classroom for teaching and learning purposes among the pre-service teachers. All the pre-service teachers who took part in this study revealed that this application is ease to access. Bar graph in Figure 1.0 shows the percentage obtained for “Ease of Access” domain.

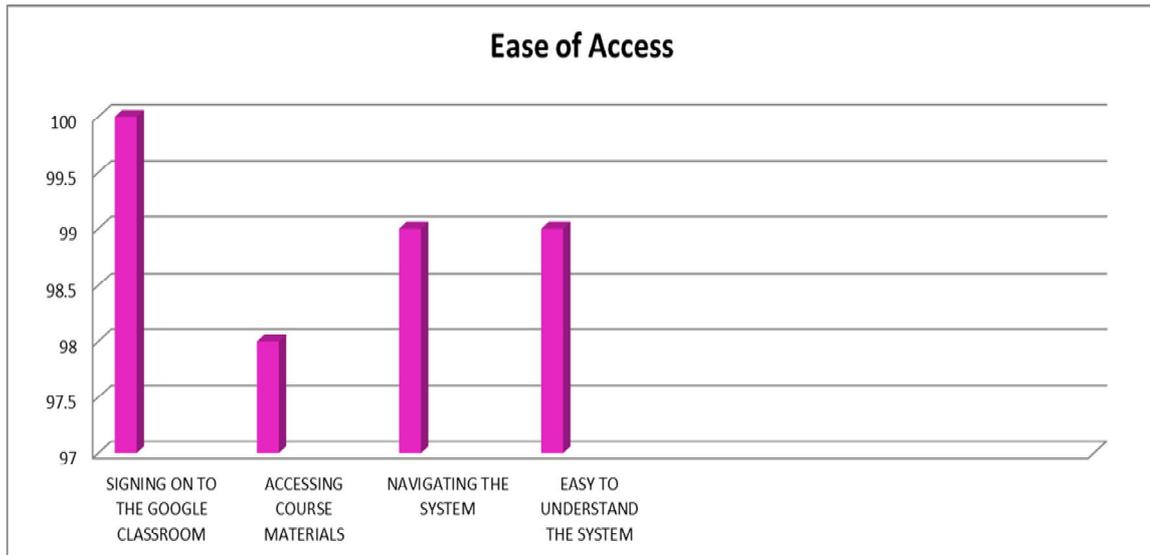


Figure 1: Bar graph on ease of access Google Classroom among the pre-service teachers

All the pre-service teachers (100%, N50) agreed that signing on to the Google Classroom is easy. PST 2 shared that “notes uploaded in Google Classroom can be accessed easily using mobile phones”. This study too identified that 98% of the pre-service teachers agreed that it is easier to access course materials using this application. PST 1, PTS 2, PTS 4, PTS 7, PTS 8 and PTS 9 shared that, “the course material... notes and announcements can be viewed in our hand phones”. PST 1, PTS 2, PTS 3, PTS 5 and PTS 9 believed that, “we save a lot of time searching for notes” in using Google classroom. Navigating and understanding the system is also easy as 99% of the pre-service teachers affirmed these items. Hence, the average score for this domain on ease of access is 99%.

However, PST 3, PST 5 and PST 6 claimed that they do face some difficulties in accessing the old notes, activities and messages. This is because, the most recent messages, notes, activities and discussion appeared at the top, while older messages move further down the stream as new messages are added. This means that it is harder to find older messages, notes, discussions and activities as more and more posts to the stream are made. PST 3, PST 5 and PST 6 found scrolling down looking for some old messages, discussions, notes and activities posted in the Google Classroom can be annoying at times. According to PST 6, “If I wanted to download week 1 notes, then I found it difficult as I had to scroll down and search for it manually”.

Similarly, the study conducted by Kaukab Abid Azhar and Nayab Iqbal (2018) in Pakistan with 12 higher education lecturers who had implemented Google Classroom for at least one semester in their classroom had negative remarks. These lecturers claimed that their students faced difficulties in using Google Classroom due to lack of ease of use and familiarity. This is

because good Internet coverage and sufficient data is required in order to use and download notes using this online learning platform which is impossible in their settings.

### 3.2 Perceived Usefulness

It is important to survey the usefulness of this online application for teaching and learning purposes. Bar graph in Figure 2 shows the percentage of usefulness for all the 4 items examined in this domain.

