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Massive Open Online Courses for Scalability and Transformational Culture of Learning in Corporate Organizations

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ABSTRACT

The global pandemic of coronavirus "Covid-19" in the fall of 2019 caused dramatic changes in all sectors, including education. Businesses, like corporate organizations that normally train their employees annually, were equally affected, due to lack of instructors. Learning institutions were faced with various challenges due to the abrupt paradigm shift of changing from face-to-face to online teaching and learning, with limited preparedness. For scalability, and to maintain their annual strategies of keeping their dynamic capabilities, organizations were forced to adapt online training although with limited preparedness. However, electronic learning innovations such as the massive open online courses (MOOCs) that should have been leveraged by corporate organizations to train their employees during these hard times, had been mainly tailored for educational institutions. More still, much as MOOCs are essential for all enterprises, there have been few or no models developed to inform their adoption for corporate training. This study sought to bridge this gap, thus developed a model for MOOCs adoption for corporate training, based on data collected from South African private sectors, and analysed quantitatively. Results indicated that perception and attitude toward technology, teaching styles, and technology control are key influencing factors of MOOCs adoption for corporate training. The developed model will be used to provide insights into MOOCs adoption for workplace training, and to extend research on MOOCs usage. It is recommended that future studies consider the analysis of the moderating effects of respondents' demographics, their perceptions possibly changing over time.

Keywords **:** *MOOCs, Online learning, Learning culture, Flexibility of learning in private sector, Distance learning*

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Kurumsal Organizasyonlarda Ölçeklenebilirlik ve Dönüşümsel Öğrenme Kültürü için Kitlesel Açık Çevrimiçi Dersler

ÖZ

2019 yılının sonbaharında ortaya çıkan Covid-19 pandemisi, eğitim dahil tüm sektörlerde dramatik değişikliklere neden oldu. Eğitim sektörü eğitmen eksikliği nedeniyle eşit şekilde etkilendi. Okullar, sınırlı hazırlıkla yüz yüze öğretim ve öğrenimden çevrimiçi öğretim ve öğrenime geçişin ani paradigma kayması nedeniyle çeşitli zorluklarla karşı karşıya kaldı. Ölçeklenebilirlik ve dinamik yeteneklerini korumaya yönelik yıllık stratejilerini sürdürmek için kuruluşlar, yeterli hazırlıkları olmamasına rağmen çevrimiçi eğitime geçmek zorunda kaldılar. Ancak, bu zor zamanlarda çalışanlarını eğitmek için kurumsal kuruluşlar tarafından kullanılması gereken kitlesel açık çevrimiçi dersler (KAÇD'ler) gibi elektronik öğrenme yenilikleri, esas olarak eğitim kurumları için uyarlanmıştır. Daha da ötesi, KAÇD'ler tüm işletmeler için gerekli olmakla birlikte, bunların kurumsal eğitim için benimsenmesini bildiren çok az model geliştirilmiş veya hiç geliştirilmemiştir. Bu çalışma, bu açığı kapatmayı amaçlamış, böylece Güney Afrika özel sektörlerinden toplanan verilere dayanmaktadır. KAÇD'lerin kurumsal eğitimde benimsenmesi için bir model geliştirmiş ve nicel olarak analiz edilmiştir. Sonuçlar, teknolojiyle öğretme stillerine ve teknoloji kontrolüne yönelik algı ve tutumun, KAÇD'nin kurumsal eğitim için benimsenmesini etkileyen temel faktörler olduğunu göstermiştir. Geliştirilen model, KAÇD'lerin işyeri eğitimi için benimsenmesine ilişkin içgörü sağlamak ve KAÇD'lerin kullanımına ilişkin araştırmaları genişletmek için kullanılacaktır.

Anahtar Kelimeler **:** *KAÇD, Çevrimiçi öğrenme, Öğrenme kültürü, Özel sektörde öğrenme esnekliği, Uzaktan eğitim*

INTRODUCTION

Corporate enterprises, as with any other small-scale organizations, require world-class skills for their employees, be it data analytics experts, or for providing business acumen, or for any other generation of leadership, in order to keep abreast of the competitive environment within the workforce. These skills need to be consistently provided in order to acquire scalability within the organization. Scalability demands solutions that deeply instil the culture of learning and dynamic capabilities within the organization (Tyler, 2020).

