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Acceptance of Digital Tools for Cross-Cultural Training: A Study of Moroccan Public University Staff

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Keywords

acceptance of technology, ICT, experience exchange, cross-cultural virtual training, Moroccan universities

Abstract

This study investigates the acceptance of ICT for training, cross-cultural exchange, and experience-sharing among employees in Moroccan public universities. The purpose is to contribute to ongoing efforts to modernize the structure of public universities in Morocco. The research employs a quantitative approach, utilizing a structured questionnaire for data collection and linear regression analysis in SPSS to examine the factors influencing the acceptance of ICT in cross-cultural training by employees. Our study was conducted in the Casablanca-Settat region. The population consists of the administrative staff of Chouaib Doukkali University, Hassan II University, and Hassan I University. Our sample comprised 480 individuals out of 1,491, with a response rate of 81%. The results highlight, among other factors, that perceived usefulness, financial considerations, and the motivation for learning are the main influences on the acceptance of ICT in international exchange experiences. The willingness to interact with other cultures also influences individuals' acceptance of technology in education. These results, derived through a scientific, impartial, and neutral process, can serve as a reference and starting point for the Ministry of Higher Education, which aims to make human resources a driver of performance for public universities.

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1. Introduction

In today's globalized world, the exchange of knowledge and experiences across cultures has become increasingly important, especially in the realm of higher education. Moroccan public universities, like many institutions worldwide, recognize the value of cross-cultural training and experience sharing in enhancing the skills and perspectives of their employees. To facilitate this exchange, Information and Communication Technologies (ICT) have emerged as a powerful tool. However, the extent to which employees in Moroccan public universities accept and embrace the use of ICT for cross-cultural training and experience exchange remains a critical question.

This study focuses on the Moroccan public universities, aiming to understand the acceptance levels of employees when it comes to utilizing ICT for cross-cultural training and experience exchange. We recognize that effective cross-cultural interactions can lead to enhanced skills, improved performance, and a broader perspective. Therefore, the acceptance of ICT in this context is not merely a technological matter but a crucial factor influencing the success of cross-cultural initiatives within these institutions.

To tackle this matter, our research will explore various factors that might influence the acceptance of ICT in cross-cultural training and experience exchange among employees of Moroccan public universities. We will examine aspects such as the availability of ICT infrastructure, employee training, and the perceived relevance of ICT in their activities.

The findings of this study are expected to provide valuable insights for Moroccan public universities, helping them make informed decisions regarding the integration of ICT in cross-cultural training and experience exchange programs. Ultimately, this research seeks to contribute to the improvement of the quality of education, research, and international collaboration within Moroccan higher education institutions.

Specifically, our research question will be as follows: **At what level do employees of Moroccan universities accept the digitization of training processes for intercultural interactions and experience exchanges?** This central question will guide our study to understand the degree of acceptance of the use of Information and Communication Technologies (ICT) in the context of intercultural training and experience exchange within Moroccan universities.

2. Literature Review

Information and Communication Technologies (ICT) have played an increasingly crucial role in intercultural communication and the exchange of

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experiences among individuals and organizations worldwide. The analysis of technology usage should primarily begin with the study of its acceptance by users, especially when it comes to employee training, where the use of ICT is not mandatory. The acceptance of technology, in general, has been the subject of several research works since the emergence of the Technology Acceptance Model (TAM) in its various versions.