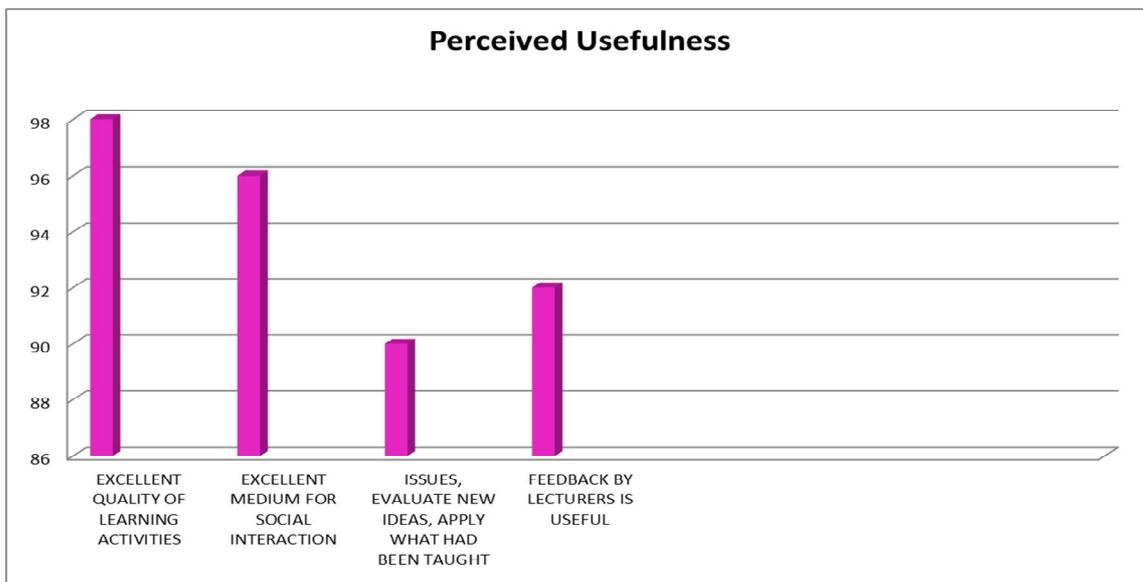


Figure 2: Percentage of the usefulness using Google Classroom

It was identified that 98% of these pre-service teachers agreed that Google Classroom is capable of providing excellent quality of learning activities. These learning activities were freely uploaded by lecturers or course mates. PST2 shared that the “notes ... pass year questions and sample answers uploaded by lecturers” aid them in preparing for the semester examination.

Google Classroom is also an excellent medium for social interaction as 96% of the pre-service teachers affirmed that they can easily discuss with their lecturers and course mates regarding the activities demonstrated. PST 6 claimed that, online discussion by using Google Classroom actually, “break fears and shyness in interacting in the second language”. PST 3 added that, this is because, “some learners are less fluent” and “lack of confidence” to interact in the English language during the face to face interaction sessions in the normal classroom. Therefore, these pre-service teachers are “comfortable to participate in non-face to face interaction” in Google Classroom (PST 1).

Ninety percent of these pre-service teachers too felt that the course activities uploaded and discussed online using this application helped them to examine issues, to evaluate new ideas, and to apply what they had learned. PST 2 added that, the course activities uploaded enable them to work base on their own pace and place which reduce stress and anxiety level.

Online feedbacks provided by the lecturers are also very useful. This is confirmed by 92% of the pre-service teachers who took part in this survey. These online feedbacks allow learners to seek help from course mates to improve themselves. The finding in this study is similar with the findings obtained in a study conducted by Wijaya (2016) in Indonesia. Wijaya found that her respondents too agreed that Google Classroom provides numerous benefits as an important e-learning platform. The respondents also claimed that Google Classroom increased the effectiveness in completing the tasks assigned by the Faculty.

However, PST 4, PST 6, PST 7 and PST 8 would prefer if the feedbacks provided could be hide from other course mates. According to PST 4, PST 6, PST 7 and PST 8, “sometimes my friends see the comments can be embarrassing” so it would be better if “the comments can hide from friends”.

All the comments or feedback provided online in this learning application too goes green with paperless policy by technology integration. Hence, the average score for this domain on “Perceived Usefulness” is 94%.

### 3.3 Communication

Communication is a very important element in teaching and learning process. Healthy communication between learners-lecturer and learners-learners leads to highly successfully collaboration in teaching and learning process. Figure 3 shows the score obtained for all the 6 items in this domain.

