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## University Staffs' Everyday Engagement with Digital Technology - Exploring the Role of Information Literacy and Digital Literacy

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# **University Staffs' Everyday Engagement with Digital Technology— Exploring the Role of Information Literacy and Digital Literacy**

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## **Abstract.**

Educational environments, such as universities, have been deeply affected by technologically driven change. In fact, educational technologies are becoming progressively common, and scholars have stated that there is an expectation for these technologies to be a part of formal learning environments. Hence, university staff are expected to use digital technologies in their work activities. These expectations, however, rely on university staff's capabilities to use such technologies, thus highlighting the importance of literacy skills. This paper aims to explore the impact of information literacy (IL) and digital literacy (DL) on university staff's intention to use digital technologies in their work activities. To support this aim, a conceptual model is composed of constructs such as performance expectancy, effort expectancy and habit from the UTAUT2 framework, while incorporating the dimensions of information literacy and digital literacy. The conceptual model is then assessed with data obtained from 100 university employees thorough partial least squares structural equation modelling (PLS-SEM). The results indicate there is a direct and significant relationship between information literacy and intention to use digital technologies, whereas the relationship between digital literacy and intention to use is mediated through performance expectancy and habit. Furthermore, performance expectancy and habit possess a direct impact on intention to use technology.

**Keywords:** Digitalisation, digital literacy, digital tools, higher education institutions, information literacy, university staff, UTAUT, UTAUT2.

## **I. Introduction**

Technologically driven development is provoking fundamental changes in the modern society, and educational environments are not excluded from this societal impact. Due to the swift emergence of new digital technologies, educational institutions are more and more confronted with opportunities to experiment with new digital tools for teaching, learning and administrative tasks. However, these opportunities lean on university staff's capabilities to utilise and make the most of such technologies, reflecting the notion that university staff are required to have high levels of literacy skills and competences in order to be able to use and perform their daily routine activities. This is a direct consequence of digital transformation and digitalisation in the digital era. Moreover, as the notion of literacy transcends the traditional definition of literacy as the ability to read and write, the important role that information literacy and digital literacy play in the perception and the intention to use digital technologies in an educational context is undeniable. As such, research in this domain is in dire need of new theoretical and practical contributions. We argue, for the success in the information-based society, that individuals must acquire new skills and abilities of different dimensions of literacy (e.g., information and digital).

The objective of this paper is twofold: (1) we intend to utilise prior literature and theoretical models (e.g., Ng, 2012; Venkatesh et al., 2012) in order to devise a conceptual model which examines university staff's intention to use digital technologies in their work activities, and (2) employ empirical

research in order to determine factors which may impact said intention. In order to meet these objectives, a comprehensive review of literature is performed. The findings of said review are used to devise a conceptual model which is then utilised as a basis for a survey questionnaire. The questionnaire is sent out to university staff and the obtained data is used to evaluate the suggested conceptual model. Thereupon, partial least squares structural equation modelling (PLS-SEM) is utilised to analyse the obtained data.

## **2. Literature Review**

According to Nikou et al. (2019), literacy has traditionally been characterised as abilities relating to reading and writing. Though, much like the modern society or the technologically driven developments, the character of literacy has undergone its own sense of evolution. New dimensions of literacy have transpired, reflecting the need of skills and capabilities valued in the contemporary society. Examples of such dimensions are information literacy (e.g., Eisenberg, 2008; Eshet-Alkalai, 2004; Kurbanoglu et al., 2006; Lloyd, 2006) and digital literacy (e.g., Eshet-Alkalai, 2004; Gilster, 1997; Ng, 2012). According to Kurbanoglu et al. (2006, p. 730) information literacy incorporates not only the abilities to recognise when information is needed but also the abilities to initiate appropriate search strategies to locate the needed information. Or, as stated by Eshet-Alkalai (2004), the concept of information literacy comprises of “the cognitive skills that consumers use to evaluate information in an educated and effective manner” (p. 101). In the information-based society, information literacy includes abilities for evaluating, synthesising and using information appropriately, ethically, and legally once it is accessed in any format (digital or non-digital) or retrieved from any digital sources. The dimension of information literacy has been a topic of interest among scholars, especially within the educational context (e.g., Bruce, 1995; Johnston & Webber, 2003; Leckie & Fullerton, 1999; Salisbury & Karasmanis, 2011).