Davis (1989) emphasizes that the ease of use of ICT-based training systems is a key factor influencing their acceptance. Employees are more likely to adopt ICT if they find them user-friendly and easy to use. The author also highlighted the perceived usefulness of technology as a determining factor for its acceptance by users. The initial TAM model is as follows:
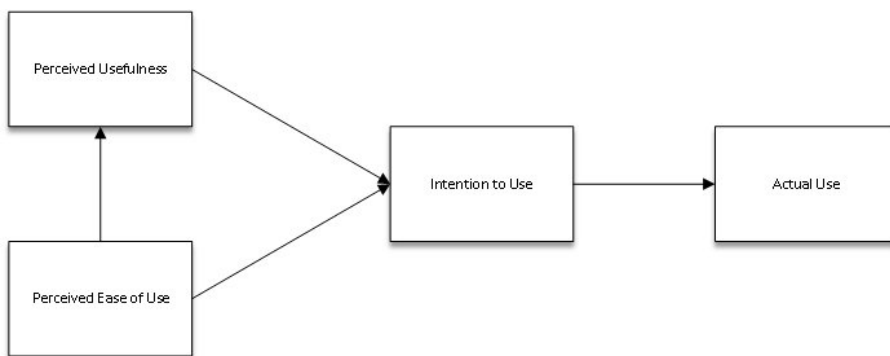
Form 1. TAM model (David, 1989)

The TAM model has been subsequently adjusted and improved by incorporating several new factors. Venkatesh et al. (2003) considered the perception of the relevance of ICT in training as another important factor. Employees must see the added value of ICT compared to traditional training methods to accept their use. Organizational support plays a crucial role. Employees are more inclined to accept ICT if the company provides appropriate infrastructure, training, and encouragement to use them (Gefen et al., 2003).

Recent studies have expanded the TAM framework by integrating cultural and contextual factors into the model. For instance, Alharbi and Drew (2014) explored the impact of cultural dimensions on technology acceptance in educational contexts, highlighting how local norms and values can influence user behavior. Such findings are particularly relevant for understanding ICT acceptance in non-Western contexts like Morocco.

With the advent of Information and Communication Technologies (ICT), online and ICT-based training has become an essential method to enhance employee skills. Several factors influence the acceptance of ICT in employee training. According to Alzahrani and Kausar (2020), ease of use, perceived

relevance, and organizational support are key elements. Pre-training of employees in the use of ICT also has a significant impact on its acceptance by users (Agarwal & Prasad, 2019).

Employee training using ICT has attracted the interest of many professionals and researchers for the benefits it offers. ICT allows employees to access training anytime and anywhere, eliminating geographical and time constraints (Rosenberg, 2001). It can also be tailored to individual employee needs, offering more targeted learning (Brown & Green, 2019). Online training is appreciated because it is often more cost-effective than in-person training due to reduced travel, accommodation, catering, and printing costs (Chen et al., 2018).

In line with this, Huu (2023) conducted a systematic review of literature on the relationship between digital autonomy and innovative work behavior, emphasizing the role of digital competence in fostering creativity, learning, and knowledge sharing. Employees with higher digital autonomy tend to engage in more innovative work, which enhances job performance and empowerment. This reflects the broader trend of digital competence becoming a critical factor in modern training processes, suggesting that organizations should not only provide access to digital tools and training but also create an environment that nurtures autonomy and innovation.

Wang et al. (2020) further explored this dynamic by examining ICT practices in professional development centers at flagship universities. While ICT training initiatives proved effective in some areas, they also faced challenges that hindered their full potential. These challenges emphasize the need for careful consideration from policymakers and administrators to ensure the successful integration of ICT into professional development processes, echoing Huu's (2023) call for a supportive work environment to maximize digital autonomy.

Enakrire (2019) reinforced these findings in a study of ICT-related training for information professionals, highlighting the importance of continuous re-skilling and knowledge acquisition in adapting to the rapidly changing workplace. As organizations increasingly rely on ICT for training, maintaining a workforce that is equipped with the necessary digital skills is essential for ensuring job performance and service delivery.

Building on these insights, a study by Joo et al. (2021) revealed that the use of online learning platforms and ICT-based training tools improved training effectiveness and knowledge retention. Furthermore, access to online resources facilitates continuous learning (Hamid et al., 2020). However, ICT-based training also presents several challenges. Employees must be self-sufficient and disciplined to succeed in the online training experience (Kemp,

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2015). They must also have computer skills (Levy, 2016). Additionally, online training does not encourage interaction, which can reduce collaboration and social learning (Moore & Kearsley, 2012). By providing continuous training for their employees, organizations gain in performance and efficiency.

