



## THE CONTEXT OF COMPREHENSIVE CHANGE ADOPTION FRAMEWORK ON EDUCATION TRANSFORMATION PROGRAMME

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### ABSTRACT

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This paper investigated the influence of the contexts Workload Expectancy (WE), Constructivists Pedagogical Beliefs (CPB), Self-Efficacy (SE), Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI) and Facilitating Conditions (FC) that influence the Behavioural Intention (BI) among teachers in Malaysian public schools to use the Frog Virtual Learning Environment (VLE) programme. In Malaysia, improving student's outcomes is an area of great interest and is key to creating better future for the nation. The paper used a sample of 999 public-school teachers which consisted of primary school teachers and secondary school teachers across Malaysia who were analyzed using a partial least squares approach via Smart PLS 3.0. The study revealed that performance expectancy, social influence and facilitating conditions leads to behavioural intention to use the FROG VLE programme among the teachers. However, workload expectancy, constructivists' pedagogical beliefs, self-efficacy and effort expectancy did not lead to behavioural intention.

**Contribution/Originality:** This study is expected to help the Malaysian Ministry of Education to revisit and revise the guidelines in Frog VLE implementation. The issues related to Frog VLE implementation have long been discussed and highlighted by various parties, but no studies have been done to investigate this matter seriously. Earlier discussion with teachers and headmasters were conducted which shows that the majority of those interviewed were unhappy with the Frog VLE implementation. The researcher felt that it was urgent to investigate the matter. Solving the recurring issues of additional obligations beyond their capabilities and potentials faced by teachers, would make the government more prepared to equip and enhance teachers' professionalism with decent ICT knowledge and competencies.

### 1. INTRODUCTION

The fusion between technology and education has created unprecedented ways on how learning can be conducted. Technology and its importance to the teaching and learning pedagogy are facing waves of change every day. Indeed, the importance of education cannot be regarded lightly as education is detrimental for human capital development. In Malaysia, such occasion is highlighted in the Eleventh Malaysia Plan 2016-2020 (Eleventh Malaysia Plan, 2015). Accordingly, the Malaysia Education Blueprint 2013-2025 has highlighted the need to improve the education to nurture young minds (Malaysia Education Blueprint, 2013). Thus, the Frog

VLE (virtual learning environment) programme that leverages learning through the rapid advancement of ICT was introduced.

The RM4.077billion project is foreseen to greatly enhance the teaching and learning pedagogy throughout public schools in Malaysia (Fong, 2016). Unfortunately, problems arose amidst the implementation and were publicly voiced by the teachers in the local newspapers (Aziz, 2016). It was documented by an audit report from the Ministry that the Frog VLE programme utilization rate was very low among the teachers, students and parents which was inconsistent with the goal of having such a state-of-the-art initiative (National Audit Department, 2014).

It is apparent that this transformation programme is having change related issues among the stakeholders especially among the teachers since they will be the ones to undertake this initiative for the students. Hence, this research explored the factors influencing teachers' adoption of using the application. Additionally, this study proposed a new change framework that will hopefully aid in assessing change adoption in education transformation programmes.

## 2. BACKGROUND

Over the years there has been much research in regards to organizational change. While the change itself is becoming more volatile, scholars are struggling to find new strategies that can help to favour the organizational change as change is inevitable (Ahearne, Lam, Mathieu, & Bolander, 2010). One of the areas of most concern for organizational change is resistance to change. There is ample research related to resistance to change since it is still the most critical factor for organizational change success.

Past research reveals disturbing figures of current organizational change failure rate of 70% (Maurer, 2010) and above (Al-Haddad & Kotnour, 2015; Decker et al., 2012). The current figures still remain high as nothing much has changed (Kotnour, Al-Haddad, & Camci, 2015; Senge et al., 1999). This study practically addressed this resistance to change in the form of dispositional resistance (DR) as people differ in how they respond to change (Oreg et al., 2008). This concept embodies individuals' differences whether they accept or resist change.

Another area of interest in change management study is change readiness (RD). In this case, the importance of having being ready for change has been recommended in past (Armenakis, Harris, & Mossholder, 1993) and present research (Rafferty, Jimmieson, & Armenakis, 2013). It was found that change readiness can alter the cognitions of individual in an effort to facilitate change (Elias, 2009). Arguably, Armenakis et al. (1993) mentioned that readiness to change can increase the potential for change efforts to be more effective while it may forestall the likelihood of change resistance happening. The statement was further supported by Rafferty et al. (2013) work as it was found that individuals' reactions within the organization will significantly affect the successful implementation of change. The concept of change readiness means needing to know how far everyone is ready to embrace or resist change.

