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# The Use of the UTAUT Model in the Adoption of E-Learning Technologies:
## An Empirical Study in France Based Banks

David Abdou, Sino-French Institute Renmin University of China, Suzhou, China
Sajjad M. Jasimuddin, Kedge Business School, Marseille, France
https://orcid.org/0000-0003-2627-9241

## ABSTRACT

E-learning is treated as a learning approach in higher education worldwide. E-learning systems are all about using digital technologies to acquire, store, and process learning resources. This article aims to examine the end-users' acceptance of e-learning in the banking sector using the unified theory of acceptance and use of technology (UTAUT) model. The paper reviews the extant literature from which a theoretical model is developed and tested empirically in the French context. The UTAUT is extended by incorporating one additional factor (top management support). A quantitative approach based on cross-sectional survey was used to collect data from 133 bank officials. Data was analyzed using, statistical software SPSS version 15. The article successfully confirms the applicability of e-learning in France-based banks. The model developed in this paper helps the practitioner to understand the factors that should be given emphasis to ensure the effective development and acceptance of the e-learning technologies in a commercial setting.

## KEYWORDS

Bank, E-Learning Technology, France, Technology Acceptance Model

## INTRODUCTION

The rapid advancement of information and communication technologies (ICT) has led to the development of new applications and services. The impact of digital technologies is so wide that the successful organisations have undergone a 'digital business transformation' in this knowledge-based society (Islam et al., 2017). Against this backdrop, electronic learning (E-learning) technology is widely used as a teaching and learning approach in higher education worldwide. The term E-learning was initially coined by Cross in 1998 (Dublin & Cross, 2002). E-learning technologies is all about using digital technologies to acquire, store and process information in learning environment. Sangra et al. (2012) define E-learning as an approach to teaching and learning is based on the use of digital technologies for improving access to training, communication and interaction. Holmes and Gardner (2006) define it as "online access to learning resources, anywhere and anytime (p. 14)." An E-learning

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application offers educators and learners a highly user-oriented system that focuses on the lecture materials for learning purposes (Shee & Wang, 2008).

E-learning is seen as an extension of human abilities as digital technologies help process and exchange educational materials between learners and service providers (instructors) in a virtual environment. Communication in E-learning is not location-bound as face to face (F-2-F) contact is (Jasimuddin, 2014; Jasimuddin et al., 2014). For example, Ally (2008) argues that E-learning allows learners to access electronic materials without a physical interaction with an instructor. Contrarily, there are reasons to end-users' dissatisfaction and rejection of e-learning system use such as lack of cues, lack of F-2-F interaction, non-verbal communication, isolation, and problems with network connectivity (Buckley, 2003). Moreover, there are huge investments made to support the adoption of E-learning applications. The success of the E-learning implementation requires critical engagement of the end-users. Against this backdrop, identifying the variables that affect the adoption of E-learning tools is an important area of research.

Technology Acceptance Model (TAM) scholars have contributed in developing the Unified Theory of Acceptance and Use of Technology (UTAUT) (Alalwan et al., 2017; Almuraqab & Jasimuddin, 2016; Bhatiasevi, 2016; Dwivedi et al., 2019; Almuraqab et al., 2017). Uğur and Turan (2018) contend that a number of studies were conducted on E-learning acceptance, mostly with the use of UTAUT Model. There are scholars who employed the UTAUT to investigate factors that influence the adoption and use of educational technology by students of a higher education institution in developing countries (Yakubu & Dasuki, 2019). Parallel to this, Uğur and Turan (2018), for example, investigate the determinants of acceptance of academic E-learning technologies with the use of proposed modified UTAUT model in Turkey.

Although there is enough research on the perception of the end-users on the intention to use the E-learning technologies in the context of higher education, there is limited discussion in the literature on the perception of the end-users from the commercial enterprises on the intention to such technologies. The lack of knowledge about the viewpoint of the end users from companies may limit the value of E-learning technologies in business sector. Hence, this study intends to investigate the end-users' acceptance of E-learning in banking sector using Venkatesh et al.'s (2003, 2012) UTAUT model. The insights of Venkatesh et al. (2003, 2012) inspired the theoretical foundation of this study.

