How e-Learning from a multinational corporate is accepted and used in Africa.

by

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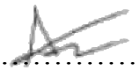
ABSTRACT

Multinational corporations have played a significant role for e-learning systems' penetration in Africa. This study sought to explore how e-learning systems are accepted and used by a multinational corporation in Africa. The multinational company focuses in building materials and construction. The qualitative research approach utilizing the exploratory and analytical case study design was employed in this study. The research participants comprised of managers who are employees of a multinational corporation, and they were purposively sampled from Middle East Africa region. Research instruments used were interviews guide and questionnaires on e-learning and its use by a multinational corporation operating in Africa. The results revealed that e-learning systems play a pivotal role in transforming education in Africa. The study also found that for a prosperous e-learning strategy in Africa, there is requisite for leadership transformation, team building, and easy access to information. In addition, there is also a need for commercial transformation, and understanding of company goals, induction of new members, and promotion of a learning culture, collaboration, and guidance. Finally, the study considered the various e-learning systems application challenges in Africa. These were found to range from the lack of technological awareness by learners, lack of time by the working class, poor connectivity, high setup costs, language barriers, as well as the lack of customised gadgets for e-learning.

Key Words: E-learning, System, Multinational, Corporations, Africa, Constructivism, Behaviourism, Cognitivism, Pedagogy, Qualitative.

DECLARATION ON PLAGIARISM

I declare that the dissertation entitled, “How e-Learning from a multinational corporate is accepted and used in Africa.” is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Signature of student:  Date: 27/01/2020

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DEDICATION

This body of work is dedicated to my family who have supported me in this endeavour.

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CHAPTER ONE

1.1 Introduction

Africa is faced with a growing need to meet and satisfy the 21st century educational requirements of its fast-growing population (Nhando, 2015). The continent is regarded as having the youngest population in the world with those under the age of 30 constituting at least 70% of the population (Euromonitor, 2012). These demographics translate into more students seeking education provision at all levels. Education is regarded as critical to the economic development of Africa and technological advancement presents an opportunity for African governments to ensure education provision for all (Hennessy, Onguko, Harrison, Ang'ondi, Namalefe, Naseem, & Wamakote, 2010). One major area that has received considerable attention is the usage of e-learning, as well as digitalization to meet the sustainable development goal (SDG) of inclusive education and skills development among Africans (Hennessy *et al*., 2010).

Al-Sharhan (2018) described e-learning as acquiring information empowered through the usage of information and communications technology (ICT). Conversely, Hrastinski (2008) defined it as acquiring information by electronic means interceded by asynchronous and synchronous communication because of assembling and approving information. Consequently, it can be deduced that e-learning is information attained, supported, and managed by the usage of electronic information provision services and systems. Hrastinski's definition leads to two sub-categories of e-learning: asynchronous and synchronous learning. The first category, synchronous learning, involves live interaction among the participants and requires all of them to be available at the same time. It takes the form of a virtual classroom where learners can interact with fellow learners from different locations, ask instructors questions and get feedback or responses instantly via instant chat messaging. Alternatively, asynchronous learning comprises the usage of internet technologies to initiate a classroom course, lecture or meeting. Learners learn at his or her own pace and only utilize the internet as a back-up tool to get lesson material and upload assignments.

Viewed from another angle, the broader meaning comprises usage of internet, intranets,

extranets, as well as video, podcasts, and audio tapes. In addition, e-learning can be looked at as an application of complex interactive systems under advanced media technology (Radović- Marković, 2010). Today, e-learning has shown to be effective at enhancing learning in both the school or college environment and the corporate realm. Multinational corporations (MNCs) are organisations with facilities and other assets in at least one country other than its home country are also capitalizing on this valuable asset to boost training and encourage skills development of their employees. This research seeks to contemplate and discover multinational e-learning systems in Africa.

1.2 Background of Study

Geographical barriers to upgrading the skills of employees are no longer a concern in today's interconnected world (Awidi, 2013). The world has become a global village with companies now able to operate in different markets across the world where there is a market for their products. This has resulted in the workplace becoming culturally diverse as employees from different corners of the world are brought together. This is common among most MNCs which operate in many different countries.

A similar study by Higley (2014) acknowledged the challenges posed by e-learning in a learning environment which affect learners and instructors. The extent to which technology is embraced in an environment affects the literacy and usage of such advanced digital technology; this implies that the students who are supposed to use e-learning platforms are affected by their background. As such, Parrish and Linder-VanBerschot (2010) noted that for such organisations, there is need to adapt their e-learning content at roll out to be in line with the specific cultural environment in which it is to be implemented.

This leaves one questioning, how e-learning from a predominantly European, American or Asian context can be adapted and adopted to suit the culturally diverse milieu that is the African country's workplace setup. Brevis, Smit and Cronje (2002), posited that Africans subscribe to an Afro-dominated worth mechanism which is more communal with shared principles and ideals. Caucasians, in contrast, are inclined toward the Eurocentric value system where individual merit and material success is vital (Martins & Coetzee, 2011; Muller, 2017). Muller (2017), Martin and Coetzee (2011), and Parrish and Linder-VanBerschot (2010) concur that cultural differences do exist in any workplace.

It is imperative to take note that though e-learning seeks to bridge a geographical rift, the cultural chasm is one that might not be able to be traversed by an exclusively influenced and foreign standardised form of pedagogy. The African continent is not immune to this as a majority of companies operating on the continent are not of African origin. As such, this research explore how e-learning systems is accepted and used in Africa using participants drawn from MNCs operating in the Middle East African region.

Multinational corporates operating in Africa utilise e-learning tools designed and managed in developed countries. For instance, multinational companies such as Google set up offices for advanced technology for the purpose of e-learning in Kenyan universities (Nhando, 2015). In pursuit of a successful e-learning system, companies would require strong organisational and management support, as suggested in Muller (2017), and Martins and Coetzee (2011). According to Kear, Williams and Rosewell (2014), e-learning framework should take into account the strategic management, content design, delivery of content and support for learners and instructors. E-learning has registered successful testimonies, it has managed to develop the talents of employees (Martin, 2011; Lafarge, 2013).

It is with this in mind that the research sought to explore and understand how employees in African workplace accepts and uses foreign e-learning systems whilst questioning whether there are challenges or inhibitors to the usage of e-learning within the African setting. There is scarcity of research that explores this scenario regarding MNCs with e-learning platforms developed in the European context being used on the African continent. Culture represents a big part in persuading the adoption of e-learning. Daly and Pachler (2011) and Al-Sharhan (2018) discuss how culture influences phenomena in e-learning. Hameed, Shaikh, Hameed and Shamim (2016), Daly and Pachler (2011) suggests that different cultures and identities portray different essential parts in the perception of the assimilating information content. Across the African continent, societies differ and have differing views on the subject matter.

1.3 Problem Statement

E-learning in a multinational corporate environment will allow for cost-effective skills development for employees all over the world, even in remote geographical locations, using a single learning and development source as demonstrated in Martin (2011). However, as Africa attracts more multinationals that utilise various e-learning systems, their successful

implementation or adoption is questionable due largely to the fact that the e-learning platforms are from predominantly European, American or Asian contexts. Therefore, there are discrepancies as to whether the e-learning systems from foreign environments can be adapted and adopted to suit the culturally diverse milieu that is in the African workplace.

1.4 Research Questions

The research was directed by the ensuing research questions:

1. What is the role of e-learning system in Africa?
2. What are the needs of an e-learning system in Africa?
3. Which content should be included in an e-learning platform in Africa?
4. Why do learners not realise the full benefits of an e-learning system in Africa?
5. What can be done to ensure a successful e-learning system in Africa?

1.5 Research Aim and Objectives

The research is directed by the main objective to how e-learning system is accepted and used by employees in Africa using a multinational corporate as a case study. This primary objective is further split into the following secondary objectives:

1. To understand the role of e-learning challenges in Africa.
2. To identify the needs of an e-learning strategy in Africa.
3. To suggest the content that should be included in a platform of e-learning in Africa.
4. To identify the challenges that inhibit learners from fully realising the benefits of e- learning systems in Africa.
5. To suggest recommendations that ensure a successful e-learning system in Africa.

1.6 Research Approach

An exploratory investigation scheme was the centre of the research because of its suitability where there is a scarcity of studies (Flick, 2011). The exploratory research design was employed as it provided insights into experiences in e-learning in particular how it is accepted and used in an African workplace. The method of analysis was research questions which were addressed in light of the primary and secondary information collected. This research design explores data that can be inspected for the discovery of new information and

delving into new horizons.

Interviews and questionnaires were used for the study to collect data on e-learning in a multinational corporation. Interviews and questionnaires were used to obtain primary data, and the secondary data was collected from desk research. The desk research involved the exploration of past studies to gain an understanding of different e-learning jurisdictions, and this was done through searching scientific databases that included Nexis, Elseivier, Emerald, Sage, Taylor and Francis databases. It was deemed an appropriate instrument of information gathering since an interview regularly eradicates partiality and reduces deviation in information which is frequent with other apparatuses of information gathering such as surveys. The interview correspondingly offers the participants free will to express how they feel (Kasonde-Ng'andu, 2013). The questionnaires confined organised pieces which allowed the researcher to arrange and examine data effortlessly.

The pretesting, cleaning, coding and investigation of raw data was imperative to assure precise, consistent and complete data. The data was examined by means of qualitative data analysis methods. The interview answers were used to formulate patterns that were determined by both the variables and the key words that arose in the typologies and taxonomies stage of analysis. Qualitative data was analysed using Atlas.ti 7, a qualitative data analysis software. Thematic analysis was used to analyse the data, and the output was presented using network diagrams. Table 1.1 shows the researches that have been conducted in South Africa on various themes, namely computers and collaborative, online and collaborative learning, collaborative learning, web-based and collaborative learning, and online and collaboration. Table 1.1 illustrates the scarcity of evidence in the e-learning realm.

Table 1.1 Completed and current research as at 28th February 2019 for South Africa

2009-2019		
	South African studies #Records	Nexis database system #Records
Computers and collaborative	5	4
Online and collaborative Learning	None	1
Web-based and collaborative learning	None	1
Collaborative learning	22	53
Online learning and collaboration	3	2

Source: Author's Computation

1.7 Significance or Justification of the Study

The e-learning topic has been researched by academics with most of the researches focusing on developed countries (Daly & Pachler, 2011; Kear, Williams & Rosewell, 2014). Table 1.1 demonstrates that little research was done to how e-learning is accepted and used by employees in an African-multinational corporate working environment. The research will allow multinational businesses operating in African environment to understand how e-learning can successful be implemented and the challenges faced by users. Policy makers are able to comprehend and anticipate how e-learning in a multinational context affects African countries to allow them to re-evaluate their e-learning initiatives accordingly.

The research is necessary to allow local agencies to understand how e-learning fares in a multinational context and to better manage the local propagated e-learning environments

with the international management who directs and source applicable content. The research is unique in the sense that despite there being adequate information on e-learning and its effects, minimum research has been undertaken on multinational corporate e-learning with emphasis on how the European-based pedagogy is accepted by the African continent.

Post research, one will have an appreciation of how corporate e-learning within a multinational company operates. Considering the fissure in the bulk of information when it comes to how Africans accept and use a foreign e-learning platform – this research aims to fill the void by adding to the body of knowledge. This also serves as a chance to find common themes or correlations between local African culture, its influence on learning and foreign e-learning content that possibly impact the acceptance rates of e-learning.

1.8 Study Assumptions

The research is directed by the succeeding conventions:

1. Current writings on multinational e-learning systems would be adequate to conclude extrapolations and articulate the research methodology.
2. The selected respondents would be co-operative.
3. The data collected provided a precise symbol of real facts about e-learning systems in multinational corporations operating in Africa.

1.9 Delimitation

The research study looked at e-learning systems in Africa with much focus on MNCs operating in the Middle East Africa region. The countries covered in the Middle East African region are South Africa, Zimbabwe, Zambia, Algeria, Benin, Cameroon, Cote D'Ivoire, Guinea, Mauritius, Morocco, Tanzania, Kenya, Madagascar, Nigeria, Malawi, Egypt, Uganda, Azerbaijan, Oman, United Arab Emirates, Qatar, Iraq, Kuwait, Jordan, Syria and Lebanon. The study used primary data obtained from exhaustive interviews with selected respondents or research participants. Secondary information was acquired from academic journals, research papers, newsletters and textbooks. The study made use of MNCs operating in the Middle East Africa region to enable the finishing point of the research on time and relaxed expedition of the paper questionnaire.

1.10 Study Limitations

The study was conducted with the following limitations:

- Time constraints – it was not possible to conduct the research across all African countries as the researcher had to balance study and work-related commitments. Thus, the scope of the research was confined to MNCs operating in the Middle East Africa region.
- Direct access constraints – a total of 15 in-depth responses from the Middle East Africa region were used to get a representative picture of the multinational companies in Africa.
- Ethical limitations include access to the respondents' data which was obtained via management approval who had to rely on the information requests presented through an interview by the researcher. This presented challenges which included the researcher not being able to ascertain the attitude of the employees towards the questions they responded to and there was no room for further probing. However, the confidentiality of the employees was assured as no names of the participants were mentioned.