Amidst the changing landscape in the teaching and learning domain due to the Covid-19 pandemic, corporate organizations need to maintain their objective of developing skills among their employees as a foundation for future work. According to Mallee (2018), corporate training offers a variety of benefits including but not limited to the enhancement of employees' performance, boosting their productivity, reducing their turnover, as well as improving organizational culture. Mallee (2018) expresses that, via training, employees receive clear

communication about their jobs, required processes, and procedures that enable them to execute their activities within the corporate guidelines. Additionally, Tyler (2020) asserts that in an organization, investment is essential but is not a guarantee of success. Tyler (2020) indicates that these skills are best provided by organizations' constant and consistent training of employees. Hence, training must be effective enough to achieve scalability that instils the culture of learning and dynamic capabilities needed for the organization's competitive advantage. Massive open online courses (MOOCs) that enable individuals not only to study on their own, but also to register and complete courses with accredited institutions, is a potential tool to be leveraged for corporate training for successful existence and competitiveness (Ma & Lee, 2019; Alamri, 2022).

Since its inception, MOOCs as a learning approach have gained popularity and have helped many learners register and complete their qualifications (Ma & Lee, 2019; Alamri, 2022). However, these developments have been widely applied in education institutions, yet little progress has been witnessed in the private sector, especially in developing countries (Chaker & Bachelet, 2020). MOOCs for corporate training provide numerous benefits for both organisations and individual employees, including but not limited to increased employee retention, performance, revenue, morale and motivation, innovation and creativity, company reputation, as well as better leadership and decision-making (Żur & Friedl, 2021).

The use of MOOCS for corporate training fits well with the current disruption in the education system due to Covid-19 and the evolving Fourth Industrial Revolution (4IR). The Covid-19 pandemic, coupled with the ongoing digitization due to the 4IR, has provided an opportunity to reflect and recalibrate teaching and learning for the support of a resilient education system in all sectors worldwide (Kanwar & Daniel, 2020; Zhao, Ao, Wang, & Wang, 2022). Besides that knowledge and societies advance during an industrial revolution, 4IR creates threats to the labour market due to the expected job redefinition and loss (Aluko, Krull, & Mhlanga, 2022). Hence, employees need to be equipped with those skills that promote complex problem-solving, creativity, emotional intelligence, and critical thinking. MOOCs can play a dominant role in imparting these skills, providing a lifelong learning approach, and also enabling employees to study at their own pace, time, and place (Kalema, 2022). However, the use of MOOCs for workplace training and learning has been given little attention: there has been limited research conducted in this respect (Karnouskos, 2017; Ma & Lee, 2019). This paucity of studies calls for more research on MOOCs adoption and usage for corporate training, as well as the development of an appropriate model.

1. RELATED WORK

Several studies have been conducted to investigate the use of MOOCs for teaching and learning, with an emphasis on higher-education institutions. This section discusses literature on these studies, highlighting their limitations and recommendations.

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Sammour, Al-Zoubi, Gladun, Khala and Schreurs (2015) carried out a study that sought to develop an intelligent model for the adoption of MOOCs by students to complete courses within universities. Their study used the approach of two virtual programmes − the international study, and the exchange study. By analysing their data quantitatively, their study revealed that the two types of proposed virtual study programmes could be accepted in most aspects by management, academics, and students. Their study indicated that when MOOCs' benefits are clearly articulated, learners will smoothly adopt and use such. On the other hand, the study of Mori and Ractliffe (2016) followed a qualitative approach in evaluating MOOCs usage in higher education. By using the teaching excellence framework (TEF) as their underpinning theory, these researchers highlighted three factors influencing the completion of MOOCs courses. Factors were listed as time commitment, loss of interest, and the lack of face-to-face interaction to discuss areas of interest and the sharing of good practice. The study recommended that for higher institution learners MOOCs should be used in a blended learning format to enable learners to have face-to-face interaction. These researchers, however, concurred with Sammour et al. (2015) that, when effectively implemented, MOOCs usage benefits are enormous.

