Employees' E-Learning Barriers Perception: does Employees' E-Learning Self-Efficacy Matter?

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ABSTRACT

Purpose: *The main purpose of this research is to examine the impact of employees' e-Learning self-efficacy on e-learning barriers perception.*

Design/methodology/approach: *An online survey has been used in which a selection of employees of from the four Egyptian telecommunication companies have been invited to participate in this research survey. Questions are structured around e-learning barriers adopting Mungania, (2003) BEL scale, and the Web-Based Learning Self-Efficacy Scale (WBLSES). Statistical analysis using SPSS (23)has been used to statistically analyze the collected data and test this research hypotheses, One-way ANOVA and multiple-comparisons (Tukey-HSD) tests are used.*

Findings: *The findings of the research support that self-efficacy is a significant predictor of employees' e-Learning barriers perception.*

Research limitations: *The research is undertaken on a single industry and therefore is not necessarily representative of other industries. This research relied on self-reported data from participantsin a cross-sectional sample.*

Empirical implications: *Employee e-Learning self-efficacy needs to be considered in online courses.Future online courses be developed with self-efficacy in mind from the start, and existing online courses should be updated to satisfy e-learners' self-efficacy needs.*

Keywords: *e-Learning, e-Learning barriers, e-Learning Self-efficacy.*

INTRODUCTION

The manner in which people go about their daily lives has changed as a result of technological advancements. The expansion of internet technologies and the revolution of computer software has been quickly affecting the world of learning during the last decade (Tayebinik et al., 2012). E-Learning is a type of environment in which learners can learn independently at their own pace, rather than in a typical classroom setting. It is a home-based program with courses that may be customized to meet the needs and preferences of learners (Al-Rahmi et al., 2018).

In organizations, there is a shift in how e-Learning is perceived: it used to be seen as a recurring expenditure, but now it is seen as an investment. Before embarking on e-Learning projects, it is critical to identify the factors that may cause them to fail. The high costs associated with e-Learning failures and system process breakdowns, which result in lost time, can be reduced by being aware of the factors that influence the success or failure of e-Learning systems. By explicitly identifying the factors that influence the success or failure of e-Learning systems, a more enhanced e-Learning environment can be provided to learners (Hani et al. 2013).

The lack of face-to-face communication among e-learners, as well as the novel environment brought in by e-Learning, are hurdles that learners must overcome (Tayebinik et al., 2012). As a result, individual effort and readiness are critical to ensuring excellent information transmission. Because self-efficacy is linked to an individual's belief in their own capacities to plan and carry out the actions required to achieve specific goals (Bandura, 1997), it creates a bridge of potential linkages on the e-Learning acceptance. People with high self-efficacy in technology are more likely to believe that learning through technology is beneficial to them. Those with poor self-efficacy, on the other hand, see e-Learning as a chore, which may impair their acceptance of e-Learning (Latip et al., 2020). This is a significant issue to address since it has the potential to impede learners' knowledge and adaptability to e-Learning, whereas the self-efficacy aspect determines how often e-Learning is used (Lwoga et al., 2015).

Because e-Learning in Egypt is still in its infancy, it is critical to address the elements that impact learners' adoption, as well as those that impede its effectiveness. Performance anticipation, self-efficacy, social influence, and other factors all contribute to the sustained use of e-Learning (Lwoga et al., 2015). Importantly, demand for e-Learning continues to rise since it has the ability to reach a global audience while also providing unique functionality, accessibility, and flexibility over a lengthy period of time (Azhari et al., 2015).

The current study begins with a discussion of the research problem, as well as the research theoretical underpinnings and review of the literature to back up the hypothesis. The methodology is then described, followed by a presentation of the findings and a discussion of them. Finally, the conclusion discusses the consequences for firms looking to ensure that their e-Learning investment pays off. As a result, the idea that employees' perceptions of e-Learning barriers are influenced by their self-efficacy is called into doubt.

