Enhancing The Usage Of Microlearning System In Public Sector

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ABSTRACT

This study explores the factors influencing the use of microlearning in the public sector by applying the DeLone and McLean Information Systems Success Model (DMISM). The study focuses on the role of overall quality, compatibility, and transformational leadership in shaping the actual use of microlearning systems. Using a quantitative approach, data were collected from 317 employees of Indonesian Government Financial Institutions (Lembaga Keuangan Pemerintah) through an online survey. The data were analyzed using covariance-based structural equation modeling (CB-SEM) in LISREL 8.8. The results indicate that overall quality, compatibility, and transformational leadership have significant and positive impacts on the actual use of microlearning systems. Among these factors, compatibility emerged as the strongest predictor of use. The findings suggest that improving the quality of microlearning content, aligning it with employee preferences, and developing a supportive leadership environment are key to increasing the adoption and effectiveness of microlearning in public sector organizations. Further research is recommended to explore other potential factors and expand the scope to other government sectors..

KEYWORDS	*Public sector; User satisfaction; Information system success; Online learning, Transformational Leadership*

INTRODUCTION

The COVID-19 pandemic (2020-2023) significantly transformed workplace learning and development. To maintain employee skills, numerous organizations adopted digital learning solutions (Kshirsagar et al., 2020; Malik et al., 2021). Advances in information technology have driven advancements in workplace learning models (Kshirsagar et al., 2020). Digital learning offers various advantages in overcoming limitations associated with traditional learning methods. However, significant challenges persist. Shail (2019) highlights that prolonged digital learning sessions can lead to mental fatigue. Concerns have also been raised about declining

individual attention spans, linked to increased smartphone usage and other technology (Wilmer et al., 2017). Shorter attention spans make it difficult for learners to focus on learning materials for extended periods (Shail, 2019).

The challenges result in low completion rates in online learning. Hollands and Kazi (2019) indicate that only around 15% of participants complete online learning programs, with the majority registering but not finishing their chosen courses. Low completion rates are a major concern as they can undermine the overall effectiveness of learning activities. Microlearning, a potential remedy for this challenge, involves breaking down content into small, focused units, each addressing a single concept and having a brief duration (Lee et al. 2021). Microlearning has gained popularity in workplace learning due to its efficient utilization of resources and time (Dolasinski & Reynolds, 2020).

Prior research has demonstrated the widespread acceptance of microlearning across diverse fields and through various media formats. The health sciences and agriculture disciplines have most extensively embraced microlearning. Microlearning, which encompasses online learning, mobile applications, videos, flashcards, text messaging, and web-based dashboards, offers exceptional flexibility. Information technology primarily facilitates microlearning (Dolasinski & Reynolds, 2020; Taylor & Hung, 2022).

Nevertheless, the implementation of microlearning is inconsistent (Dolasinski & Reynolds, 2020). Considering microlearning is a newer learning model, there is inconsistency. As a relatively new learning model, microlearning's meaning and application may differ based on individual and organizational contextual understandings. There has been limited research exploring factors that influence the usage in microlearning. The primary focus has been on the overall success of the complete electronic learning system (Rouibah et al., 2020). Additionally, there is a scarcity of empirical studies examining the success or practical implementation of microlearning in adult learners, with the majority comprising philosophical or technical debates (So et al., 2020). Further investigation is required to understand the usage of microlearning in adult learners. Organizations can improve their learning practices by having a deeper understanding of these factors.

Microlearning has a strong connection to information systems (Mohammed et al., 2018) and can be evaluated using several theoretical frameworks, such as the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the DeLone & McLean Information System Success Model (DMISM). Although TAM and UTAUT emphasize user acceptance and behavioral intentions, they tend to neglect the aspect of actual system usage (Aldholay et al., 2020). Conversely, DMISM is widely recognized for its effectiveness in measuring the success of information systems (Cauter et al., 2017). According to the DMISM framework by DeLone & McLean, system success is determined by the quality of the system, information, and services, which, in turn, influence both actual usage. This study adopts the DMISM framework to examine the determinants of the actual usage, utilizing its core dimensions of overall quality (system, information, and service quality), and actual usage, in addition to two supplementary variables, to explore the factors that contribute to usage in microlearning within the public sector.