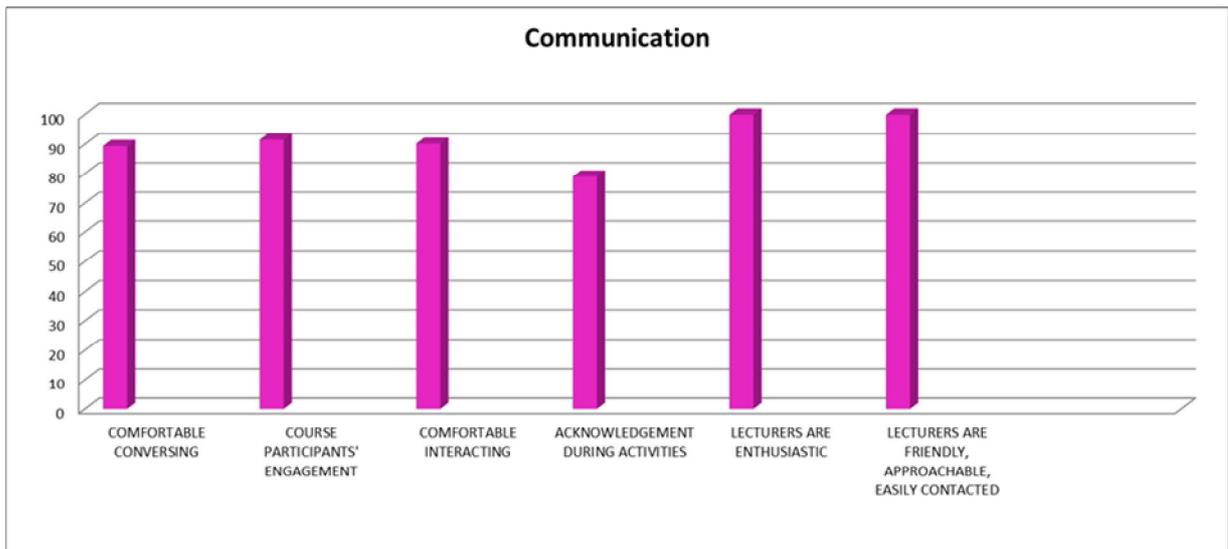


Figure 3: Communication in Google Classroom

A very high percentage of 99.9 percent of the pre-service teachers is very enthusiastic, friendly, approachable and could be easily contacted using Google Classroom. PST 1, PST 2, PST 5, PST 6, PST 8 and PST 9 claimed that they could “post questions”, ask for “clarification” or “reconfirmed their answers” in Google Classroom “anytime and anywhere”. This indicate that the lecturer is friendly and approachable regardless or time and place via this learning platform.

It was also identified that 91.5% of the pre-service teachers agreed that lecturers helped to keep course participants engaged in productive online discussions. PST 3, PST 4 and PST 5 explained that the lecturer keep course participants engaged by “posting questions”, “ask course mates to share opinions and comments”. In other words, the lecturer initiates the online discussion to break the silence and keep the discussion going. The questions posted by lecturer from time to time stimulate and encourage Higher Order Thinking Skills towards learners-centered holistic learning. Whereas, simple comments posted by the pre-service teachers in the comment domain in Google Classroom based on their course mates’ performance act as the online “Parking Lot” in line with the 21st century classroom teaching.

These pre-service teachers (90.2) indicated that they felt comfortable interacting with other participants in the activities posted on Google Classroom. They (89.4%) felt comfortable conversing through this medium for various activities. Pre-service teachers too share their opinions and views in Google Classroom based on the activities. Seventy nine percent of these pre-service teachers agreed that their point of view was acknowledged by other participants during this activity. Hence, the average score for this domain is 91.65%.

These findings revealed that Google Classroom is able to encourage communication in teaching and learning process in line with the 21st Century Classroom learning. The finding in this study is similar with the findings obtained in studies completed by Thurmond and Wambach

(2004) and Ya (2013). Thurmond and Wambach as well as Ya reported that some of the students who did not participate often in face-to-face classroom discussion are more comfortable to participate in the online discussions.

### 3.4 PRE-SERVICE TEACHERS' SATISFACTION

Pre-service teachers' satisfaction played a major role in choosing and using mobile learning platforms. Figure 4 shows bar graph for the scores for 4 items on pre-service teachers' satisfaction in using Google Classroom.