1.11 Chapter Summary

This section presented the research topic, focus, the problem and the primary purpose of the research. The research aims to explore multinational e-learning systems in Africa and determine the role these systems play in enhancing continuous education and skills development for Africans. The study will also expand on what content these systems should include for them to be more effective in bridging the cultural gap that exists between Africa and most developed countries where the majority of e-learning systems are developed. The study is qualitative, and it utilised data collected from e-learning systems users from a multinational company. The information was evaluated using the Atlas.ti 7 software. The dissertation is organised according to the illustration in Figure 1.1.

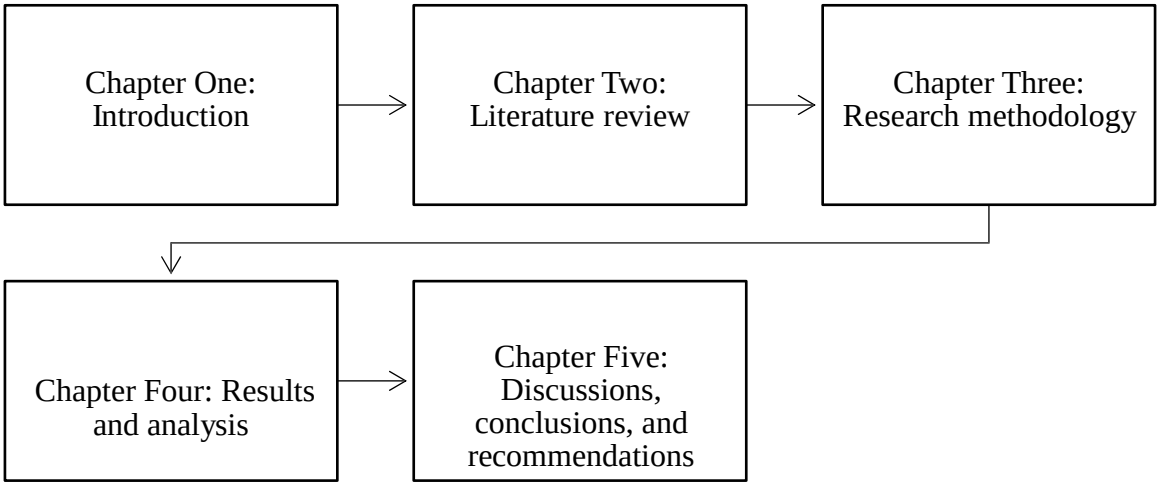

Figure 1.1: Layout of the study

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section methodically recognised, inspected, as well as shortened what other researchers, establishments and authors had inscribed regarding e-learning. The chapter delves into theoretical and empirical literature of researches relating to e-learning systems in use today by different organisations. In addition, the knowledge gained through the review of existing literature was considered during the identification of the research gap and the formulation of the questions that would address the objectives. The questions aided in the formulation of research questions that are spelt out in Chapter One of this study. Literature relating to e-learning systems focussed mostly on theories of e-learning, the role of e-learning systems, characteristics of a sound e-learning system, the constituency of an e-learning system and finally challenges faced by e-learners.

2.2 E-learning

Al-Sharhan (2018) defined e-learning as acquiring knowledge through the use of information and communications technology (ICT). By tapping into the benefits derived from e-learning, Africa has great potential to realise its dream of ensuring education provision for all. Leveraging on e-learning opens channels for universities to co-operate in subject matter expansion as well as distribution practices. As noted by Herrington, Reeves, and Oliver (2010), e-learning provides an opportunity for borderless education that is not limited by time and space. This has led to the re-definition of learning and instructional methods leading to a change in principles, policies, practices and underlying issues for knowledge acquisition by learners. More so, this has also redefined the cost, intrinsic value, connotation and distribution of informative amenities across the continent. E-Learning has transformed the way lessons/lectures are delivered from a central classroom founded approach to disseminated e-learning options facilitated virtually (Al-Sharhan, 2018).

Several studies have provided the benefits that institutions and individuals derive from the adoption of e-learning technologies (Herrington *et al.*, 2010; Al-Sharhan, 2018). These benefits include ease and speed to achieve the organisation’s objectives because e-learning

equips both learners and instructors with the necessary tools and a platform to be up to date as they acquire skills supplied and offered through several experts within the countless fields of information (Parrish & Linder-VanBerschot, 2010). More so, Davidson & Goldberg (2010) posited that e-learning is centred on the student as it focuses on their individual needs as a vital aspect in the procedure of learning reasonably than those of the mentors, or educational establishments. E-learning offers numerous profits both to the learners and the facilitating institution, as highlighted below (Unwin, 2008):

- Accessing information is made easy,
- Offers opportunity for interactions between learners and instructors,
- Lessons can be conducted remotely across geographical boundaries,
- Enables the provision of timely and dependable content that can be reused later,
- Provides in one package, synchronous and asynchronous learning,
- Supports scholar centred e-learning archetype and a scholar can study at his/her own stride,
- Offers the opportunity for increased access to learning and training,
- Costs reduction and improved educational resource effectiveness,
- Helps strike a balance among education, work and family life,
- Provides scalable solutions, and
- Easy and real-time student's records management and progress tracking.

Just like in the physical classroom setup, e-learning can correspondingly be structured in such a manner to meet the specific needs intended by the content producers. According to Higley (2014), e-learning's use in institutions of higher learning is directed mainly to meeting learner needs and makes use of an integrated learning environment which necessitates an important expanse of the period from the student. However, the focus shifts in corporate e-learning, which includes separate subject usage of restricted kinds of educational undertakings, a high expectation for performance improvement, as well as focusing on the organisation's needs and requirements.

2.3 Theories of E-learning

Learning theories exist which have been developed to explain assimilation of information,

and these apply in different settings (Ertmer & Newby, 2013; Staddon, 2014). However, these theories can all be reduced into three broad categories of learning which have become dominant over time: Behaviourism, Cognitivism and Constructivism. The different theories of e-learning mostly focus on the empirical evidence on why individuals accept or resist using technological platforms for learning in the aim of alleviating technological barriers in case of resistance. As noted by Awidi (2013), most e-learning failures are often a result of design failures by e-learning initiators because designing e-learning is different from designing classroom or workbook-based learning.

2.3.1 Behaviourism

This school of thought was influenced mostly by such researchers as Watson, Thorndike, and Skinner (Staddon, 2014). They contended that educating is a chance in noticeable conduct triggered by exterior incitements in the surroundings (Staddon, 2014). Behaviourists view the brain as an obscure box with the capability of responding to a given stimulus, whilst not giving attention to the effects of internal thought processes (Staddon, 2014). Additionally, Staddon (2014) who highlighted major aspects deemed relevant in order to realise subjects with esteem in the behaviourist faculty emphasises the breaking down of the learning material into small instructional steps which can then be presented in a deducible manner. Instructors should organise the material to start with a statute, grouping, standard, formulation or meaning, and at the same time providing illustrations to reinforce understanding by learners. Instructors should also provide negative examples which help in the establishment of conceptual boundaries.

Content developers, from the outset, need to use conditional or unconditional branching to define sequences of instructions together with choice predetermination within the course. Activities should be arranged in terms of the difficulty level for learners to be able to progress gradually.

Learners may be diverted in a specified direction or asked to repeat certain sections of completed courses in a structured diagnostic test to ensure effectiveness of learning. Lesson designers or instructors may allow learners to choose preferred instructions from a set of activities to offer the learners additional governance over the education procedure.

The behaviouristic approach for learning recommends the demonstration of the required procedure or operation, breaking it down into small parts that are easy to understand by learners before they are projected to live the preferred conduct. Students are projected to develop skills and techniques from their regular assessment or reconsideration aided alongside chequered examinations at tactical topics with reaction. Instructional design highlights small mistake ratio as well as the utilization of curative rings backed by material if required.

2.3.2 Cognitivism

The cognitivism school views the learner as an information processor and contends that the innermost senses ought to be put to use and understood. According to cognitivists, educating is an inner development made up of reminiscence, reflection, discernment, motivation, meta-cognition and abstraction. This school acknowledges the significance of singular variances containing numerous educating tactics that can be applied to tolerate those differences (Ertmer & Newby, 2013). Learners recognise, interrelate by means of, and reply to educating material differently, and this necessitates the usage of a suitable educational style for the concerned individual learner. More so, reasoning elegances as spoken by Ertmer and Newby, (2013) take a look at learner's chosen way of deriving meaning from data that is an individual's exclusive way of rationalizing, recalling, or problem cracking. Similarly, Yilmaz (2011) added that stylists that instruct have to deliberate the ensuing facets for a successful online course. Schooling tactic employed should improve the educating procedure through simplifying all devices, directing the student's consideration by emphasizing essential and perilous information, perceiving each teaching methods, and corresponding the mental standard of the student.

Lesson developers ought to bring together novel and familiar concepts or information using progressive controllers to excite existing intellectual assemblies or to integrate the particulars of the experience; given that theoretical simulations empower the student to re-claim current cognitive simulations, utilizing pre-instructional queries to set anticipations. In addition, this will help to trigger the student's present information, structures, and utilizing prerequisite examination problems to trigger the precondition information construction essential for new materials.

For the reason of preventing reasoning overkill, lesson developers ought to discriminately put together learning content. Strategies that challenge the learner to perform deep information processing, including analysis, evaluation and synthesising should be used. Accessible educational resources must be varied to contain such happenings for diverse educational and rational elegances. Ertmer and Newby, (2013) noted that for a successful learning program, content should be presented in different modes as explained by the dual coding theory. Instructors will be able to satisfy learners' varied information processing differences whilst enabling long term memory transfer. Learning strategies that are both intrinsic and extrinsic should be employed to motivate to learn. A good example is that of responsiveness, significance, self-assurance, as well as gratification. Yilmaz, (2011) posited that a proper schooling tactic ought to equip students to utilize their meta-cognitive talents by reproducing what they know together with co-operating with fellow learners. There is a need for the employed schooling tactic to link educational subject matter with diverse everyday circumstances. This enables students to associate what they would have learnt with personal experiences, thereby helping improve memorisation.

2.3.3 Constructivism

As noted by Ertmer and Newby (2013), constructivism theory holds that people construct knowledge and understanding from their individual experiences. The theory views learning as a dynamic process where learners cannot receive understanding from an outside source or someone else. Dagar and Yadav (2016) asserted that the crucial point is that learners actively accumulate knowledge through input mediation from the external environment to define what they will absorb. This makes education an activity that can be positioned in the setting where it happens. In addition, understanding is built by the student also handles opposition to change.

The constructivist approach has a considerable effect on online learning programs as every learner is seen as an inimitable person with unique requirements and background. It promotes the personal level discovery of knowledge as individuals discover relationships between concepts on their own. The usage of educational objects in the not so distant prospect will become common to stimulate tractability and recycling of accessible resources to reach the requirements of singular students.

According to Gupta (2011), the constructivism learning theory can be summarised in 18 points listed below, based on an in-depth literature review. The physiognomies are as follows:

- Many viewpoints, as well as illustrations of notions and subject matter are offered and stimulated.
- Aims and purposes are consequent by the learner or in conciliation with the educator or mechanism.
- Instructors help in the part of chaperons, observers, trainers, lecturers and enablers.
- Undertakings, chances, apparatuses and surroundings are delivered to inspire metacognition, inner-analysis, inner-regulation, inner-reflection and inner-awareness.
- The learner acts a vital part in arbitrating and monitoring the learning process.
- Educational circumstances, settings, abilities, subject matter, as well as errands are pertinent, accurate, and reliable and characterise the regular intricacies of the 'real world'.
- The chief origins of information are utilised for the reason of ensuring legitimacy as well as real-world convolution.
- Information production rather than imitation is stressed.
- This production happens in personal contexts and by social intercession, alliance and involvement. The student's preceding information productions, principles, as well as assertiveness, are deliberated in the information production procedure.
- Way-making, higher-order rational expertise and deep consideration are stressed.
- Mistakes offer the prospect for discernment into scholars' erstwhile information productions.
- Investigation is a preferred tactic for the reason of encouraging learners to pursue information individually plus to accomplish the chase of his/her aims.
- Students are offered the chance of traineeship education in which there is a cumulative intricacy of jobs, expertise and information procurement.
- Information intricacy is echoed in theoretical interrelatedness, as well as interdisciplinary knowledge.
- Collective and accommodating education is preferred for the reason of exposing the

student to alternate perspectives.

- Platform is enabled to aid scholars to execute beyond the restrictions of their aptitude.
- Examination is reliable in addition to being intertwined with education (O`Donell & Reeve, 2012).

In conclusion, constructivist learning strategies can be used to teach realistic and private applications and circumstantial learning. The focus, with the continued advancement in technology, is shifting towards constructive learning which gives learners a chance to develop his/her own implication from the data offered throughout the online sittings (Gilakjani, Leong & Ismail, 2013). This is achieved by using educational materials that encourage plasticity, and recycling of virtual objects to reach individual learners' requirements.

Apart from the learning theories described above, there are various other learning theories which have been developed, some which have evolved from the three aforementioned theories. This section looks into those theories connected to e-learning and comprises of the Cognitive Flexibility Theory, Situated Learning Theory, Discovery Learning Theory, Social Development Theory and Elaboration Theory.