Marques and Azevedo (2017) investigated MOOCs' success factors for which they proposed an analysis framework, testing it qualitatively. Their study observed that, much as there is still scant literature on MOOCs' success factors, such literature as is available points to the development of appropriate frameworks for different situations as they are presented. In a similar effort to explain MOOCs usage by higher-education students, Kerr, Dale and Gyurko (2018) developed a framework for an adaptive MOOC in a blended learning format. Their framework was tested quantitatively using alpha and beta-testing. Results indicated that, whether blended learning format or purely online, MOOCs adoption and usage is strongly influenced by learners' perceptions and the technology that the learners interact with when using MOOCs.

The study of Ziegenfuss, Furse, Sykes, and Buendía (2019) developed a framework of MOOCs usage in the flipped teaching environment. By analysing their data using mixed methods, their study revealed that for younger learners to effectively use MOOCs, their attitude plays a significant role; whereas for mature learners, various factors, including environment and support, are more significant. Additionally, other MOOCs researchers such as (Oyo & Kalema, 2014; Marques & Azevedo, 2017; Dousay& Janak, 2018) highlight several other factors that are essential to the successful adoption of MOOCs. These authors, however, note that the adoption of MOOCs is governed by the diversity of approaches that users engage with while carrying out their activities. The above authors indicated that such makes MOOCs relevant to people of different organizational cultures, technological backgrounds, varying technological infrastructure, learning styles, and other distinctive characteristics.