RESEARCH PROBLEM

E-learning is frequently used to improve performance, develop skills, provide convenience, reduce costs, and increase motivation (Ali et al., 2008). As the use of e-Learning techniques in the workplace grows, so does the need to continue researching e-Learning and identifying factors that could improve its effectiveness (Welsh et al., 2003).

Based on various researches conducted in different education environments, it is clear that e-Learning presents a significant number of barriers for adults. (Garland, 1993; Schilke, 2001; Simmons, 2002). E-learning approaches, like any other mode of training delivery, have flaws. (Schank, 2002). This calls for an examination of the possible factors that affect learners' perception concerning barriers faced by employee e-learners, population who haven't been studied in past studies on e-Learning barriers.

Some researchers have recently included the notion of psychology into the measurement of e-Learning success (Ithriah et al., 2019; Cidral et al., 2018). Self-efficacy is one of the psychological concepts that has been used to assess the usage of e-Learning. Various researchers investigated the self-efficacy variable, and found that it is an important aspect in online learning (such as; Hodges, 2008; Tsai et al., 2010; Li et al., 2012; Alqurashi, 2016; Valencia-Vallejo et al., 2016; Peechapol et al., 2018; Pumptow et al., 2021).

However, from the extensive literature review, most of the researches conducted in this context are limited to test the effect of self-efficacy on e-Learning success, and in students' educational environments. This current research is examining the effect of self-efficacy on e-Learning barriers perception, and in organizational learning environment. Thus, employees from Egypt's telecommunications sector who have participated in e-Learning, representing diverse organizational functions and occupations, make up this current researcher's population. This current research should fill a gap in the lack of research that examines the barriers faced by the population being investigated in this research.

RESEARCH QUESTIONS AND OBJECTIVES

The purpose of this research is to investigate effect of employees' self-efficacy on e-Learning barriers perception. One research question guiding this is:

Does Employees' e-Learning Self-efficacy have an Effect on e-Learning Barriers Perception?

Theoretical Foundation

The study's theoretical framework is based on social cognitive learning theory. Social cognitive theory is a psychological perspective on human functioning that emphasizes the critical role played by the social environment on motivation, learning, and self-regulation (Schunk et al., 2019).

The present research study was particularly concerned about self-efficacy because self-efficacy influences activity (behavior), environment selection (Bandura, 1994), level of effort, and persistence exerted in the face of obstacles to the performance of those behaviors (Bandura, 1994). Social cognitive theory has been intimately connected with motivation from its inception. Motivational variables emphasized by the theory have been extensively tested in research and theoretical predictions have been largely supported (Schunk et al. 2020).

Perceived self-efficacy is defined as "a judgement of one's capability to achieve a certain degree of performance"(Bandura, 1997, p.391), or "confidence in one's ability to effectively complete a specific activity" (Kreitner et al., 2002). Because self-efficacy varies by domain (Jooet al., 2000), the notion of e-Learning self-efficacy is developed, which refers to the conviction that one can succeed in e-Learning activities.

LITERATURE REVIEW

E-Learning Barriers

In the literature, there are several definitions of e-Learning. E-Learning is the utilization of Information and Communication Technology to deliver knowledge in education and training when trainers and learners are separated by distance or time to improve the learner's experience and performance (Tarhini et al., 2016; Keller et al., 2007). While Keis et al. (2017) define e-Learning systems as an internet based software for allocating, tracking, and managing training courses over the internet, it also encompasses the application of technological advances to design, direct, and deliver learning content, as well as to enhance the two-way communication between learners and institutions. Learners can use e-Learning to overcome time and distance barriers and take control of their continuous learning (Obeidat et al., 2015; Almajali et al., 2016). Masa'deh et al. (2016) found that e-Learning environments minimize the cost of providing and, as a result, enhance income for companies.