2.3.4 Cognitive Flexibility Theory

This theory builds upon the constructivist theory. According to Dennis and Vander (2010), cognitive flexibility develops with maturity and is a higher-order cognitive function. This gives individuals the ability to adapt cognitive strategies for processing to address new unanticipated and altering conditions. As stated by Dennis and Vander (2010), cognitive flexibility is meant to assess three issues namely insight to controllable distinguished scenarios, variety in clarifying behaviourism in people and circumstances of life, and the capability to proffer answers to complex scenarios. Thus, through multiple presentations of content in a varied manner, learners are able to have a better appreciation of complex content. The theory also posits that multiple illustrations of the same content aid learners to develop a mental picture for considering new knowledge applications to new situations. The cognitive flexibility theory is constructed on principles that require learning activities to be planned in a manner that provides students with several symbols of the learning

subject matter, objects used to instruct ought to evade over-generalising the subject matter purview, and should back up setting-reliant information, tutoring ought to be case-based and underscore information production, not information broadcast. It calls for the interconnection of knowledge sources as opposed to compartmentalised sources.

This theory has been functional in the expansion of e-learning content where the primary aim and focus is to arm learners with the capability to apply knowledge gained in real life circumstances. Thus, to be effective, an e-learning course must provide context and enable knowledge creation graphics for easy assimilation by learners. E-learning content developers can apply the theory by offering several symbols of the identical e-learning subject matter in diverse situations to allow learners to build diverse depictions of the content, as well as discover fresh means to implement on day-to-day experiences. In addition, the theory also requires content developers to avoid oversimplification of the content domain and focus on knowledge construction instead of knowledge transmission.

2.3.5 Situated Learning Theory

The concept was first suggested by Lave and Wenger (1991) as a theoretical account of knowledge acquisition within a society of practice. Shaltry, Henriksen, Wu and Dickson (2013) and Huang and Liaw (2011) added that social interaction and cooperation are indispensable components of situated learning. They further posited that learning content must construct a sensitive instructional environment that is sensitive to the tasks that learners need to complete in order to be practically successful.

The theory underlines the use of familiar content, which learners are used to from their daily activities. By so doing, the instructor, in agreement with learners, provides the meaning of content, framing it to address the issues and concerns common to the learners. Shaltry *et al.* (2013) pointed out the resulting features of positioned educational settings that include offering dependable contexts that mirror the manner in which the information will be utilised in day-to-day activities, provide realistic happenings, deliver admission to professional enactments and the demonstration of procedures, proffer several parts and viewpoints, enable back up of the collective creation of information, assist in training and support of perilous times, encourage consideration to allow the establishment of constructs,

stimulate pronunciation to permit implicit information to be completed to become overt, and deliver combined valuation of educating within the responsibilities.

2.3.6 Discovery Learning Theory

Bruner (1961) introduced the discovery learning theory, which is premised on the idea that learning should go beyond the mere absorbing of what was said or read. Instead, it includes actively seeking solutions and answers to presented challenges. It promotes a learner-centred approach to learning through which learners can discover new knowledge through active and hands-on experiences. In addition, it also offers learners the opportunity to construct new ideas founded on their current information (Bruner, 1961). Discovery learning encourages learner creativity in problem solving and encourages learner independence or the 'heuristics of discovery', finding out things independently.

Mandrin and Preckel (2009) pointed out the following as the key features of unearthing education:

- Discovering and problem cracking, this attribute includes the stimulation of learners to apply an active approach to knowledge creation, acquisition and generalization as an alternative of inactively being bare to orations and exercise,
- Being accountable for assimilating information, this involves learners choosing their own learning environments and speed at which to cover content.
- Building new knowledge from the existing when applied to e-learning, the discovery learning theory claims that instructions by the lesson developers must prepare learners to be ready to assimilate knowledge through the creation and provision of appropriate experiences and contexts. In addition, instructions must be organised in a spiral manner for the learner to expand taught concepts in more detail whilst putting learners in a position to go beyond the information given.

2.3.7 Social Development Theory

Developed by Vygotsky, (1978), the social development philosophy of learning holds that social interface plays a significant role in cognition development. According to Vygotsky (1978), all things learnt can be traced to two levels which are by interface with others and or integration of interests in the person's cognitive assembly. Likewise, functions in the

learner's cultural expansion is apparent twice: at the social stage, and the individual stage. Thus, this appears primarily amongst individuals (inter-psychological) and formerly inside the learner (intra-psychological).

2.4 Role of E-learning Mechanisms

E-learning is reinforced through a wide variety of research, and its effectiveness in education shows that it equips learners with capabilities to shape as well as maintain inventive, co-operative and expansive aspects of education (Al-Sharhan, 2018). E-learning, which is regarded as conducive and adaptable to almost every situation, enhances collaboration and corporation in learning by individuals not necessarily in the same place. The advantages of e-learning are mostly derived from the scopes of e-learning (Arkorful & Abaidoo, 2014). This implies that the degree of e-learning expertise usage in progress supply diverges extensively and these disparities take into account synchronicity, setting, liberation and style. The advantages of e-learning will be expanded in line with these variations in the following chapters.

E-learning bundles propose several advantages to diverse individuals, as the educators, who intend to involve his or her learners in a collaborative manner, or big businesses who intend to propose worthy teaching to his or her workers with little cost and excellent quality. Hammad (2018) outlines certain significant aids of e-learning which are explained in the following sections.

2.4.1 No Boundaries or No Restrictions

The educators, as well as the students encounter the trials of the limitations of the location and time in traditional education. Education restricts the presence of students with the capability to contribute to the expanse, and the specific time to attend the class (Radović-Marković, 2010). Conversely, e-learning encounters these contests by proposing education for persons at any time and place (Radović-Marković 2010). Through e-learning, a higher degree of interaction among learners and instructors is achieved. As postulated by Radović-Marković (2010) e-learning can improve the quality of the education or the knowledge accumulation process though this is dependent on technological innovation which allows effective communication between learners and instructors. Additionally, lecturers and their

helpers have advanced their learners' perilous thought processes and have provided them with more autonomy in their pick of conversation subjects and shared interchange of philosophies, information and understanding enlargement.

2.4.2 Cost-Effectiveness

E-learning has a lower cost compared with the cost of the conventional education materials, such as textbooks, which need to be modernised frequently as new information becomes available. The education materials are habitually modernised effortlessly, so modernised forms are readily available in e-learning. Moreover, institutions of higher learning have realised increased profits through investments in humans and other resource utilization (Radović-Marković, 2010). A good example is Wisconsin-Madison University, where US$172,000 was saved, through a reduction in professors' time. Prior to the change, professors would spend more time attending to big clusters of learners. Also, the number of old-fashioned schoolrooms has been significantly abridged, all translating to the reduction of related costs.

In addition, Nedeva and Dimova (2010), noted that the solicitation of modern virtual technologies consents to the realisation of advantages in the education process ranging from an improved standard of education, increased inspiration, interactivity; the likelihood of self-dependent work, and self-evaluation of the achieved level.

Niculescu-Aron, Asandului, Marinescu and Mihăescu (2007) highlighted several e-learning advantages that include the ability to make available large amounts of information rapidly and without fault. The information must be well-ordered, rendering from pedagogical and psychological principles which is conceivable when the package has been developed by an interdisciplinary team moulded of experts in pedagogy, software and rationalities, and experts in the numerous technical fields that interact with computer assisted education. In this circumstance, the computer can be viewed as an accelerator of pedagogy; regimented and methodical information can be presented to a vast number of learners (scholars, apprentices or grownups taking pick-me-up courses) who demand pedagogical, psychological assistance. It proposes the opportunity of rapidly, as well as completely modifying the education procedure, and consequently, the solicitation of the Caroll and Bloom's Full Education Model which view learning as a function of efforts spent

in relation to efforts needed. Subsequently pedagogical-psychological aid delivered through the computer acclimatizes to the tempo of each trainee, proposes results conferring to the type of errors made, the computer processing unit (CPU) is adept at having a discourse with those requesting assistance and to prominently and punctually propose the essential response. Consistent with Nedeva and Dimova (2010), it was stated that innovation broadens the meaning of close and personal two-way lesson delivery.

2.5 Content and Features of a Good E-learning System

2.5.1 One-stop-shop for Integrated Learning

Through the e-learning stage, the educational process can be easily centralised and automated. Likewise, an incorporated learning environment makes accessible a platform wherein courses can be produced, brought together, overseen and checked remotely at insignificant costs irrespective of the geographical location of the instructors and developers. Organisations can have a scope of preparing programs at one place with learners getting to them according to their requirements. In this way, the selection of courses can be incorporated under a similar framework, which makes it easily accessible (Radović-Marković, 2010).

2.5.2 Multiple Formats Content Delivery

An e-learning framework gives a feasible online platform to combine training prerequisites. It is possible to coordinate and convey content in various formats utilizing e-learning. Contingent upon the appropriateness and necessities of learners, course material, can be designed to incorporate graphics, animation, video or webcasts (Hrastinski, 2008).

2.5.3 Automation of Evaluation Process

E-learning platforms facilitate the automation of the way toward regulating the progress and final assessment tests with the help of a question bank. It makes it conceivable to screen and record student's cooperation and advancement at various stages of the learning process and along these lines measure the viability of training activities. Likewise, it helps plan and track learning prerequisites and achievements of employees, and channel accomplices or clients (Hennessy *et al*., 2010).

2.5.4 Reduced Costs and Ease of Accessibility

One major cost associated with e-learning is usually a once-off cost for setting up and administering learning programs. From that point, the entire procedure moves toward becoming cost productive as the course content is stored away at an easily accessible location and can be accessed over the internet by students. This makes it feasible for organisations to run training programmes rapidly and effectively across borders. As the cost will be presently low, this makes the cost recovery process much quicker (Hennessy *et al*., 2010).

2.5.5 Portability Standards

A good e-learning platform ensures that the content is portable across different systems. It can ration the influence, efficiency, as well as a general charge of learning creativities. Compatible e-learning platforms make it easy to integrate the course curriculum, which also reduces the costs of technological implementation in e-learning (Hennessy *et al*., 2010). Leaders in technology are essential in ensuring that there is flexibility in content easily fitting in various e-learning platforms (Hennessy *et al*., 2010).

2.6 E-learning's Focus in Corporate Environment

E-learning, when referring to the commercial ecosphere is frequently around expertise expansion of the targeted employees. Herrington *et al*. (2010) came up with the following characteristics of e-learning in a corporate environment that focuses on the organisation's requirements and desires, which involves unrelated courses, makes use of inadequate types of learning activities, involves the reduction of training time to acquire knowledge, holds an excellent prospect for enhancement in enactment and should be the solitary foundation of subject matter. For the reason of developing a successful e-learning program in an organisation, course content developers need to identify the organisation's training needs, who the target audience/organisation members are and what will be more suitable to the learners.

2.7 E-learning System Constituency

The e-learning framework consists of key elements such as infrastructure, e-learning platforms and content (Al-Sharhan, 2018). The e-learning framework requires a proficient

and coordinated execution structure that consolidates all the diverse components of the e-learning initiative to guarantee effective usage. According to Al-Sharhan (2018), the integrated framework constitutes the following components:

The infrastructure component provides an elite server and the required registered gadgets that are compatible to the e-learning system facilities. The organisation is structured to assist mutually concentrated and decentralised setups.

The education portal provides a unique sign-in entryway and Learning Management System (LMS). It provides a completely fledged Learning Management System and cooperation apparatuses for the education procedure and knowledge universe. Cope and Kalantzis, (2016) likewise gives a total progression of open sites for the diverse interested parties in the e-learning activity. The informative gateway configuration must be structured by the most elevated global norms.

Cope and Kalantzis (2016) claim that the aim of this interactive e-content constituent is to virtualise the conformist prospectuses and transmit all the texts into collaborating virtual foci offered on the virtual gateway, traced by the Learning Management System. The automated subject matter is an important benefit of amassed information; consequently, it ought to be premeditated as first-class, precise objects, as well as affording international principles in this part.

According to Cope and Kalantzis (2016), the portal similarly offers other vital amenities that include Student Information System (SIS) Teacher Information Systems (TIS), e-Management and Human Resources and online amenities and scholars' psychotherapy. The fundamental target of the e-library is to brand accessible the data resources, differing educating assets and offer a digital archive to all learners and instructors to empower learners to have complete admission to these assets allowing them to learn independently and for the educators to be enablers (Cope & Kalantzis, 2016).

Executing an e-learning framework imposes another cutting edge and technological environment. Likewise, Cope and Kalantzis, (2016) state that this innovation presents numerous difficulties that confront the instructor and force him/her to keep pace with current instructive, mechanical or behavioural advancements. Thus, this segment goes for

planning and preparing the instructors and guaranteeing their continuity with professional development.

Awareness has an essential part to guarantee the achievement of e-learning schemes because of the way that these undertakings mark diverse dimensions in the general public and manage conduct variation. E-learning works straightforwardly to present novel instructive simulations, abilities, and frames of mind at the dimension of the faculties, administrations, relatives and culture. Consequently, Cope & Kalantzis (2016) state that a productive mindfulness and social change segment are of crucial significance.