This research aims to apply the modified DMISM model in Indonesia's public sector, considering significant cultural and contextual differences to examine the

factors impacting the actual usage of microlearning. By addressing individual and organizational dimensions, the study fills a gap in the DeLone and McLean model. Additionally, it expands the current literature on the application of DeLone and McLean's theories in relation to microlearning within the public sector. The Government Financial Organization (GFO) was selected as the study's sample due to its suitability, particularly because it has operated a microlearning platform through its learning system center since 2017. The findings of this study can offer public sector entities valuable perspectives, potentially enhancing the effectiveness of employee learning initiatives, particularly in microlearning programs.

The novelty of this study compared to previous studies lies in several important aspects, most previous studies on microlearning have focused more on the private sector or general education. This study provides a unique contribution by examining the implementation of microlearning in the public sector, especially in Indonesia, which has a different cultural context and specific needs compared to other sectors.

This study adapts the DeLone and McLean information system success model (DMISM) by including additional variables such as system compatibility and transformational leadership. This approach provides a more comprehensive understanding of the factors that influence the use of microlearning, different from previous studies that generally only use the original model or the technology acceptance model (TAM and UTAUT).

Another novelty of this study is the inclusion of transformational leadership as a tested variable. Although the role of leadership has been discussed in the context of general management, the influence of transformational leadership on the use of microlearning in the public sector has not been widely studied.

This research was conducted in Indonesia, as part of a developing country, which often has its own challenges related to information technology and digital training. This adds a new perspective to the literature that has previously been dominated by studies in developed countries.

Overall Quality (QUL)
Overall quality is a construct built upon the dimensions of system quality, information quality, and service quality (Aldholay et al., 2020; Aldholay, Isaac, Abdullah, & Ramayah, 2018; Aldholay, Isaac, Abdullah, Abdulsalam et al., 2018; Isaac et al., 2019). In the study conducted by Flack (2016), significant relationships were discovered between usage and the quality of information systems. In microlearning information systems, if the quality of the learning system is perceived as good, it will be used more effectively and frequently.

Overall quality has shown relationships that can significantly and positively influence actual usage in online learning in Jordan University (Aldholay et al., 2020; Aldholay, Isaac, Abdullah, Abdulsalam, et al., 2018). Another study found that system, information, and service quality exhibited significant positive relationships with usage (Çelik & Ayaz, 2022). They found a positive and significant correlation between system quality, information quality, and service quality on the usage of information systems among Turkish university students across all state universities in Turkey. Their research indicated that as the quality of the system, information, and service, particularly technical support, increases, so does its impact on student usage. Based on these findings, there is a positive and significant

relationship between overall quality and actual usage. Currently, the relationship between two variables. Therefore, the following hypotheses will be proposed in this study.

H1 Overall quality has a positive and significant impact on the actual usage of the microlearning system

Compatibility (CMP)

Compatibility, a critical element in innovation, is emphasized by Rogers (1995) as it expedites technology adoption by aligning with users' values and prior experiences. Rogers (1995) further contends that compatibility provides meaning to new innovations, making them more familiar and thereby increasing the likelihood of acceptance. In this study, focusing on the microlearning system as the new information technology innovation, compatibility is measured by the system's alignment with users' values, needs, environment, and prior experiences, as perceived by employees (Cheng, 2015; Moore & Benbasat, 1991; Mutahar et al., 2017). Hence, compatibility serves as an evaluation of the microlearning system's alignment with individuals' values, needs, environment, and prior experiences.

Aldholay et al. (2020) found that compatibility has significantly influenced actual usage in learning information systems. Furthermore, Ozturk et al. (2016) and Cheng (2015) discovered similar results, indicating that compatibility significantly affects usage in information systems. In their study, they demonstrated that when users perceive that the information system aligns with their individual preferences, they are more likely to utilize the system and find it comfortable. Therefore, in this study, the following hypotheses will be formulated:

H2 Compatibility has a positive and significant impact on the actual usage of the microlearning system

Transformational Leadership (TL)

Transformational leadership, characterized by leaders as change agents fostering values, vision, risk-taking, trust, and lifelong learning, plays a vital role in developing a learning organization (Burns, 1978; Schein, 1992). Leaders need to embody idealized influence, providing positive examples, inspiring motivation, stimulate intellectual thinking, and consider individual needs to create a culture of continuous learning (Bass & Avolio, 1994). This leadership style is crucial in the context of information systems, contributing to organizational empowerment, stimulation, and motivation for employee engagement in learning, ultimately impacting learning success (Khalid et al., 2020).