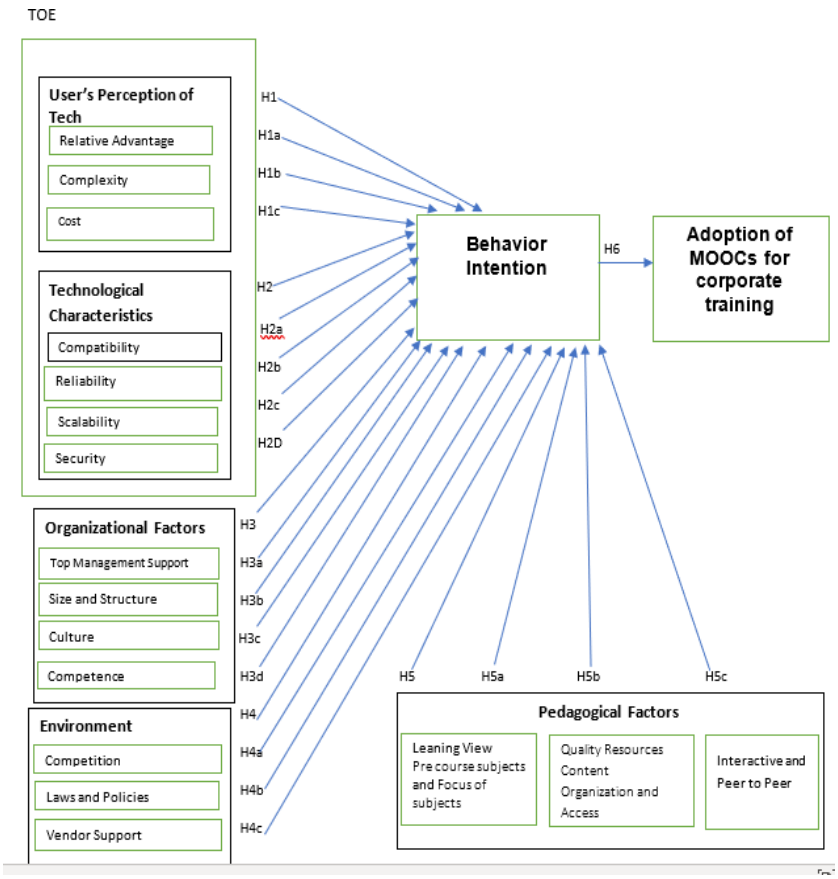

Figure 1: The Conceptual Model

2.1 The Conceptual Model

From the reviewed literature, it was observed that MOOCs studies, like those of other technological innovations adoption, were underpinned by various theories and models including the Theory of Reasoned Action (TRA), Diffusion of Innovation (DOI), the Theory of Planned Behaviour (TPB), the Social Cognitive Theory (SCT), the Technology Acceptance Model (TAM) and others. However, from the related work, this study adapted the Technology, Organization and Environment (TOE) theory (De Pietro, Wiarda & Fleischer, 1990) as its underpinning theory. Based on this underpinning theory and the factors that were revealed in the literature, a conceptual model was designed as demonstrated in Figure 1. In the conceptual model, the technological factor was reconceptualized from two different perspectives, namely, users' perception of technology, and the technology's characteristics. The users' perception of technology included relative advantage, complexity, and cost; whereas the technological characteristics included compatibility, reliability, scalability, and security. On the other hand, the organizational and environmental factors were only presented with their attributes, without further categorization.

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2.2 Hypothesis Development

As demonstrated in Figure 1, five categories of factors were suggested to inform MOOCs adoption for corporate training. These were the technological, organizational, environmental, pedagogical, and behavioural intention. These constructs are as discussed in the proceeding section and the hypotheses that were derived from them.

a) **Technological factors:** In relation to this study, these factors refer to technological characteristics and users' perceptions of the technology that informs the organizational preparedness for adoption. Users' perception of technology implies the way in which users perceive the technology as being either easy, useful, or costly. On the other hand, the technological characteristics refer to the features, functional, as well as the non-functional requirements of the technology (De Pietro *et al*., 1990). From this category, two hypotheses (H1 and H2) and seven sub-hypotheses were derived.

H1: Users' perception towards technology when mediated by behavioural intention influences MOOC adoption for corporate training.

H1a: Relative advantage when mediated by behavioural intention influences MOOCs adoption for corporate training.

H1b: Complexity when mediated by behavioural intention influences MOOCs adoption for corporate training.

H1c: Cost when mediated by behavioural intention influences MOOCs adoption for corporate training.

H2: Technological characteristics when mediated by behavioural intention influence MOOCs adoption for corporate training.

H2a: Compatibility when mediated by behavioural intention influences MOOC adoption for corporate training.

H2b: Reliability when mediated by behavioural intention influences MOOC adoption for corporate training.

H2c: Scalability when mediated by behavioural intention influences MOOC adoption for corporate training.

H2d: Security when mediated by behavioural intention influences MOOC adoption for corporate training.

b) **Organizational Factors**: This refers to the organizational aspects that play a role in the adoption of MOOCs. These may include factors such as the size and structure of the

organization, organizational support, culture, and competence. The third hypothesis H3, and its sub-hypotheses H3a – H3d, were derived.

H3: Organizational factors when mediated by behavioural intention influence MOOCs adoption for corporate training.

H3a: Top management support when mediated by behavioural intention influences MOOCs adoption for corporate training.

H3b: Organizational size and structure when mediated by behavioural intention influence MOOCs adoption for corporate training.

H3c: Culture when mediated by behavioural intention influences MOOCs adoption for corporate training.

H3d: Organization's competence when mediated by behavioural intention influences MOOCs adoption for corporate training.

c) **Environmental factors:** These factors relate to the aspects that create an influence on physical activities within an organization. These include the alignment with business strategies, finding solutions to competitive pressure, balancing the mental effort and bulkiness of using MOOCs along with other activities. Based on this category, hypothesis H4 and its three sub hypotheses were developed.

H4: Environmental factors when mediated by behavioural intention influence MOOCs adoption for corporate training.

H4a: Competition when mediated by behavioural intention influences MOOCs adoption for corporate training.

H4b: Laws and policies when mediated by behavioural intention influence MOOCs adoption for corporate training.

H4c: Vendor support when mediated by behavioural intention influences MOOCs adoption for corporate training.

d) **Pedagogical factors**: In this study, the pedagogical category refers to the approach to teaching and training. The approach is informed by the theory of practice and learning, and how this process influences, and is influenced by, the social, political, and psychological development of learners. From this category, hypothesis H5 and its sub hypotheses H5a – H5c were derived.

H5: Pedagogical factors when mediated by behavioural intention influence MOOCs adoption for corporate training.

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H5a: Learning view, focus of subjects, and pre-course subjects when mediated by behavioural intention, influence MOOCs adoption for corporate training.

