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Fear of Loss of Face Among Instructors on Adoption of eLearning in Tanzanian Higher Learning Institutions

Leonard J. Mselle[1,*]

1 Department of Computer Science, The University of Dodoma, Tanzania

Abstract: This study was about the low uptake of eLearning in Tanzanian higher learning institutions. A lack of investment in equipment, poor internet services, and a lack of technical skills among instructors are mentioned as the major factors for the low uptake of eLearning in Tanzania and worldwide. To the contrary, the study found that 100% of instructors in Tanzania used PowerPoint presentations, which is one major aspect of eLearning, while only 2% of them used videos. Even after improving computer availability, internet connection, and training, 98% of instructors still did not adopt video content. It is concluded that, due to fear of loss of face among instructors, the pace of adoption of video content as part of eLearning is slow. From the Technology Acceptance Model (TAM) perspective, even if perceived usefulness (PU) and perceived ease of use (PEU) are favorable, unless fear of loss of face is reduced, acceptance will be slow. In addition to PU and PEU, fear of loss of face is recommended to be included as one of the constructs of the TAM. When striving to adopt eLearning, institutional administrators are advised to pay attention to psychological barriers in addition to PU and PEU.

Keywords: fear of loss of face, eLearning, adoption of technology, Technology Acceptance Model (TAM)

1. Introduction

The torment due to loss can be psychologically twice as powerful as the equivalent of joy due to gain [1]. This often motivates the choices people make, leading some to cling to what they already have rather than try to acquire new objects or opportunities. Fear of loss of face, as a variant of fear of loss, is linked to an inclination to avoid any action that can lead to one being publicly criticized/humiliated.

For eLearning to be successful, the instructor must make video content. Making video content is not a difficult endeavor. However, this technology, as part of eLearning, has been avoided by instructors. According to the Technology Acceptance Model (TAM), people will adopt the new technology if its perceived usefulness (PU) and its perceived ease of use (PEU) are favorable [2, 3]. Studies regarding the adoption of eLearning in Tanzanian higher education institutions are numerous [4–9]. According to these articles, the pace of adoption of digital technology worldwide has been slow [10–13] despite PU and PEU being favorable. Numerous studies contend that inadequate investments in equipment and connectivity are the key obstacles toward the adoption of eLearning [3–10, 14–22]. From the perspective of fear of loss as posited by Kahneman and Tversky [23], there is no evidence of any study on psychological barriers in the adoption of eLearning in the Tanzanian higher education system.

This study is organized as follows: Section 2 is about related work. Section 3 delves into methodology. Section 4 is about results. Section 5 is the discussion. Section 6 is about the conclusion and recommendations.

2. Literature Review

Low investment in equipment, connectivity, and skills is reported as a major obstacle to the adoption of eLearning in Tanzania [4, 9, 10, 20, 22]. From a TAM perspective, although these reports contend that instructors and students have a positive attitude (favorable PU and PEU) toward eLearning, the role of psychological barriers such as fear of loss of face is not investigated. Worldwide, the same conclusions and omissions are reported in the works of Ghasia et al. [4], Shohel and Power [6], Mukenya et al. [7], Kafyulilo et al. [10], Oyetade et al. [11], Atta and Bonyah [16], Marikyan and Papagiannidis [22], and Kiage [24]. In the educational realm, people who want to avoid loss of face, which may come from their work being scrutinized by the public, will try and avoid technology that may expose them to public scrutiny despite there being favorable PU and PEU toward such technology.

Fear of loss of face can be measured by looking at four variables: (1) ability to publicly admit mistakes, (2) ability to tolerate being criticized in front of others, (3) capacity to back down in an argument when one is convinced that he/she is wrong, and (4) personal proclivity to critical/intellectual public debate [23].

The basic assumption of this study is that if an instructor is unafraid of admitting mistakes, can tolerate public criticism, and can back down in an argument when facts have shown the alternative is true and he/she enjoys public debate, then he/she will not be affected

***Corresponding author:** Leonard J. Mselle, Department of Computer Science, The University of Dodoma, Tanzania. Email: leonard.msele@udom.ac.tz

by fear of loss of face when required to adopt a new technology [3, 5–25] so long as its PU and PEU are favorable.

2.1. Theoretical framework

TAM by Davis [26] is one of the widely used models explaining the different trends in the adoption of different technologies in different contexts. TAM and related models, such as the Theory of Planned Behavior (TPB) and Unified Theory of Acceptance and Use of Technology (UTAUT), have been used to explain and predict trends in the adoption of digital technology, specifically information systems [1, 2] in different domains. Despite their popularity, fear of loss of face does not feature as one of the constructs in any of these models [1–3, 8].