Thus, it is paramount for every institution to ensure that every change initiative brings many benefits to organization although it can be difficult for some (Hernandez, 2016). Change helps to develop better ways of thinking where individuals are encouraged to think critically to develop new or better ways of doing things. Research by Kotter (1996) who is an expert in change discovered that change can help in empowering people.

### 2.1. Problem Statement

Unfortunately, the Frog VLE programme was found to have several shortcomings (Abdullah, Mohamed, Nik, & Mansor, 2013). The major issue was the level of acceptance and utilization among the teachers despite the government's huge effort and spending. As such, this failure is measured by the use or the number of log ins to the Frog VLE website which was astonishingly low (Mahizer & Mohd, 2016).

Clearly, the utilization rate was the major concern as the goal of achieving a world class education seems to be far off if this platform was not being fully utilized by them. Several preliminary studies have been conducted to comprehend the issues of Frog VLE (Abdullah et al., 2013; Kaur & Hussein, 2015; Mahizer & Mohd, 2016; Thah, 2014; Umm & Fariza, 2014). It was found that the teachers agreed that Frog VLE can assist in developing the students (Umm & Fariza, 2014) but however the utilization rate remains low as reported earlier.

Due to these growing concerns it was necessary to explore and comprehend this issue from a different approach. An indepth study was needed to evaluate why the utilization rates among the teachers were at low levels. It was imperative to assess the teachers' behavioural intention in using this system since they are the ones to deliver the system to the students.

## 2.2. Research Objective

This descriptive research will be done to fulfil the entire research objectives and to answer the research question. Descriptive research is undertaken to ascertain and be able to describe the characteristics of the variables of interest in a situation (Sekaran & Bougie, 2016) and is based on some previous understanding of the nature of the research problem (Sundram et al., 2016).

This study adopted the UTAUT model as its framework with the extension of additional predictors. The unified theory of acceptance and use of technology (UTAUT) has been used extensively in information system and other fields including marketing, management and education (Venkatesh, Thong, & Xu, 2016). The nature of UTAUT2 has given many opportunities for several studies to be carried out. This is confirmed by Venkatesh et al. (2016) whose work mentioned that the main effects of UTAUT/UTAUT2 should serve as the baseline model of future research. Its' similarities with other theories and models have position itself to be a strong core theory and a basis for integration. This research adopted UTAUT model as the research framework since it fits to the context of information system in education setting, in which UTAUT is one of the most established model to be used in the field of information system (Venkatesh et al., 2016). Thus, this study investigated the influence of the contexts (workload expectancy (WE), constructivists' pedagogical beliefs (CPB), self-efficacy (SE), performance expectancy (PE), effort expectancy (EE), social influence (SI) and facilitating conditions (FC)) that influence behavioural intention (BI) to use the Frog VLE programme among the teachers.

Workload can be defined as the amount of time consumed by the teachers in performing various tasks ranging from meetings, co-curricular activities, teaching and learning and other related official tasks as a teaching during or after school hours (Azita, 2012). This definition is further supported by Punia and Kamboj (2013) and Sharifah, Suhaida, and Soaib (2017) in which they expounded workload as the amount of time taken by teachers to set up their official duties both inside and outside school hours. Additionally, a study by Ferguson, Frost, and Hall (2012) discovered that workload is one of the significant predictors of depression and anxiety among the teachers. The study mentioned that the teachers who have left the profession have a lower level of job satisfaction.

Collectively, all of the authors discussed earlier opined that the workload borne by the teachers is increasing overtime and has somewhat causing many negative spillover effects to the students. A recent study found that workload has a significant positive affect on turnover intention (Askiyanto, Soetjipto, & Suharto, 2018).

Therefore, the hypothesis for workload expectancy was hypothesized as:

*H1: There is a significant relationship between workload expectancy and behavioural intentions.*

Pedagogical beliefs refer to preferred ways of teaching by teachers. These beliefs are generally categorized into the knowledge transmission view or the knowledge construction view (Wong, Wong, Lam, & Zhang, 2009). Teachers who embrace the knowledge transmission view are inclined to prepare and conduct lessons in a teacher-centered and content-oriented manner. They prefer didactic instruction and act as the sole provider of knowledge. Students accordingly act as passive recipients of content knowledge (Teo, 2010).