H5b: Quality resources, content organization, and access, when mediated by behavioural intention influence MOOCs adoption for corporate training.

H5c: Interactivity and peer-to-peer learning when mediated by behavioural intention influence MOOCs adoption for corporate training.

e) **Behavioural intention**: This refers to the intention to use technological innovation. Based on this understanding, the sixth hypothesis H6 was derived.

H6: Behavioural intention influences MOOCs adoption for corporate training.

2. RESEARCH DESIGN AND METHODOLOGY

By following a quantitative approach, this study collected data from the South African mining industry. Three companies were selected: data were collected from the head offices of the six business units: business systems, master data departments, human resource development (HRD), accounts payable, business partners/human resources (HR), as well as general administration. From within these business units, individual respondents were selected using inclusive sampling, each unit not having more than 50 personnel. Based on the Krejice and Morgan's (1970) tool for determining sample sizes for a finite population, a sample of 175 respondents was determined from the expected population of 300 personnel. To achieve a good response rate, 210 closed-ended questionnaires were distributed, of which 196 were answered and returned, although only 180 were usable.

3. RESULTS

Both correlation and regression analyses were conducted to determine the relationship between the conceptualized factors and their overall contribution toward MOOCs adoption for the transformation of the culture of training and learning within corporate organizations. Correlations showed that the suggested factors had a good relationship among themselves. However, the regression indicated that the conceptualized model had an overall prediction of 72.7%. Regression results are demonstrated in Table 1.

Table 1: Regression Analysis Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.475	.566		2.607	.010		
	RA	.260	.122	.127	2.129	.026	.340	2.944
	COMPX	.724	.346	.737	2.094	.038	.335	2.985
	COMPY	.088	.148	.083	.599	.550	.322	3.105
	Cost	-.208	.105	-.069	-1.984	.045	.422	2.370
	Rel	.004	.106	.005	.042	.967	.350	2.854
	Scal	.199	.155	.142	1.282	.202	.352	2.842
	Sec	.132	.120	.112	1.098	.274	.413	2.422
	ORGTMS	.326	.123	.167	2.651	.016	.402	2.490
	ORGCul	.900	.179	.732	5.030	.000	.304	3.289
	ORGCompce	1.107	.248	1.124	4.454	.000	.468	2.137
	ORGSS	-.258	.130	-.108	-1.988	.040	.265	3.770
	EnvtCompn	1.025	.340	.908	3.017	.003	.348	2.384
	EnvtVS	-.113	.100	-.118	-1.139	.256	.401	2.495
	EnvtLPGF	.176	.129	.164	1.359	.176	.297	3.364
	PEDLV	-.789	.192	-.687	-4.113	.000	.454	2.204
	PEDQR	-1.643	.299	-1.631	-5.490	.000	.349	2.865
	PEDInter	-.866	.413	-.730	-2.100	.037	.336	2.976
	BI	.140	.042	.404	3.345	.018	.348	2.873

a. Dependent Variable: MOOCs Adoption

As demonstrated in Table 1, of the 18 conceptualized independent factors, 12 were found to have a significant contribution; whereas the sixth's contribution was found not to be significant. The overall prediction of the model was set at 72.7%. However, it could be deduced that the conceptual framework is a good presentation of a model needed for MOOCs contribution towards scalability and transformational culture of learning within a corporate organization through training. Based on the critical ratio (*t-value*), the suggested hypotheses were tested, and the results were in line with the findings demonstrated in Table 1.

4. DISCUSSION AND INTERPRETATION

The first hypothesis H1, tested users' perception of technology. It influences the adoption of MOOCs for scalability and transformational culture of learning in corporate organizations through training. This hypothesis was ***accepted.*** The implication of these findings is that one's perception and attitude toward technology influence one's ability to use technology for learning. Positive perceptions and attitudes stimulate learning, whereas those negative hinder such. Perceptions are influenced by self-efficacy, attitude, beliefs, as well as trust in the system. Similarly, the sub hypotheses H1a, H1b, and H1c, of relative advantage,

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complexity, and cost, respectively, were also ***accepted***. These findings imply that, when adopting technology for learning, learners should appreciate the benefits of using it; more so, if the technology is easy to use. Another implication is that the organization should view the technology implementation as being cost-effective compared with other available alternatives. This was true especially after the Covid-19 pandemic shock that compelled all enterprises to implement social distancing and telecommuting.