Issues or situations that prevent learners from starting or completing courses, make it difficult for them to participate, or make it difficult for them to concentrate and learn, are known as e-Learning barriers (Darling-Hammond et al., 2019).Various researchers classify e-Learning barriers into different groups (Anton et al., 2018). Darling-Hammond et al. (2019) categorize e-Learning barriers into different emotional, mental, and attitudinal categories, which may be related to learner characteristics, such as general perceptions of e-Learning, motivation to learn, and so on.Learning barriers, according to Merrill (1992), can be divided into three categories: ethical, legal, and cultural barriers. Garland (1993) divides the barriers to adult learners' learning perseverance into four categories: situational, institutional, dispositional, and epistemological. E-Learning barriers are divided into three categories by Rezabek (1999): situational, institutional, and dispositional barriers.

Garland's (1993) model is modified and improved by Schilke (2001), who divides e-Learning barriers into 5 categories: Situational; Dispositional; Epistemological; Institutional; and Technological. According to Berge et al. (2002), 64 barriers to e-Learning can be divided into ten categories: organizational change structure; administrative ; technical expertise; faculty compensation and time; Social interaction and quality; technological risks; evaluation/ effectiveness; legal difficulties; student support services; and accessibility. Mungania (2003) investigates organizational e-Learning barriers and believes that they can be categorized into seven categories: Dispositional barriers; Learning style barriers;Content suitability barriers; Situational barriers; Organizational barriers; Instructional barriers; and Technological barriers.

Moreover, Muilenburg et al., (2005) listed the following eight barriers to e-Learning, grouped in order of severity, from light to heavy: administrative matters; social interaction; academic skills; technical skills; time and support for study; learner motivation;

internet access and cost; and technical issues.Flores et al. (2012) identify three e-Learningbarriers categories: Technology-related factors; organizational-related factors; and environment-related factors. Stoffregen et al. (2015) focus on establishing a framework for e-Learning barriers in public administrations, and their findings are divided into three categories: context;social; and technical barriers.

Ali et al. (2018) have compiled a detailed list of 68 unique barriers that are divided into four conceptual groups:individual; pedagogy;

technology; and enabling conditions. With the exception of Mungania (2003) in the workplace and Stoffregen et al., (2015) working in public administrations, the majority of e-Learning barriers categories have been studied in college and university settings. As a result, the researcher has chosen to use Mungania (2003) e-Learning barriers classification in this study. Table 1 lists Mungania's (2003) seven classes of e-Learning barriers, as well as an explanation of each barrier category.

Table1. *Classifications to e-Learning barriers, proposed by Mungania, (2003)*

Barriers	Description
Dispositional Barriers	Employees' personal traits and attitudes toward e-Learning are perceived as impediments. Personal barriers are another term for dispositional barriers.
Learning Style	Concerning employee familiarity with technology and the compatibility of e-Learning approaches with different learning styles or preferences.
Instructional Barriers	The online instructor, as well as the pedagogical design and resources.
Organizational Barriers	Barriers related to the organization in which an employee works.
Situational Barriers	Situations or conditions in one's life that make it difficult to study.
Content Suitability Barriers	The alignment of one's career goals or employment requirements with the courses available.
Technological Barriers	Barriers related to learning technologies.

E-Learning Self-Efficacy

In social cognitive theory, self-efficacy is an important aspect. The word self-efficacy refers to "Beliefs in one's capacity to organize and execute the courses of action required to generate specific attainments" (Bandura, 1997: 3). This is a person's level of assurance in performing a given task, action, or activity. Self-efficacy beliefs influence how people think, feel, and are motivated, as well as how they act and behave. According to Bandura (1997), self-efficacy beliefs influence the actions people take, the amount of effort they put in, the amount of time they will hold on in the face of barriers and breakdowns, their resilience to difficulty, the amount of stress and depression they experience when dealing with a demanding environment, and the level of accomplishments they achieve.Self-efficacy beliefs control four fundamental processes in human functioning;affective manners (anxiety and stress), cognitive manners (objectives and task orientation), motivational manners (causal attributions, result expectancies, and goals), and self-regulation manners (actions and environment) are among them(Bandura 1997).