Thus, like all organizations, Moroccan universities are also called upon to improve the skills of their employees. Continuous training of employees in Moroccan universities is crucial for improving the quality of teaching, research, and academic administration. All training programs can eventually have an influence on the university and academic life. Teacher training will allow them to update their pedagogical skills, explore new teaching methods, and incorporate the latest advancements into their programs (Marzouk et al., 2019). Research training will help researchers stay up- to- date with the latest developments in their field, develop research methodology skills, and access essential resources (El-Baz et al., 2020). Training in management and administration strengthens the skills of university executives, contributing to better planning, more efficient resource management, and transparent governance (Zain et al., 2018). Leadership and management training improve the skills of university administrators, promoting effective governance, strategic planning, and optimal resource management (Ehrenberg et al., 2016). Training in inclusion and diversity sensitizes university staff to the need to create inclusive and equitable environments for students from all backgrounds (Dill et Zambrana, 2018).

The need for training and skill improvement of employees in Moroccan public universities must be considered to meet the various quality requirements and to address the weaknesses generated by changes in the legal, economic, and technological environment. The rapid evolution of Information and Communication Technologies (ICT) requires continuous updating of employees' skills to remain competitive (Akkaş, 2020), especially at a time when the Ministry of Higher Education and the government are moving towards the digitization of all processes (recruitment, public procurement management, promotion, teaching, etc.). The increasing internationalization of higher education in Morocco also requires training in foreign languages, intercultural pedagogy, and international project management (Mouzaoui, 2018). In general, employees in Moroccan universities must continuously develop their skills to adapt to the changing needs of higher education and research (Alem & Ghamizi, 2017).

To address the need for training among civil servants in Moroccan public universities, several solutions can be considered. Firstly, promoting international mobility. Sending Moroccan employees abroad and welcoming foreign teachers and researchers in Morocco fosters the exchange of experiences and

intercultural communication, thus enhancing the skills and perspectives of employees (Chedid & Khneisser, 2019). However, due to the high costs of this operation and the impossibility of sending all employees, the establishment of virtual channels for intercultural exchange and communication appears to be a suitable solution. These channels can also enable Moroccan universities to collaborate with foreign universities in research projects and academic programs, which will help Moroccan employees benefit from international expertise (Lounès & Zniber, 2018).

Therefore, given the crucial importance of digitizing the training processes of Moroccan university employees, the analysis of its acceptance appears to be paramount. The acceptance of ICT by employees in Moroccan universities can be influenced by various factors. A study conducted by Ben Hmida et al. (2020) demonstrated that the availability of ICT infrastructure, employee training, and their perception of the relevance of ICT for their activities play an essential role in their acceptance.

The effective use of ICT can have a positive impact on the performance of Moroccan universities. Research conducted by El Ammari et al. (2018) showed that the integration of ICT in higher education has improved the quality of education and the visibility of Moroccan universities on the international stage.

In a context of Moroccan universities opening up to the international arena, intercultural exchanges and experiences hold paramount importance. Intercultural interactions enable university employees to gain a deeper and more nuanced understanding of the various cultures represented within their institution. This fosters awareness of cultural diversity, which can be beneficial in a globalized context (Gudykunst, 2003). Exchanges of experience among university employees from different countries can lead to fruitful international collaborations in research, teaching, and program development (Mendenhall & Oddou, 1985).

The acceptance of ICT by employees in Moroccan public universities is essential to facilitate intercultural exchanges and international collaborations. The effective use of ICT can contribute to enhancing the performance of Moroccan universities by strengthening their reputation and their ability to share knowledge on a global scale.