By comparison, the knowledge construction view advocates that students should actively make sense of their learning experiences while teachers design meaningful learning experiences and scaffold students' sense making. Teachers who hold the constructivist view tend to emphasize more student-centered activities that facilitate students' knowledge construction through active self-reflection, peer interaction, and meaning-making process (Chan & Elliott, 2004; Wong et al., 2009).

While transmissive and constructivist pedagogies might seem to be polar opposites, a given teacher's pedagogical beliefs cannot, in reality, be categorized solely as either. Rather, there is significant evidence that teachers can and do simultaneously hold these seemingly contradictory pedagogical beliefs, and alternate between student- and teacher-centered teaching practices (Crespo, 2016).

Therefore, the hypothesis for pedagogical belief was hypothesized as:

*H2: There is a significant relationship between pedagogical belief and behavioural intentions.*

The teacher's sense of efficacy is a critical component to successful classrooms and ranks as a significant teacher characteristic associated with instructional quality and student achievement (Guo, Connor, Yang, Roehrig, & Morrison, 2012; Tucker et al., 2005). Accordingly, it is one of the most studied aspects of the classroom context. Teacher self-efficacy has been shown to positively affect teachers' beliefs about teaching and behaviors (Cho & Shim, 2013; Skaalvik & Skaalvik, 2007; Tschannen-Moran & Hoy, 2001) thereby influencing the classroom instruction and ultimately affecting student outcomes (Zee & Koomen, 2016).

More specifically, high teacher self-efficacy has been found to be related to higher end of the year goals for students, positive teacher practices and policies used in the classroom, and innovative classroom methods (Caprara, Barbaranelli, Steca, & Malone, 2006; Evers, Brouwers, & Tomic, 2002). Additionally, teachers with high self-efficacy beliefs are more likely to: (a) implement curriculum innovations; (b) use classroom management and instructional methods that encourage student autonomy; (c) manage classroom problems effectively; (d) keep students on task; and, (e) have fruitful collaborative relationships with colleagues and parents that contribute to sustained work satisfaction and higher teacher retention (Betoret, 2006; Caprara et al., 2006).

Increased levels of teaching self-efficacy have been associated with more mastery-oriented approaches to instruction and higher expectations for students (Cho & Shim, 2013; Midgley, Anderman, & Hicks, 1995; Wolters & Daugherty, 2007). Therefore, the hypothesis for self-efficacy was hypothesized as:

*H3: There is a significant relationship between self-efficacy and behavioural intentions.*

Performance expectancy is defined as the degree to which an individual believes that he or she can increase job performance through utilizing information system (Venkatesh, Morris, Davis, & Davis, 2003). In the past study made by Venkatesh et al. (2003) it was found that performance expectancy was the biggest predictor of behavioral intention to use IT. To highlight, perceived usefulness is the frequently used predictor to decide adoption rate among users (Davis, 1989). Therefore, by applying the performance expectancy context, it is expected that the teachers will use Frog VLE since many of the teachers agreed that the system (Umm & Fariza, 2014).

A study found that teaching using virtual learning platform can improve students' learning productivity (Wang, Wu, & Wang, 2009). Ahmad and Love (2013) reported that individual with high performance expectancy will accept mobile learning rather than the individual with lower performance expectancies. Therefore, it is hypothesized that;

*H4: There is significant relationship between performance expectancy and behavioural intentions.*

Effort expectancy is defined as the degree of ease that individuals will have when they use an information system Venkatesh et al. (2003). Past research indicates that individuals' effort expectancy is influenced by demographics profile. For example, effort expectancy will be a stronger predictor of behavioral intention for women (Viswanath Venkatesh, Morris, & Ackerman, 2000). A study found that virtual learning that needs lesser instruction can influence behavioral intention to use (Ahmad & Love, 2013). This is parallel to an evident found by Mohiddin and Khalid (2014) which mentioned that one of the reasons why teachers did not utilize the system was

due to a lack of guidance on how to use the system. Therefore, the hypothesis for effort expectancy was hypothesized as:

*H5: There is a significant relationship between effort expectancy and behavioral intention.*

Social influence is defined as the degree a person perceives it is important that others believe he or she could use the information system (Venkatesh et al., 2003). Past studies found that social influence is a predictor to individual's behavioral intention to use new technology (Venkatesh & Davis, 2000). In this study, social influence refers to the teachers colleagues influence to use the virtual learning platform.