Self-efficacy is regarded to be a crucial feature in e-Learning environments, particularly if learners are having their first encounters

(Yavuzalp et al., 2020). According to Horzum et al. (2015), learners' attitudes toward online technologies determine how they engage with their peers and instructors, as well as how they use technology. Moreover, several researches argued that self-efficacy may be a critical component of e-Learning success (Hodges, 2008). Shen et al. (2013) assert that, in addition to e-Learning performance, self-efficacy is linked to previous e-Learning experiences. According to Lim (2001), learners' computer self-efficacy has a significant impact on their satisfaction and thoughts regarding considering future online courses. Furthermore, according to Zimmerman et al. (2016), learners with high e-Learning self-efficacy are more likely to succeed in online courses.

Self-efficacy is the learners' belief in their own abilities, which they use to complete the required level of tasks in the e-Learning system (Venkatesh et al., 2000). I f a learner has a high level of self-efficacy in information and communication technology, their contribution to e-Learning system courses will be active and positive (Solangi et al., 2018). In the context of e-Learning, self-efficacy refers to an individual's willingness to incorporate e-Learning into daily activities such as the use of

the internet, computers, web-based tutorials, and learning tools (Venkatesh et al., 2000). Individuals that have a high level of self-efficacy in technology will have a favorable opinion of e-Learning, and vice versa (Latip et al., 2020).

According to Hodges (2008), self-efficacy research in online environments is still in its infancy. In the realm of e-Learning self-efficacy, Hodges suggests that additional research is needed. According to Al-Rahmi et al. (2018), self-efficacy has a positive association with learners' intention to use e-Learning and is a crucial component. Despite the fact that self-efficacy has the ability to act as a mediator in the direction of learner acceptance of e-Learning, there is a paucity of research to evaluate this link (Latip et al., 2020).Yukselturk et al. (2014) investigate the prediction of dropouts in an online program using data mining techniques, e-learner's self-efficacy proved to have a role in predicting dropouts, according to the findings.Al-Gahtani (2016) investigates for a causal explanation for learners' decision-making about the assimilation and adoption of e-Learning in academic settings. He discovered that one of the most important factors of e-Learning acceptability is self-efficacy. Kanwalet al. (2017), provides and analyses adoption and acceptance guidelines for e-Learning systems by incorporating crucial external elements of Technology Acceptance Model (TAM). According to Kanwalet al. (2017), computer self-efficacy, internet experience, and system characteristics are major barriers to the successful adoption of e-Learning systems.

Almaiah et al. (2020) conduct study to identify the major obstacles that current e-Learning systems face, as well as the main elements that support the use of e-Learning systems during the COVID-19 pandemic. Self-efficacy elements are among the essential factors that influence the use of e-Learning systems, according to the participants in the study.Truelove's (2020) finds that not only can one's self-efficacy impact how inhibitory they perceive barriers, but the strength of barriers themselves can influence one's self-efficacy.

According to the literature, the focus of the researchers mostly is on the technology factor of self-efficacy in e-Learning, for example, computer self-efficacy (Womble, 2007; Jan 2015; Pellas, 2014; Lee et al., 2011; Simmering et al., 2009; Lim, 2001; Tennyson

et al., 2010), Internet self-efficacy (Joo et al., 2000; Kuo et al., 2014; Lin et al., 2013), information-seeking self-efficacy (Tang et al., 2013), and Learning Management System (LMS) self-efficacy (Martin et al., 2008; Martin et al., 2010). Aside from the technology factors, some researches focus on just the learning factor (Artino, 2007; Hodges, 2008; Joo et al., 2000; Jooet al., 2013; Lin et al., 2008; Shea et al., 2010; Xiao, 2012) and others focus on general e-Learning self-efficacy (Gebara, 2010). Few researches available that investigate the multidimensional of self-efficacy in e-Learning (Bates et al., 2007; DeTure, 2004; Fletcher, 2005; Miltiadou et al., 2000; Shen et al., 2013; Taipjutorus, 2014; Taipjutorus et al., 2012). This current research focus on e-Learning self-efficacy. Therefore, the following hypothesis is offered:

H1. E-Learning Self-Efficacy has a Positive Impact on Employees' e-Learning Barriers Perception

In summary, the research will test one hypothesis, focusing on e-learners' self-efficacy and its impact on employees' e-Learning barriers perception.