3. Method
3.1. Choice of research variables

The analysis of the acceptance of employees in Moroccan universities was conducted through the implementation of a quantitative approach using a structured questionnaire to collect data, which were analyzed using SPSS

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through linear regression. The variables incorporated into our model were derived from the TAM theory, the established literature review, and an interview conducted with three professors who are experts in international mobility and a coordinator responsible for cooperation. The research variables are as follows:

Variables	Possible answers
Age	The respondents were asked to tick one of the following choices: 1- [20 – 30] 2- [30 – 40] 3- [40 – 50] 4- [50 – 60]
Gender	The respondents were asked to tick one of the following choices: 1- Male 2- Female 3- Prefer not to say
Academic level	The respondents were asked to tick one of the following choices: 1- Baccalaureate 2- Bachelor's degree 3- Master's degree 4- Doctoral degree 5- Other
Being comfortable with ICT Experience using Digital tool in work	The questions regarding these variables were formulated in such a way that respondents had to select one of these five choices: 1- Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5- Strongly Agree.
Participating in international mobility Participating in virtual event with people from other countries Participating in training (face to face) about the importance of cross-cultural interactions. Being in contact with employees from universities abroad. Having difficulties with communication in other languages.	The questions regarding these variables were formulated in such a way that respondents had to select one of these five choices: 1- Never 2- Rarely 3- Sometimes 4- Often enough 5- Very often

Considering intercultural communication as a lever for developing interpersonal relationships, soft skills, and teamwork.	The questions regarding these variables were formulated in such a way that respondents had to select one of these five choices:
The authorities justify employees' non-participation in international mobility due to a lack of financial resources	1- Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5- Strongly Agree.
The willingness to learn	
The willingness to improve work methods	
The perceived ease of ICT in training	
The perceived usefulness of ICT in training	
The acceptance of ICT in cross-cultural training and experience exchange	

Table 1. Determination of research variables

3.2. Sample selection

The study was conducted within the Casablanca-Settat region, which includes three public universities: Hassan II University of Casablanca, Hassan I University of Settat, and Chouaib Doukkali University of El Jadida. According to the Ministry of Higher Education's statistics for the 2022–2023 academic year, the total number of employees at these institutions is 1,491.

To ensure a representative sample, we distributed 580 questionnaires (approximately 40% of the total population) in paper format to employees across these universities. The response rate was 81%, providing a solid dataset for analysis.

The sample selection was purposefully inclusive of employees aged 20 to 60 to capture diverse perspectives on ICT acceptance. This age range ensures representation across a broad spectrum of employees, from those who may be more adept with digital tools (younger employees) to those with more experience and institutional knowledge (older employees). This inclusion was intended to examine how ICT acceptance varies by age and experience, providing a holistic view of the challenges and opportunities that different age groups face in adopting digital technologies.

4. Results

On statistical analysis was undertaken as the cornerstone of this study, seeking to evaluate the acceptance of the use of ICT in training by employees of public universities. To validate the robustness of the linear regression employed in this analysis, several critical tests were employed. These tests

include the Durbin-Watson (DW) test, which examines autocorrelation in the residuals; the determination coefficients (R and R^2), offering insights into the strength and explanatory power of the model; and the F statistic, a pivotal tool for assessing the overall significance of the regression model. The results of those preliminary tests were as follows:

Modèle	R	R-deux	R-deux ajusté	Erreur standard de l'estimation	Changement dans les statistiques					Durbin-Watson
					Variation de R-deux	Variation de F	ddl1	ddl2	Sig. Variation de F	
1	,921ª	,847	,842	,467	,847	160,722	16	463	,000	1,404

Table 2. Model extracted from SPSS (Linear regression)

The correlation index, denoted as R, stands impressively strong at 0.92, indicating a remarkable proximity to the perfect correlation value of 1. This compelling observation underscores a clear and robust correlation between the acceptance of ICT in cross-cultural training and experience exchange and the explanatory variables considered in our analysis. The R^2 value, which stands at a remarkable 0.85, signifies that our selected explanatory variables collectively account for an impressive 85% of the variability observed in our target variable.

Furthermore, the statistical robustness of our model is substantiated by the F-statistic, which registers below the conventional 5% threshold. This affirmation underscores the validity and reliability of our statistical model in explaining the relationships within the data. Additionally, the Durbin-Watson (DW) statistic, hovering around 1,4, indicates weak autocorrelation in the residuals, further supporting our confidence in the model's significance.