A plan for managing change has recognised the fundamental stages including getting ready for adjustment, overseeing adjustment, strengthening adjustment, and assessment appraisals to gauge the adequacy of the change to the executive plan in fulfilling the requirements of the e-learning framework (Cope & Kalantzis, 2016).

2.8 Challenges Faced by E-learners in Realisation of E-learning Benefits

Educating and acquiring knowledge in an e-learning setting as portrayed by the elements of e-learning, occurs uniquely in contrast to in the conventional schoolroom. This difference poses new challenges to both instructors and e-learners (Higley, 2014). According to Higley (2014), innovation-assisted education apparatuses are rapidly altering the essence of instruction, converting the classroom-only education surroundings to a virtual learning experience. The challenges inherent to e-learning lie in the difference of the way learning ought to have been taken into deliberation to ensure student victory. There are two dimensions in e-learning; the instructor's and the e-learner's (Higley, 2014). These must be considered when addressing ways to improve the effectiveness of an e-learning platform. Both dimensions entail an appreciation of change from traditional instructor-learner relationship, parts and accountabilities to online planetary parts. Most notably the challenges faced by e-learners that are going to be explained in the following paragraphs are the novel digital divide, learner incentive, subject structure and other related challenges (Abrami, Bernard, Bures, Borokhovski, & Tamim, 2011; Martin, 2009; Archambault & Barnett, 2010).

2.8.1 The New Digital Divide

Conferring to Abrami *et al*. (2011) the digital divide is usually defined in education as referring to the opening amid those learners who have, do not have, and know how to utilize the internet and the ICT that are presently re- defining tutelage. Quinn (2011) adds on by saying that this virtual gulf is noticeable not only by corporeal right of entry to computers and connectivity but correspondingly through right of entry to the extra means that permit individuals to utilize technology well.

Numerous IT gadgets are presently moderate today, and the presence of the virtual gulf is changing from accessibility to realizing how to utilize the advances as confirmed in Abrami *et al*. (2011). By so doing, the digital divide acts as a barometer for instruction and even more definitely e-learning situations. Generally, the digital divide has proven to be progressive about closing the gap amongst the suitable utilization of possessions to obtain worthwhile, informative outcomes rather than not approaching the novelty in training as confirmed by Abrami *et al*. (2011). Nedeva and Dimova (2010) note that the concerned individual learner's experience in using the various e-learning associated technologies go far afield in defining the value of educational results and the prosperous usage of the projected technology resources.

2.8.2 Student Motivation

Although, frequently the learner's eagerness can only truly happen inherently, the creation of the right online environment for learners to acquire knowledge whilst feeling successful is the lesson designer's primary responsibility. As indicated by Martin (2009), in the greater part of the present online situations, there is an absence of instructor nearness, vis-à-vis connection, and technical support. What is more, it is not enough to have a very organised and expressly spread out online instructional condition to continue the enthusiasm of the student or bolster inborn inspiration. Furthermore, new online students, for the most part, need metacognition and time the board abilities, and self-coordinated adapting, all which are pivotal for the achievement of the web-based learning (Martin, 2009).

2.8.3 Course Design

It is an instructor's role to come up with a well-designed course that is easily understood

by e-learners. Thus, failure to come up with a proper course design becomes a challenge to e-learners. Amongst the main challenges for e-learning instructors and an enormous causative issue to all poor digital education practises is the insufficient time devoted to lesson or course content development by instructors. Furthermore, Archambault & Barnett (2010) takes note that the measure of time required to plan and execute an all-around structured online exercise is an essential thought. They showed that most instructors revealed an expansion in the measure of time they consumed making e-learning progressions as a result of innovative substance, fresh innovations, and better approaches for connecting with the differing web students.

2.8.4 Lack of Emotions in Lesson Delivery

It is argued that proceedings that induce authoritative feelings in persons remain new in their recollections for a while. It is for this reason that an individual's brainpower is hard-wired to recall and to absorb information that is associated with passionate sentiments. As such, classroom learning which involves the in-person interface amongst the student and the teacher, tends to have more room for the instructor to include emotions during lesson delivery. Learners and instructors' emotions play a crucial role in learning, and they emanate from different setups such as those associated with family backgrounds and classroom environment (Pekrun, 2014). Learning requires one to have positive emotions which in turn determine motivational levels to acquire education (Pekrun, 2014). When e-learning is involved, the students cannot express their emotions which they could do in a traditional classroom setup.

The assessment of learners' academic emotions proves to be difficult in a virtual classroom as compared to a physical classroom, where the instructors can easily relate to the students (Pekrun, 2014). Pekrun (2014) argues that in a classroom environment, students experience a period of excitement which is unavailable in an e-learning environment. In this way, an e-learning involvement that does not draw in feelings is probably not going to be to students' advantage or may abandon them with many long hours of learning. Including a few feelings in the learning environment can ideally turn that around, positive feelings will make students like themselves (Pekrun, 2014).

2.8.5 Technology Non-performance Issues

This is when technology used by the learners fails to perform that which it is intended to do. Across Africa, the delivery of materials and upkeep of apparatus remains a critical problem as there are insufficient amounts of skilled and eagerly accessible upkeep workforce (Al-Sharhan, 2018). The majority of e-learning technologies that are utilised in Africa has been traded in from external nations, which offer the practical back up as well. The absence of local methodical maintenance proficiency distresses educating of the learners and the daily operating of the e-learning platforms if problems happen. This results in the loss of credibility of the e-learning program.

2.9 Empirical Review and Gap Analysis

As said by Chigona and Dagada (2011), social mannerisms such as gestures, body language and vocal tone are imperative in the business world, and amongst the chief disadvantages of e-learning is the absence of that component from the relevant business environment of e-learning. The human interface in the educational environment is crucial.

According to Kocur and Kosc (2009), learning can be seen as social behaviour where goals are activity-based. However, e-learning transforms goals to results-based, which shifts the emphasis from teamwork and group dynamics to individual collaboration (Kocur & Kosc, 2009). The above is in contradiction to Alsabawy, Carter-Steel, & Soar, (2012) who suggest that e-learning allows for content to be shared among others thus allowing for shared collaboration and reintroduction of the social elements of learning. Higley (2014) suggests that e-learning is a social marvel that necessitates being assumed. Instructors should be transformed into the dual role of coach and tutor, thus allowing for a better e-learning pedagogy. Within the realm of corporation e-learning Head Office Learning and Development, specific management will have to propagate the training ethos to their subsidiaries in child companies.

Higley (2014) proposed that the lack of regulations and standards in the development of e-learning materials will also negatively affect e-learning. Education and Development should also be convoluted in the content of e-learning material and the manner in which it will be conveyed and not only rely on a third-party provider.

A few issues are related with actualizing e-learning in distance education like insufficient information, technology infrastructure and planning, absence of awareness by government authorities, absence of legitimate training programs, lack of human asset limit, and low-reliability internet access. Kocur and Kosc (2009) affirmed that e-learning achievement frequency was exceptionally reliant scholar's capacities to be self-motivated and propelled from the inside. Learners require necessary equipment for e-learning, including among other items, desktops or notepads, PCs and printers. Thus, impediments of e-learning are especially related to technological and hardware limitations, personal issues, design issues, individual issues and structure issues.

Despite the role e-learning plays in operations of business, an expose of how it is accepted and used in African work environment has not been investigated. Therefore, this study added to the knowledge gap by analysing a multinational corporate with business interests in Africa, looking at its acceptance and use of its foreign e-learning system in an African setup.

2.10 Chapter Summary

The chapter has outlined the theoretical and empirical evidence in conjunction with e-learning platforms in the aim of snowballing future consciousness and usage of e-learning platforms worldwide. The literature has outlined the benefits, challenges, expectations of a good e-learning stage and the framework of an e-learning system. Evidence concerning the literature on e-learning is still amassing, which depicts the importance of the phenomenon.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section outlines the way the study was carried out in order to obtain information, which enabled the examination of the research problem and the solutions sought. In order to meet research objectives, this chapter discusses the research design, target population, and data gathering methods used to collect sample information together with justification of the methods. Rajasekar, Philominathanet, and Chinnathambi, (2013) defined research methodology technique as an expansion of a research project's aims and objectives that clearly give the subtleties of the methodology utilised in completing a project. The research questions to be answered include finding out the role of e-learning systems in Africa; needs of an e-learning mechanism in Africa; content that ought to have been involved in an e-learning platform in Africa; reasons learners do not realise the full benefits of an e-learning mechanism in Africa and what can be done to ensure a prosperous e-learning system in Africa?

3.2 Philosophy of the Research

The philosophy of the research relates to the way researchers develop and bring their worldviews to the study, which in turn informs research project methodology (Kasonde-Ng'andu, 2013). The study thinking offers methods on the type of information collected and how the information will be construed. Furthermore, the information from the study viewpoints permits the scholar to appraise the diverse procedures.

As a slice of philosophy, epistemology investigates the theory of knowledge, its pre-suppositions, its extent and validity. It is a study of learning, extending into a collection of assumptions about ways by which it is conceivable to gain knowledge of the real world, how what exists might be known, what can be known, as well as criteria to be fulfilled to obtain the allure of learning.

The assumption behind these different approaches is that the most rational and best way to examine the world is to use either a quantitative or qualitative approach, or both via a mixed approach to complement the weakness in one method. According to Flick (2011), there are

three epistemological strategies, namely interpretivism, positivism and realism. As such, this study conveys the philosophical position adopted in the exploration of multinational e-learning systems in Africa. The present study is qualitative, and as such, the interpretivism strategy was appropriate as the views were hinged upon the subjective opinions of the research participants.

3.2.1 Positivism

According to Edirisingha (2012), positivism studies are limited to quantitative research where data collection and interpretation is premised on objectivity and research findings are observable and typically expressed in numeric terms. All things considered, this sort of sociology is increasingly inspired by patterns and designs and determines hypotheses and test them instead of people. Edirisingha, (2012) emphasised that positivists advance that policies and techniques to educate the social world should be investigative of the physical world first. More emphasis is placed on getting ‘logical’ measures which would give sociologists the capacity to disclose the laws that manage social orders similar to scholars who have established the laws that supervise the physical world. In the positivist study, sociologists will, in general, pursue associates, or 'relationships' among at least two variables. Quantitative research is efficient in getting basic highlights of public activity and clarify the thinking behind expansive connections.

3.2.2 Interpretivism

Interpretivism opposes positivism and is premised on the belief that certainty can be assumed by biased clarification. It accepts that individuals make and partner their subjective and inter-subjective implications as they collaborate/interrelate with other people near them. Edirisingha (2012) alluded that interpretivism requires insight into the social process and has an interaction with those driving the process rather than hypothesising the social world. The former statement justifies the use of interviews in the collection of data which brings out a more detailed, qualitative and empathetic outcome. The study follows the interpretivism stance because of subjectivism.

3.2.3 Justification of a Qualitative Approach

The philosophical perspective adopted by this research is interpretivism which is not hinged

on the scientific approach, which can only describe certain aspects from the field but goes further to describe the reason for the description. In addition, Interpretivism provides a pervasive approach from all aspects of qualitative research, unlike positivism which concentrates only on that which can be systematically acknowledged or adept of calculated evidence (Edirisingha, 2012).

Furthermore, the researcher adopted this philosophy as the interpretive lens allows for critical analysis which may also lead to call for action and transformation. The approach tends to use interviews which results in statistics being high in validity, qualitative, empathetic personal and in-depth rather than a generalization of results under positivism. Moreover, the problems and research questions are aimed at understanding specific issues pertaining to certain phenomena (Anney, 2014). Accordingly, interpretivism rejects the logical idea that social enquiry can get to the reality about the real world exclusively by ideals of a logical technique. This research was carried out using qualitative research methodology because this particular methodology offered particular advantages over quantitative research.

Firstly, it was appropriate for this study due to its ability to analyse and explain human experiences in a way that numbers and statistics cannot. According to Guest, Namey and Mitchell (2013), qualitative research methods are often utilised to respond to the why and how of certain phenomena as well as human experiences, especially where numbers or figures may fail to explain it in detail.

The significance of e-learning systems could not be explained numerically as they were neither uniform nor statistical, and that is why the qualitative methodology was adopted for this research. Moreover, the research aimed at exploring multinational e-learning systems in Africa. Secondly, this study used the qualitative research methodology due to its ability to represent the views of e-learning system users, not the views of the researcher alone. Yin (2011) alluded that qualitative research has been accepted in education because of its unique characteristics such as possessing the ability to find meanings in real world setup, collecting views and opinions from people, providing insight into various conditions that individuals live in, developing of concepts through exploring the behaviour of people and the use of empirical evidence to understand concepts. Participants were able to express themselves

freely with regards to e-learning systems due to the allowance that qualitative research offers.

Thirdly, qualitative research was seen to be more appropriate for this study due to the need to gather comprehensive data of the views imprinted in the minds of e-learning system users in their real-world context and environment and not in a controlled one. Flick (2011) stated that the qualitative approach in research looks at the research participant in the world and constructs a world from practices, ideas and opinions.