The dimension of digital literacy is, however, somewhat more ambiguous to its nature. According to Eshet-Alkalai (2004), this ambiguity might stem from the broad usage of the term in varying contexts. A definition by Ng (2012) states that digital literacy can be defined as “the multiplicity of literacies associated with the use of digital technologies” (p. 1066). Although the literature presents no clear consensus in what digital literacy stands for, digital literacy refers here to the ability to understand and use information in multiple formats from an array of digitally available sources (Gilster, 1997) as well as the effective use of information and communications technology (ICT) (Bawden, 2008). The dimension of digital literacy has also awakened the interest of scholars, and much like with information literacy, the context of educational settings has been engaging scholarly research (e.g., Mohammadyari & Singh, 2015; Prior et al., 2016; Spante et al., 2018).

Within the technology acceptance context, literacy as a concept has thus far seen some exploration, e.g. in the research conducted by Mohammadyari and Singh (2015). In said research, digital literacy was explored in connection to assessment of how e-learning can impact individual performance. Mohammadyari and Singh (2015) utilised constructs from the empirically validated UTAUT and UTAUT2 frameworks devised by Venkatesh et al. (2003, 2012), while concurrently incorporating the construct of digital literacy. As the UTAUT frameworks were originally intended for investigation of use behaviour in organisational settings and consumer settings (Venkatesh et al., 2003, 2012), some alterations were made in order to make the borrowed constructs more suitable for the e-learning context. The results of Mohammadyari and Singh (2015) suggest that a positive relationship is present between digital literacy and performance expectancy as well as effort expectancy. Additionally, performance expectancy was found to have a positive impact on continuance intention, which subsequently impacts performance. Moreover, research conducted by joining UTAUT constructs with information literacy and digital literacy has also been carried out by Aavakare (2019), leading to

results which suggest that digital literacy possesses a positive effect on intention as well as on performance expectancy, effort expectancy and habit. Information literacy was also found to possess a positive effect on performance expectancy (Aavakare, 2019).

In this paper, we aim to answer the call for further research on the topic by expanding the literature on information- and digital literacy as well as technologically driven change by examining university staff's intention to use digital technologies and tools for work activities such as teaching, learning and administrative tasks. Consequently, the research questions guiding this paper are:

*RQ1) "what antecedents factors explain the intention to use digital technologies in the educational environment"?*

*RQ2) "to what extent does information- and digital literacy explain the intention to use digital technologies"?*

### **3. Theoretical Background and Hypothesis Development**

In order to assess the set research questions, we have devised a theory-based conceptual model (see Figure 1) encompassing information literacy (IL) and digital literacy (DL), while concurrently incorporating determinants of the Unified Theory of Acceptance and Use of Technology II (Venkatesh et al., 2012), such as performance expectancy (PE), effort expectancy (EE), and habit (HB). The dependent variable is intention to use digital technologies (INT) for teaching, learning and administrative tasks. Although this research utilises some of the UTAUT 2 (Venkatesh et al., 2012) constructs, not all are incorporated in the proposed conceptual model.

The constructs of social influence, facilitating conditions, hedonic motivation, price value and use behaviour have been deliberately left out. Said constructs were excluded due to the following reasoning: use behaviour, as the intention of our research is to assess intention and not actual usage; hedonic motivation, as university staff are expected to use digital technologies in their work activities and the pleasure derived is thus less relevant; social influence, as it can be regarded as an external variable and therefore not under the impact of information literacy and digital literacy; facilitating conditions, as for the same reasoning as social influence; price value, as the research is conducted at Finnish universities entailing that staff have free access to digital technologies while at campus. The constructs of the suggested model are presented below.