METHOD

Since the variables under investigation have been identified and previously validated, and constructs to measure them exist, a quantitative study with a self-administered online questionnaire was deemed the best way to test the hypothesis (Sekaran et al., 2013). The context for the research population, as well as specifics about the research sample, techniques, and measures used in this research, are provided in the next section.

RESEARCH POPULATION AND SAMPLE

According to Sekaran (2003), the unit of analysis is the level of aggregation of the data analysis stage. Individual employees in the Egyptian telecommunications business who participated in e-Learning within the last two years, comprising all job levels ranging from senior level, middle level, and clerical personnel, serve as the unit of analysis in this study. Since 2018, these participants have taken part in voluntary or mandated e-Learning opportunities provided by the organizations under investigation. To ensure that the respondents have current memories of their e-Learning experiences, this timeframe is confined to two years (2018 to 2020). The exact population count was unknown to the

researcher at the time the study was conducted, consequently, the researcher decides to utilize power analysis approach to determine the appropriate sample size to the study.Accordingly, the sample size is calculated based on power analysis using the GPower3 tool.To detect an effect size of Cohen's d = 0.5 with 95% power (alpha = .05, two-tailed),G*Power suggests 210 participants would be needed in a paired samples t-test,the smallest effect size of interest is set to d = 0.5 based on the meta-analysis by Richard et al. (2003). While to detect an effect of η2p = .04 with 95% power in a one-way between-subjects ANOVA (six groups, alpha = .05), G*Power suggests 38 participants would be needed in each group counts for a sample size of 228 participants.

The sample size indicates the number of collected responses, not the number of questionnaires distributed (often raised to compensate for non-response). In most social and management surveys, the response rates for e-mailed surveys are very rarely 100% (Taherdoost, 2016). Probably the most common and time-effective way to guarantee minimum sample sizes are met is to increase the sample size by 50% in the first survey distribution (Bartlett et al., 2001). The researcher distributed 400 questionnaires to collect the data. Two hundred sixty-nine questionnaires are filled with a 67.5% response rate, larger than the sample size required.

MEASURES

To ensure the validity and reliability of the questionnaire, the items were adapted from previous research, as follows:

- The Barriers in E-Learning Scale (BELS) is a 32-item questionnaire designed by Mungania (2003) to identify e-Learning barriers and classify them into seven categories. The response possibilities range from 1 (no barrier) to 5 (no barrier) (very strong barrier), with a reported Cronbach's alpha of 0.9605, and calculatedCronbach's alpha 0.93.

- The Web-Based Learning Self-Efficacy Scale (WBLSES), developed for older adults'online learning (Nahm et al., 2008). The eight-item WBLSES incorporates a 1 to 10 point Likert scale ("1" being "not at all confident"; "10" "being totally confident").The WBLSES, basically is a short questionnaire designed to measure older adults' self-efficacy for using Web-based learning modules, could be convenient to recognize individuals who lack computer confidence,with a reported Cronbach's alpha of 0.98, and calculated Cronbach's alpha 0.952.

RESULTS

To test this research hypothesis, the statistical testhas been used is One way ANOVA. In case that there are significant differences between the independent samples in the One way ANOVA analysis, the POST-HOC test (multiple-comparisons) is used to determine the direction and significance of the differences between each two independent groups separately, and the Tukey-HSD test is used as one of the Post-hoc tests(multiple-comparisons).

Table 2 presents the Oneway ANOVA results regarding the impact of employees' e-Learning self-efficacy on employees' perceptions of e-Learning barriers.