3.3 Research Design

Flick (2011) defined research design as that which explains the processes of data collection, planning and analysis, selecting empirical material for the reason of providing answers to research questions in the available time given available resources. Also, it is also important to note that whichever set study topic can be deliberated in several means, can espouse varied methods.

The research was carried out using an exploratory and analytical case study design. According to Flick (2011), an exploratory research design is conducted on research where there are few or no previous studies to refer to. As such, the study made use of case study design principally to gain insight into and familiarity with basic details, concerns and settings provide a more grounded picture of the situation being developed. It is this explorative sense that instigated data gathering through interviews to get answers as to what solutions are provided by e-learning systems within a multinational African context; what the e-learning system should include; and why learners do not realise the benefits of e-learning.

Kasonde-Ng'andu, (2013) characterised scientific research as the utilization of facts and dissected it to make a critical assessment of the material. The research is analytical in the sense that the researcher critically explored how e-learning system is accepted and used in Africa for a multinational corporate context.

3.4 Phenomenological research strategies

Since the qualitative approach was utilised, the corresponding research strategies adopted

include case study, questionnaires and interviews. The author selected a multinational company as the case study for this research which was more appealing to the researcher because the study is unique, and it is a territory that has never been researched. The case study is a company founded in 1833 specialising building materials used in construction and have a global workforce of more than 72 000 as of year 2019. The multinational company is represented in every continent, has headquarters in Switzerland and they have business operations in 80 countries around the world. Guest, Namey, and Mitchell (2013) posited that the case study tactic offers a more profound, as well as wider outlook of how situations occur, as well as procedures inside a firm. Additionally, Guest, Namey, and Mitchell (2013) stated that the case study tactic is appropriate for exploratory researches which has the ability to generate responses to the what, why and how queries. This permitted the scholar to comprehend the e-learning system in a multinational company completely. Though, McLeod (2019) highlighted the disadvantages of case study research that included difficulties in the generalization of findings, subjectivity introduced by the investigator and complexity in replicating the research findings. Moreover, they detailed that the case that study is based on what cannot be utilised to forecast the forthcoming performance of definite variables.

3.5 Data Sources

Both primary and secondary data were utilised to answer research questions. Primary data can be described as information which is gathered unswervingly from objective participants. The primary data was obtained from multinational company employees who are heads of learning in the Middle East Africa region. It is information gathered from the original basis (Hox & Boeije, 2005). This is referred to as raw information; there is a necessity to examine and deduce the information so that connotation can be resultant. Primary data is original data, which has not been clarified or modified by concentration, evaluation or clarification by a second or third party. Primary data is predominantly distinctive as it offers pertinent, as well as precise information, which assisted the researcher in making vigorous, corresponding and up to date conclusions (Hox & Boeije, 2005). Be that as it may, wellsprings of primary data are constrained, and on occasion, it is hard to acquire data from primary sources as a result of either shortage of populace or absence of collaboration. The research utilised interviews as a wellspring of primary data.

3.5.1 Desk Based Research

Secondary data is often alluded to as desk-based research. Secondary information is likewise utilised to acquire an understanding of the problem from previous research (Hox & Boeije, 2005). Secondary information was gathered from organisation archives, scholastic diaries, past research papers, pamphlets and textbooks to attain the end goal of this study. Secondary data can be seen as information recorded by somebody before (and for a reason other than) the present project. Secondary data analysis includes gathering and dissecting information from recently gathered informational indexes or recently distributed records and reports (Hox & Boeije, 2005).

It is not just an abridging of different records or reports, but another examination of the previously gathered data. Secondary data examination frequently centres on the qualities and highlights of larger social groups like associations, establishments, urban areas, states, communities or nations. In this study research was conducted on secondary data that intended to facilitate analysis of e-learning systems. Secondary information was essential for this research study as it proposed to supplement as well as overwhelm prejudice of primary data. The chief benefit of utilizing data that is of secondary nature is that it costs less to assemble, and cuts back on time. Though there are also drawbacks, the data occasionally was not intended to counter the scholar's objectives hence searching for the appropriate data was time consuming.

3.5.2 Interviews

Qualitative data gathering technique of interviews were utilised to assemble information from the contributors in this research. In order to meet research objectives, primary data collection was obtained from the employees from a multinational company using an e-learning structure for the reason of facilitating informed analysis and recommendations as shown in the Appendix A. The Global Head of Learning and Development Manager conducted the interviews through an interview guide which was sent to other Learning and Development Managers representatives. The Global Head of Learning and Development Manager was the point of contact and ensured private and confidentiality of the company information. In addition, data collection is a process that begins with locating a site, gaining access and establishing a rapport; sample purposefully by selecting only

relevant respondents who make use of the e-learning; collect data through questionnaires and interviews; explore field issues and store information. A multinational cement production company was utilised as a case study. Data access was provided by the Global Learning and Development Manager for the multinational company. The Learning and Development managers were purposively selected because they are the ones who are strategically involved in e-learning decision making.

An interview guide was used to solicit opinions from learning and development managers (See Appendix A). However, this sort of interview questions still offers a grade of adaptability as well as freedom. The use of more structured interview questions ensures that interviewees answer the same questions and results can be easily compared. As such, the researcher designed standard interview questions for the users of an e-learning mechanism in a multinational company. The researcher also made use of less structured interview questions to give room for respondents to focus on what they think is more relevant to the question. In addition, the manager in charge of the releasing data from the company archives considered the questions which the researcher had pre-discussed, and the matched questions were retrieved from the MNC's database.

Challenges inherent in interviews are often directed to the mechanics of conducting an interview and construction of questions (Kasonde-Ng'andu, 2013). These challenges affect the response rate, the validity of data collected and reliability. To counter these challenges, the researcher embarked on a literature exploration and pretested the research instrument through use of experts to investigate information that was regarded as sensitive and insensitive, carefully designing of interview questions, and a brief explanation for the reason of the study during the process of obtaining ethical clearance for the study. The interview questions were designed to maintain the anonymity of the participants and all the information relating to the purpose of the research and the problem. The scholar's objectives were the primary source of interview questions.

As the researcher focused on the multinational company with a particular emphasis on the African context, interviews were done by sending the interview guide to learning and development managers. The interview questions were carefully constructed, and expert opinions were incorporated. The main objective of the interview was for the researcher to

present interview questions on the data being sought. Data requirements were specifically for the African region. The ethical clearance obtained from the university empowered the researcher to secure the interview with the manager of the MNC. The delayed response from the MNC in looking for the data which addressed the interview questions posed by the researcher was the major challenge as some emails were responded to more than 3 weeks later. The questionnaire was administered via the Global Head of Learning for the company and was conducted via emails of the heads of learning. The questionnaire is illustrated in Appendix A.

3.6 Sampling Technique and Size of Sample

The population under study was 156 heads of learning responsible for the e-learning system for the multinational company in all regions. However, since the focus was on Middle East African region, the size of the sample used was 15 respondents which is an appropriate number for a qualitative study. The 15 research participants are heads of learning covering the Middle East African region. These were purposively sampled since they are in charge of setting the tone for e-learning.

3.7 Data Analysis and Presentation

The information gathered was examined and presented utilizing thematic analysis. The data were divided into groups and subgroups using typologies and taxonomies as proposed in Quinn (2011). Using, Quinn's (2011) typologies and taxonomies, the researcher classified the data based on some common phrases used by participants. This process was followed by a system of coding the data based on patterns identified until all the opinions were classified. The data analysis was directed by the research questions spelt out in Chapter One. Lastly, the researcher identified patterns and themes that emerged from coded data. These patterns were determined by both the variables and the keys words that arose in the typology and taxonomy stage of analysis.

3.8 Validity

Kasonde-Ng'andu, (2013) attested that validity is how much any estimating instrument estimates what it is intended to quantify or measure. According to Kasonde-Ng'andu (2013), several criticizers are hesitant to agree to test the validity and reliability of a qualitative

study. However, strategies have been put to test the validity qualitatively. The researcher used ensured that the content of research instruments was aligned to the objectives of the study. Experts were also engaged to establish whether the research questions were being addressed in the research instrument. The content validity was ensured by purposively sampling the heads of learning in the Middle East African region and covering all the research questions for the study.

3.9 Reliability

Reliability is concerned with issues of consistency of measures (Rajasekar, Philominathanet, and Chinnathambi, 2013). Reliability is whether the same results would be obtained if the study is repeated thus accuracy, consistency and dependability in another multinational setup. The gathering of steadfastness measure is difficult in subjective work. Be that as it may, the research ought to at any rate endeavour to empower an investigator to repeat the study. The researcher gave a point by point portrayal of the methodology, sampling methods and adopted the code-recode strategy to guarantee reliability. Research instruments were pretested and corrected to ensure that there was no ambiguity and hence reliability of the responses.

Transferability denotes to the degree to which the findings and conditions of a study can be imitated in another research by providing detailed information about the methodology of the research. The researcher contributed to transferability by detailing the sampling methods and the research process and providing what Anney, (2014:277) refers to as ‘thick description’ in the research to ensure trustworthy and quality.

Another strategy that was used in this research to ensure trustworthiness was the code recode strategy. According to Anney (2014), this is when the researcher analyses the data twice to accurately capture the data of the study. Data from interview opinions were analysed several times. This process contributed to dependability as the accuracy of the findings was ensured. Anney (2014) argues that dependability is achieved when coding output is consistent and converging, which is important for identifications of patterns. The results that were analysed both times were similar, and this indicated the credibility of this research and increased the quality and trustworthiness**.**

3.10 Limitations of the Study

Limitations generally relate to factors that are beyond the researcher's control but may have an effect on the researcher's study. Limitations are inherent in any study; however, it is important for them to be identified during the planning stage and measures be taken to reduce any negative effects on the outcome (Price & Murnan, 2004). Limitations encountered by the researcher are described below.

Firstly, the main limitation that the researcher encountered was access to the learning and development managers to conduct the interviews, but the head of the Learning and Development Manager conducted the interviews because of his/her direct interaction with the managers. Due to protocol issues at the research site, the clearance to conduct research on the multinational company took time and the researcher could not gain access to the employees. Secondly, linked to the above point, the researcher could not further probe some questions which were presented in the interview with the manager. Confidentiality was assured as names of the respondents were not disclosed in this study.

3.11 Elimination of Bias and Ethical Considerations

To eliminate bias in the study, the researcher structured non-leading interview questions and avoided making assumptions on the e-learning system users, and there was utmost respect of the views of research participants which were taken into account in the interpretation of the findings. Opinions from respondents were taken as they were.

Ethics in research refers to custom or character and hints at a social code that passes on moral uprightness and reliable qualities. Ethics concerns what is right and what is wrong when carrying out research. Despite research structures, sampling techniques employed, and choice of methods, all researchers are liable for adherence to moral or ethical considerations (Rajasekar *et al*., 2013). The ethical characteristics in this study incorporate privacy of data and the namelessness, and these were adhered to in totality.

3.11.1 Confidentiality and Anonymity

The right to professional privacy and confidentiality of information obtained was guaranteed by the Head of Learning and Development Manager. Data collected was treated

in the strictest of confidence, and all responses from learning and development managers were kept secure, and no names were mentioned. Confidentiality and anonymity are closely connected. The subject's identity should not be linked to personal responses for the protection of anonymity, (Giordano, O'Reilly, Taylor, & Dogra, 2007). The head manager did not provide the demographic information and personal information, which would directly or indirectly identify the managers. Therefore, participants from whom data emanated were anonymous. This was achieved by not including any interview questions requesting the identity of the respondents or the company they work for.

3.11.2 Informed Consent

Informed consent refers to seeking permission to carry out the research to ensure that participants give informed consent during the research process voluntarily based on established know-how (Sarantakos, 2005). The informed consent was through requesting the learning and development managers to provide responses to the interview questions.

3.12 Chapter Summary

This chapter provided an explanation of the research methods that were utilised to assemble information for this study. Due to the interpretivist paradigm adopted in this research, the researcher made use of qualitative methods of gathering data in this case through interviews. The aim of using this method was to ensure that comprehensive data was gathered from the participants that would aid the researcher in having an understanding of e-learning systems in a multinational company in an African context. Apart from this, the section also offered justifications for the research methods. Conclusively, this chapter also outlined the thematic analysis, which was used in this study.

CHAPTER FOUR: RESULTS AND ANALYSIS

4.1 Introduction

The research's aim was to explore multinational e-learning systems in Africa. The research participants were from Middle East Africa. Fifteen contributors took part in the research. The qualitative data was generated from in-depth interviews based on the responses provided by research participants. Qualitative data was analysed using Atlas.ti 7, qualitative software. The analysis was focussed on the research objectives set out in Chapter one. In particular, the following objectives were addressed in this study:

a) To propose solutions provided by e-learning systems in Africa.
b) To identify the needs of an e-learning strategy in Africa.
c) To suggest the content that should be included an e-learning platform in Africa.
d) To identify the challenges that inhibit learners from fully realising the benefits of e- learning systems in Africa.
e) To suggest recommendations that ensure a successful e-learning system in Africa. The first four objectives are examined in this chapter.