#### **3.1 Information Literacy**

The construct of information literacy (IL) is characterised in this paper based on the American Library Association (2000) definition of the concept, which states that information literacy contains the abilities required to recognise information needs, locating the needed information, evaluating it and finally using said information in an effective manner. Prior research on the topic has indicated that a significant relationship is present between IL and attitude toward utilisation of digital technologies, which in turn was found to have a significant relationship with individuals' intention to use digital technology (Nikou et al., 2018; 2019). Performance expectancy, effort expectancy and habit have not seen much exploration in a similar context. However, IL has been researched in the context of self-efficacy (e.g., Kurbanoglu, 2003; Tang & Tseng, 2013), and efficacy leans on perceptions such as those relating to performance, effort and past behaviours.

In this paper, we argue that the higher the level of information literacy of university staff is, the higher the influence on productivity of the university staff will be. Similarly, the high level of IL enables university staff to use less effort to use digital technology and, therefore, it might become a habit to use technology in their work activities. Thus, the following hypotheses have been devised:

*H1: Information literacy has a positive effect on the intention to use digital technology*  
*H2a: Information literacy has a positive effect on performance expectancy*  
*H2b: Information literacy has a positive effect on effort expectancy*  
*H2c: Information literacy has a positive effect on habit*

### **3.2 Digital literacy**

In this paper, digital literacy (DL) follows the definition of Gilster (1997), who described DL as the ability to understand and use information in multiple formats from an array of digitally available sources. Prior research on the topic (e.g., Aavakare, 2019; Bayrakdaroğlu, & Bayrakdaroğlu, 2017; Nikou et al., 2018) has indicated a positive relationship between DL and the intention to use digital technologies. Furthermore, previous research (e.g., Aavakare, 2019; Mohammadyari & Singh, 2015) has also shown a positive relationship between DL and UTAUT2 constructs such as performance expectancy, effort expectancy and habit.

In this paper, we argue that the higher the level of digital literacy of university staff is, the higher the influence on productivity of the university staff will be. Similarly, the high level of DL enables university staff to use less effort to use digital technology and, therefore, it might become a habit to use technology in their work activities. Therefore, the ensuing hypotheses have been stipulated:

*H3: Digital literacy has a positive effect on the intention to use digital technology*  
*H4a: Digital literacy has a positive effect on performance expectancy*  
*H4b: Digital literacy has a positive effect on effort expectancy*  
*H4c: Digital literacy has a positive effect on habit*

### **3.3 Performance Expectancy**

As for the UTAUT2 constructs, performance expectancy (PE) is characterised in this paper as the degree to which the utilisation of digital technologies benefit university staff in work activities such as teaching, learning and administrative tasks. Said definition is an alteration of the performance expectancy construct utilised in the UTAUT frameworks (Venkatesh et al., 2003; 2012) due to a differing context. According to prior research on the topic, performance expectancy has been shown to have a significant effect on intention (e.g., Oh et al., 2009; San Martín & Herrero, 2012; Venkatesh et al., 2003). Consequently, the following hypothesis has been composed:

*H5: Performance expectancy has a positive influence on the intention to use technology*

### **3.4 Effort Expectancy**

Effort expectancy as a construct has been characterised in this paper as the degree of ease which university staff associate with the utilisation of digital technologies. Like the aforementioned construct, the definition of effort expectancy has also been altered from its context in the UTAUT (Venkatesh et al., 2003; 2012) frameworks due to differing contexts. Previous research on the topic has indicated that effort expectancy can also possess a significant relationship with intention to use (e.g., Boontarig et al., 2012; Sung et al., 2015; Venkatesh et al., 2003). Thereupon, the following hypothesis has been developed:

*H6: Effort expectancy has a positive influence on the intention to use technology*