Table2. *Oneway ANOVA the impact of e-Learning self-efficacy on e-Learning barriers dimensions*

		Sum of Squares	df	Mean Square	F	Sig.
Dispositional Barriers	Between Groups	887.873	2	443.936	10.067	0.000
	Within Groups	11642.045	264	44.099		
	Total	12529.918	266			
Learning Style Barriers	Between Groups	188.291	2	94.145	4.479	0.012
	Within Groups	5548.751	264	21.018		
	Total	5737.041	266			
Instructional Barriers	Between Groups	31.922	2	15.961	0.925	0.398
	Within Groups	4554.236	264	17.251		
	Total	4586.157	266			
Organizational Barriers	Between Groups	1085.701	2	542.851	32.753	0.000
	Within Groups	4375.565	264	16.574		
	Total	5461.266	266			

Situational Barriers	Between Groups	14.393	2	7.196	0.440	0.644
	Within Groups	4316.806	264	16.352		
	Total	4331.199	266			
Content Suitability Barriers	Between Groups	22.075	2	11.037	2.659	0.072
	Within Groups	1095.888	264	4.151		
	Total	1117.963	266			
Technological Barriers	Between Groups	226.950	2	113.475	12.508	0.000
	Within Groups	2395.013	264	9.072		
	Total	2621.963	266			
E-Learning Barriers	Between Groups	9360.976	2	4680.488	10.429	0.000
	Within Groups	118485.391	264	448.808		
	Total	127846.367	266			

It is clear from Table 2 regarding the effect of the employees' e-Learning self-efficacy variable on e-Learning barriers that there are significant differences at the level of 0.05 between the employees' e-Learning self-efficacy and dispositional, learning style, organizational, and technological barriers and with e-Learning barriers as a whole. Where the value of "f" is greater than the value of f tabulated and Pvalue< 0.05. Which indicates the influence of employees' prior experience with e-Learning factor on situational barriers.

Since there found significant differences between the independent samples in the Oneway ANOVA analysis, then the results of multiple comparisons and performing the Tukey test presents the following:

- For the dispositional barriers dimension, there is a significant difference between employees groups with fair e-Learning self-efficacy and those with good e-Learning self-efficacy, at P_{value}< 0.05 with mean difference 4.04, and in the direction of fair e-Learning self-efficacy, which means that the dispositional e-Learning barriers perception is higher in employees with fair e-Learning self-efficacy than in employees with good e-Learning self-efficacy.

- For organizational barriers dimension, there is a significant difference between employees groups with fair e-Learning self-efficacy and those with good e-Learning self-efficacy, at P_{value}< 0.05 with mean difference 4.58, and in the direction of fair e-Learning self-efficacy, which means that the learning style e-Learning barriers perception is higher in employees with fair e-Learning self-efficacy than in employees with good e-Learning self-efficacy.

- For technological barriers dimension, there is a significant difference between employees groups with fair e-Learning self-efficacy and those with good e-Learning self-efficacy, at P_{value}< 0.05 with mean difference 2, and in the direction of fair e-Learning self-efficacy, which means that the learning style e-Learning barriers perception is higher in employees with fair e-Learning self-efficacy than in employees with good e-Learning self-efficacy.

From the above results it could be indicated that, the higher the employee's e-Learning self-efficacy, the lower the perception of e-Learning barriers. This indicates the effect of employees' e-Learning self-efficacy on e-Learning barriers perception. This result is consistent with (Yavuzalp et al., 2020; Horzum et al., 2009; Hodges, 2008; Shen et al., 2013; Zimmerman et al., 2016; Solangi et al., 2018; Abdul Latip et al., 2020; Yukselturk et al., 2014; Al-Gahtani, 2016; Kanwal et al., 2017; Almaiah et al., 2020; Truelove, 2020; Yavuzalp et al., 2020) results.

These results provide support to accept research hypothesis.

DISCUSSION

The aim of this current research is to examine the impact of employees' e-Learning self-efficacy on e-Learning barriers perception. This research findings confirm that the significant impact of employees'e-Learning self-efficacy on perceived barriers, the higher the employee's e-Learning self-efficacy, the lower the perception of e-Learning barriers. This result is consistent with (Yavuzalp et al., 2020; Horzum et al., 2009; Hodges, 2008, Shen et al., 2013; Zimmerman et al., 2016; Solangi et al., 2018; Latip et al., 2020; Yukselturk et al., 2014; Al-Gahtani 2016;

Kanwal et al., 2017; Almaiah et al., 2020; Truelove, 2020) results.