This study aims to assess the impact of transformational leadership on the microlearning information system, focusing on the dimensions of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Ghazali et al., 2015). It measures transformational leadership based on employee perceptions of their direct supervisor's leadership style, using the four specified dimensions (Ghazali et al., 2015; Khalid et al., 2020). Aldholay et al. (2020) found that transformational leadership positively and significantly impacts actual usage. Similar findings were obtained in the studies conducted by Rezvani et al. (2017) and Ghazali et al. (2015), which demonstrated that transformational

leadership is positively enhances system usage. Therefore, in this study, the following hypotheses will be formulated:

H3 Transformational leadership has a positive and significant impact on the actual usage of the microlearning system

Actual Usage (USE)

DeLone and McLean (2003) present a thorough framework for understanding genuine usage, with a particular focus on the extent to which individuals actively interact with the many features offered by information systems. Information system usage, encompassing microlearning, is defined as individuals' efforts to employ the system, playing a pivotal role in creating organizational value (Jeyaraj, 2020). The distinction between actual usage and usage intention is crucial, with actual usage being the behavior of employing the system and the latter pertaining to the user's future intent. Without genuine usage, the information system fails to yield positive impacts. Characteristics of usage include frequency, duration, extent, and variation, along with user attitudes and system dependence (Aparicio et al., 2019). In this study, usage is defined as the perceived extent of utilizing the microlearning system for specific activities (Aparicio et al., 2019).

Proposed conceptual model overview

The connections between the components proposed in this conceptual model were drawn from relevant literature on the subject, as mentioned earlier. Figure 1 below illustrates the suggested framework, which includes overall quality (service, system, and information quality), actual usage of the system (DeLone & McLean, 2003), compatibility and transformational leadership (Aldholay et al., 2020). The present conceptual model evaluates the relationships observed among the constructs and proposes a series of four hypotheses for empirical examination.
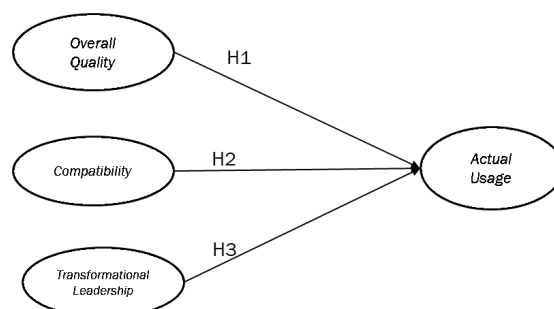

Figure 1. Conceptual model (2023).

The study aims to explore the factors that influence the actual use of microlearning in the public sector using the DeLone and McLean Information System Success Model (DMISM) and adding additional variables such as transformational leadership and system compatibility. In addition, the study aims to provide new insights into the implementation of microlearning in the context of public sector organizations in Indonesia.

This study is useful for expanding the literature on the application of microlearning in the public sector, which is still rarely studied compared to the private sector or education. By adapting the DeLone and McLean model, this study

provides new insights into the factors that influence the use of technology-based learning systems in the public sector.

RESEARCH METHOD

Data Collection

This study employs a quantitative research approach, gathering data through an online survey distributed via Google Forms. This method was chosen for its ability to reach a wider pool of geographically dispersed respondents, making it particularly suitable for a study involving participants from various regions of Indonesia. The study focuses on employees of Government Financial Organizations in Indonesia (GFO) with at least one year of work experience and a completed microlearning course. Nonprobability sampling, specifically snowball sampling, was used to recruit participants based on availability and recommendations from existing respondents (Cooper & Schindler, 2014).

This cross-sectional survey, conducted from September to October 2023, collected 363 responses from The Government Financial Organization in Indonesia (GFO). After data screening and cleansing, 317 entries were deemed eligible for analysis, exceeding the minimum sample rule of n x 5. LISREL 8.8 was used to test hypotheses through Covariance-Based Structural Equation Modeling (CB-SEM), analyzing the relationships between variables. Demographic information of the respondents is presented in Table 1.