### **3.5 Habit**

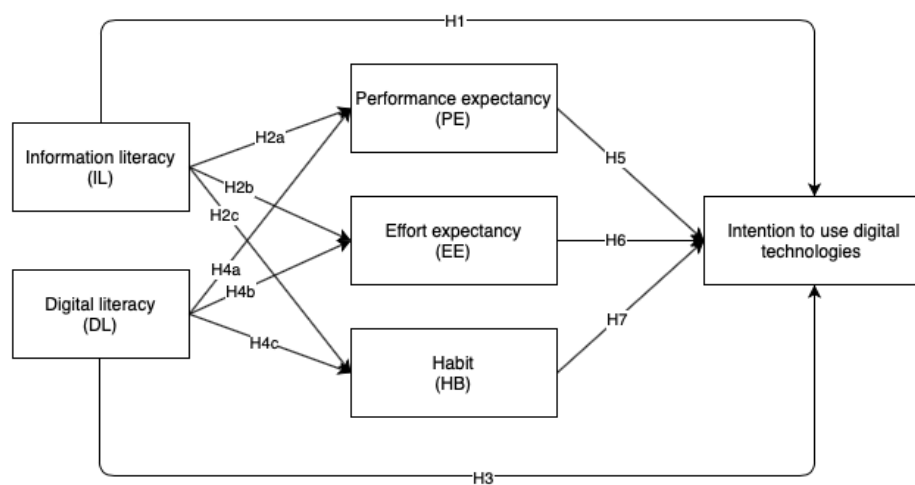
The construct of habit (HB) is defined in this paper as the degree to which an individual tends to execute behaviours automatically due to learning. This construct is likewise an alteration of the habit construct which was used in the UTAUT2 (Venkatesh et al., 2012) framework. Previous research has found habit to be a critical determinant in the context of exploring behavioural intention (e.g.,

Alalwan et al., 2015; Kang et al., 2015; Sharif & Raza, 2017; Venkatesh et al., 2012). Hence, the subsequent relationship is hypothesised:

*H7: Habit has a positive influence on the intention to use technology*

### 3.6 Intention to Use Digital Technologies

As scholars have researched the future of technology usage, intention has been widely explored as a dependent variable (e.g., Ajzen, 1985; Davis, 1989; Fishbein & Ajzen, 1975, Nikou et al., 2020; Nikou, 2019; Venkatesh et al., 2003; Venkatesh et al., 2012). In this paper, the intention to use technology (INT) construct refers to university staff's intention to use digital technologies for work activities such as teaching, learning and administrative tasks. Intention was chosen as the outcome of interest, as the aim of this research is to explore how the intention of individuals working in the university might be affected by information literacy, digital literacy, performance expectancy, effort expectancy and habit when the context is set as the usage of digital technologies.



**Figure 1.** A conceptual model for assessing university staff's intention to use digital technologies

## 4. Research Methodology

The devised conceptual model is inspected via partial least squares structural equation modelling (PLS-SEM). According to Hair et al. (2017), PLS-SEM can be employed within exploratory research while the intention is to develop theories. PLS-SEM allows for visualisation of hypothesised relationships while applying SEM, as a theoretical background is used to motivate predictive causal relationships (Hair et al., 2017). The conceptual model used in PLS consists of constructs that are measurable through indicator variables, which in turn consist of the obtained raw data (Hair et al., 2017). Hence, this method allows for exploration of complex models that contain several constructs, as well as indicator variables and structural paths, all while refraining from distributional assumptions of the obtained data (Hair et al., 2017).

### 4.1 Data Collection

The survey questionnaire designed to obtain the data was open for university staff over the time period of five weeks in 2019. The participants were asked to answer three sections, the first of which was information about respondents' backgrounds. In this section, information was gathered regarding gender, age, educational background, current position within the university, access to digital technologies, frequency of use regarding said technologies, and self-reported levels of proficiency while using said technologies. In the following section, consisting of conceptual model construct items, respondents were directed to answer to statements on a 7-point Likert scale, where the

answer options ranged from “1 = strongly disagree” to “7 = strongly agree”. In the final section of the questionnaire, respondents could choose if they wished to give any additional comments relating to their perceptions. The questionnaire was distributed via multiple channels digitally. In addition, flyers were distributed at four university campuses in Finland.