This significant influence show employees' perception of their ability to engage in e-Learning, not necessarily their level of skill as "Self-efficacy is not concerned with the skills one has but with judgments of what one can do with whatever skills one possesses." (Bandura, 1986: 391). In the e-Learning field, learners with little self-efficacy are likely to quit e-Learning as soon as they encounter barriers in the process. To improve self-efficacy, practitioners could provide experiential opportunities for trying out e-Learning through demonstration courses and training.

EMPIRICAL IMPLICATIONS

"Among the different aspects of self-knowledge, perhaps none is more influential in people's everyday lives than conceptions of their personal efficacy" (Bandura, 1986:390). In the context of this research, the influence of self-efficacy on e-Learning, which significantly influences the perception of barriers, has several implications for e-Learning stakeholders. In the present research, e-Learning self-efficacy is expected to influence employees' affective manners (anxiety and stress), cognitive manners (objectives and task orientation), motivations (causal attributions, result expectancies, and goals), and self-regulation manners (actions and environment). When confronted with barriers, an employee's self-efficacy will influence some or all of the factors mentioned above, a piece of evidence that self-efficacy is a significant factor in e-Learning. E-Learning self-efficacy beliefs must be reinforced, and below are some of the recommendations and implications the present research's findings have for practitioners.

Self-efficacy reveals what people believe they can achieve with their skills (Eastin et al., 2000). Because perceived self-efficacy functions independently of existing skills (Bandura, 1986), it is crucial to look beyond training to reduce barriers. Future online courses can be developed with self-efficacy in mind from the start. In addition, existing online courses should be updated to satisfy e-learners' self-efficacy needs. Instructional designers should pay special attention to technologies that are already well-liked by learners and educators and that can be integrated in such courses with minimal effort.

Other strategies that can improve self-efficacy are essential. Dealing with the four sources of self-efficacy:

- Improving self-efficacy through providing positive experiences. Previous experiences of success or failure are the most influential source of self-efficacy.

- Improving self-efficacy through verbal persuasion. Peoples' self-efficacy dogmas can be supported through verbal persuasion (Bandura, 1986) of others such as supervisors, peers, relatives, or significant others. This has indications for many e-Learning stakeholders because the feedback provided to an employee could influence their self-efficacy. Managers need to become e-Learning advocates and verbally persuade employees of its value and credibility.

- Improving self-efficacy through affective arousal. To enhance employee self-efficacy, the challenge for e-Learning stakeholders is to eliminate barriers that could cause feelings of inadequacy and lessen the stress caused by e-Learning barriers.

- Assess employees' self-efficacy. E-Learning stakeholders should be equally concerned with e-learners self-efficacy as they are with other skills because to function competently, one requires both skills and self-efficacy (Bandura, 1986).

LIMITATIONS AND FUTURE RESEARCH

When evaluating the findings of this study, it's important to keep in mind the limitations. To begin, the current study used a self-administered questionnaire in a cross-sectional sample. As a result, there's a chance that common procedure bias will affect our results; nonetheless, studies have shown that this is unlikely. Future studies could reduce this potential influence by gathering data from many sources and/or over time periods. Second, because we chose a single instance industry, the findings should not be seen as necessarily typical of the entire workforce. Future research might look into a variety of businesses and contexts to see how generalizable the findings are. Finally, while the study was planned as quantitative research,

the complexities of the interconnected aspects lend itself to additional qualitative and quantitative inquiries.

CONCLUSION

E-Learning has been and will continue to be utilized by many small and large companies. This study has reaffirmed key elements essential for businesses to efficiently and successfully embrace and continue to employ e-Learning as key part of their training and development plans. Notably, the research has found that employees'e-Learning self-efficacy has a substantial influence one-Learning barriers perception. Based on these findings, it is proposed that if self-efficacy is found to be an essential factor in online course success, future online courses can be developed with self-efficacy in mind from the start. In addition, existing online courses should be updated to satisfy e-learners' self-efficacy needs. Instructional designers should pay special attention to technologies that are already well-liked by learners and educators and that can be integrated in such courses with minimal effort.

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