A study found that teachers that are influenced by peers were most likely to have higher behavioral intention to use an information system (Raman & Rathakrishnan, 2018). Therefore, the hypothesis for social influence is hypothesized as:

*H6: There is significant relationship between social influence and behavioural intentions.*

Facilitating conditions is defined as the degree to which a person believed that the technical infrastructure supports the information system whenever needed (Venkatesh et al., 2003). Additionally, Teo (2010) highlighted that facilitating conditions refers to the existing factors that are present in the environment which exert and influence over a person's desire to perform a task. Past research indicates that facilitating conditions have profound impact on teachers' intention to use technology as compared to other predictors (Wong, Teo, & Russo, 2013). This in agreement with the research by Ngai, Poon, and Chan (2007) which found that facilitating conditions to have a positive effect on teachers' attitude to computer use. Therefore, the hypothesis for facilitating conditions is hypothesized as:

*H7: There is significant relationship between facilitating conditions and behavioral intentions.*

### 3. DATA ANALYSIS

The data was collected via questionnaire. A sample of 999 public-school teachers which consisted of primary school teachers and secondary school teachers across Malaysia who were analyzed using a partial least squares approach via Smart PLS 3.0. through Partial Least Square version 3.01. To begin with, each data variable was coded and entered in Statistical Package for the Social Sciences (SPSS) version 24. Starting with the first section in the questionnaire, demographic profile followed by the six-measurement context (WE, PB, SE, PE, EE, SI, and FC), BI, CL, ATC, UB and CA variables.

As mention earlier there are six considerations to explain the measurement model. First is the nature of the construct. Second consideration is the direction of causality. The third consideration is characteristics of indicators. The fourth consideration is the indicators intercorrelations. The fifth consideration is the indicator relationship with construct antecedents and consequences. Last is the consideration of measurement error and collinearity.

Thus, based on these six considerations, both theoretically and empirically to justify the measurement model for the constructs. The utilization of correct measurement model supports the content validity of the constructs, represents the structural relationships within which these constructs are embedded, and ultimately increases the usefulness of UTAUT and UTAUT2 for the current study.

#### 3.1. Reliability

The indicator reliability of the measurement model is measured by looking at the item's loadings. A measurement model is suggested to have satisfactory indicator reliability when each of the loadings is not less than 0.4. However, the items can be deleted if the loadings are 0.4 and below and give impact to the Cronbach's alpha value. Based on the analysis, all items in the measurement model exhibit loadings ranging from a lower bound of 0.666 to an upper bound of 1.233. Though the lower bound is less than 0.4, however, the value does not affect the

Cronbach's alpha, CR, and AVE. The Table 1 shows the loadings for each item. Based on the results, all items used for this study have demonstrated a satisfactory indicator reliability.

Table-1. AVE, CR, and Cronbach's Alpha for each construct.

| Construct                            | Cronbach's Alpha | Composite Reliability | Average Variance Extracted (AVE) |
|--------------------------------------|------------------|-----------------------|----------------------------------|
| 1. Attitude toward Change            | 0.936            | 0.950                 | 0.791                            |
| 2. Behavioural Intention             | 0.903            | 0.939                 | 0.838                            |
| 3. Change Acceptance                 | 0.894            | 0.949                 | 0.902                            |
| 4. Change Leadership                 | 0.886            | 0.922                 | 0.747                            |
| 5. Constructivist Pedagogical Belief | 0.871            | 0.912                 | 0.720                            |
| 6. Effort Expectancy                 | 0.884            | 0.920                 | 0.742                            |
| 7. Facilitating Conditions           | 0.839            | 0.892                 | 0.674                            |
| 8. Moderating Effect 1               | 0.972            | 0.974                 | 0.759                            |
| 9. Moderating Effect 2               | 1.000            | 1.000                 | 1.000                            |
| 10. Performance Expectancy           | 0.893            | 0.925                 | 0.756                            |
| 11. Self Efficacy                    | 0.869            | 0.902                 | 0.605                            |
| 12. Social Influence                 | 0.843            | 0.906                 | 0.763                            |
| 13. Usage Behaviour                  | 0.935            | 0.968                 | 0.939                            |
| 14. Workload Expectancy              | 0.790            | 0.863                 | 0.614                            |