## 5. Results

After removing unengaged and incomplete responses, 100 responses were usable. The data from said responses are displayed through a descriptive analysis, after which measurement model results are presented as well as structural model results. Finally, the hypothesis testing results are presented.

### 5.1 Descriptive Analysis

The respondent sample of 100 participants contained 48 (48%) males, 51 (51%) females, and 1 individual who identified as other. When addressing age, the respondents were within the age group of 21-66 and the average age respondents was 42.3. When asked about the educational background, the majority of the sample stated that their highest level of education was PhD (n = 56), followed by master’s degree (n = 38) and bachelor’s degree (n = 4) and two reported other as their highest level of education. As for the respondent’s current jobs within the university, the majority of the respondents were involved in teaching and research 80 (80%), whereas the rest of the respondents were administrative (n = 7) and service personnel (n = 16) who stated to possess other duties at the university. The occupation question was formulated as a multiple-choice matrix, thus allowing respondents to choose multiple roles. The respondents’ access to digital technologies, frequency of use of said technologies, and self-reported levels of proficiency are presented in Tables 1-3.

**Table 1.** Access to digital technology

Access to digital technologies (%)					
Digital tools	Smartphone	Tablet	Desktop PC	Laptop	Wearable devices
1	0%	43%	22%	2%	75%
2	1%	20%	12%	3%	4%
3	0%	10%	8%	6%	2%
4	1%	7%	5%	11%	4%
5	98%	20%	53%	78%	15%
Mean	4.96	2.41	3.55	4.6	1.8

**Note:** 1 = I do not use; 2 = A few times a month or less; 3 = A few times a week; 4 = About once a day; 5 = Several times each day.

As presented in Tables 1-3, there is some variation in the respondents’ access to digital technologies, frequency of use of said technologies, and self-reported levels of proficiency. In Table 1, when asked to provide information regarding access to digital technologies, smartphones scored the highest with a mean of 4.96, followed by laptops (4.6) and PC computers (3.55). Tablets (2.41) and wearable devices (1.8) scored the lowest.

**Table 2.** Frequency of software (application) use

Frequency of software (application) use (%)									
Digital tools	Word processor	Spread sheets	Slides	File sharing	Photo editing	Website management	Mobile organiser	Email	Social media
1	0%	2%	2%	1%	28%	52%	16%	0%	7%
2	7%	19%	23%	28%	44%	39%	17%	0%	3%
3	12%	31%	37%	27%	20%	5%	12%	1%	6%
4	10%	13%	20%	19%	3%	4%	24%	6%	18%
5	71%	35%	18%	25%	5%	0%	31%	93%	66%
Mean	4.45	3.61	3.29	3.39	2.13	1.61	3.37	4.92	4.33

**Note:** 1 = I do not use; 2 = A few times a month or less; 3 = A few times a week; 4 = About once a day; 5 = Several times each day.

In Table 2, when asked to provide information regarding frequency of software application use, email

scored the highest with a mean of 4.92, followed by word processors (4.45), social media (4.33), spreadsheets (3.61), file sharing (3.39) and mobile organisers (3.37). Meanwhile, slides (3.29) and website management tools (1.61) scored the lowest. Email services are clearly the most widely used option, whereas website management tools were barely utilised by the respondents.

