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Propose a model of E-learning Acceptance in Poland and Libya

Monther M. Elaish[1*], Elaheh Yadegaridehkordi[2], Mariana Sokol[3], Rusyn Halyna[4], Rozlutska Galyna[5]

[1]*Faculty of Information Technology*
University of Benghazi, Benghazi, Libya
monther.elaish@uob.edu.ly

[2]*College of Information and Communications Technology*
School of Engineering and Technology
Central Queensland University, Queensland, Australia
e.yadegaridehkordi@cqu.edu.au

[3]*Institute of Modern Languages*
University of Rzeszow, Rzeszow, Poland
msokol@ur.edu.pl

[4]*Department of Primary Education and Educational Innovations*
Vasyl Stefanyk Precarpathian National University, Ivano-Frankivsk, Ukraine
galina.rusyn@pnu.edu.ua

[5]*Department of General pedagogy and High school pedagogy*
Uzhhorod National University, Uzhhorod, Ukraine
grozlutska@ukr.net

***Abstract*— E-learning popularity rises for its flexibility. This study crafts a holistic acceptance model integrating TAM, SCT, and TRI, encompassing 11 key factors. Validated through literature and expert insight, the model addresses cultural nuances and contextual elements impacting e-learning acceptance worldwide. By including anxiety, motivation, and learning style, it offers a comprehensive framework for enhancing e-learning adoption efficiency, benefitting educators and policymakers. This research enriches the e-learning literature, offering practical tools to bolster e-learning effectiveness in diverse educational settings.**

***Keywords*— E-learning acceptance, Model development, Cultural and contextual, Technology acceptance model, Expert validation**

I. INTRODUCTION

E-learning presents several advantages such as consistency, accessibility, adaptability, affordability, and flexibility, which afford learners autonomy over their learning processes [1, 2]. However, the effectiveness of e-learning is highly dependent on its acceptance and use by the learners [3]. While the literature has been informative with contributions from existing models such as TAM, SCT, and TRI, a model incorporating cultural and contextual influences is necessary to explain e-learning perceptions across diverse settings [4].

This study aims to develop a model for Poland and Libya by considering the factors of trust, risk perception, facilitating conditions, and user satisfaction that are relevant in those locations. The choice of Poland and Libya is justified because both countries have a number of unique cultural, linguistic, and technological characteristics that make them ideal for comparative analysis.

The main idea is to propose a culturally sensitive model of e-learning acceptance in Poland and Libya, providing an integrated framework that takes into account cultural, contextual, and individual factors shaping learners' perceptions of e-learning. Expert validation and a survey involving learners from both countries will be conducted to verify the reliability of the model and to shed light on the factors influencing e-learning acceptance in different cultural and contextual settings. It will therefore make suggestions for developing relevant e-learning strategies that are suitable to be adapted and molded in various ways with which to meet the diverse needs of culturally diverse learners.

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II. LITERATURE REVIEW

E-learning acceptance and adoption have been approached with several theoretical lenses. Such key theories include but are not limited to the Technology Acceptance Model, Social Cognitive Theory, and Technology Readiness Index. Technology Acceptance Model (TAM), developed by Davis [5], describes perceived usefulness and perceived ease of use as two critical factors of technology acceptance that explain up to 40% of the variance. Davis said that the two essential variables in technology acceptance involve perceived usefulness and perceived ease of use, accounting for up to 40% of the variance. SCT by Bandura [6] states that self-efficacy along with outcome expectations are the two main factors that determine behavior. TRI by Parasuraman [7], measures the level of readiness based on optimism, innovativeness, discomfort, and insecurity factors.

Anxiety, motivation, and learning styles are key influencers of e-learning acceptance [8-10]. Anxiety, stemming from technology unfamiliarity and concerns, impacts adoption [11]. Motivation, driven by content relevance and educational goals, enhances acceptance [12]. Learning styles, as per El-Sabagh [13], can also sway acceptance, with self-directed learners favouring e-learning [9].

This study proposes a model integrating these factors, tailored to the cultural contexts of Poland and Libya. Table 1 synthesizes the factors influencing e-learning acceptance and adoption.