4.2 Data Description

The research participants are from the Middle East Africa region. Data were obtained by the research method of interviews. Due to confidentiality of the research, the demographic features of the participants were not provided. The respondents were assigned number labels for reference purposes. The responses were loaded into a response form table. Data was collected in 2017, and each interview lasted on average 26 minutes. The interview guide was time triggered, and the length of time from the beginning to the end of the interview was automatically generated.

4.3 Role of E-learning Systems in Africa

Figure 4.1 highlights the findings on the solutions provided by e-learning systems in Africa. The respondents were requested to provide their sentiments on the role played by e-learning systems in Africa. Eleven themes pertaining to the role of e-learning systems were revealed by the research participants. The purpose of the themes is to provide access to information, improve agility and collaboration, improve availability of learning materials, provide the business with up to date technology, reduce costs of face

to face training delivery, improve business management, develop individual competencies, provide equal learning opportunities, reinforce lessons and skills, provide better cross-functional knowledge transfer and team management.

Respondent One provided the idea of individual competencies, team and business management as supported by Al-Sharhan (2018). Below is the respondent's response:

> "It helps us in developing individual competencies, team management as well as managing our business."

The research participants mention that access to information is amongst the roles of e-learning system. This is also supported by Hammad (2018) who identified similar conclusions. Respondent Two stated that:

> "It provides access to almost everything, processes, tools, people, etcetera quickly. It has removed the tedious task of looking for information."

Respondent Four also supported Respondent Two's claim and alluded that the e-learning system:

> "Enables employees to have easy access to different training topics anytime and anywhere."

Furthermore, Respondent Six expounded the aspect of access to information by highlighting that:

> "It's a cloud-based tool that provides development tools and material for employees whenever and wherever it is suitable for them to work on their development plans."

The idea of improving agility and collaboration, keeping the business with up to date technology and better cross-functional knowledge transfer was captured by Respondent Seven who provided the following opinion on the role of e-learning:

> "Improving agility and collaboration by making best utilization of resources and time constraints. Ensuring better cross-functional knowledge transfer. Keeping up with the new- age technology to drive our business priorities."

E-learning systems provide quick availability of learning materials as spelt out by Respondent Eight.

In addition, Respondent Twelve reported that e-learning systems:

> "Enhance Knowledge and skills base for employees."

Face-to-face delivery costs can be abridged when e-learning systems are used. This insight is captured by Respondent Thirteen, who states that:

> "Driving self-managed personal development and reduction of all costs from face to face training delivery."

Respondent Fourteen believes that e-learning systems offer equity in learning because everyone is accorded equal opportunities to learn. Respondent Fourteen's view is that:

> "Provide same learning opportunities for the Group within approved governance." E-learning reinforces lessons and skills gained through face to face training as highlighted by Respondent Fifteen.

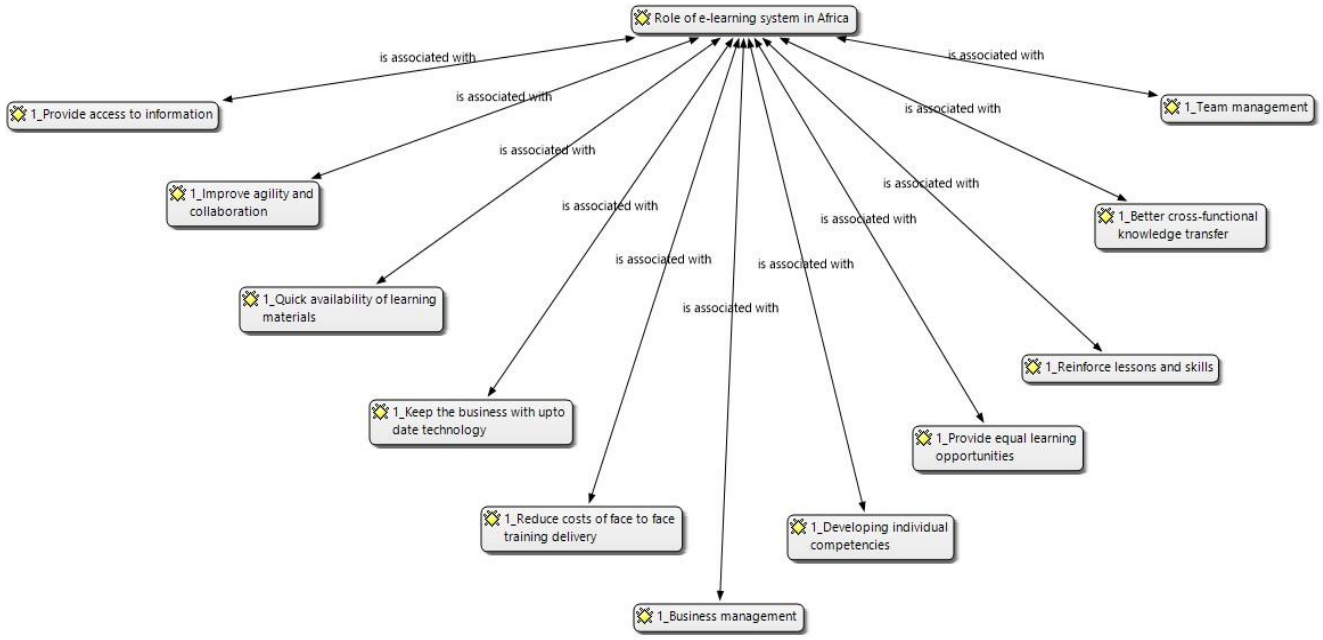

Figure 4.1:Solutions provided by e-learning systems in Africa (Field data 2017)

4.4 Needs of E-learning Strategy in Africa

The findings in Figure 4.2 reveal the need for e-learning strategy in Africa and are consistent with solutions to the challenges of e-learning highlighted in Bagarukayo and Kalema (2015). Fifteen essential factors were identified as a requirement of an effectual and excellent e-learning system. The factors are leadership, team building, easy access to vast information, commercial transformation, supporting other learning and development methodologies, an understanding of the company goals, connect better with customers and community, management, organisation development, sales knowledge and techniques, collaboration and guidance, new staff members induction, promotion and quick connection, health and safety, and promote learning culture.

Respondent One emphasised the importance of leadership, team building, management and new staff member induction which is captured as follows:

> "Leadership: put more emphasis on leadership training. Teambuilding: Provide training for teambuilding (oriented team objectives/results). Management: Provide a training package for new managers."

> Additionally, Respondent Six intensifies and augments the opinion of Respondent One: "Company goals and updates alignment to all employees, whenever we use a new tool or need to communicate new values or values description it's a bit difficult to make sure updates are available to all staff members specially those on leave or at remote locations. Competencies' development programs for G11-14 so they can have a long-term development programs with access to development materials, experts, coaches and development actions follow up all on their screens."

Accessibility to vast information, promotion of quick connection, and promotion of learning culture are viewed by Respondent Two as drivers of e-learning strategy, and this is outlined as:

> "Promote quick connection for geographically separated business units. Easy access to vast information. Trigger a company culture of learning where information is readily available."

Respondent Three reveals that an e-learning system should provide an understanding of the company goals, collaboration and guidance, and team building. The following statement amplifies the impression of Respondent Three:

> "Aligning employees around a common understanding of the company goals. Capability Building; especially around soft, management and professional skills. Collaboration and guidance - experts, coaches, mentors."

An e-learning system should ensure commercial transformation and promote health and safety as alluded to by Respondent Eight. However, Respondent Ten indicates that e-learning should …

> "ensure key messages relevant to the company business goals are getting through to target audience. Support other learning and development methodologies. Connect better with customers and community through proposing learning initiatives."

Respondent Eleven shares that e-learning should …

> "address sales knowledge and techniques as well as organisational development."

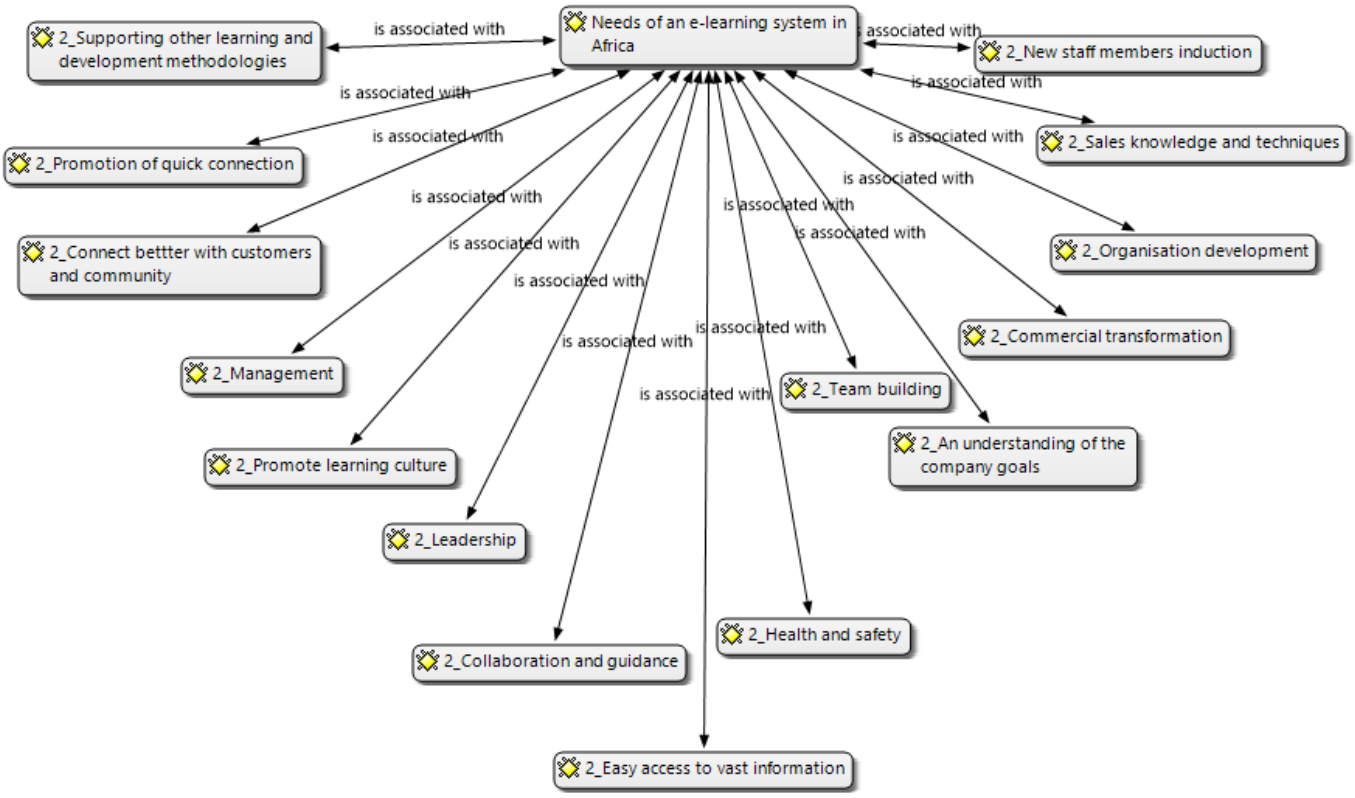

Figure 4.2: Needs of e-learning system in Africa (Field data 2017)

4.5 Content for an E-learning Platform in Africa

By the words of Chigona and Dagada, (2011), the adoption and implementation of e-learning programs hinge on the platform and how it is easily accessible and operational. Results in Figure 4.3 indicates the seven key aspects that ought to be incorporated in an e-learning system. The research participants were asked to provide the most relevant content for inclusion in an e-learning system. The content includes key job processes, expert's and manager's analysis, game approach, virtual classes led by an instructor, online learning program, podcast, and collaboration to talk to the learning cohort and instructor.

Respondent One highlights that:

> "Expert's and manager's analysis (videos, articles, and books), Key processes about my job (presented in portable document format, power point, tutorials, etcetera), Game approach (serious game, challenge, three-dimensional, 3D immersive learning, etcetera.)"