Considering the rigorous evaluation of our statistical model, it becomes essential to present a snapshot from the correlation table. This table offers a visual representation of the intricate relationships between audit quality and the array of explanatory variables embedded within our analytical framework. The insights derived from Table 4 shed light on the degree of correlation between each explanatory variable and our chosen dependent variable, thus enriching our understanding of the factors influencing audit quality.

Modèle		Coefficients non standardisés		Coefficients standardisés	t	Sig.	Statistiques de colinéarité	
		A	Erreur standard	Bêta			Tolérance	VIF
1	(Constante)	3,837	1,099		3,490	,001		
	Age	,501	,209	,311	2,397	,017	,020	50,983
	Gender	,007	,052	,005	,132	,895	,273	3,667
	Academiclevel	,388	,072	,234	5,388	,000	,175	5,722
	BeingcomfortablewithICT	-,119	,079	-,071	-1,516	,130	,151	6,631
	ExperienceusingDigitaltoolinwork	,165	,078	,170	2,117	,035	,051	19,674
	Participatingininternationalmobility	,789	,134	,177	5,869	,000	,362	2,759
	Participatinginvirtualeventwithpeoplefromothercountries	,419	,055	,370	7,574	,000	,138	7,227
	Participatingintrainingfacetofaceabouttheimportanceof	-,886	,183	-,346	-4,828	,000	,064	15,554
	Beingincontactwithemployeesfromuniversitiesabroad	,060	,078	,039	,774	,439	,131	7,654
	Havingdifficultieswithcommunicationinotherlanguages	-,873	,090	-,650	-9,681	,000	,073	13,681
	Financielissues	-,033	,038	-,042	-,883	,378	,144	6,955
	Consideringinterculturalcommunicationasaleverfordevelopin	,619	,057	,904	10,803	,000	,047	21,271
	Thewillingnesstolearn	-,207	,054	-,229	-3,802	,000	,091	10,995
	Thewillingnesstoimproveworkmethods	-,030	,049	-,015	-,611	,541	,519	1,928
	TheperceivedeaseofICTintraining	-,443	,050	-,269	-8,791	,000	,351	2,848
	TheperceivedusefulnessofICTintraining	,135	,038	,115	3,581	,000	,319	3,138

Table 3. Model extracted from SPSS (Linear regression).

The acceptance of employees towards the use of ICT in cultural interactions and exchange of experiences in training depends on several variables. The first variable showing a significant impact is participation in international mobility, with a correlation coefficient of 0.78. Employees who have participated in international mobility programs are more attentive to the importance of intercultural interactions and the exchange of experiences. Our dependent variable also shows a significant correlation with the perception of intercultural communication as a development lever, with a coefficient of 0.6.

However, the model highlights variables that have a significant but negative impact on employees' acceptance of the use of ICT in training. Non-mastery of foreign languages is a factor that negatively influences employee acceptance, with a coefficient of -0.87. The more employees experience linguistic difficulties, the more likely they are to reject any form of training involving individuals from other countries. Additionally, the organization of training exclusively in face-to-face mode, focusing on intercultural communication, makes employees less inclined to accept online training on the same subject, even if these workshops involve the participation of employees from other universities located in different countries.

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Age is also a variable to consider when analyzing our dependent variable. Employees under the age of 40 are more likely to accept this type of training. Acceptance of e-learning in intercultural interactions and exchange of experiences depends on several variables. University administrators and the responsible ministry should consider all the conclusions drawn from this work in order to better guide their efforts aimed at improving human resources.

5. Discussion

The results of our study reveal a solid and significant correlation between the acceptance of Information and Communication Technology (ICT) in cross-cultural training and experience exchange, and the various explanatory variables we considered. The correlation index (R) of 0.92 suggests a remarkably strong association, nearing the ideal correlation value of 1. Additionally, the R^2 value of 0.85 indicates that the explanatory variables collectively account for an impressive 85% of the variability observed in our target variable. These statistics highlight the substantial impact of the factors we investigated on the acceptance of ICT in training for intercultural interactions and experience exchange.

