Factors Influencing Teachers' Acceptance of Using Google Classroom in Mathematics Blended Learning

Faktor-Faktor Yang Mempengaruhi Penerimaan Guru Menggunakan 'Google Classroom' dalam Pembelajaran Teradun Matematik

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ABSTRACT

This concept paper will discuss the definition and concept of Blended learning in Mathematics as well as the factors of teachers' acceptance of using Google Classroom in Mathematics Blended Learning based on previous technology acceptance models. The factors of teachers' acceptance of using Google Classroom in Mathematics Blended Learning have been identified through the extensive analysis of the previous literature review. The purpose of this concept paper is to discuss in detail the design and selection of the acceptance factors of teachers using Google Classroom in Mathematics Blended Learning. This concept paper is expected to give a complete picture related to the factors that influence teachers' acceptance of using Google Classroom, especially in Mathematics Blended Learning and serve as a guide to stakeholders and policy implementers to take the initiative to use Google Classroom in the field of Mathematics education in Malaysia a success.

Keywords: Blended learning; Google Classroom; Mathematics

ABSTRAK

Kertas konsep ini akan mengupas tentang definisi dan konsep Pembelajaran Teradun dalam matematik, faktor-faktor penerimaan guru menggunakan Google Classroom dalam Pembelajaran Teradun matematik berdasarkan model atau teori penerimaan teknologi yang terdahulu. Faktor-faktor penerimaan guru menggunakan Google Classroom dalam Pembelajaran Teradun matematik telah dikenal pasti melalui analisis secara ekstensif tinjauan literatur yang lepas. Tujuan penulisan kertas konsep ini adalah untuk membincangkan secara terperinci pembentukan dan penetapan faktor-faktor penerimaan guru menggunakan Google Classroom dalam Pembelajaran Teradun matematik. Hasil penulisan ini diharap dapat memberi gambaran lengkap berkaitan dengan faktor-faktor yang mempengaruhi penerimaan guru menggunakan Google Classroom khususnya dalam Pembelajaran Teradun matematik dan menjadi panduan kepada pemegang taruh dan pelaksana polisi bagi menjayakan inisiatif penggunaan Google Classroom dalam bidang pendidikan matematik di Malaysia.

Kata Kunci: *Pembelajaran Teradun, Google Classroom, Matematik.*

INTRODUCTION

The learning process in the field of education across all branches of knowledge proves the demand of technology integration which forms a learning approach known as Blended Learning (BL). In Blended Learning (BL), the learning environment combines e-learning and face-to-face teaching methods and provides space and opportunities for students to learn at their flexibility (Prasad et al., 2018).

Lopes and Soares (2018) claim that BL has a very exclusive and sometimes confusing definition as the term has almost the same meaning with the other terms and they are used interchangeably. Therefore, it is quite difficult to distinguish BL with other terms such as "Virtual Learning", "Hybrid Learning", "Distance Learning", "Network Learning", "Online Learning", "Web-enhanced Learning", "Internet -enabled Learning" and so on.

Graham (2006) defines Blended Learning as a combination of face-to-face instruction and computer-mediated instruction. Similarly, Garrison & Kanuka (2004) defines Blended Learning as "thoughtful integration of classroom face-to-face learning experiences with online learning". In the context of this article, the Mathematics Blended Learning approach refers to the combination or integration of face-to-face teaching and the use of the Google Classroom learning platform in learning Mathematics. Research by Ab Hajis et al. (2022) found that the integration of Google Classroom in mathematics learning helps teachers greatly to ensure the effectiveness of the implementation Home-Based Teaching and Learning (PDPR) implementation.

In order to ensure the success of Blended Learning approach in mathematics, teachers should plan the teaching and learning process by using Google Classroom as; (1) a support tool for the sharing of mathematics learning materials, (2) a virtual medium of interaction, communication and collaboration between teachers, students and parents or guardians and (3) a tool to assess the students' level of mastery and learning performance in mathematics.

LITERATURE REVIEW

There are a number of factors that have been outlined in evaluating the acceptance and use of technology such as *Perceived Usefulness, Perceived Ease of Use, Social Influence, Facilitating Conditions, Attitude, Subjective Norm, Perceived Behavioural Control* and so on. These factors have been developed from several theories or models such as Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), Technology Acceptance Model (TAM) (Davis, 1986), Technology Acceptance Model 2 (TAM 2) (Venkatesh & Davis, 2000), Technology Acceptance Model 3 (TAM 3) (Venkatesh & Bala, 2008), Theory of Planned Behaviour (TPB) (Ajzen, 1991), Innovation Diffusion Theory (IDT) or Diffusion of Innovation (DOI) (Rogers, 1983), Social Cognitive Theory (SCT) (Bandura, 1989), Model of PC Utilization (MPCU) (Thompson et al., 1991), Motivational Model (MM) (Davis et al., 1992), C-TAM-TPB (Taylor & Todd, 1995), Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) and Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2) (Venkatesh et al., 2012).

These models have been used as a basic theoretical framework in various fields of study to measure and predict factors of acceptance and use of technology through feedback such as perceptions, beliefs, attitudes and so on. Examples of past studies that use the theory or model mentioned are such as Diffusion of Innovation Theory (DOI) (Bokolo et al., 2019; Porter et al., 2016), Social Cognitive Theory (SCT) (San Pedro et al., 2017), Technology Acceptance Model (TAM) (Deepak, 2017; Adukaite et al., 2017; Stockless, 2018; Bazelais et al., 2018; Al-Rahmi et al., 2018; Mailizar et al., 2021) and Unified Theory of Acceptance and Use of Technology (UTAUT) (Sesma, 2020; Raman & Rathakrishnan, 2018; Alabi & Mutula, 2020;