In the next section, the conceptual framework is presented, and hypotheses are proposed. The research hypotheses are tested using a sample of French companies in banking sector. The research methodology and analysis of results are then presented. Following a discussion of the results, we highlight its implications and give suggestions for future research.

## THEORETICAL PERSPECTIVE AND RESEARCH HYPOTHESES

This section reviews the extant literature to propose a research model. The model incorporates the key issues surrounding the technology adoption to help the successful E-learning applications in France-based bank. The UTAUT provides an underlying rationale, which leads to establish the theoretical foundation that guides this research.

### Performance Expectancy

E-learning can only be accepted by employees if they perceive its usefulness in terms of their working needs. Performance expectancy is described as "the degree to which the user expects that using the system will help him/her to attain gains in job performance" (Venkatesh et al., 2003). Venkatesh et al. (2003) proved that performance expectancy was the most important explanatory factor in the UTAUT model. Performance expectancy involves the perceptions of the end-users on the benefits such as improving performance and increasing efficiency that could be achieved through the use of e-learning technology.

If an end-user is convinced that this new technology is more efficient and productive, then he/she will be encouraged to adopt e-learning. Performance expectancy is measured by the end-users' perception of adopting e-learning in terms of benefits (i.e., saving time and money), facilitating interaction with instructors and other learners, and thereby improving learning quality.

Several scholars (e.g., Uğur &Turan, 2018; Ahmed at el., 2017; AlAwadhi & Morris, 2008; Venkatesh et al., 2003; Almuraqab, & Jasimuddin, 2017, Venkatesh & Davis, 2000) suggest that there is a linkage between performance expectancy and behavioral intention to use E-learning technology. Performance expectancy were determined to be salient factors that positively influence the actual usage of e-learning technologies (Yakubu & Dasuki, 2019). According to Uğur and Turan (2018), performance expectancy has an effect on behavioural intention to use E-learning technologies. Tarhini et al.'s (2017) in their study showed that behavioral intention to use E-learning technologies was significantly influenced by performance expectancy. It is argued that using e-learning systems helps an individual to attain gains in personal performance. Hence, performance expectancy is kept as an employee's e-learning acceptance determinant. Therefore, we have formulated the following hypothesis:

*Hypothesis 1: There is a positive relationship between performance expectancy and behavioural intention to use E-learning technology.*

## Effort Expectancy

Effort expectancy has a significant impact on the adoption of e-learning technologies. Effort expectancy is defined as the degree of ease associated with the use of the system (Venkatesh et al., 2003). This construct rests on ease of use perception. The end-users would like to use the E-learning technologies because it is simple, easy to access and use. The perceived ease to technology use has influence on an end-user's intension of its usefulness. Several authors (e.g., Giannakos & Vlamos, 2013; Uğur & Turan, 2018; Al Awadhi & Morris, 2008; Tarhini et al., 2017; Yakubu & Dasuki, 2019) treat effort expectancy as an important issue in the acceptance and adoption of e-learning technologies.

Effort expectancy is a good predictor of intention to utilize e-learning technologies. The fact that effort expectancy was determined to be salient factors that positively influence the actual usage of E-learning technologies (Uğur & Turan, 2018). According to Yakubu and Dasuki (2019), effort expectancy has an effect on behavioural intention to use e-learning technologies. Tarhini et al. (2017) in their study showed that behavioral intention to use e-learning technologies was significantly influenced by effort expectancy.

Effort expectancy is measured by the end-users' perception of adopting e-learning in terms of benefits, such ease of use of e-learning applications. Effort expectancy involves the perceptions of the end-users on such benefit that could be achieved through the use of technology. Based on these arguments, the following hypotheses can be proposed:

*Hypothesis 2: There is a positive relationship between effort expectancy and behavioral intention to use E-learning technologies.*

## Social Influence

Social influence is one of the major factors of the intention to technology use in E-learning system. According to Venkatesh et al. (2003), social influence is the degree to which an individual perceives importance of system through the influence of others (e.g., fellow colleagues, family, and friends. It is vital to realise the importance of friends and family in the decision of adopting such technology. The end-users would like to utilise e-learning applications if their friends use them. Since this study examines the adoption of e-learning in France-based banks, this construct will be measured by examining the perception of how others affect the use of e-learning systems.