The second hypothesis H2, theorized the influence of technological characteristics; this hypothesis was ***rejected***. Similarly, its sub hypotheses, H2a, H2b, and H2c, examining the influence of compatibility, reliability, and scalability of the technology, respectively, were also ***rejected***. On the contrary, the sub-hypothesis H2d, predicating the influence of security, was ***accepted***. The implications of these findings are that the characteristics of the technology are more of a concern to the implementers, that is, a technical group, than to the users. This argument was also supported by researchers such as (Al-Fraihat, Joy & Sinclair, 2017; Aluko et al., 2022), who also observed that users will value more the smooth interaction with and benefits of the technology, than its characteristics. More so, most recent technological tools such as MOOCs have been developed to be operational on numerous platforms, hence giving few or no hiccups to users, especially if the technology is well implemented.

On the other hand, security was found to be significant. It is essential for both the users and management to have peace of mind about the security of the technology being used. Management, on one hand, will be concerned about issues of liabilities that may accrue for the system usage; whereas users will be concerned mostly about their use of the system on their personal devices such as laptops, cell phones, and iPads. These findings support those of previous researchers such as (Marques & Azevedo, 2017; Mcgill, Klobas, & Renzi, 2014) who alluded to a good network security system helping businesses reduce the risk of falling victim to data theft and sabotage.

Another hypothesis, H3, predicted the influence of organizational factors on the MOOCs adoption for scalability and transformational culture of learning in corporate organizations through training. Hypothesis H3 was ***accepted.*** Consequently, its sub hypotheses H3a, H3b, H3c, and H3d, relating to top-management support, organizational size and structure, culture, and organization's competence, respectively, were also ***accepted***. The findings of this study imply that organizational factors are crucial to the adoption and implementation of any technological innovation. Organizational issues such as sensitization of users, allocation of budgets, planning, as well as control of usage, play a critical role in technological implementation. Organizational factors have been found to be significant for technological innovation implementation by many other researchers (Barteit, Depoux, Sié, Ye, & Sauerborn, 2018; Dousay & Janak, 2018; Alharbi & Lally, 2017).

The fourth hypothesis, H4, theorized the influence of environmental factors on MOOCs adoption for corporate training; this hypothesis was ***accepted*.** Similarly, the three sub hypotheses H4a, H4b, and H4c, relating to competition, laws, and policies, as well as vendor support, respectively, were also ***accepted***. The implication of these findings is that social and externally related factors are essential to the adoption of technological innovations. More so, policies are needed for guidance in running organizational programmes and also in aligning the IT objectives with the strategic business goals. These findings are in agreement with other researchers' findings, who also indicated that corporate training must be tailored to fit the organization's goals and objectives. As such, the technology should embrace the social and external surroundings of the organization (Barteit *et al*., 2018; Alharbi & Lally, 2017; Kanwar & Daniel, 2020).

The fifth hypothesis, H5, theorized that pedagogical factors, when mediated by behavioural intention, influence MOOCs adoption for corporate training. This hypothesis was **accepted.** Furthermore, its sub hypotheses H5a, H5b, and H5c related to learning, viewing quality resources, as well as interactivity and peer-to-peer learning respectively, were also ***accepted***. Pedagogical factors mainly focus on how instructors or teachers assist learners to acquire skills necessary to develop their own ideas, as well as to question themselves and group members in constructive ways. The acceptance of these hypotheses implies that for successful adoption of MOOCs for corporate training, learners need to focus on how they learn, in addition to what they learn, to activate metacognition skills. These findings are in agreement with those of previous researchers who also noted that having a well-thought-out pedagogy is essential to the quality of teaching and learning (Zur & Friedl, 2021; Sigama & Kalema, 2018; Alharbi & Lally, 2017).