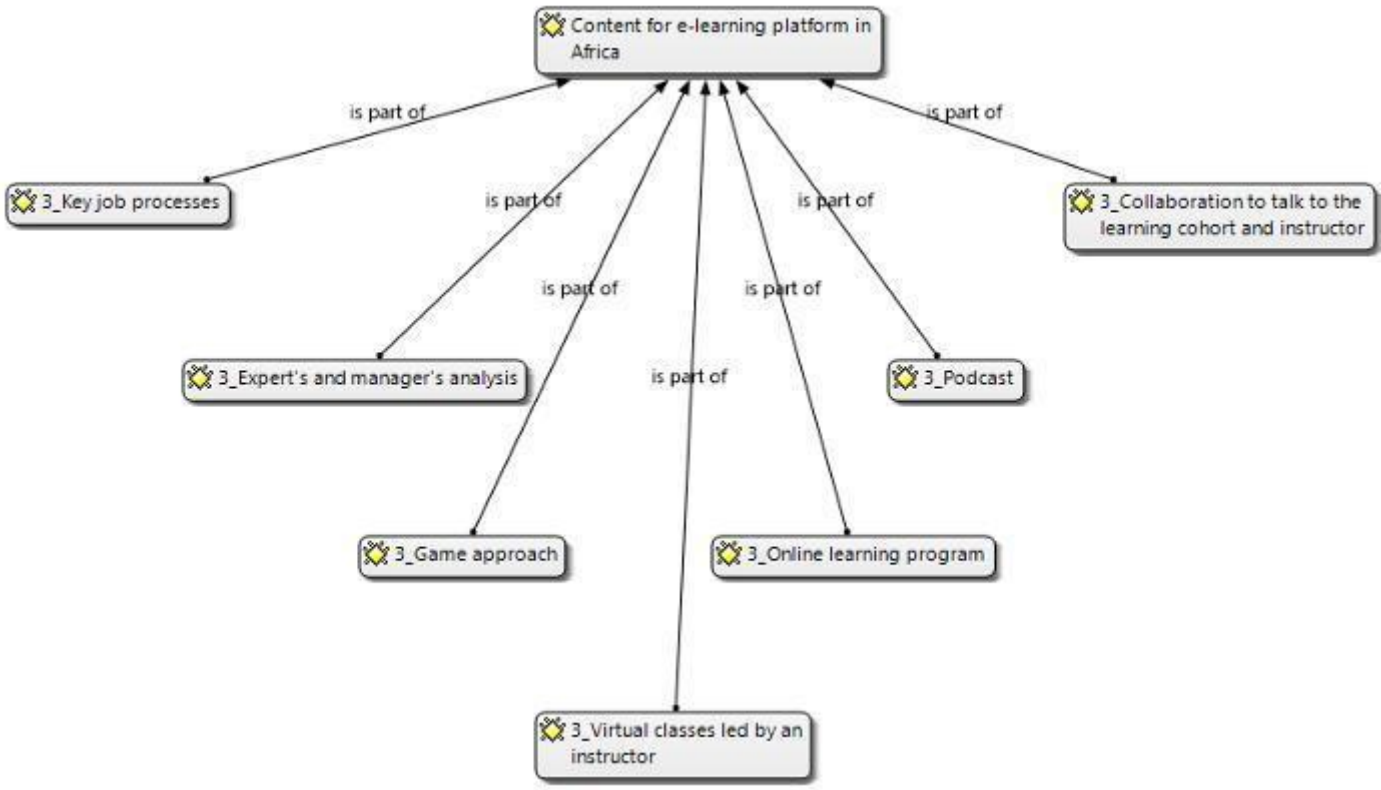

Figure 4.3: Content that should constitute an e-learning system in Africa (Field data 2017)

In addition, Respondent Two asserts that the content for e-learning should include:

> "The e-learning system must have a feature that allows collaboration of the learning cohort and instructor."

Respondent Three indicates that:

> "Collaboration space to talk to the learning cohort, Collaboration space to talk to a coach, to a mentor, to a trainer…"

Respondents Four to Fifteen support the essential components as previously alluded.

4.6 Challenges Inhibiting Learners in an E-learning System in Africa

As said by Higley (2014), innovation-helped education apparatuses are rapidly altering the essence of instruction. Figure 4.4 shows the challenges faced by users of the e-learning system. Research participants were asked about the main barriers that hinder their ability to utilize the e-learning system effectively. The respondents highlighted eight challenges namely access to training modules, certification and accreditation, lack of technological knowledge, time and willingness, connectivity, lack of sophisticated gadgets, and language and ownership of learner's own development. Respondent One identified language and access to training modules as an obstacle to the prosperous realisation of e-learning potential. Respondent One emphasised that:

"Language and Access (employees don't like searching for modules)."

Respondent Eleven explained that:

> "Language barrier (Many employees are not English speakers)."

Lack of technological knowledge was revealed by Respondent Two as an inhibitor for e-learning system learners, in particular, it was asserted that:

> "Not everybody is tech-savvy."

Internet connectivity poses a challenge in making usage of the e-learning system as alluded via Respondent Three. The connectivity will affect access to the learning materials.

Respondent Five points to:

> "Internet reliability and availability."

Availing of time and willingness of the learner may affect the performance of an e-learning system. Respondent Four attributed the challenges to the attitude of the learner and commitment by indicating that:

> "Time and willingness."

Respondent Seven gives a clear picture of the opinion made by Respondent Four by stating that:

> "Mindset - of having traditional classroom trainings or workshops to learn regarding the industrial topics."

Moreover, Respondent Ten explained that:

> "The need to connect to a facilitator interaction. The 'what's in it for me mind-set'. Resistance. The time and aging population who find it difficult to adopt new approaches."

Unavailability of technological equipment hampers utilisation of the e-learning system. Respondent Twelve raised the point that:

> "Lack of sophisticated gadgets, such as tablets."

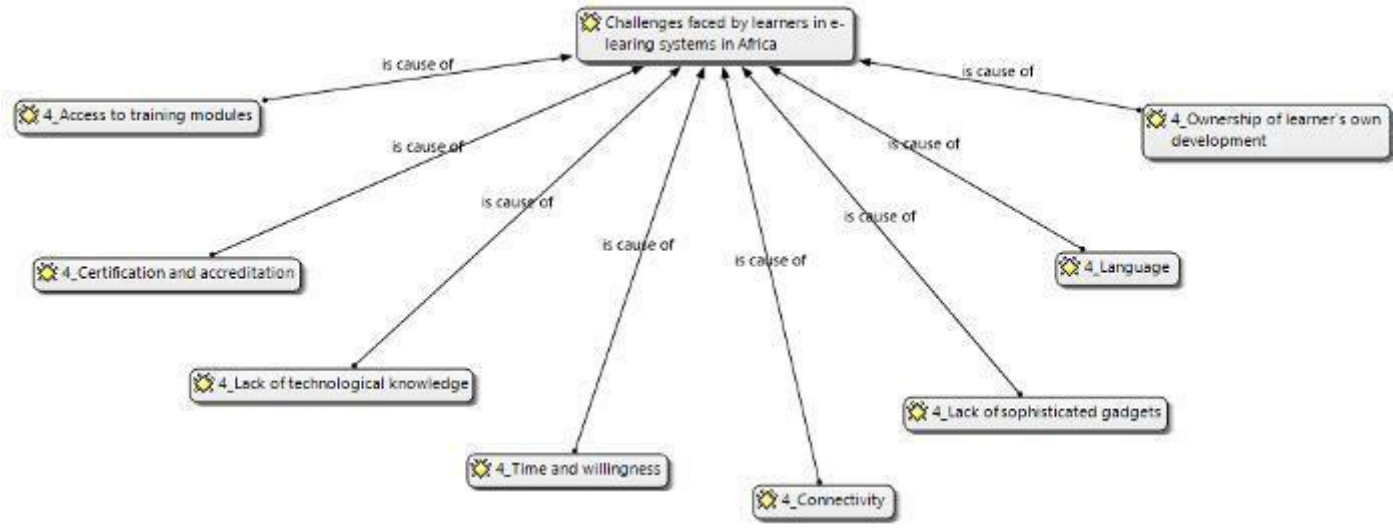

Figure 4.4: Challenges faced by learners on an e-learning system in Africa (Field data 2017)

Learners do not get rights to learning works that they develop and as such they will be unwilling to embrace the e-learning technology. Respondent Thirteen states the challenge that:

"…ownership of their own development."

Some of the learning modules or materials lack certification and accreditation from recognised institutes of learning, and this discourages learners from pursuing e-learning. This notion was highlighted by Respondent Fifteen, who indicated a deficiency in:

"…certification and accreditation."

4.7 Chapter Summary

This chapter addressed the four objectives namely to assess solutions provided by e-learning systems in Africa, to examine the needs of an e-learning strategy in Africa, to establish the content that should be included an e-learning platform in Africa, and to explore the challenges that inhibit learners from fully realising advantages of e-learning systems in Africa. The next chapter provides recommendations and conclusions**.**

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

As set out in Chapter One, the study's main objective was to explore multinational e-learning systems in Africa. The study was primarily motivated by the need to assess solutions provided by e-learning systems in Africa, examine the needs of an e-learning strategy in Africa, establish the content that should be included an e-learning platform in Africa as well as exploring the challenges that inhibit learners from fully realising benefits of e-learning systems in Africa. The study ends with a list of recommendations to ensure a successful e-learning system in Africa.

5.2 Discussions

The Middle East Africa region is the place of choice for the interviews. The research, participants' demographic qualities were not revealed at the discretion of the researcher due confidentiality and company policy of the case study. The participants were assigned number labels for reference. The replies were encumbered into a response to questionnaire form in Appendix A. Data was collected in 2017, and each interview lasted on average for 26 minutes.

5.2.1 Role of E-learning Systems in Africa

Study findings revealed that e-learning systems play a key role in transforming education at all levels in Africa. Among the highlighted roles, the research found a total of eleven major themes pertaining to the role of e-learning systems in Africa. These are: to provide access to information, improve agility and collaboration, quick availability of learning materials, keep the business with up to date technology, reduce costs of face to face training delivery, business management, developing individual competencies, provide equal learning opportunities, reinforce lessons and skills, better cross-functional knowledge transfer and team management.

The above outcomes are upheld by the discoveries of Hammad, (2018) who found that e-learning gives time and site flexibility; which outcomes in expense and time saved for

learning foundations; encourages self-coordinated and self-guided educating by empowering student-focused happenings; makes a synergistic educational condition by connecting every student with tangibly scattered specialists and peers; enables boundless right of entry to virtual educational material; and enables information or understanding to be sustained in a more convenient and productive way.

In light of the African context, the traditional learning systems are too congested, often resulting in learners sharing a few scarce materials. The advent of e-learning is a most welcome development which is enabling tutors to transmit their information to a vast number of learners without space, time, location and facility limitations (Radović-Marković, 2010).

Zhang, Wen, Fu, and Cu, (2010) emphasised the role played by e-learning, in evaluating the students' learning. In addition, expanding students' involvements in learning, by providing interface methods that are appropriate to education as seen by community. Moreover, diversifying cultures and globalization, and removing limits of place and time provide e-learning advantages. From the participants' points of view, which are the generalised view of the majority of students who are introduced to e-learning the most important attributes and benefit of e-learning in learning is that it fixates on the scholars.

5.2.2 Needs of E-learning Strategy in Africa

The research also sought to establish the needs for an e-learning strategy in Africa. Among other points, the findings revealed the following as topping the list: the need for leadership transformation, team building, and easy access to information, commercial transformation, and understanding of company goals, induction of new members, and promotion of a learning culture, collaboration and guidance (Martins & Coetzee, 2011). Thus, for a successful e-learning program, there is need to synchronise the program's objectives with organisational goals, participants and management support and enhancement of performance (Parrish & Linder-VanBerschot, 2010).

Aligning the e-learning program's objectives to the organisational goals is crucial to roll out the program with results in mind. The organisation should be able to spell out expectations from the e-learning program and how these are to be met. This enables

comparisons with existing workforce skills to be made and gaps identified for the employees' training needs (Parrish & Linder-VanBerschot, 2010). As noted from respondent three, "Aligning employees around a common understanding of the company goals. Capability Building; especially around soft, management and professional skills. Collaboration and guidance - experts, coaches, mentors."

Once the program's objectives and organisational goals are aligned, the findings revealed a need for buy-in from management. Management support is crucial to accelerate the program's progress because when management is indifferent to the e-learning program, progress will be undermined. Ellis and Kuznia (2014) observed that most e-learning initiatives are successful when leadership is fully behind them. Thus, the involvement of management during the initial phases affords them the chance to express their concerns and needs to win their support for the initiative.

5.2.3 Content for an E-learning Platform in Africa

The study found seven key aspects that should be incorporated for an effective e-learning system in Africa. These include key job processes, expert's and manager's analysis, game approach, virtual classes led by an instructor, online learning program, podcast, and collaboration to talk to the learning cohort and instructor (Al-Sharhan, 2018). For an effective e-learning program, content development and or acquisition processes should be clearly defined from the outset (Hrastinski, 2008) because e-learning is totally different from face to face delivered lessons as it requires specific content formats with adequate support to aid in the understanding of learners (Cope & Kalantzis, 2016).

Another significant idea to take note of is the high cost of developing e-learning programs is often dampened by the availability of various cheap and ineffective e-learning programs meant to drive out the good ones. As noted by Martins and Coetzee (2011), the e-learning industry is becoming commodified, which is resulting in a continued decrease in the amount of quality material available online. E-learning is meant to be auxiliary to other methods of education. However, the technology used to enhance the learning process should never be viewed as a substitute for the learning process. The course content on its own has to involve both the tutor and the virtual student.

In today's highly congested e-learning environment, much of the content comes from commercial suppliers, with most of the material not catalogued in any formal way. This limits the opportunity of the teaching supervisors, tutors or students to study what trustworthy critics comment about -- the value of each online course (McPherson & Nunes, 2004).

5.2.4 Challenges Inhibiting Learners in an E-learning System in Africa

Despite the numerous advantages and benefits that come alongside e-learning systems, like any other teaching or learning method, e-learning does have its shortcomings. The respondents highlighted the following as the major shortcomings associated with e- learning in Africa: difficulty in accessing training modules, certification and accreditation, lack of technological knowledge, time and willingness, connectivity, lack of sophisticated gadgets, and language and ownership of learner's development.