Several authors (e.g., Yakubu & Dasuki, 2019; Tarhini et al., 2017; Lu et al., 2005; Pavlou & Fygenson, 2006; Jasimuddin, et al., 2017; Uğur & Turan, 2018) suggest that social influences are an important determinant of behavioural intentions to use the e-learning technologies. Social Influence was deemed to be a significant factor in influencing behavioural intentions to use such systems (Tarhini et al., 2017). According to Uğur & Turan (2018), social influence is one of the most significant factors in determining the level of technology acceptance. Yakubu and Dasuki (2019), in their study showed that social influence was significant factor to effect the behavioural intention to use the e-learning applications.

Social influence involves the perceptions of the end-users that family members, friends and colleagues may influence their decision to use E-learning irrespective of whether this influence is positive or negative. Based on this premise, the following hypothesis is proposed:

*Hypothesis 3: There is a positive relationship between social influence and behavioral intention to use E-learning technologies.*

## Facilitating Conditions

Facilitating conditions is the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the e-learning system (Venkatesh et al., 2003). It is the fourth basic determinant of e-learning technologies use. The fact that the existence of such infrastructure comes as a backup for the use of the system. It is also influenced by the perception of the technology fitting into the lifestyle of the user. Accordingly, this construct is measured by the perception of being able to access required resources and the necessary support needed to use e-learning technology. Several scholars (e.g. Venkatesh et al., 2003; Moore & Benbasat, 1991; Thompson et al., 1991; Taylor & Todd, 1995; Venkatesh & Speier, 1999; Ahmed at el., 2017; Yakubu & Dasuki, 2019; Tarhini et al., 2017; Uğur & Turan, 2018) treat facilitating conditions as an important determinant of behaviour and the intention to use the technology. For example, Uğur and Turan's (2018) results showed that facilitating conditions was significant factor in influencing the behavioural intention to use the e-learning technologies. Yakubu and Dasuki (2019) also found that behavioral intention to use e-learning technologies was significantly influenced by facilitating conditions. Facilitating conditions are measured by the perception of being able to access required resources and the necessary support needed to use e-learning systems.

Moreover, top management and line managers have a role to encourage the end-user use e-learning system. Top management support, in particular, is crucial to ensure huge investment to install the e-learning system. Scholars, most notably AlAwadhi and Morris (2009), state that management awareness and support is found to be very important when accepting and adopting new E-learning technologies. Top management support implies positive attitude towards technology adoption (Alshamaila et al., 2013; Lian et al., 2014), and willingness to invest in the technology (Chan & Chong, 2012; Low et al., 2011).

The fact that the decision to invest in the adoption of E-learning system depends on top management. If top management consider it as a value for money (Lian et al., 2014; Low et al., 2011), then it is obvious that they will favor to make such investment. Top management has a role to create facilitating condition that enhances the end-user's intention to use E-learning system. This leads to the following hypotheses:

*Hypothesis 4: Facilitating conditions will have a positive impact on the behavioral intention to use E-learning technology.*

*Hypothesis 4a: Top management will have a positive impact on creating facilitating conditions that leads to enhance the intention to use E-learning technology.*

### Attitude Towards E-Learning Technology Use

Attitude towards E-learning systems use is considered to be an immediate antecedent of behaviour intention to use technology. Attitude towards E-learning systems is defined as "an individual's positive or negative feeling about performing the target behavior" (Fishbein & Ajzen, 1975, p. 216). There is considerable evidence of the significant effect of attitude towards E-learning on behaviour intention to technology acceptance studies (e.g., Awan, 2011; Venkatesh et al., 2003, 2012; Almuqarub et al., 2017; Venkatesh & Zhang, 2010). It is to be noted that in his meta-analysis of the UTAUT literature, Williams et al. (2015) identify behavioural intention as the only factor in the UTAUT which is being consistently shown in the literature to significantly predict the acceptance and use of E-learning technologies. Since attitude towards e-learning technology is an important factor in explaining technology acceptance, such attitude may lead to positive or negative feeling regarding the use of e-learning technology in an organizational setting. Thus, we propose the following hypothesis:

*Hypothesis 5: Attitude toward using E-learning technology has a significate influence on the behavioral intention to use such technology.*

## METHODOLOGY

A multiple regression analysis is used to test the hypotheses, using statistical software SPSS version 15 (Islam et al., 2015). A multiple regression allows to examine whether predicator variables help to increase the statistical power of the model (Kotabe et al., 2011; Jasimuddin et el., 2015; Jasimuddin et el., 2019). The paper reviews the existing literature from which it develops a theoretical model which is then tested empirically in the French context. The units of analysis in this study were France-based banks where E-learning system is employed to provide training to their employees. The data collection process resulted in 133 useable questionnaires, with a response rate of 61%. Statistical Package for Social Sciences (SPSS) software, version 23.0 (SPSS, 2014) was used to analyze the collected data.

The respondents were the employees of the France-based banks. The questionnaire used in this research was developed through the literature review. Initially, the questionnaire was piloted using 15 respondents to increase the clarity of the questions and to avoid interpretation errors. Moreover, it was translated and back-translated to ensure that the French translation accurately reflected the meaning of the English version and to reduce comprehension problems (Sperber et al., 1994; Jasimuddin & Nakshabandi, 2019). Most respondents were female (56%), in the 31+ age group (80%) and junior employees (58%). Table 1 shows the demographic information.

**Table 1. Research sample demographic information**

| Description | Frequency | Percent |
|---|---|---|
| **Gender** | | |
| Male<br>Female | 58<br>75 | 44%<br>56% |
| **Age** | | |
| 19 – 30<br>31 – 45<br>46+ | 30<br>88<br>15 | 23%<br>66%<br>11% |
| **Position** | | |
| Senior manager<br>Line manger<br>Junior employees | 13<br>43<br>77 | 10%<br>32%<br>58% |

## ANALYSIS AND FINDINGS

Cronbach's alpha (α) reliability estimates were used to measure the internal consistency of these multivariate scales (Nunnally, 1978; Fornell & Larcker, 1981). Table 2 displays the reliability test results for the constructs. According to Nunnally (1967), a suitable criterion for instruments in the early stages of development is regarded as between 0.5 and 0.6. It would typically be about 0.7 for established scales. In this study, all the scales had Cronbach's coefficient (α) scores that are closer to or greater than 0.70. This satisfies the requirement set by Nunnally (1978) and indicates a strong reliability for our questionnaire content.

Convergent validity was assessed by examining the composite reliability. Composite reliability values should be 0.6 as a cut-off value (Bagozzi & Yi 1988). In our study, all composite reliability values exceeded the recommended threshold value, demonstrating convergent validity. To assess discriminant validity, the square root of AVE needs to be higher for that construct than its correlation with other constructs (Fornell & Larcker, 1981). Discriminant validity is confirmed for all the variables as the square root of each variable's AVE are greater than the bivariate correlation. Table 3 displays the means, standard deviations, the inter-construct correlation matrix and the square root of AVE depicted in bold.

### The Results of Hypotheses Testing

A hierarchical multiple regression analysis is used to test the hypotheses, using statistical software SPSS version 15. Table 4 summarizes the parameter estimates, significance levels, and hypotheses test results.

Hypothesis 1 suggests that there is a significant relationship between performance expectancy and behavioural intention to use e-learning technology. The standardized coefficient (β) of performance expectancy and behavioural intention to use E-learning is 0.485, and is significant as indicated by the p-value ($p < 0.01$). Performance expectancy explained 23.5% of the variance ($R^2$) in behavioural intention to use E-learning application. Thus, Hypothesis 1 is fully supported.

Similarly, Hypothesis 2 suggests that there is a significant relationship between effort expectancy and behavioural intention to use E-learning system. The standardized coefficient (β) of effort expectancy and behavioural intention to use E-learning is 0.492, and is significant as indicated by the p-value ($p < 0.01$). Effort expectancy explained 24.2% of the variance ($R^2$) in behavioural intention to use E-learning. Hence, Hypothesis 2 is fully supported.