TABLE I
SUMMARY OF FACTORS AFFECTING E-LEARNING ACCEPTANCE AND ADOPTION

Factors	Description
Perceived usefulness	Learners' perceptions of the extent to which e-learning will enhance their learning experience
Perceived ease of use	Learners' perceptions of the ease with which they can use e-learning
Self-efficacy	Learners' belief in their ability to use e-learning effectively
Outcome expectations	Learners' expectations of the outcomes of using e-learning
Technology readiness	Learners' readiness to adopt technology
Trust	Learners' trust in the technology and the institution providing e-learning
Social influence	The influence of peers, instructors, and other stakeholders on learners' attitudes towards e-learning
Facilitating conditions	The availability of resources and support for learners to use e-learning
Perceived risk	Learners' perceptions of the potential risks associated with using e-learning
User satisfaction	Learners' satisfaction with the e-learning experience
Cultural and contextual factors	The impact of local cultural norms and contextual factors on e-learning acceptance and adoption

III. MODEL DEVELOPMENT

A. Model Build

In this, eleven factors were incorporated, including perceived usefulness, perceived ease of use, self-efficacy, outcome expectations, technology readiness, trust, social influence, facilitating conditions, perceived risk, user satisfaction, and cultural and contextual factors. Anxiety, motivation, and learning style are other factors considered within the framework. Through a review of literature, these factors were noted that best described e-learning acceptance and adoption. The proposed model provides an integrated framework for the measurement of e-learning acceptance, incorporating cultural, contextual, and individual factors. Figure 1 illustrates the model that is proposed in this study.

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B. Expert Validation

The participation of experts was sought as their opinions and feedback are crucial in evaluating the design [14]. The approach used to present and analyze the survey questions was based on a prior study [15, 16].

1) Sampling: A relevant expert in the field of technology adoption is invited to participate in the survey. Using Google Forms, a structured questionnaire is designed and forwarded through e-mail to the targeted expert group. Expert identification was through a purposive sampling approach. Inclusion criteria of the expert selection relate to the experience and expertise of those invited on issues that concern the adoption of e-learning.

2) Instrument: The questionnaire consists of three sections:

Introduction *The first section introduces the researchers, the research topic, and the proposed model, which incorporates The Technology Acceptance Model (TAM), Social Cognitive Theory (SCT), and Technology Readiness Index (TRI). This section also includes a request for participation in the study.*