**Table 3.** Proficiency with digital technology

Proficiency with digital technology (%)									
Digital tools	Word processor	Spread sheets	Slides	File sharing	Photo editing	Website management	Mobile organiser	Email	Social media
1	0%	2%	1%	2%	21%	38%	9%	0%	8%
2	0%	6%	0%	7%	19%	14%	9%	0%	2%
3	3%	14%	2%	7%	11%	18%	9%	0%	7%
4	6%	17%	14%	15%	18%	13%	13%	5%	7%
5	13%	23%	28%	23%	11%	10%	20%	16%	26%
6	35%	20%	26%	21%	15%	5%	22%	38%	26%
7	43%	18%	29%	25%	5%	2%	18%	41%	24%
Mean	6.1	4.85	5.62	5.13	3.44	2.66	4.64	6.15	5.15

**Note:** 1 = Not proficient at all; 7 = Very proficient.

In Table 3, when asked to provide information regarding proficiency with digital technology, email scored the highest with a mean of 6.15 on a scale from 1-7, followed by word processors (6.1), slides (5.62), social media (5.15), file sharing (5.13), spreadsheets (4.85) and mobile organisers (4.64). Concurrently, photo editing (3.44) and website management tools (2.66) scored the lowest. The two highest scoring answers, email services and word processors, were also the top two when asked about the frequency of use. Meanwhile, the absolutely lowest scoring answer, website management tools, was also the least frequently used. Connections can thereby be established between frequency of use and levels of proficiency.

### 5.2 Measurement Model Results

The research model was analysed in two different stages: (a) measurement model assessment and (b) structural model assessment. The reliability and validity of the measurement model were assessed through the outer loadings, composite reliability (CR), and average variance extracted (AVE). The values of outer loadings, CR and AVE were all above the Hair et al. (2011) recommended threshold values of (.60, .70 and .50) respectively (see Table 4). However, some items were removed from the analysis due to low factor loadings. As for the Cronbach's alpha values, all were higher than .70 as recommended by Cortina (1993).

**Table 4.** Reliability and validity

Construct	Item	Loadings	Cronbach's $\alpha$	CR	AVE
Digital literacy	DL_1	0.838	0.893	0.918	0.618
	DL_2	0.890			
	DL_3	0.833			
	DL_4	0.850			
	DL_5	0.788			
	DL_7	0.701			
Effort expectancy	DL_9	0.600	0.948	0.963	0.866
	EE_1	0.939			
	EE_2	0.910			
	EE_3	0.920			
Habit	EE_4	0.952	0.747	0.887	0.797
	HT_1	0.879			
Information literacy	HM_4	0.907	0.905	0.922	0.569
	IL_1	0.795			
	IL_2	0.776			
	IL_3	0.636			
	IL_5	0.725			
	IL_6	0.768			



	IL_7	0.726			
	IL_8	0.813			
	IL_9	0.738			
	IL_10	0.796			
Intention to use	IN_1	0.853	0.827	0.880	0.598
	IN_2	0.899			
	IN_4	0.743			
	IN_5	0.713			
	IN_6	0.624			
Performance expectancy	PE_1	0.876	0.877	0.915	0.730
	PE_2	0.854			
	PE_3	0.869			
	PE_4	0.818			

### 5.3 Discriminant Validity

In order to assess the discriminant validity, the square root of AVE was measured following the Fornell and Larcker (1981) criterion. According to Fornell and Larcker (1981), the square root of AVE values must be higher than the value of those correlations that are found among them. The results for the constructs presented in the conceptual model are visible in Table 5, where the values meet the requirement, thus confirming the discriminant validity.

**Table 5.** Discriminant validity with the Fornell-Larcker criterion

	DL	EE	HB	IL	INT	PE
DL	<b>0.786</b>					
EE	0.788	<b>0.930</b>				
HB	0.506	0.558	<b>0.893</b>			
IL	0.595	0.522	0.331	<b>0.754</b>		
INT	0.537	0.500	0.557	0.522	<b>0.773</b>	
PE	0.560	0.555	0.576	0.466	0.636	<b>0.855</b>

**Note:** DL= Digital literacy; EE = Effort expectancy; HB = Habit; IL = Information literacy; INT = Intention to use technology; PE = Performance expectancy

Moreover, the discriminant validity of the constructs was also measured according to the Heterotrait-Monotrait Ratio (HTMT). The HTMT can be utilised for measurement of discriminant validity via comparison to previously formed threshold levels, e.g. .85 (Kline, 2011) or alternatively .90 (Teo, Srivastava & Jiang, 2008). The results for the constructs presented in the conceptual model are visible in Table 6, where the values meet the requirement, hence establishing the discriminant validity.