Hypothesis 3 suggests that there is a significant relationship between social influence and behavioural intention to use E-learning technology. That is, there is no significant relationship between social influence and behavioural intention to use e-learning. The standardized coefficient (β) of social influence and behavioural intention to use e-learning is 0.358, and is significant as indicated by the p-value ($p < 0.01$). Social influence explained 12.8% of the variance ($R^2$) in behavioural intention to use e-learning. Thus, Hypothesis 3 is supported.

Hypothesis 4 predicts there is a significant relationship between facilitating conditions and behavioural intention to use e-learning technology. That is, there is a significant relationship between facilitating conditions and behavioural intention to use e-learning. The standardized coefficient (β) of facilitating conditions and behavioural intention to use e-learning is 0.396, and is significant as indicated by the p-value ($p < 0.01$). Facilitating conditions explained 15.7% of the variance ($R^2$) in behavioural intention to use e-learning. Hence, Hypothesis 4 is supported.

Hypothesis 4a suggests that there is a significant relationship between top management support and behavioural intention to use e-learning system. That is, there is a significant relationship between top management support and behavioural intention to use e-learning systems. The standardized coefficient (β) of top management support and behavioural intention to use e-learning is 0.330, and is significant as indicated by the p-value ($p < 0.01$). Top management support explained 10.9% of the variance ($R^2$) in behavioural intention to use e-learning. Accordingly, top management have a positive

**Table 2. Confirmatory factor analysis**

| Factors | Coding | Items | Composite reliability | Average Variance Explained | Cronbach's alpha |
|---|---|---|---|---|---|
| Performance Expectancy | **PE1** | **I would find the e-learning useful for my job.** | **0.89** | **0.75** | **0.83** |
| | PE2 | Using E-learning enables me to train me faster. | 0.85 | | |
| | PE3 | Using E-learning enables me to train me more efficiently. | 0.86 | | |
| Effort Expectancy | ER1 | My interaction with the E-learning system would be clear and understandable. | 0.79 | 0.67 | 0.83 |
| | ER2 | It would be easy for me to become skillful at using the e-learning system. | 0.72 | | |
| | ER3 | I would find the e-learning system easy to use. | 0.89 | | |
| | ER4 | Learning to operate the e-learning system is easy for me. | 0.89 | | |
| Social Influence | IS5 | My line manager encourages me to use the e-learning system. | 0.87 | 0.81 | 0.89 |
| | IS6 | My colleagues are convinced by the interest of the e-learning system. | 0.92 | | |
| | IS7 | My line managers encourage me to use the e-learning system | 0.93 | | |
| Facilitating Conditions | CF1 | I have the resources necessary to use the e-learning system. | 0.80 | 0.61 | 0.69 |
| | CF2 | I have the knowledge necessary to use the e-learning system. | 0.79 | | |
| | CF3 | The system is compatible with other systems I use. | 0.77 | | |
| Top Management Support | CF5 | My manager makes every effort to facilitate the use of e-learning system. | 0.87 | 0.84 | 0.91 |
| | CF6 | My manager arranges my working time to allow me to plan my e-learning sessions. | 0.94 | | |
| | CF7 | My manager protects my e-learning training time. | 0.94 | | |
| Attitude Toward Using E-learning Technology | AUT1 | Using the e-learning system is a good idea. | 0.86 | 0.78 | 0.91 |
| | AUT2 | The e-learning system makes work more interesting. | 0.88 | | |
| | AUT3 | Working with the e-learning system is fun. | 0.88 | | |
| | AUT4 | I like working with the e-learning system. | 0.94 | | |
| Behavioral Intention | IU1 | I intend to use the system in the next 6 months. | 0.96 | 0.94 | 0.97 |
| | IU2 | I predict I would use the system in the next 6 months. | 0.98 | | |
| | IU3 | I plan to use the system in the next 6 months. | 0.97 | | |