Furthermore, the statistical rigor of our model is underscored by the F-statistic, which falls below the conventional 5% threshold. This demonstrates the model's validity and reliability in explaining the relationships within the data. The Durbin-Watson (DW) statistic, hovering around 1.4, also supports the model's significance by indicating weak autocorrelation in the residuals.

Our correlation table provides a visual representation of the important relationships between the explanatory variables and our dependent variable, shedding light on the degree of correlation between each factor and the acceptance of ICT in training. This enriches our understanding of the factors influencing this acceptance.

Notably, international mobility participation emerges as a significant factor positively affecting employees' acceptance of ICT in cross-cultural training and experience exchange. Those who have engaged in international mobility programs exhibit a heightened awareness of the importance of intercultural interactions and the exchange of experiences. Additionally, the perception of intercultural communication as a developmental lever positively correlates with acceptance.

Conversely, our model highlights variables with a significant negative impact on employees' acceptance of ICT in training. Non-mastery of foreign languages emerges as a strong negative factor. The more employees struggle

with linguistic challenges, the more inclined they are to resist training involving individuals from different countries. Moreover, our findings suggest that organizing training exclusively in face-to-face settings, emphasizing intercultural communication, may deter employees from accepting online training on the same subject, even if it involves participants from different countries.

6. Recommendations

Employee training plays a crucial role in enhancing organizational performance. Moroccan universities are, therefore, urged to provide training for their administrative staff to align with the quality objectives set by the Ministry of Higher Education. Given that Moroccan institutions have international connections and that digital technologies have enabled remote training, promoting the exchange of experiences and intercultural interactions appears to be an effective solution that does not require significant financial resources. Based on our study's findings, we offer the following recommendations:

- Promoting the exchange of experiences

Foreign universities are developing innovative methods in terms of supporting scientific research, student guidance, database management, and more. Encouraging the exchange of experiences through the organization of remote workshops appears to be an effective and cost-effective solution for enhancing human resource performance.

- Promote international mobility

Encourage and support international mobility programs for employees, as our results suggest that participation in such programs positively influences acceptance of ICT-based cross-cultural training. These programs can enhance employees' intercultural competencies and willingness to engage in online learning experiences.

- Language proficiency training

Recognize the importance of language proficiency in fostering acceptance of ICT in training. Universities should provide language training programs or resources to help employees overcome language barriers, thereby increasing their willingness to engage in cross-cultural training.

- Diverse training formats

Consider offering a variety of training formats that cater to employees' preferences. While face-to-face training may be valuable for certain aspects of intercultural communication, online training should also be made available, especially when involving participants from different countries. This accommodates diverse learning styles and preferences.

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- Targeted training for different age groups

Recognize the influence of age on acceptance of ICT-based training. Tailor training approaches to different age groups, taking into account the higher acceptance levels among employees under the age of 40.

- Continuous evaluation

Continuously assess and adapt training programs based on employee feedback and evolving needs. Regularly review the effectiveness of training methods and update content to align with changing intercultural dynamics.

Incorporate intercultural competencies:

Integrate intercultural competency development into training programs, emphasizing its importance as a tool for personal and professional growth.

- Policy considerations

Encourage university administrators and relevant ministries to consider the implications of our study's findings in shaping policies related to employee training and development, with a focus on improving human resources in the context of cross-cultural interactions and experience exchange.

7. Limitations

Although this study provides valuable insights into the acceptance of ICT among employees at Moroccan universities, several limitations should be acknowledged. These limitations could affect the generalizability and interpretation of the results:

Sample Bias:

Although the sample includes employees from a broad age range (20-60 years), the study's sample was predominantly drawn from three public universities in the Casablanca-Settat region. As a result, the findings may not be representative of employees in universities outside this region or in other educational sectors. Additionally, the study's paper-based survey format may have limited participation from employees with lower digital literacy or those not comfortable with traditional survey methods. Future studies could include a more diverse geographic sample and utilize digital platforms for survey distribution to improve inclusivity and accessibility.