**Table 6.** Discriminant validity with the Heterotrait-Monotrait Ratio

	DL	EE	HB	IL	INT	PE
DL						
EE	0.849					
HB	0.618	0.658				
IL	0.657	0.556	0.398			
INT	0.621	0.556	0.703	0.597		
PE	0.637	0.611	0.704	0.514	0.725	

**Note:** DL= Digital literacy; EE = Effort expectancy; HB = Habit; IL = Information literacy; INT = Intention to use technology; PE = Performance expectancy

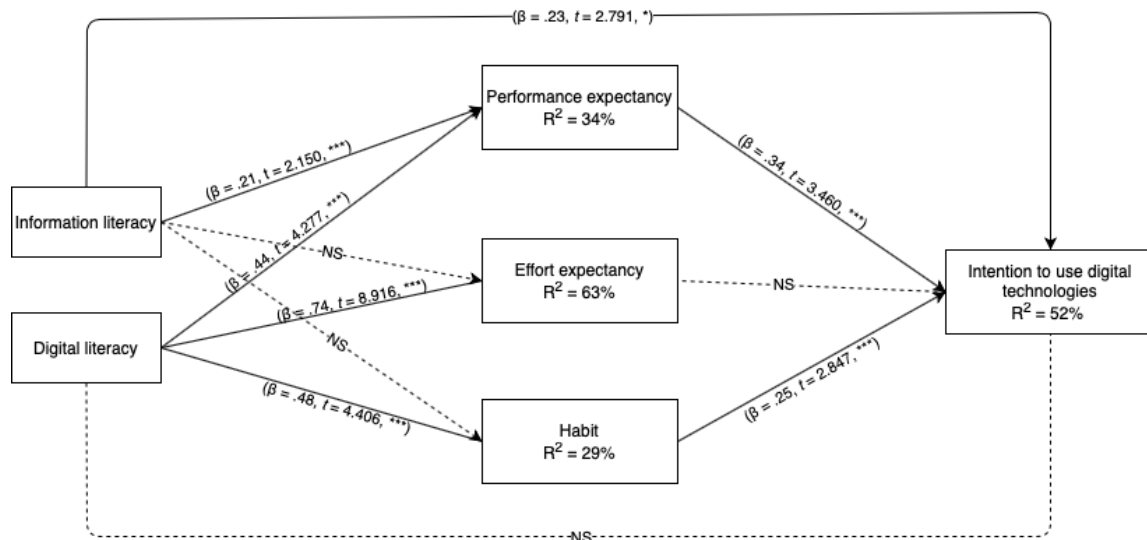
### 5.4 Structural Model Results

The proposed conceptual model and the coefficient paths within were assessed through SEM, where significant level values and coefficient values were attained by applying bootstrapping. The confirmation and rejection of hypothesis is illustrated in Figure 2.

### 5.5 Hypothesis Testing

The SEM results show that the intention to use digital technology was explained by a variance of