**Table 3. Survey structure and description of statistics for dimensions**

| Dimensions | Mean | SD | PE | EE | SI | FC | TMS | ATE | BIU |
|---|---|---|---|---|---|---|---|---|---|
| Performance expectancy (PE) | 4.03 | 0.44 | **0.888** | | | | | | |
| Effort expectancy (EE) | 3.05 | 1.29 | 0.65** | **0.819** | | | | | |
| Social influence (SI) | 4.47 | 1.57 | 0.51** | 0.67** | **0.90** | | | | |
| Facilitating conditions (FC) | 3.44 | 0.74 | 0.48** | 0.59** | 0.64** | **0.781** | | | |
| Top management support (TMS) | 4.06 | 1.11 | 0.39** | 0.71** | 0.65** | 0.83** | **0.926** | | |
| Attitude toward E-learning (ATE) | 3.88 | 1.14 | 0.76** | 0.74** | 0.61** | 0.64** | 0.59** | **0.88** | |
| Behavioral Intention to use (BIU) | 3.70 | 0.81 | 0.43** | 0.55** | 0.64** | 0.61** | 0.68** | 0.51** | **0.97** |

**Notes**: The bold values on the diagonal represent the square root of the AVE (√**AVE**). Other entries represent intercorrelations of the constructs.

**Table 4. Test significance synthesis**

| Hypothesis test | | $R^2$ | Path coefficient (β) | Decision |
|---|---|---|---|---|
| H1 | There is a positive relationship between the performance expectancy and the behavioral intention. | 0,235 | 0,485*** (12,528) | Supported |
| H2 | There is a positive relationship between the effort expectancy and the behavioral intention. | 0,242 | 0,492*** (12,767) | Supported |
| H3 | There is a positive relationship between the proximity manager's influence and the behavioral intention. | 0,128 | 0,358*** (8,671) | Supported |
| H4 | Facilitating conditions have significant impact on the behavioral intention. | 0,157 | 0,396*** (9,738) | Supported |
| H4a | There is a positive relationship between the top management support and the behavioral intention. | 0,109 | 0,330*** (7,907) | Supported |
| H5 | Attitude toward e-learning technology have significant impact on the behavioral intention. | 0,221 | 0,470*** (12,022) | Supported |

(***) significant at 1%, (**) significant at 5%, (*) significant at 10%

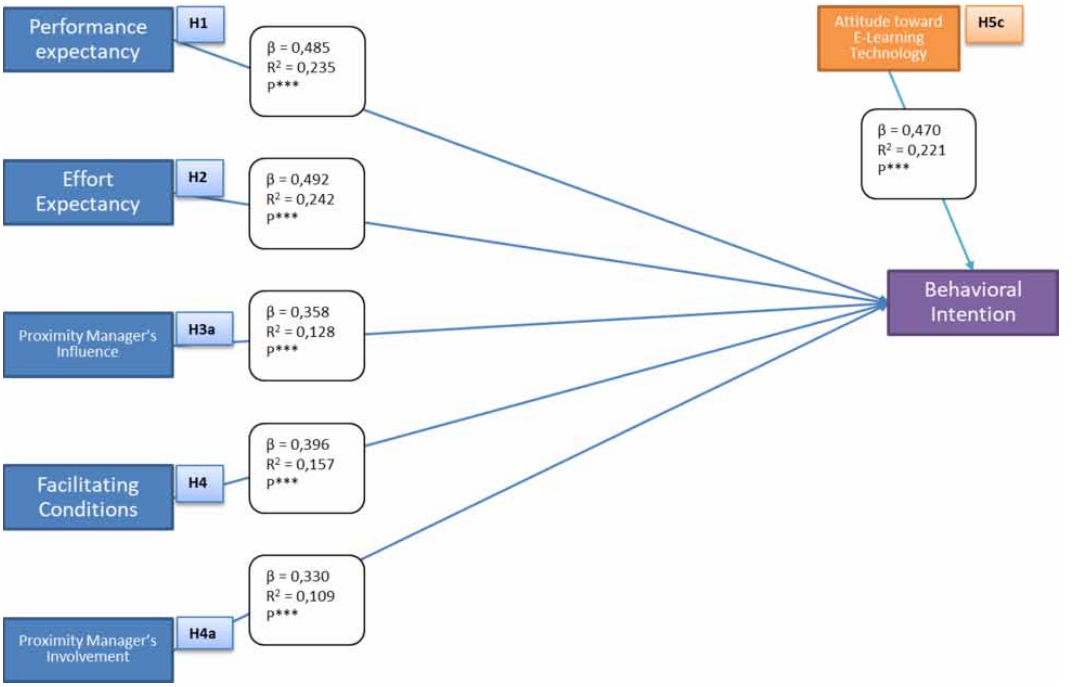
impact on creating facilitating conditions that leads to enhance the intention to use e-learning. Thus, Hypothesis 4a is fully supported.