Limited Variables:

While the study incorporated variables based on the TAM theory and previous literature, other factors influencing ICT acceptance, such as institutional support, technological infrastructure, and personal motivation, were not considered. Future research could expand the model by including these additional variables to provide a more comprehensive understanding of the factors influencing ICT acceptance in training.

Cross-Sectional Nature of the Study:

The study is cross-sectional in nature, meaning it captures data at a single point in time. This limits the ability to draw conclusions about causal relationships between the variables. Longitudinal studies would provide more solid findings into how ICT acceptance evolves over time, particularly in response to changes in training practices or technological advancements.

Exclusion of Qualitative Insights:

Although the study used quantitative analysis through linear regression, it did not incorporate qualitative data from in-depth interviews or focus groups, which could provide richer insights into the factors influencing ICT acceptance. Qualitative research could help further explore the employee attitudes, experiences, and the barriers they face in adopting ICT-based training methods.

References

Agarwal, R., & Prasad, J. (2019). Determinants of e-learning adoption in the workplace: A multinomial logit analysis. Decision Support Systems, 120, 105–669.

Akkaş, N. (2020). Faculty members' attitudes toward lifelong learning and their readiness for ICT use in the education process. Educational Technology & Society, 23(3), 101–113.

Alharbi, S., & Drew, S. (2014). Using the Technology Acceptance Model in understanding academics' behavioural intention to use learning management systems. *International Journal of Advanced Computer Science and Applications (IJACSA)*, *5*(1). https://doi.org/10.14569/IJACSA.2014.050120

Alem, Y. A., & Ghamizi, S. A. (2017). Factors influencing faculty members' adoption of online education in higher education institutions: The case of Moroccan universities. Journal of Educational Technology Systems, 45(3), 294–315.

Al-Masri, A. N. (2019). Cross-cultural communication in international higher education through information and communication technologies: A case study of Moroccan universities. Computers & Education, 137, 54–68.

Alzahrani, A. I., & Kausar, R. (2020). Factors influencing employees' intention to use e-learning systems in Saudi Arabian universities: A structural equation modeling approach. Education and Information Technologies, 25(5), 3955–3979.

Ben Hmida, I., Aouichaoui, S., & Essalmi, F. (2020). Factors influencing the acceptance of ICT by university professors: A case study of Moroccan public universities. International Journal of Educational Technology in Higher Education, 17(1), 1–22.

Brown, A., & Green, T. (2019). The role of digital technology in workplace learning: A systematic review and synthesis of the literature. Information and Learning Sciences, 120(5/6), 284–299.

Chedid, R., & Khneisser, I. (2019). International academic mobility as an essential element in the process of internationalisation of higher education institutions: The Lebanese and Moroccan contexts. Higher Education, 78(2), 295–313.

Chen, M., Teng, C. I., Chou, C. C., & Lin, H. C. (2018). The impact of e-learning platform on the performance of vocational school students. Computers & Education, 120, 12–24.

Chua, R. Y. J., Morris, M. W., & Mor, S. (2018). Collaborative multicultural interaction and creativity: Multicultural identity and the mediating role of perspective-taking. Academy of Management Journal, 61(2), 603–632.

Clark, R. C., & Mayer, R. E. (2016). E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning. Wiley.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340.

Dill, L. B., & Zambrana, R. E. (2018). The anatomy of STEM diversity in higher education: A critical review. The Journal of Higher Education, 89(6), 857–882.

Enakrire, R. T. (2019). ICT-related training and support programmes for information professionals. Education and Information Technologies, 24(5), 3269–3287. https://doi.org/10.1007/s10639-019-09931-1

Ehrenberg, R. G., Jakubson, G. H., Groen, J. A., So, E., Price, J. T., & Ballen, J. R. (2016). Inside the black box of administrative bloat: Evidence from higher education. The Journal of Higher Education, 87(6), 831–858.