Table-2. Structural model path coefficients.

|  | Direct Effects | 95% of CI's of the Direct Effect | Standard Deviation (STDEV) | t Value | Signification (p<0.05) | Decision |
|--|----------------|----------------------------------|----------------------------|---------|------------------------|----------|
| 1. Attitude toward Change -> Change Acceptance_                | -0.037         | (-0.109, 0.060)                  | 0.043                      | 0.855   | 0.393                  | No       |
| 2. Behavioural Intention_ -> Change Acceptance_                | 0.462          | (0.371, 0.548)                   | 0.046                      | 9.977   | 0.000                  | Yes      |
| 3. Behavioural Intention_ -> Usage Behaviour                   | 0.337          | (0.209, 0.466)                   | 0.065                      | 5.163   | 0.000                  | Yes      |
| 4. Change Leadership -> Usage Behaviour                        | 0.468          | (0.336, 0.587)                   | 0.064                      | 7.278   | 0.000                  | Yes      |
| 5. Constructivist Pedagogical Belief -> Behavioural Intention_ | 0.091          | (-0.013, 0.182)                  | 0.049                      | 1.879   | 0.061                  | No       |
| 6. Effort Expectancy -> Behavioural Intention_                 | 0.112          | (-0.015, 0.223)                  | 0.063                      | 1.768   | 0.077                  | No       |
| 7. Facilitating Conditions -> Behavioural Intention_           | 0.179          | (0.048, 0.307)                   | 0.064                      | 2.792   | 0.005                  | Yes      |
| 8. Moderating Effect 1 -> Usage Behaviour                      | -0.041         | (-0.101, 0.014)                  | 0.029                      | 1.396   | 0.163                  | No       |
| 9. Moderating Effect 2 -> Change Acceptance_                   | 0.010          | (-0.071, 0.099)                  | 0.044                      | 0.219   | 0.826                  | No       |
| 10. Performance Expectancy -> Behavioural Intention_           | 0.319          | (0.180, 0.447)                   | 0.066                      | 4.833   | 0.000                  | Yes      |
| 11. Self-Efficacy -> Behavioural Intention_                    | -0.013         | (-0.133, 0.108)                  | 0.061                      | 0.215   | 0.830                  | No       |
| 12. Social Influence -> Behavioural Intention_                 | 0.152          | (0.018, 0.284)                   | 0.069                      | 2.217   | 0.027                  | Yes      |
| 13. Workload Expectancy -> Behavioural Intention_              | 0.066          | (-0.042, 0.184)                  | 0.055                      | 1.203   | 0.229                  | No       |



### 3.2. Goodness-Fit Index

Square Root Mean Square Residual (SRMR) is the square root of the mean of the squared residual that indicate the mean of the residuals between the observed and the estimated input matrices (Sarstedt, Ringle, Smith, Reams, & Hair, 2014). SRMR ranged from zero to one, the closer the value to zero, the better the goodness-of-fit index (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014).

To examine the measurement characteristics of the scale, this study has taken the items of the variables with the fundamental conditions of plausibility and identification have been met. The goodness of fit indices for the measurement model are by looking at the SRMR value, 0.057.

### 3.3. Structural Model Path Coefficients

The path coefficients have standardised the values approximately falls between -1 and +1 bound. Estimated path coefficients close to +1 represent strong positive bounds. As shown in the Table 2, by looking at the value in direct effects column shows that the nearer to +1 bounds indicates a strong positive relationship and statistically it is significant.

### 3.4. Coefficient of Determination

This coefficient is a measure of the model's predictive power. It is calculated as the squared correlation between a specific endogenous construct's actual and predicted values. The  $R^2$  value for BI is 0.615 making moderate predictive accuracy Table 3. Whereas for CA is 0.198 which is considered as low predictive accuracy, whereas for UB is 0.613 which is considered as moderate predictive accuracy.

Hence, in Table 3, 77.41% of the variation in CS is determined by the linear relationship between CS and OE. While there is 69.97% of the variation in MCS is determined by the linear relationship between MCS and OE.