Hypothesis 5 predicts that there is a significant relationship between attitude towards E-learning and behavioural intention to use e-learning. The standardized coefficient (β) of attitude towards e-learning and behavioural intention to use e-learning is 0.470, and is significant as indicated by the p-value ($p < 0.01$). Attitude towards e-learning explained 22.1% of the variance ($R^2$) in behavioural intention to use e-learning, Thus, Hypothesis 5 is fully supported. The results of our analysis are shown in Figure 1.

## DISCUSSION AND IMPLICATIONS

Based on the banks operating in France, our study sets out to identify a number of factors influencing the adoption and application of e-learning, with the use of the UTAUT model. The empirical results derived from this study warrant a discussion along several lines. A total of six research hypotheses were tested to examine whether the independent variables significantly explained the dependent variables. All of the six research hypotheses were supported by the data and it means that most of

**Figure 1. Analytical results of the research model**




the independent variables significantly explained the intention to accept e-learning technology. This paper confirms others' work (e.g. Ally, 2008; Buckley, 2003; Low et al., 2014; Al Awadhi & Morris, 2008; Uğur & Turan, 2018; Yakubu & Dasuki, 2019; Tarhini et al., 2016).

The results showed that performance expectancy, effort expectancy, social influence, facilitating conditions, top management support, and attitude towards e-learning technology use were all important and significant in the adoption of e-learning system within the banking sector.

Most specifically, performance expectancy and effort expectancy are the most significant determinants of the intention to use e-learning technologies in the banking sector. Performance expectancy is the extent to which the end-users perceive that using the system would benefit their performance. The current research reveals that performance expectancy is one of the factors that significantly determined behavioural intention to use digital technology for learning, confirming the findings of others' (Uğur & Turan, 2018; Giannakos & Vlamos, 2013; Tarhini et al., 2017; Yakubu & Dasuki, 2019).

The outcomes from the previous studies (e.g., Yakubu & Dasuki, 2019; Tarhini et al., 2017; Lu et al., 2005; Pavlou & Fygenson, 2006; Uğur & Turan, 2018) suggested the significance of social influence in explaining the behaviour of usage and adoption of technology. The results from the study also confirm, indicating that there is a significant relationship between social influence construct and the behavioural intention to use digital technology for learning.

The study provides an interesting finding on top management support in creating facilitating conditions. Previous studies (Hennington & Janz, 2007; Venkatesh et al., 2003; Venkatesh et al., 2012) found that facilitating condition is a significant predictor of the intention to use the e-learning technologies. This study confirmed the hypothesis related to the effects of the facilitating condition on behavioural intention to use digital technology for learning. In addition, the findings of the previous studies (e.g., Alshamaila et al., 2013; Lian et al., 2014; AlAwadhi & Morris, 2009) illustrated the significant influence of top management on behavioural intention to the adoption of e-learning

technologies. The paper shows that top management support construct is modelled to be related directly to attitude toward E-learning applications. That is, top management have a positive impact on creating facilitating conditions that leads to enhance the intention to use e-learning technologies in France-based banks.

### Theoretical and Managerial Implications

This article makes several contributions to the literature. This study contributes to the literature by empirically examining the relationships among the constructs. This study contributes to the continuous efforts to validate UTAUT in specifically banking sector. Most specifically, we contribute to the conceptualisation of the intention to use E-learning technologies in the banking sector. There is limited empirical attempt to explore the factors that influence the end-users' adoption of e-learning technology in France-based baking sector. The paper emphasises the role of top management support as the important determinants of the intention to adopt e-learning technologies. The fact that the paper expands the traditional discussion by incorporating top management support as a construct, in addition to Venkatesh et al.'s (2003, 2012) variables, in a model that acts as facilitator in the intention to use e-learning technologies. We propose and test an integrated framework by bringing them together to explain their linkage, and quantifies the relationship.