In the educational realm, various digital skills can be adopted either through individual initiatives or institutional initiatives. The individual adoption concerns those skills or parts of them that are adopted by an individual for both private application and at work. Examples of such skills include internet browsing, WhatsApp, word processing, etc. Institutional initiatives, on the other hand, concern those technologies whose use is specific to the core business of the institution. Such systems include examination record systems, library systems, video contents, staff evaluation systems, etc. Adoption of technology through institutional imitative succeeds even if the PU and PEU of such technology are unfavorable. However, at both the individual and institutional levels, if there is a psychological barrier, the pace of adoption of any given technology can be slow. In TAM and its variants, the individual and institutional adoption modes are not distinguished [8, 13]. Concerning eLearning, both individual and institutional tracks have failed despite the favorable PU and PEU. This study was guided by the following three questions:

1) To what extent is it reported in the literature that psychological barriers such as fear may be the possible cause of low uptake of eLearning in Tanzanian higher learning institutions (HLIs)?
2) Is the fear of loss of face among instructors a contributing factor to the negative attitude toward the adoption of eLearning despite PU and PEU being favorable?
3) Can fear of loss of face be a construct together with PU and PEU for the modified TAM for the adoption of eLearning?

3. Research Methodology

A mixed method that combined content evaluation concerning the adoption of eLearning and an experiment that analyzed instructors' attitudes before and after the improvement of equipment and teacher training was employed in this study.

3.1. Experiment design

The experiment employed a longitudinal approach to compare data on instructors' attitudes toward eLearning before and after improvement of hardware availability, the internet, and technical training at the University of Dodoma (UDOM).

3.2. Materials and participants

From a population of 261 publications on eLearning as listed in Allier-Gagneur et al. [3] and Angrist et al. [17], a randomly selected sample of articles $N = 30$ (see Appendix) was employed for evaluation of publications to determine the extent to which instructors' attitude has been cited as one among the main causes of failure for adoption of eLearning (technical vs. psychological). A questionnaire was used to determine the current level of adoption of eLearning in five HLIs. Another questionnaire was used to determine the prevalence of fear of loss of face among instructors in five institutions. An experiment was carried out at UDOM where 38 instructors, conveniently selected, participated in answering the questionnaires on their preference for videos. The research sought and obtained UDOM's ethical clearance. All instructors who participated in the experiment were informed of this research, and each gave consent for its execution and publication.

3.2.1. Instruments

For content evaluation, on the major causes for failure of eLearning, a checklist, as presented in Table 1, was used. A questionnaire, as presented in Table 2, was used to evaluate the extent

Table 1
Content evaluation: Investment vs. psychological barriers

Item	Present	Absent	%ge.
Conclusion that inadequacy of infrastructure, equipment, and a lack of skills among instructors were the major causes of low uptake on eLearning	37	1	98%
Investigation on psychological barriers concerning adoption of eLearning	0	38	0%

Table 2
The status on the use of digital technology among instructors ($N = 56$)

Institutions	Questions	Always	On some occasions	Never	Positive	Negative/ambivalent
UDOM, UDSM, Mzumbe, OUT	How often do you use digital videos for instructional purposes?	1	39	16	1 = 1.7%	55 = 98.3%
	How often do you use PPT in your lectures/tutorials/labs?	56	0	0	56 = 100%	0 = 0%
	Would you prefer your videos to be accessed online by everyone?	1	32	23	1 = 1.7	55 = 98.3%

Table 3
Fear for loss of face among instructors (*N* = 56)

Item N = 56	Very much	Depends	Never	Positive	Negative/ambivalent
Ability for publicly admitting mistakes	2	30	6	2 = 5%	36 = 95%
Tolerance for being criticized in front of others	1	28	09	1 = 2%	37 = 98%
Backing down in an argument	1	30	7	1 = 2%	37 = 98%
Keenness to participate in open written public debates	1	6	31	1 = 2%	37 = 98%

Table 4
UDOM instructors' attitude (*N* = 38) to eLearning after improving equipment and providing and receiving training

S. #	Question	Always	In some cases	Never	Positive	Negative
1	How often do you use digital videos for instructional purposes?	1	17	20	1 = 2%	37 = 98%
2	How often do you use PPT in your lectures/tutorials/labs?	38	0	0	100%	0%
3	Would you prefer your videos to be accessed online by everyone?	1	10	27	1 = 2%	37 = 98%
4	How much would you prefer your video content to be accessed only by your students?	37	0	1	98%	2%

of use of digital videos in classrooms across five institutions. The prevalence of loss of face among instructors was determined using the checklist as presented in Table 3. All items in Table 3 were adopted from Yoshioka's loss of face scale [27], which is internationally recognized as an instrument for measuring loss of face.