Table 1. Respondents Demographic

Item	Categories	Freq.	Percentage
Gender	Male	223	70.3
	Female	94	29.7
Age	< 25 years	29	9
	25 to 30 years	87	27
	31 to 40 years	163	51
	41 to 50 years	23	7
	> 50 years	15	5
Education	High School or equivalent	7	2.2
	Diploma (DI - DIII)	99	31.2
	Bachelor's degree (DIV / S1)	160	50.5
	Master's degree (S2)	50	15.8
	Doctorate degree (S3)	1	0.3
Work Location	Sumatera	34	10.7
	Java	211	66.6
	Kalimantan	18	5.7
	Bali-NTT-NTB	26	82
	Sulawesi	17	5.4
	Maluku-Papua	11	3.5

Source: Data Processing Completed in 2023

Instrument Development

Participants were requested to complete a questionnaire consisting of 34 items that were derived from a range of previous research projects. This study will measure overall quality using 11 indicators adapted from (Aldholay, Isaac, Abdullah, Abdulsalam, et al., 2018). Compatibility variable measured using four indicators

adapted from Moore and Benbasat (1991). Transformational leadership variable measured with 12 items adapted from Ghazali et al. (2015). Therefore, the actual usage variable in this study will be measured using four indicators adapted from Aparicio et al. (2019) to reflect the extend use of information systems for micro-learning.

Sample Type

The sample used in this study were public sector employees, more precisely employees at the Government Financial Organization (GFO) in Indonesia. The characteristics of this sample are in accordance with the purpose of the study, namely to explore the use of microlearning in the context of the public sector. This study targets employees with at least one year of work experience and who have completed a microlearning course. This sample was chosen because they were considered relevant in providing insight into the application of microlearning in the public sector work environment.

Sampling Technique

This study uses a nonprobability sampling method, more specifically snowball sampling.

Sample Analysis Technique

After the data from the sample is collected, the next step is data analysis. The analysis technique used in this study is Covariance-Based Structural Equation Modeling (CB-SEM), which is implemented with the help of LISREL 8.8 software.

Convergent Validity

Convergent validity ensures that indicators measuring the same construct have a high correlation with each other. To ensure convergent validity, this study used standardized loading factor (SLF), average variance extracted (AVE), and construct reliability (CR). According to Hair et al. (2014), an indicator is considered valid if it has an SLF ≥ 0.5, and an AVE value ≥ 0.5 indicates that more than 50% of the variance in the indicator is explained by the construct. Based on the results of this study, most indicators meet this criterion, although there are two indicators in the system quality and service quality dimensions that have an AVE slightly below 0.5, but the CR is more than 0.6, which is still considered adequate according to Fornell and Larcker (1981). Discriminant Validity: This ensures that the construct being measured is different from other constructs in the model. In this study, discriminant validity was tested by examining the correlation between constructs and ensuring that the AVE value for each construct was greater than the squared correlation between the construct and other constructs.

Reliability of Measurement Instruments

Construct Reliability (CR)

CR is used to assess the reliability or internal reliability of the construct being measured. CR ≥ 0.7 is considered adequate to ensure that the indicators within the construct are consistent in measuring the same concept. The results showed that the CR values for most indicators were above 0.7, indicating good reliability.

Cronbach's Alpha

Although this article does not explicitly mention the use of Cronbach's Alpha, this is a common method used to measure the internal reliability of an instrument scale. In many quantitative studies, Cronbach's Alpha values above 0.7 are considered to indicate good reliability.

RESULT AND DISCUSSION

Descriptive analysis

Table 2 displays the standard deviation and mean values for all indicators. Participants in the questionnaire were requested to indicate their personal impressions using a 7-point scale, where the scoring spanned from 7 (indicating strong agreement) to 1 (indicating strong disagreement). The greatest score was achieved in the domain of service quality, with an average rating of 6.7 out of 7.0 in indicator SERQ2 and with a standard deviation of 0.51.