El-Baz, M., Hamdy, H., Badr, E., & El-Gamal, S. (2020). Academic staff development and its impact on the scientific research output of higher education institutions in Morocco. Higher Education

Faruq, Q. O. (2019). Positive integration of ICT to reshape the learning process in large corporates. In A. Tatnall (Ed.), Encyclopedia of education and information technologies (pp. 256–261). Springer. https://doi.org/10.1007/978-3-319-60013-0_256-1Policy, 33(3), 435–456.

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. MIS Quarterly, 27(1), 51–90.

Hamid, S., Waycott, J., Kurnia, S., & Chang, S. (2020). Digital natives' use of mobile social networking sites: Implications for e-portfolio design in higher education. Australasian Journal of Educational Technology, 36(6), 36–48.

Huu, P. T. (2023). Impact of employee digital competence on the relationship between digital autonomy and innovative work behavior: A systematic review. Artificial Intelligence Review, 56(12), 14193–14222. https://doi.org/10.1007/s10462-023-10492-6

Joo, Y. J., Park, S., & Oh, E. (2021). How does online learning enhance the potential for deep learning in a pandemic? The mediating role of perceived learning benefits and technology acceptance. Computers & Education, 165, 104113.

Kemp, N. (2015). The influence of e-learning, e-assessment, and e-portfolio on student engagement. Higher Education Research & Development, 34(3), 571–587.

Artykuły i rozprawy

Lahcen, A., Mekkaoui, M., & Iraqui, A. (2017). Training needs and employability skills: A case study of graduates from Moroccan private higher education institutions. International Journal of Higher Education, 6(2), 192–202.

Levy, Y. (2016). Assessing the application of blended learning to soft skills development: A literature review. Computers in Human Behavior, 64, 843–858.

Lounès, S., & Zniber, R. (2018). Institutionalization of international relations in Moroccan higher education. Higher Education Policy, 31(1), 105–125.

Marzouk, A., Loulidi, M., & Fathalla, K. (2019). Professional development of teaching staff in Moroccan higher education: A case study. Higher Education Research & Development, 38(4), 755–770.

Mendenhall, M. E., & Oddou, G. R. (1985). The dimensions of expatriate acculturation: A review. Academy of Management Review, 10(1), 39–47.

Moore, M. G., & Kearsley, G. (2012). Distance education: A systems view of online learning. Cengage Learning.

Mouzaoui, M. (2018). Internationalisation of higher education in Morocco: Issues, opportunities and challenges. In V. Ravindran & K. Krishnan (Eds.), Internationalization of higher education: The case of non-English-speaking countries (pp. 179–201). Springer.

Rosenberg, M. J. (2001). E-learning: Strategies for delivering knowledge in the digital age. McGraw-Hill.

Ruiz, J. G., Mintzer, M. J., & Leipzig, R. M. (2006). The impact of e-learning in medical education. Academic Medicine, 81(3), 207–212.

Shyshkina, M. (2013). Emerging technologies for training of ICT-skilled educational personnel. In V. Ermolayev, H. C. Mayr, M. Nikitchenko, A. Spivakovsky, & G. Zholtkevych (Eds.), Information and Communication Technologies in Education, Research, and Industrial Applications (pp. 233–244). Springer. https://doi.org/10.1007/978-3-319-03998-5_14

Tennyson, R. D., & Christensen, T. K. (2019). The use of simulations and games in educational settings: A review of the research. Simulation & Gaming, 50(3), 308–341.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425–478.

Wang, Q., & Baker, R. (2018). A systematic literature review of the factors influencing international students' academic success. Journal of International Students, 8(2), 661–683.

Wang, X., Jacob, W. J., Blakesley, C. C., et al. (2020). Optimal professional development ICT training initiatives at flagship universities. Education and Information Technologies, 25(5), 4397–4416. https://doi.org/10.1007/s10639-020-10154-y