4. Results

Table 1 shows that 98% of publications contend that failure in the adoption of eLearning is due to low investment in equipment and internet together with a lack of technical training among instructors. Research on psychological barriers is nonexistent (0%). The same publications ignored the use of PowerPoint presentations (PPTs) as part of eLearning. As revealed in Tables 2 and 4, the use of PPTs as part of eLearning among instructors is 100%. This contradicts the literature. This reveals that one fundamental aspect of eLearning has been fully adopted, while the other (video making) has only been accepted at 2% as shown in Table 4. Technically, making PPTs and videos does not fundamentally differ. The only difference between the two is that videos must be publicly broadcast, while PPTs can be shared with students in a restricted/controlled fashion. The prevalence of fear of loss of face among instructors, as confirmed in Table 3, averages 98%.

4.1. The experiment

Even after improving the availability of equipment and training at UDOM, only 2% of instructors adopted videos as part of eLearning. Since the fear of loss of face that could result from videos being seen publicly remained constant, the changes in investment, awareness, and technical training could not make 98% of instructors to change from face-to-face mode to video content.

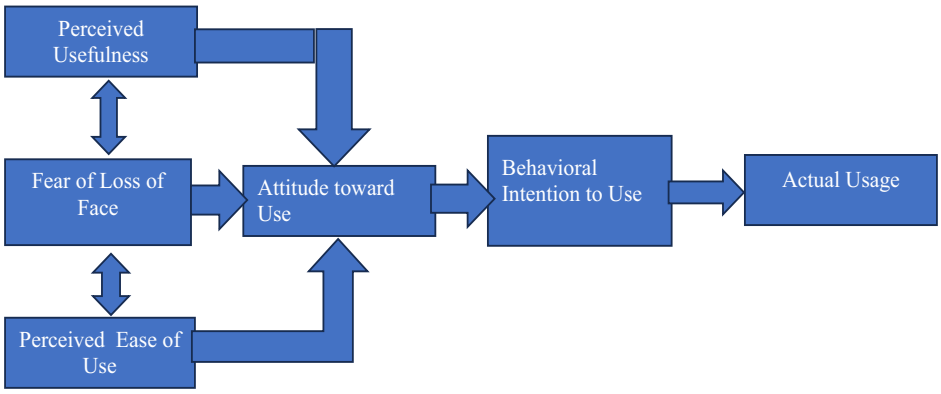
5. Discussion

On the one hand, low investment in equipment, high internet costs, and a lack of technical training among instructors negatively affect the pace of adoption of eLearning in Tanzanian HLIs and worldwide [3–5, 10, 13–20]. On the other hand, attitude toward the use of technology is an important contributor to this failure. In the content analysis, studies on psychological barriers are scarce as compared to those related to investment (2% vs. 98%). This has caused institutions to focus their attention on materials and technical training, neglecting psychological barriers. Fear of loss of face, as revealed from the questionnaire in Table 3, is particularly prominent in Tanzania. Instructors are keen to avoid embarrassment whenever they can. 98% of instructors were not keen on publicly admitting mistakes. They were hesitant about being criticized in front of others and backing down in an argument or participating in open written/verbal public debates. This reflects sensitivity toward loss of face. Since eLearning in the form of videos may lead to the exposure of someone's class activities to the public and hence an opening to criticism, such technology is unattractive to a majority of people with these characteristics. According to Ajzen [1] and Ajzen and Fishbein [2], if the individual who is expected to adopt the new technology anticipates loss of face, he/she will resist the change or act indifferently toward such technology. To the contrary, if the prospective adopter anticipates a gain in esteem, he/she will exert discipline and work hard toward adoption. In this research, all instructors who participated were competent users of applications such as WhatsApp, office automation, internet browsing, etc., so long as these technologies were useful both at work and in the private realm. Concerning eLearning, all 56 instructors used PPTs for lectures and tutorials, but they were not so keen to combine those PPTs with their voice to make videos.

According to Marikyan and Papagiannidis [22], attitudes toward using technology can be improved when power distance is involved, irrespective of PU and PEU. However, even when power distance was applied in the four institutions involved in this study, regarding the adoption of videos, the success by average is below 1%. This implies that even if there is institutional intervention, if the fear of loss of face is high, the adoption will not be easy.