Table 2. Descriptive And Measurement Assessment Results

Variables	Dimension	Indicator		Latent Variables	SLF	AVE	CR	Mean	SD
			First Order						
Compatibility	*Unidimensional*	CMP1	←	CMP	0.82	0.614	0.862	5.74	1.03
		CMP2	←	CMP	0.88			5.83	1.01
		CMP3	←	CMP	0.81			5.85	0.94
		CMP4	←	CMP	0.6			5.99	1.06
Transformational Leadership	*Ideal Influence*	II1	←	II	0.89	0.817	0.930	6.19	0.99
		II2	←	II	0.93			6.20	0.98
		II3	←	II	0.89			6.25	0.97
	Inspire Motivation	IM1	←	IM	0.88	0.736	0.893	6.15	1.02
		IM2	←	IM	0.83			6.33	0.93
		IM3	←	IM	0.86			6.29	0.96
	Intellect Stimuli	IS1	←	IS	0.93	0.849	0.944	6.17	1.01
		IS2	←	IS	0.92			6.11	1.00
		IS3	←	IS	0.91			6.13	0.98
	Individu Consider	IC1	←	IC	0.8	0.777	0.912	6.15	1.01
		IC2	←	IC	0.94			6.32	0.95
		IC3	←	IC	0.9			6.40	0.89
Overall Quality	*System Quality*	SYSQ1	←	SYSQ	0.76	0.442	0.701	6.60	0.60
		SYSQ2	←	SYSQ	0.58			6.50	0.71
		SYSQ3	←	SYSQ	0.64			6.55	0.62
	Information Quality	INFQ1	←	INFQ	0.79	0.623	0.892	6.15	0.88
		INFQ2	←	INFQ	0.8			6.32	0.75

Variables	Dimension	Indicator	Latent Variables	SLF	AVE	CR	Mean	SD
		INFQ3	← INFQ	0.82			6.32	0.75
		INFQ4	← INFQ	0.78			6.21	0.82
		INFQ5	← INFQ	0.75			6.32	0.80
	Service Quality	SERQ1	← SERQ	0.66	0.420	0.684	6.01	1.00
		SERQ2	← SERQ	0.59			6.70	0.51
		SERQ3	← SERQ	0.69			5.95	1.01
Actual Usage	*Unidimensional*	USE1	← USE	0.65	0.524	0.812	6.33	0.86
		USE2	← USE	0.57			4.77	1.64
		USE3	← USE	0.82			5.78	1.28
		USE4	← USE	0.82			5.84	1.11
		SAT3	← SAT	0.76			6.01	1.00
		SAT4	← SAT	0.87			6.27	0.80
Second Order								
Transformational Leadership	*Ideal Influence*	II	← TL	0.95	0.890	0.970		
	Inspire Motivation	IM	← TL	0.99				
	Intellect Stimuli	IS	← TL	0.95				
	Individu Consider	IC	← TL	0.87				
Overall Quality	*System Quality*	SYSQ	← QUL	0.87	0.797	0.922		
	Information Quality	INFQ	← QUL	0.91				
	Service Quality	SERQ	← QUL	0.9				

Assessment of Measurement Model

To assess how accurately the constructs are represented, Confirmatory Factor Analysis is employed to evaluate the model's measurement components. In this stage, the validation and reliability of each indicator, as well as the dimensions composing the constructs, will be tested. According to Hair et al. (2014), a construct is deemed valid if it meets the criteria of convergent validity, with standardized loading factor (SLF) values ≥ 0.5, average variance extracted (AVE) values ≥ 0.5, and construct reliability (CR) values ≥ 0.7 taken into consideration.

The initial step involves testing the construct validity by interpreting the SLF values obtained from the LISREL 8.8 application output. In this phase, the

researcher will perform CFA on first-order constructs by examining the SLF values for each indicator. An indicator is considered valid if it has an SLF value ≥ 0.5, with an SLF value ≥ 0.7 being deemed ideal (Hair et al., 2014). Following the first-order CFA, the next step is to examine the SLF values for second-order constructs, which involves assessing the SLF values for the dimensions that make up the variables. The SLF values for each indicator are presented in Table 2.

Based on Table 2, it can be observed that all indicators in the first-order validity testing have SLF values above 0.5. In the second-order validity testing, the SLF values for all dimensions are above 0.7. All CR values are reported to be between 0.68 and 0.97. AVE is reported above 0.5 for all variables except for two indicators in the SYSQ and SERQ dimensions, which have values below 0.5. According to Fornell and Larcker (1981), an AVE value at the threshold of 0.4 is still acceptable if the CR value is higher than 0.6, indicating sufficient convergent validity of the constructs. Based on these results, all indicators and dimensions meet convergent validity, and the model evaluation process can proceed.