52%. The UTAUT constructs, performance expectancy, effort expectancy and habit were explained by a variance of 34%, 63% and 29%, respectively. Moreover, SEM results show that information literacy ( $\beta = .23, t = 2.791, p < .001$ ) has a direct impact on the intention of university staff to use digital technology; thus, H1 is supported. We could not establish the same positive impact for digital literacy; thus, H2 is rejected. However, the effect of these two dimensions of literacy are different in other path relationships. Information literacy has a direct positive effect ( $\beta = .21, t = 2.150, p < .001$ ) on the performance expectancy; thus, H2a is supported. The influence of IL on the effort expectancy and habit is not significant; thus, both H2b and H2c are rejected. Moreover, the SEM results show that digital literacy has a strong positive influence on all three UTAUT constructs: performance expectancy, effort expectancy and habit. These effects are, ( $\beta = .44, t = 4.277, p < .001$ ), ( $\beta = .74, t = 8.916, p < .001$ ) and ( $\beta = .48, t = 4.406, p < .001$ ), respectively; thus, all three H4a, H4b and H4c are supported. In other words, we found strong support for the role that information literacy plays in formation of decision among university staff to use digital technologies in their work context. The path relationships results show that performance expectancy ( $\beta = .34, t = 3.460, p < .001$ ) and habit ( $\beta = .25, t = 2.847, p < .001$ ) have a positive impact on the intention to use technology; thus, H5 and H7 are supported by the model, while we could not find a significant effect of effort expectancy on the intention to use; thus, H6 is rejected.



**Figure 2.** Structural model results

**Note:** \*\*\* p-value < 0.001; \*\* p-value < 0.005; \* p-value < 0.01

To examine whether the constructs of UTAUT: performance expectancy, effort expectancy and habit mediate the path relationships between digital literacy and information literacy to intention to use digital technology, we ran a mediation test. The results showed that none of the UTAUT constructs mediate the path relationship between information literacy to intention to use. In other words, the effect of IL to intention to use is only realised through a direct effect and there is no mediation effect in this path. However, as per digital literacy, the mediation test results showed that the total indirect effects of digital literacy to intention to use is ( $\beta = .24, t = 2.347, p < .01$ ). This indicates that there is a mediation effect in this path; thus, we assess the specific indirect effects results. The results show that the path between DL to intention to use is mediated through habit ( $\beta = .12, t = 2.239, p < .05$ ) and performance expectancy ( $\beta = .15, t = 2.458, p < .001$ ). Therefore, we could establish a partial mediation effect in this path.

## **6. Conclusion**

The aim of this research was to expand the topic of information literacy and digital literacy as well as technologically driven change by examining university staff's intention to use digital technologies for work activities such as teaching, learning and administrative tasks. In order to reach this aim, we devised a conceptual model based on prior literature, employing constructs such as performance expectancy, effort expectancy and habit from the empirically validated UTAUT2 framework, while concurrently incorporating the dimensions of information literacy and digital literacy. To the best of the authors' knowledge, such conceptualisation has rarely been proposed and validated empirically. The model was then assessed through PLS-SEM. The results of the analysis suggest that there is a direct and significant relationship between information literacy and university staff's intention to use digital technologies for work activities. However, according to the SEM results, the relationship between digital literacy and intention to use is indicated not to be significant. This could be due to sample size or quality of the items utilised within the conceptual model. However, the SEM results showed that the effect of DL to intention to use digital technology is mediate through performance expectancy and habit. With these results, we could establish a partial mediation in this path.

As for the UTAUT2 (Venkatesh et al., 2012) constructs, the results suggest that performance expectancy and habit possess a direct impact on the intention to use, aligning with prior literature. This entails that university staff's intention to use digital technologies in their work activities is indeed affected by their expectations regarding performance to utilise said technologies. However, effort expectancy was not found to have an effect on intention, diverging from prior research. The lack of a positive relationship could, however, possibly be explained by sample size.

### **6.1 Limitations and Future Work**

This paper builds upon previous theory by merging technology acceptance literature with dimensions of literacy in the creation of a conceptual model intended to examine university staff's intention to use digital technologies for work activities. Due to the fact that the data collection method of this paper was a self-completion survey, there are naturally some limitations that need to be mentioned. The nature of the data collection method limits the ability to manage respondent quality. In addition, all the survey questions in sections one and two were closed-ended, thus limiting the respondent's ability to answer them more broadly. In the future, these limitations could be assessed by scholars by employing qualitative research methods, e.g., focus groups, in order to gain broader and more detailed answers from the respondents.

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