Kisanjara and Maguya [12], Wang et al. [13], Postic [20], and Kiage [24] contended that decision-making under risky circumstances may require some external encouragement. Such external

Figure 1
The modified TAM



intervention, however, must be directed to the real obstacles in order for the intervention to succeed. Regarding eLearning, even if investment, cost, and technical training may be obstacles, there is a need to pay attention to psychological barriers in order to accelerate the adoption.

5.1. A modification of TAM

TAM postulates that the acceptance of technology is predicted by the users' behavioral intention, which is, in turn, determined by the PU and PEU. The primary objective of TAM was to shed light on the processes underpinning the acceptance of technology, in order to predict the behavior of and provide a theoretical explanation and possible intervention in the course of implementation of technology [22]. So far, the adoption of eLearning worldwide has been slow. Exploring and validating new factors that influence its pace is important. The strength of TAM variables in predicting behavior was tested in different cultures and geographical contexts. TAM has been used in several studies to explain the acceptance and usage of some digital technologies such as website usage and e-commerce in different cultures. With these studies, TAM has had various modifications, with some examples discussed in the works of Marikyan and Papagiannidis [22] and Webb et al. [25]. This study was part of the effort to modify TAM for the purpose of explaining the role of psychological barriers such as the fear of loss of face in the course of adoption of eLearning. As results show, fear of loss of face can negatively affect the user's attitude toward the use of eLearning and, as a consequence, the behavioral intention toward adoption of eLearning. This is pictorially depicted in Figure 1.

In the context of this research, concerning the relationship between PU and PEU, even if the technology is perceived as useful, its adoption can be hindered by fear of loss of face. Similarly, even if the technology is perceived as easy to use (technically), its adoption can be jeopardized by the degree of risk of fear of loss of face among the adopters. This implies that institutions, while striving to provide technical training to their employees (improving PEU and PU) for eLearning systems, must include contextual and psychological realities of the adopting population.

It is worth noting that this modification is contextual. That is, unless further studies are conducted, for societies where risk aversion and loss of face sensitivity are low, then PU and PEU will remain the only factors affecting the adoption.

6. Conclusion and Recommendations

The findings revealed that research on psychological barriers concerning the adoption of eLearning is scarce. To the contrary, 100% of research has focused on investment and technical training for instructors and students. Except for the report by Wang et al. [13], there is no evidence of longitudinal studies to evaluate the impact of the improvement of investment on the pace of adoption of eLearning and whether psychological barriers to instructors might be one of the causes of the low uptake of eLearning. As a consequence, attention toward alternative causes has been minimal.

This study concludes that instructors' attitudes, especially fear of loss of face, are the main obstacles toward the adoption of eLearning in Tanzanian HLIs. While decision-makers in the institutions must strive to improve the availability of equipment and a smooth infrastructure, more effort in capacity building should be directed toward psychological barriers such as resilience to loss of face among instructors. Though public criticism is part of human character, the capacity to face public scrutiny widely differs from one individual to another. The assumption that every instructor is going to accept his/her classroom approach as a matter of public scrutiny is wrong.

Although making and using videos for lectures and tutorials just as it is for PPTs is technically not difficult, instructors have been reluctant to embrace videos due to fear that exposure of their work may result in unexpected loss of face. Demanding training is just a mechanism to either avoid the task or an attempt to find out if such training would make them succeed somehow in achieving a certain capacity by making videos that can pass public scrutiny.

The acceptance of technology such as making videos for eLearning requires instructors to work hard and persevere when the first product is not good enough. The adoption of digital videos in particular and eLearning in general will benefit instructors immensely, especially now that the number of students in all HLIs is increasing and the volume of work is becoming huge. The adoption of eLearning will relieve the instructor of many of the teaching tasks, creating room for the instructor to use the saved time for other important tasks [1, 2, 24, 25].

Researchers in Tanzanian HLIs are called upon to initiate research toward attitudes concerning the low uptake of eLearning. Specifically, longitudinal studies that combine improvement of investment and instructor training, followed by training on resilience against fear of loss of face, are important to determine the appropriate areas where the effort must be directed in order to improve the situation.

Since the adoption of eLearning requires a combination of both individual and public initiatives, TAM, as proposed by Davis [26], is modified as depicted in Figure 1 to include a third construct, that is, fear of loss of face among instructors. The proposed modified TAM can be tested in other contexts and cultures where fear of loss of face may be low to further validate/invalidate the model. Furthermore,

more studies on psychological barriers to the adoption of eLearning from different models and theories such as the TPB and the UTAUT, which build upon or integrate aspects of TAM and other models, are recommended.