Assessment of Structural Model

The results of the Goodness of Fit (GOF) analysis are presented in Table 3. Two out of three criteria demonstrate a satisfactory fit in terms of Absolute Fit Indices, while all seven criteria exhibit a satisfactory fit in terms of Incremental Fit. According to Hair et al. (2014) it can be inferred that the model utilized in this study can be concluded to be a good fit.

Tabel 3. The Goodness of Fit Result

GOF	The Goodness of Fit Indicators	Goodness of Fit Standard	Goodness of Fit Result	Conclusion
Absolute Fit Indices	Goodness-of-Fit Index (GFI)	GFI ≥ 0,90 good fit; 0,80 ≤ GFI < 0,90 marginal fit	0,88	Marginal Fit
	Root Mean Square Error of Approximation (RMSEA)	0,05 ≥ RMSEA ≤ 0,08	0,070	Good Fit
	Normed Chi-Square	3:1	2,55:1	Good Fit
Incremental Fit Indices	Normed Fit Index (NFI) Tucker Lewis Index	NFI > 0,9	0,97	Good Fit
	(TLI) or Non-Normed Fit Index (NNFI)	NNFI > 0,9	0,98	Good Fit
	Comparative Fit Index (CFI)	CFI > 0,9	0,98	Good Fit
	Relative Fit Index (RFI)	RFI > 0,9	0,97	Good Fit
	Incremental Fit Index (IFI)	IFI > 0,9	0,98	Good Fit

Source: Data Processing Completed in 2023

Hypotheses Testing

Hypothesis testing in this research was conducted using the covariance-based structural equation modelling (CB-SEM) method through the LISREL 8.80 application. The t-values obtained from the path diagram were compared with the critical t-table values established to test the hypotheses in this study. The research employed a confidence level of 95%. Subsequently, all hypotheses in this study examined relationships that were pre-determined to be positive in direction. Thus,

the hypotheses in this study were tested using a one-tailed test approach. Consequently, the reference t-table value in this study was 1.645. The relationship between variables can be considered significant if they have t-values ≥ 1.645. The t-values associated with each link are above t-table, suggesting that all relationships presented in this model are statistically significant (fig. 2). Furthermore, all proposed hypotheses are supported by empirical evidence.
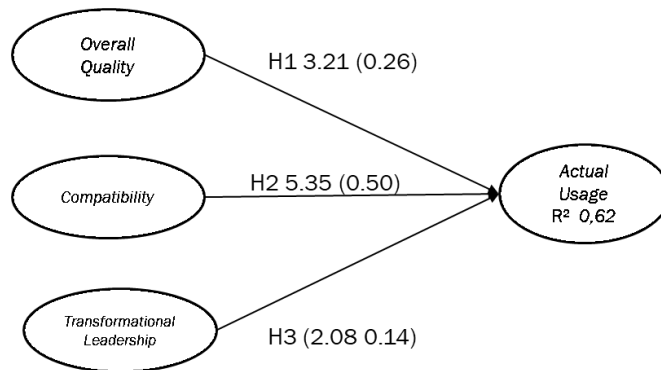

Figure 2. Path diagram conceptual model t-stat (path coefficient) (2023)
Source: Data Processing Completed in 2023

Figure 2 above shows the overall quality (system quality, information quality, and service quality), as well as compatibility and transformational leadership, which account for 62% ($R2 = 0,62$) of the variation in the actual usage variable. The remaining 38% is attributed to other variables. The results of all T-values can be seen in Table 4 below.

Tabel 4. Hypotheses Result Summary

Hypotheses	Relationships	T-value	Conclusion
H1	QUL → USE	3,21	supported
H2	CMP → USE	5,35	supported
H3	TL → USE	2,08	supported

Source: Data Processing Completed in 2023

Discussion

Microlearning has gained attention as an effective approach for knowledge dissemination and skill development across various industries, including the public sector (Beste, 2023). This study aims to highlight the significance of understanding the usage in microlearning within the public sector to effectively plan and execute microlearning initiatives. Moreover, Sankaranarayanan et al. (2023) emphasized the role of microlearning in improving learner perceptions, further underlining its potential to enhance the usage in the public sector.