The sixth hypothesis, H6, related to the influence of behavioural intention to accept MOOCs adoption for enhancing scalability and transformational culture of learning in corporate organizations was ***accepted*.** Behavioural intention has been found by many previous researchers to have a direct influence on the actual change of behaviour (Sigama & Kalema, 2018; Alharbi & Lally, 2017).

5. CONCLUSION AND RECOMMENDATIONS

The Covid-19 pandemic caused many organizations to adopt a hybrid format of working and to extend their operations to a fully remote workforce, in response to the need for social distancing and the maximizing of workspaces (Kalema, 2022; Palinkas, Springgate, Sugarman, Hancock *et al*., 2021). This transformation, due to this new dynamic, impacted on all business units of organizations, including activities that needed to be conducted, such as training. Despite the Covid-19 pressure having somewhat eased, many organizations are still telecommuting (Aluko *et al*., 2022). Amidst these dramatic changes, corporate organizations must endeavour to lead a large-scale transformation of the culture of learning through

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training, keeping in mind that some of their workforce remains hybrid or fully remote. In this respect, the leveraging of learning tools such as MOOCs remains the best option. Despite the fact that MOOCs for teaching and learning have been available for a long time, MOOCs have become even more important with a hybrid and virtual workforce, especially for corporate organizations (Alamri, 2022). Meaningful training must be implemented to achieve the organizational objective of knowledge transfer and effective skills development in the virtual context of a corporate enterprise. There is therefore a need to rely more on collaborative tools such as MOOCs that allow people to work with one another in an agile way.

Consequently, the increasing globalization and the momentum arising from the Fourth Industrial Revolution (4IR) are forcing many businesses to face enormous risks of competition and loss of market share (Kalema, 2022). Organizations must ensure that their critical functions are in the hands of employees with proven ability and competencies needed to compete in the business changing environment. To meet this demand, organizations must leverage online learning and its applications such as MOOCs. This will allow such institutions to be both flexible and transformational towards their full-time employees. The correct applications will equip employees with critical skills and address skills gaps that could affect their business. Importantly, MOOCs are supported by accredited universities and experts in the field (Zhao *et al*., 2022). MOOCs can be tailored to fit the needs of an organization. As such, this makes MOOCs an ideal addition to the corporate transformation culture of learning. Additionally, the MOOCs characteristics such as versatility, having a broad range of topics, as well as good and high-quality content, are essential for the provision of employees' skills development and compliance training relevant for almost all corporate enterprise business units (Alamri, 2022). Besides cost saving, MOOCs will also help an organization to upskill its employees, create a culture of personalized learning, improve collaboration among its employees, as well as bridging the performance gaps key to achieving a competitive advantage (Aluko *et al*., 2022).

The study developed a model for the adoption and use of MOOCs for corporate training. Based on the reviewed literature, the study developed a conceptual model that was tested quantitatively. Results indicated that organizational competencies and culture play a highly significant role in the adoption of MOOCs for corporate training. More so, pedagogical factors and environmental competition also need close attention in the process of adoption of MOOCs for corporate training. The model developed by this study will be used by many organizations that intend to scale a culture of learning using technology. It is important to note that embarking on any sort of online learning initiative is no small feat. Therefore, organizations need to base their adoption decisions on empirical evidence supported by a well-developed model, so as to avoid potentially expensive technology missteps.

6.1 Recommendation

This study was conducted during the times of post-Covid-19 crisis when many people are still traumatized by the pandemic experiences, even though the respondents were not necessarily victims of the disease. It is not clear whether the perceptions of the respondents will remain the same after some time when Covid-19 has completely been eradicated or when its cure has been found. Therefore, some factors of this model may cease to be significant, and others become salient. Because the data for this study were collected at one particular time, the study, therefore, recommends future testing of the model and extending it to include new factors that would have become salient. Future research should also include the analysis of the interacting effects of the respondents' demographic factors; as such perceptions may change with time.

The rapidly changing business environment due to globalization and the evolution of the 4IR requires organizations to constantly equip their employees with the skills and competencies needed for achieving competitive advantage. Much as the online learning method has been proven to be revolutionary in providing quality learning much more rapidly, some employees may not find it user-friendly when training online. Organizations must therefore sensitize their employees prior to engaging in online training.

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