Table-3. Coefficient of Determination.

| Variables                | R Square | R Square Adjusted |
|--------------------------|----------|-------------------|
| 1. Behavioural Intention | 0.615    | 0.608             |
| 2. Change Acceptance     | 0.198    | 0.192             |
| 3. Usage Behaviour       | 0.613    | 0.610             |

## 4. FINDINGS

Based on the research findings, BI within education programme is found to be significantly positive by their level of PE, SI, FC, UB and CAc. CL and ATC are found to have non-significant moderating effects on the relationship between BI and CA; and, BI and UB. A summary of the research hypotheses Table 4 is provided under each variables and hypotheses as in the table below. Total of five hypotheses (H4, H6, H7, H10, and H11) are supported by the empirical findings as listed in Table 4.

## 5. DISCUSSIONS

To validate the proposed hypothesis and the structural model, the path coefficient between two latent variables is assessed. Assessing the path between WE and BI in Table 5, the path coefficient value needs to be at least 0.1 to account for a certain impact within relationship (Hair, Ringle, & Sarstedt, 2011). Assessment of the path coefficient shows that the proposed hypothesis is supported. From the analysis, the hypothesis is not significant at the level of 0.5, has an expected positive sign direction with value of 0.066 and consists of a path coefficient value ranging from - 0.042 to 0.184. The t-value is 1.203. Based on the analysis, it shows that BI is not influenced directly by WE. As a result, hypothesis H0 is supported.

Table-4. Summary of research hypotheses.

| No. | Variables | Abbreviation | Hypotheses   | Result               |
|-----|-----------|--------------|--|----------------------|
| 1   | WE and BI | H1<br>H0     | H1: There is a significant relationship between workload expectancy and behavioural intention.<br>H0: There is no significant relationship between workload expectancy and behavioural intention.        | Failed to support H1 |
| 2   | PB and BI | H2<br>H0     | H1: There is a significant relationship between pedagogical belief and behavioural intention.<br>H0: There is no significant relationship between pedagogical belief and behavioural intention           | Failed to support H1 |
| 3   | SE and BI | H3<br>H0     | H1: There is a significant relationship between self-efficacy and behavioural intention.<br>H0: There is no significant relationship between self-efficacy and behavioural intention.                    | Failed to support H1 |
| 4   | PE and BI | H4<br>H0     | H1: There is a significant relationship between performance expectancy and behavioural intention.<br>H0: There is no significant relationship between performance expectancy and behavioural intention   | H1 is supported      |
| 5   | EE and BI | H5<br>H0     | H1: There is a significant relationship between effort expectancy and behavioural intention.<br>H0: There is no significant relationship between effort expectancy and behavioural intention.            | Failed to support H1 |
| 6   | SI and BI | H6<br>H0     | H1: There is a significant relationship between social influence and behavioural intention.<br>H0: There is no significant relationship between social influence and behavioural intention.              | H1 is supported      |
| 7   | FC and BI | H7<br>H0     | H1: There is a significant relationship between facilitating conditions and behavioural intention<br>H0: There is no significant relationship between facilitating conditions and behavioural intention. | H1 is supported      |

As for second hypothesis the path between PB and BI in Table 5, the path coefficient value needs to be at least 0.1 to account for a certain impact within the relationship (Hair et al., 2011). Assessment of the path coefficient shows that the proposed hypothesis is not supported. From the analysis, the hypothesis is not significant at the level of 0.5, has an expected positive sign direction with value of 0.091 and consists of a path coefficient value ranging from -0.013 to 0.182. The t- value is 1.879. Based on the analysis, it shows that BI is not influenced directly by PB. As a result, hypothesis H<sub>0</sub> is supported.

Next was assessing the path between SE and BI in Table 5, the path coefficient value needs to be at least 0.1 to account for a certain impact within the relationship (Hair et al., 2011). Assessment of the path coefficient shows that the proposed hypothesis is not supported. From the analysis, the hypothesis is not significant at the level of 0.5, has an expected negative sign direction with value of -0.013 and consists of a path coefficient value ranging from -0.133 to 0.108. The t-value is 0.830. Based on the analysis, it shows that BI is not influenced directly by SE. As a result, hypothesis H<sub>0</sub> is supported.