This article helps practitioners to understand of the possible factors that should be given emphasis in enhancing the intention to adopt e-learning systems. This study can also be seen to provide managers and practitioners with an understanding that the key constructs in various forms are issues in causing the variation in the intention to accept e-learning applications. The results revealed from this study of the UTAUT model within French context demonstrates that the framework can be applied by other educators to predict behavioural intentions of e-learning technologies prior to implementation. This will benefit future course of action for the successful adoption of such system. The study also provides insights to the banks in understanding of these phenomena that can help managers in selecting appropriate factors to reduce the resistance of using technologies, thereby to enhance e-learning applications. Moreover, the model developed in this paper helps practitioner to identify an appropriate construct to ensure the effective development and use of the e-learning technologies in a commercial setting.

## FUTURE RESEARCH DIRECTIONS AND CONCLUSION

This study looked to explore factors that influenced the acceptance of e-learning from the perspective of French bank officials. This study confirms the hypotheses related to the effects of performance expectancy, effort expectancy, social influence, factor conditions, and management support on behavioural intention to use e-learning technologies. The paper successfully suggests the applicability of e-learning in a French banking context. The results from the data obtained support the UTAUT's ability to explain the factors responsible for the acceptance of e-learning technologies. However, like any other empirical research, this study has several limitations that should be considered before interpreting the findings.

First, the data were drawn only from one particular sector within a country. The findings may not be generalizable to other contexts. Future study can test the research model in other contexts. Second, this study was based on a quantitative research approach. Future research may use a mix-method approach that would strengthen our findings. Third, future research may use longitudinal data to test the model of this study. Four, this research did not cover a comprehensive list of potential factors that may influence the end-users' intention to E-learning application. For example, there are important variables, such as awareness, perceived trust in technology, perceived trust in government, perceived cost and perceived risk. Moreover, age, gender, and profession can be controlled for. Hence, these variables are being taken into account in the future work.

Although the research model where attitudes would have an impact on behavioural intention to use such technology, the respondents' education level or the types of education, and competency in computing could have an impact on their behavioural intention. These variables can be incorporated in future study to address their impact on behavioural intention to use such technology.

The acceptance of e-learning technologies by the end-users is a major concern of the policy-makers, practitioners and scholars. The paper identified the factors that affect the successful adoption of E-learning technologies. The results revealed from this study of the Venkatesh et al.'s (2003) UTAUT framework within French context demonstrates that the model can be utilized by other educators (bank officials) beyond higher education sector.

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*David Abdou is Associate Professor at de l'Université Renmin de Chine, IFC-Renmin (Pékin-Suzhou). He holds Doctor of Management and holds a master's degree in Philosophy from the University of Toulouse and a Master's degree in Management from Pau University. From 2008 to 2012, David Abdou worked in a large cooperative bank in France, where he was responsible for the online learning project. He has taught courses in human resource management, project management and research methodology at Pau University and the Rennes School of Politics. He is mainly engaged in the research of human resource management and information system cross-cutting topics, with particular emphasis on research on users' resistance to the use of information dissemination technology.*

*Sajjad M. Jasimuddin is Professor at the Kedge Business School, France since July 2012. Previously, he taught at Aberystwyth University, Southampton University, King Abdulaziz University, and University of Dhaka. He received MPhil from Judge Business School at Cambridge University (Trinity College), and PhD from Southampton University. He authors 13 chapters and 110 articles, appear in the European Journal of Operational Research, the International Business Review, Production Planning & Control, Information Systems Journal, the Annals of Regional Science, the Thunderbird International Business Journal, the European Management Journal, the Information Systems Management, the Journal of Operational Research Society, Industrial Management & Data Systems, Management Decision, the Journal of Business & Industrial Marketing, Global Business and Organizational Excellence, the International Journal of Organizational Analysis, IJIM, the Journal of Management Analytics, the Journal of Knowledge Management, JGIM, JIKM, K&PM, IJTHI, EJISE, IRMJ, VINE, and KMR&P. Recently, he published a book, "Knowledge Management: An Interdisciplinary Perspective" (World Scientific, 2012). His research interests are in knowledge management, international business, information management, and strategic management.*