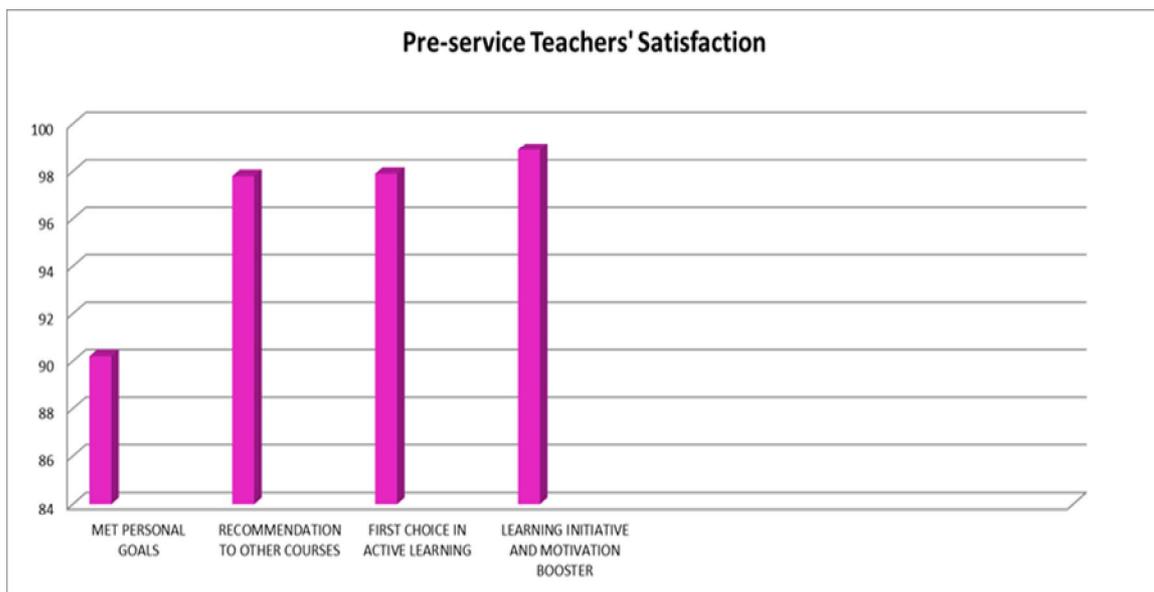


Figure 4: Pre-Service Teachers' Satisfaction in using Google Classroom

A very high percentage of 98.9% of the pre-service teachers confirmed that Google Classroom act as a learning initiative and motivation booster. PST 2 shared that she is “highly motivated” as her course mates posted positive comments for “her posting” on “additional study notes”. These pre-service teachers (97.9%) regards Google Classroom as their first choice in active learning compared to other methods. This is because they received instant “feedback”, “comments”, “appraisal” from their lecturer and course mates (PST 1, PST 2, PST 3, PST 5, PST 7 and PST 9). In fact, 97.8% claimed that they would recommend this method of learning to be applied to other appropriate courses as well since 90.2% agreed that they manage to meet their goals pertaining to certain specific subject through this learning platform.

Hence, the average of 96.2% of these pre-service teachers was actually satisfied using Google Classroom as their learning platform. PST 1, PST 2, PST 3, PST 6, PST 7, PST 8, and PST 9 convey their satisfactory in using this online application since it is “cost free”, and

“mobile”. This result is similar with Shaharane et.al (2016) that many students feel satisfied with Google Classroom because of its effectiveness and efficiency.

#### **4. Conclusion**

The findings in this study brought to light that Google Classroom can be the best learning platform to develop 21st Century classroom teaching pedagogy which is mobile, dynamic, effective, meaningful, easy access and fun. In addition, Google Classroom too save time, space, safe to use, user- friendly, environment friendly and cost effective. It is undeniable that this learning platform enables smart partnership collaboration between lecturers in the same learning institution and lectures from abroad institutions with learners in the same learning platform to aid in facilitating, coaching and mentoring through online intellectual discussion.

In a nut shell, Google Classroom meets the requirement of Malaysian Education Development Plan 2013-2015 and School Transformation Program 2025 (Ts25) to achieve an active and innovative teaching and learning process.

#### **About the author**

DR Julinamary Parnabas is a lecturer at the Language Department in Darulaman Teachers' Training Institution, Malaysia. Her research interests include English literacy, writing practices, ELT, ESL, TESOL, Sports Psychology, ICT integration for language used, Education Psychology, Innovation in Education and educational research. Her work has been published in both local and international journals. She reviews both international and local journals and supervise degree theses.

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