Assessing the path between PE and BI, the path coefficient value needs to be at least 0.1 to account for a certain impact within the relationship (Hair et al., 2011). Assessment of the path coefficient shows that the proposed hypothesis is supported. From the analysis, the supported hypothesis is significant at least at the level of 0.5, has an expected positive sign direction with value of 0.319 and consists of a path coefficient value ranging from



0.180 to 0.447. The t-value is 4.833. Based on the analysis, it shows that BI is influenced directly by PE. As a result, hypothesis H<sub>1</sub> is supported.

Assessing the path between EE and BI, the path coefficient value needs to be at least 0.1 to account for a certain impact within the relationship (Hair et al., 2011). Assessment of the path coefficient shows that the proposed hypothesis is not supported. From the analysis, the hypothesis is not significant at the level of 0.5, has an expected positive sign direction with value of 0.112 and consists of a path coefficient value ranging from -0.015 to 0.223. The t-value is 1.768. Based on the analysis, it shows that BI is not influenced directly by EE. As a result, hypothesis H<sub>0</sub> is supported.

Determining the path between SI and BI, the path coefficient value needs to be at least 0.1 to account for a certain impact within the relationship (Hair et al., 2011). Assessment of the path coefficient shows that the proposed hypothesis is supported. From the analysis, the supported hypothesis is significant at least at the level of 0.5, has an expected positive sign direction with value of 0.152 and consists of a path coefficient value ranging from 0.018 to 0.284. The t-value is 2.217. Based on the analysis, it shows that BI is influenced directly by SI. As a result, hypothesis H<sub>1</sub> is supported.

Judging the path between FC and BI, the path coefficient value needs to be at least 0.1 to account for a certain impact within the relationship (Hair et al., 2011). Valuation of the path coefficient shows that the proposed hypothesis is supported. From the analysis, the supported hypothesis is significant at least at the level of 0.5, has an expected positive sign direction with value of 0.179 and consists of a path coefficient value ranging from 0.048 to 0.307. The t-value is 2.792. Based on the analysis, it shows that BI is influenced directly by FC. As a result, hypothesis H<sub>1</sub> is supported.

**Table-5.** Direct effect relationship between WE, CPB, SE, PE, EE, SI, FC and BI.

| Variables    | Direct Effect | 95% of Cis of the Direct Effect | Standard Deviation (STDEV) | t-Value | Signification (p<0.05) |
|--------------|---------------|---------------------------------|----------------------------|---------|------------------------|
| 1. WE ->BI   | 0.066         | (-0.042, 0.184)                 | 0.055                      | 1.203   | 0.229                  |
| 2. CPB ->BI  | 0.091         | (-0.013, 0.182)                 | 0.049                      | 1.879   | 0.061                  |
| 3. SE > BI   | -0.013        | (-0.133 0.108)                  | 0.061                      | 0.215   | 0.830                  |
| 4. PE > BI   | 0.319         | (0.180 0.447)                   | 0.066                      | 4.833   | 0.000                  |
| 5. EE > BI   | 0.112         | (-0.015 0.223)                  | 0.063                      | 1.768   | 0.077                  |
| 6. SI > BI   | 0.152         | (0.018 0.284)                   | 0.069                      | 2.217   | 0.027                  |
| 7. FC - > BI | 0.179         | (0.048, 0.307)                  | 0.064                      | 2.792   | 0.005                  |

## 6. CONCLUSION

Some of the findings from the study supported the identified problem. This research identified and evaluated the relationship between BI and PE, SI, and FC in assessing change adoption in education transformation programmes.

Based on the reviews, seven hypotheses were produced, and a research model created. Based on the findings, there three significant hypotheses and four failed to support the significant hypotheses. Facilitating conditions and social influence were found to be significant predictors of behavioral intention among the teachers and this finding aligned with the past research (Raman & Rathakrishnan, 2018). This finding possibly suggest that the teachers need to be in a network of positive peers who supports the virtual leaning environment to increase the utilization of the system. Aside from that, good infrastructure like accessibility to desktops or laptops and good internet connectivity may also contribute to increased rates of utilization of the system. Meanwhile, the remaining

hypotheses were found to be not supported. This situation potential suggested that the findings revealed that the context of this study is different and some of the features of cloud computing, contents and portals are different and did not take into account in prior studies.

By testing all the hypothesized relationships of the model, this research provided a better vision in understanding the grand design of the problem of this study. Future research should opt for a different sampling technique; for example, performing multistage sampling technique for more nuance in the results and include demographic elements among the school teachers to get richer data since it allows comparative studies among different demographic groups.

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