Based on the research findings, when GFO employees perceive the overall quality of microlearning as high, it increases the level of usage. This aligns with the DeLone and McLean IS Success Model (2003), which states that the quality of the system, information, and service influences the level of usage (Aldholay et al., 2020; Aldholay, Isaac, Abdullah, Abdulsalam, et al., 2018). Overall quality is most strongly influenced by information quality. Therefore, in the implementation of microlearning in GFO, attention needs to be given to the information quality of

microlearning. Microlearning is expected to provide relevant, accurate, up-to-date, comprehensive, and organized knowledge. In future developments, GFO can prioritize information quality as a primary focus. GFO can improve the quality of information by adding a feature for classifying the publication year in the microlearning system. This improvement could facilitate participants in sorting based on the latest year, making it easier for administrators to update microlearning content that is no longer relevant.

In the next factor, this research proves that the higher the compatibility level between GFO employees and the microlearning system, the higher the level of usage. This finding confirms previous research indicating a relationship between compatibility and actual usage (Aldholay et al., 2020; Cheng, 2015; Ozturk et al., 2016). Compatibility is most influenced by the indicator indicating that microlearning aligns with the preference work of GFO employees. Therefore, this finding reflects that the compatibility of microlearning with the preference work of GFO employees has the strongest impact on the assessment of the microlearning system's compatibility with GFO employees.

In this study, it is demonstrated that the transformational leadership style of immediate superiors in the GFO (Government Financial Organization) has an impact on the usage of the microlearning system. In other words, the inspiration and motivation emanating from immediate superiors with a transformational leadership style can enhance the utilization. This relationship underscores the crucial role of transformational leadership in motivating and supporting team members in utilizing microlearning. The findings align with previous research indicating that transformational leadership influences actual usage (Aldholay et al., 2020; Ghazali et al., 2015; Rezvani et al., 2017). The most contributing trait is the inspiring motivation aspect, with one indicator, direct supervisor speaking optimistically about the team's future, showing the highest contribution. Interestingly, despite the significant contribution, respondents' questionnaire responses for this aspect were below average. This suggests that employees perceive immediate direct supervisor who speaks optimistically about the team's future to be less favorable than the overall variable average.

The most significant indicators of actual usage were the perceptions of GFO employees regarding the learning system's utility in task performance and as an information repository. While the system was widely used for these purposes, its utilization as a communication platform among trainees was relatively low. This indicates a gap in the use of the system's communication features, suggesting that many GFO employees do not fully leverage the discussion forums and external groups provided. Finaly, the analysis reveals that compatibility, overall quality, and transformational leadership are all significant factors influencing actual usage. Compatibility emerged as the strongest predictor, followed by the positive effects of overall quality and transformational leadership.

CONCLUSION

This study investigates the factors influencing the usage of microlearning within the public sector. Findings reveal that information quality, compatibility, and transformational leadership significantly impact usage of the system. High-quality microlearning content, aligned with employee preferences, and a supportive

leadership environment are crucial for enhancing microlearning adoption and effectiveness. Public sector organizations should prioritize improving the quality of microlearning systems, focusing specifically on ensuring information accuracy and relevance. Aligning microlearning with employees' work styles is crucial for ensuring compatibility to actual usage. Organizations need to ensure that the system can run effectively on various applications and raise awareness of these features among employees. These insights offer practical strategies for optimizing microlearning efficiency usage within the public sector.

Although this research offers valuable insights for public sector organizations in developing microlearning systems, the findings should be interpreted with caution due to three key limitations. Firstly, the study exclusively employed quantitative methods using questionnaires. Secondly, the research subjects were confined to employees from a single government entity, the Government Financial Organization. Lastly, the investigation focused solely on system usage. Future research should adopt a mixed-methods approach, combining quantitative surveys with qualitative techniques like interviews and focus groups, to gain a deeper understanding of user experience microlearning systems. Additionally, broadening the research subjects to include employees from various government agencies across different sectors will help identify common and unique factors influencing the usage of microlearning systems, thereby enhancing the generalizability of the findings. Researchers should also explore a wider range of outcomes, such as employee user satisfaction, and learning performance. These efforts will offer a more comprehensive understanding of the elements that contribute to effective microlearning in the public sector, ultimately leading to more robust and widely applicable insights.

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