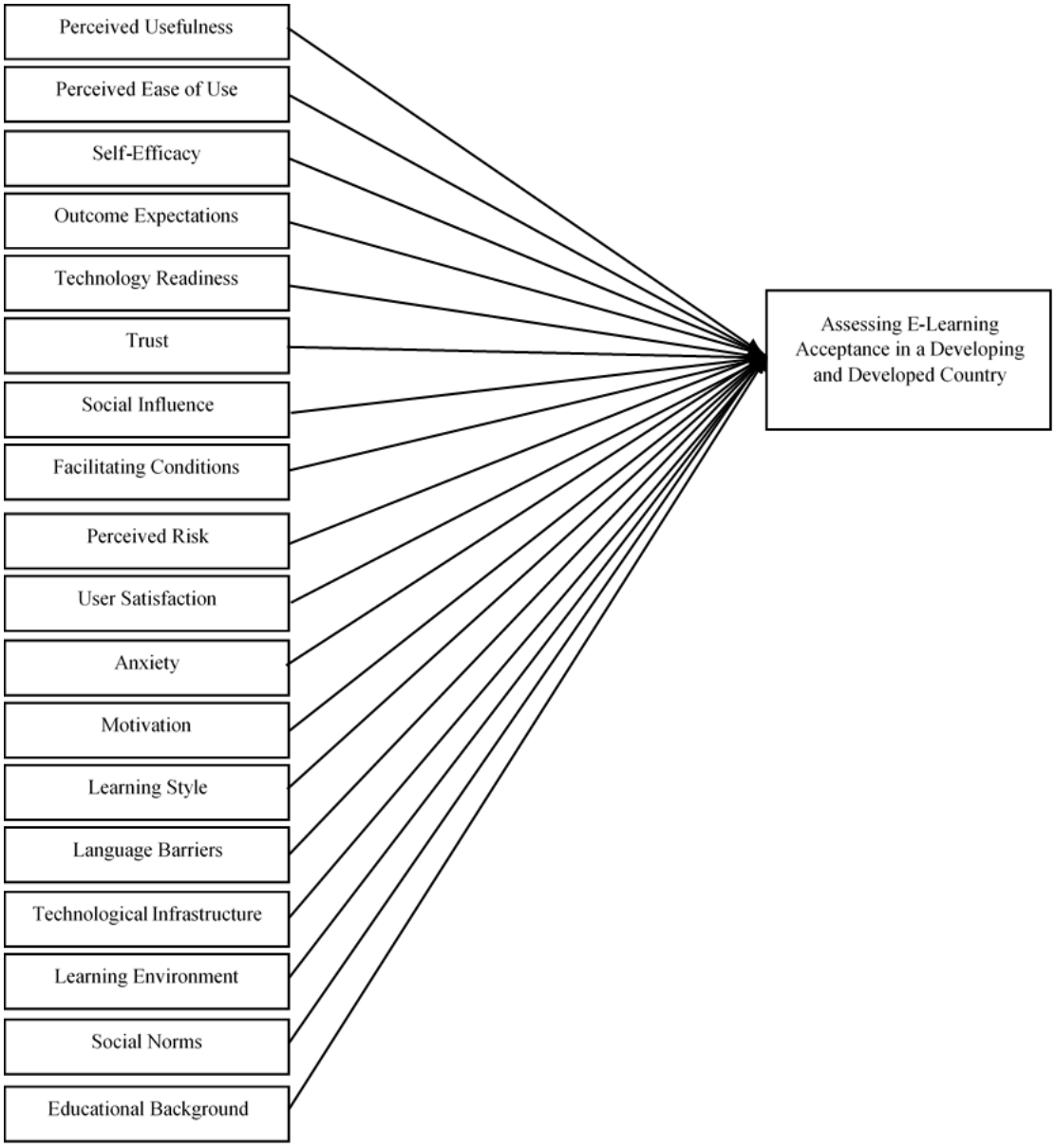

Fig 1 The proposed model

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Participant Identification *The second section aims identify the participants (4 experts). It includes questions regarding the participant's name, organization, and years of experience in the field.*
Expert Opinion *The third section seeks to gather the opinions of experts on the proposed model. It includes six questions.*

- *Questions 1 to 4 evaluate the relevance of the model to the topic, the appropriateness of the model's description, the correlation between the different factors in the model, and whether more data is required. The experts are asked to provide their opinions by selecting one of the following options: agree, not sure, or disagree.*
- *Question 5 asks the experts to provide their suggestions, comments, and opinions about the model. The question allows the experts to provide their feedback in a free-form text box.*
- *Question 6 provides an opportunity for the experts to share any additional remarks they may have regarding the proposed model.*

3) Analysis of expert opinion: The collected survey data were analyzed based on the response provided by the four experts regarding the factors. Each item was evaluated separately, with agree = 1, disagree = -1, and not sure = 0. To determine item acceptance, it was required that the item values was not equal to -1 in the first question, and the overall result of Q1 to Q4 was greater than or equal to 0. The experts' comments were also examined to identify and similarities in their responses.

4) Results and Discussion: Perceived usefulness, ease of use, self-efficacy, technology readiness, trust, social influence, facilitating conditions, perceived risk, anxiety, motivation, learning style, language barriers, technological infrastructure, learning environment, social norms, and educational background factors will be included in the final model. For factors where experts had divided opinions (outcome expectations, user satisfaction), decisions aligned with Elaish, et al. [16] inclusive approach.

IV. CONCLUSION

The proposed model provides a comprehensive framework for measuring e-learning acceptance that takes into account cultural and contextual factors. The model can help promote e-learning acceptance and adoption by identifying the factors that are most important in specific contexts and developing interventions to address these factors. This study, therefore, seeks to support the validity and reliability of the proposed model. This model will be helpful for educators, instructional designers, and policymakers in the development of appropriate e-learning strategies to cater to the needs of culturally and contextually diversified learners. In this way, future studies could seek to test the model across cultural and contextual boundaries and assess the influence of other variables like anxiety and motivation; future interventions might also attempt to enhance e-learning acceptance and adoption.

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