The major limitation of this study is its scope. The survey was carried out on a few instructors from one country. The experiment was carried out in one HLI, in one country. To validate the findings and the new TAM model, more studies covering various countries and more HLIs are necessary. Specifically, similar studies can be carried out in societies such as East Asia and the Middle East, where face-saving is highly valued.

Conflicts of Interest

The author declares that he has no conflicts of interest to this work.

Data Availability Statement

The data that support the findings of this study are all included in the article.

Author Contribution Statement

Leonard J. Mselle: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Resources, Writing – original draft, Writing – review & editing, Visualization.

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Appendix

The sample of 30 publications reviewed for this study

S. #	Citation
1	Oyetade, K. E., Zuva, T., & Harmse, A. (2020). Technology Adoption in Education: A Systematic Literature Review. *Advances in Science, Technology and Engineering Systems Journal, 5*(6), 108–112. DOI: 10.25046/aj050611
2	Kisanjara, S. B., & Maguya, A. (2024). Low Uptake of E-Learning at Mzumbe University: Answers and Perceptions from Students. *International Journal of Education and Development using Information and Communication Technology, 20*(1), 39–62.
3	Kiage, J. D. (2023). *Adoption of information and communication Technology in teaching and learning in secondary Schools in Nairobi County, Kenya.* Doctoral dissertation, Kenyatta University.
4	Kahneman, D. & Tversky, A. (1977). *Prospect Theory: An Analysis of Decision Making Under Risk*. Defense Technical Information Center. doi:10.21236/ada045771
5	Hennessy, S., D'Angelo, S., McIntyre, N., Koomar, S., Kreimeia, A., Cao, L. & Zubairi, A. (2022). Technology use for teacher professional development in low-and middle-income countries: A systematic review. *Computers and Education Open, 3*, 100080. https://doi.org/10.1016/j.caeo.2022.100080
6	International Labour Organization. (2021). *Digitalization in teaching and education in Ethiopia, Kenya, Malawi, Rwanda and the United Republic of Tanzania, Synthesis report*.
7	Anamuah-Mensah, J., Banks, F., Moon, B., & Wolfenden, F. (2012). New modes of teacher pre-service training and professional development. In *B. Moon(Ed.), Teacher Education and the Challenge of Development*. (pp. 201–211). Routledge. https://doi.org/10.4324/9780203094259.
8	Angrist, N., Evans, D. K., Filmer, D., Glennerster, R., Rogers, F. H., & Sabarwal, S. (2020). *How to improve education outcomes most efficiently?: A comparison of 150 interventions using the new learning-adjusted years of schooling metric.* USA: Center for Global Development.
9	British Educational Communications and Technology Agency (2004). *A review of the Research Literature on Barriers to the Uptake of ICT by Teachers*.
10	Shohel, M., Mahruf C. & Power, T. (2010). Introducing mobile technology for enhancing teaching and learning in Bangladesh: teacher perspectives. *Open Learning: The Journal of Open and Distance Learning, 25*(3), 201–21.
11	Wang, Y., Liu, X., & Zhang, Z. (2018). An overview of e-learning in China: History, challenges and opportunities. *Research in Comparative and International Education, 13*(1), 195–210. https://doi.org/10.1177/1745499918763421.
12	Vavrus F. & Bartlett L. (2012). Comparative pedagogies and epistemological diversity: Social and materials contexts of teaching in Tanzania. *Comparative Education Review, 56*(4). https://doi.org/10.1086/667395
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14	Kafyulilo, A., Fisser, P., & Voogt, J. (2016). Teacher design in teams as a professional development arrangement for developing technology integration knowledge and skills of science teachers in Tanzania. *Education and Information Technologies, 21*(2), 301–318. https://doi.org/10.1007/s10639-014-9321-0
15	Kisanjara, S.B. (2020) *Modeling E-learning Implementation in Tanzanian Universities.* Doctoral dissertation, Mzumbe University.
16	Ndibalema, P. (2022). 'Constraints of transition to online distance learning in higher education institutions during covid-19 in developing countries: A systematic review', *E-Learning and Digital Media*, 19(6)
17	Ghasia, M., & Machumu, H. (2020). Reflection on e-learning system of the Mzumbe University in Tanzania: Successes, challenges and way forward. *International Journal of Education and Development using Information and Communication Technology (IJEDICT), 16*(2), 109–121.
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