For most corporate learners, the major challenge is lack of time and resources to access and complete the self-paced courses. According to Frankola, (2001), most corporate learners do not have right of entry to the courses from their households as their only admission is by the business' intranet. Hence, they cannot complete their coursework from their household. In addition to time-related challenges, respondents also highlighted the difficulty in accessing training modules and lack of technological skills and the required sophisticated gadgets as other e-learning shortcomings. These shortcomings confirm findings by Abrami *et al*. (2011), who warned introducing e-learning without proper groundwork will negatively affect the success of the entire programme.

In addition, lack of motivation is also singled out as a major hindrance to a successful e-learning program. Nedeva and Dimova (2010) argued that for the learner to successfully complete their online course, one should be extremely motivated with willingness and ability to follow a self-directed learning style. In addition, Nedeva and Dimova (2010) stressed the importance of e-learning self-efficacy. This, the authors described as the distinct members of staff trust that they can become prosperous students. An employee with immense self-efficacy levels perceive a smaller number of e-learning obstacles; hence, associations should ascertain their employees' self-efficacy levels before formulating e-learning strategies for its employees.

Another barrier raised by respondents is the language used for e-learning lessons. In most e-learning courses, the language used is text-based, and as such, it is constrained by the lack of non-verbal resources. More so, to most Africans, the English language comes as a second language and the majority of learners struggle to understand concepts clearly on their own when they are conveyed in English. Additionally, Martins and Coetzee (2011) also noted that majority of the subject matter, as well as style of e-learning resources are fashioned in advanced nations and are typically unfit for social and cultural customs in less advanced nations.

5.3 Conclusions

The study sought to explore multinational e-learning systems in Africa, using a total of fifteen selected participants from the Middle East Africa region. Qualitative data from the selected respondents were analysed using Atlas.ti 7 software, with the analysis focussing on the research objectives set out in Chapter One. The study revealed several solutions provided by e-learning across Africa. These were found to include provision of access to information, quick availability of learning materials; provision of better cross-functional knowledge transfer; development of individual competences as well as keeping the business environment up to date with technological advances. In addition to the solutions provided by e-learning systems, the study also revealed the various needs for an effective e-learning strategy in Africa. Several factors were pointed out as essential for an effective e-learning strategy. Chief among them was the need for the alignment of the e-learning program's objectives with organisational goals.

Other related important factors included the need for management support or buy-in, a conducive environment with proper facilities, internal marketing and promotion and follow through. Strategy development was found to be very important as failure at this stage will affect the whole e-learning program. Apart from the role of e-learning and the need for a strategy, the study also touched on the content for an effective e-learning system. It was found that content plays a crucial role as it directly affects the learning outcomes. In today's world, where the internet is filled with information on almost anything, content development is very important to provide learners with authentic information that will aid their intellectual development. The study ended by looking at the various challenges inhibiting e-learning

systems in Africa. These were found to range from the lack of technological awareness by learners, lack of time by the working class, poor connectivity, high set up costs, language barriers, as well as the lack of customised gadgets for e-learning.

5.4 Recommendations

The results of this research provide a number of clear implications for the improvement of e-learning programs in Africa. The following recommendations are made:

- Countries in Africa should continue to invest in technology, including fast and reliable internet to ensure uninterrupted access to learning materials and facilities.
- Creation of appropriate e-learning policies for the workplace environment for successful implementation.
- Making coordinated efforts and associations with other effective e-learning accomplices to learn best practices to fast-track e-learning implementation and lessen duplication of assets.
- Course content ought to be designed to complement various types of learners, inclinations and learning styles. Course content should be continuously updated to reflect improvements and changes that would have taken place.
- Management should support e-learning initiatives from the top level to the bottom.

Preparation ought to be presented to teachers and course designers either through internal or external workshops with the intention that they can be further acquainted with the educational management systems.

5.5 Areas of Further Study

This research focussed on the exploration of multinational e-learning systems in Africa. Although the results to some extent present an overview of the African situation, each African country has its unique e-learning experiences. Thus, for policy development and implementation at country and even institutional level, a more refined research will be required. In addition, there still remain some grey areas on whether e-learning improves learner's performance. A dedicated study is, therefore, recommended to assess the role of computers and the whole e-learning system in improving learner's performance.

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APPENDIX A - INTERVIEW QUESTIONS AND TRANSCRIPTS

Respondent one

Indicate your geographical area (where you are physically located) Middle East Africa

In your opinion what is the role of LH Digital Learning strategy in the country/region business strategy implementation? It helps us in developing individual competencies, team management. As well as managing our business,

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Increasing awareness, connecting people to experts

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. - Leadership: put more emphasis on leadership training - Teambuilding: Provide trainings for teambuilding (oriented team objectives/ results) - Management: Provide a training package for newly managers

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Key processes about my job (PDF, PTT, tutorials, etc), Game approach (serious game, challenge, 3D immersive learning, etc.)

Which best in class digital learning practices do you want to see in the Digital Learning offer? - Interactive Training with game roles, scenarios. Etc

What do we need to do more of in digital learning?

Make accessible the annual catalogue of the different training modules, facilitate access into the system, permit the translation in different languages (French)

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? - Language and Access (employees don't like searching for modules)

What are your two major pain points today? - Access to training modules too long (we wish to have access in 1 or 2 clicks) - Most training modules in English (provide possibility for translation in French)

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Anywhere, Relevant content, Inspirational content

Respondent two

Indicate your geographical area (where you are physically located) Middle East Africa *In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation?* It provides access to almost everything (processes, tools, people, etc.) quickly. It has removed the tedious task of looking for information.

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, Increasing awareness, Ensuring compliance, connecting people to experts

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. 1. Promote quick connection for geographically separated business units. 2. Easy access to vast information. 3. Trigger a company culture of learning where information is readily available.

Which kind of Digital Learning content would be most relevant and engaging for your

selected audience(s)? Expert's and manager's analysis (videos, articles, books), Key processes about my job (PDF, PTT, tutorials, etc), Virtual classes led by an instructor, Online learning program from external recognised institutions (MOOC, etc.), Podcasts

Which best in class digital learning practices do you want to see in the Digital Learning offer? Individual documentation of online training, integrated web tools & platforms, blended with Ft. training

What do we need to do more of in digital learning? Get more visual

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Not everybody is tech-savvy

Are you aware of any technical constraints or limiting regulations on learning (such as data protection)? No

What are your two major pain points today? 1. Getting as much people to exploit the digital learning platform 2. Train people to be abreast with advanced technology

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Anywhere, Relevant content, Inspirational content, Ability to connect with peers

Respondent three

Indicate your geographical area (where you are physically located) Middle East Africa

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, creating common culture, Growing talent, Building skills, Increasing awareness, Ensuring compliance, connecting people to experts

Which audience do you expect to be supported by your Digital Learning strategy? [All country employees] No

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. 1. Aligning employees around a common understanding of the company goals 2. Capability Building; especially around soft, management and professional skills 3. Collaboration and guidance - experts, coaches, mentors

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Key processes about my job (PDF, PTT, tutorials, etc), Virtual classes led by an instructor, Game approach (serious game, challenge, 3D immersive learning, etc.), Collaboration space to talk to the learning cohort, Collaboration space to talk to a coach, to a mentor, to a trainer, Online learning program from external recognised institutions (MOOC, etc.), Podcasts

Which best in class digital learning practices do you want to see in the Digital Learning offer? 1. Interactive interfaces/learning 2. Strong administrative access/control - assign, monitor, reporting learning 3. Multi-device compatibility

What do we need to do more of in digital learning? 1. Interactive interfaces/learning 2. Strong administrative access/control - assign, monitor, reporting learning 3. Multi-device compatibility

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? 1. Technology - bandwidth/connectivity

Are you aware of any technical constraints or limiting regulations on learning (such as

data protection)? Technical constraints on bandwidth/Java scripts/etc. Not aware of any limiting regulations

What are your two major pain points today? 1. Bandwidth/Connectiveness 2. Lack of awareness/learning culture (tilts more towards the classroom than computers)

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Anywhere, Relevant content, Ability to connect with peers, 1. Fun 2. Ease of Navigation

Respondent four

Indicate your geographical area (where you are physically located) Middle East Africa

In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation? Enable employees to have easy access to different training topics anytime and anywhere.

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, Building skills, increasing awareness, connecting people to experts

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Virtual classes led by an instructor, Game approach (serious game, challenge, 3D immersive learning, etc.), Online learning program from external recognised institutions (MOOC, etc.)

What do we need to do more of in digital learning? Communicate effectively about the digital platform

What are the main barriers inhibiting your audience's ability to learn using new practices?

and digital technology? Time and willingness

Are you aware of any technical constraints or limiting regulations on learning (such as data protection)? No

What are your two major pain points today? To get people into the digital learning experience

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Anywhere, Relevant content, Inspirational content, Ability to co-design and share content

Respondent five

Indicate your geographical area (where you are physically located) Middle East Africa

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, creating common culture, Growing talent, Building skills, Increasing awareness, Ensuring compliance

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Key processes about my job (PDF, PTT, tutorials, etc), Virtual classes led by an instructor, Online learning program from external recognised institutions (MOOC, etc.)

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Internet reliability and availability

Are you aware of any technical constraints or limiting regulations on learning (such as data protection)? No

What are your two major pain points today? Availability of several and variety courses on e-learning

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Anywhere, Relevant content, Inspirational content

Respondent six

Indicate your geographical area (where you are physically located) Middle East Africa

In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation? It's a cloud based tool that provides development tools and material for employees whenever and wherever it is suitable for them to work on their development plans.

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, growing talent, Building skills, and connecting people to experts

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. New staff members induction would be great if digitised, due to the irregular timing at which they each join. Company goals and updates alignment to all employees, whenever we use a new tool or need to communicate new values or values description it's a bit difficult to make sure updates are available to all staff members specially those on leave or at remote locations. Competencies' development programs for G11-14 so they can have a long term development programs with access to development materials, experts, coaches and

development actions follow up all on their screens.

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Key processes about my job (PDF, PTT, tutorials, etc), Collaboration space to talk to the learning cohort, Collaboration space to talk to a coach, to a mentor, to a trainer, Online learning program from external recognised institutions (MOOC, etc.) *Which best in class digital learning practices do you want to see in the Digital Learning offer?* Access to experts, access to online courses, digital development follow-up programs on actions, check Lynda.com

What do we need to do more of in digital learning? Be more user friendly, focus on simplifying the experience, and make it more entertaining and enriching the content

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Language and internet access

Are you aware of any technical constraints or limiting regulations on learning (such as data protection)? I worked for a while as a project manager for a project called "madrasa", the Arabic word for school, it was an e-learning platform, the biggest challenge was content, we couldn't settle for a while on which is best, user created content so the platform becomes an education sharing platform "more traffic" or to become a centralised content creator so the platform becomes more of an e-school "better quality".

What are your two major pain points today? Question unclear, do you mean in work in general?

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Anywhere, Relevant content, Ability to connect with peers, fun

experience

Respondent six

Indicate your geographical area (where you are physically located) Middle East Africa

In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation? 1. Improving agility and collaboration by making best utilization of resources and time constraints 2. Ensuring better cross-functional knowledge transfer 3. Keeping up with the new-age technology to drive our business priorities

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, creating common culture, Building skills, increasing awareness, connecting people to experts

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. 1. Focussed programs for First time 'Manager' from operations / industrial background - to prepare them for the leadership role 2. Executive leadership / business strategy development for country Eco 3. Programs supporting ACE pillars and living the CRISP values - to support in the mind-set transformation

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Virtual classes led by an instructor, Game approach (serious game, challenge, 3D immersive learning, etc.), Collaboration space to talk to a coach, to a mentor, to a trainer, Online

learning program from external recognised institutions (MOOC, etc.)

Which best in class digital learning practices do you want to see in the Digital Learning offer? 1. Blended learning - with localised content in multiple languages - videos and reading materials. Books to be recommended for complimenting the learning. 2. Social media / connect engagement - Gamification / scoring 3. Feedback on progress 4. Pause and play - time flexibility to ensure the employees are able to do complete the learning at their own pace

What do we need to do more of in digital learning? 1. More engaging content and shorter timeframes to deliver the learning (skill-pill format). 2. Reduce the dependency on add-on software's (eg: JAVA, flash...) to ensure there is more accessibility

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Mindset - of having traditional classroom trainings / workshops to learn regarding the industrial topics.

Are you aware of any technical constraints or limiting regulations on learning (such as data protection)? None

What are your two major pain points today? 1. Low level of engagement from employees to explore digital learning platform 2. Availability of good content delivered in a short span of time (instead of 1 hour modules) - to address the attention span for adult learners

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Relevant content, Inspirational content, Ability to connect with peers

Respondent seven

Indicate your geographical area (where you are physically located) Middle East Africa

In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation? 1. Improving agility and collaboration by making best utilization of resources and time constraints 2. Ensuring better cross-functional knowledge transfer 3. Keeping up with the new-age technology to drive our business priorities *what challenges should be solved by the new digital learning environment? Check the applicable answer(s)* Aligning employees around a common understanding of the company goals, creating common culture, Building skills, increasing awareness, connecting people to experts

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. 1. Focussed programs for First time 'Manager' from operations / industrial background - to prepare them for the leadership role 2. Executive leadership / business strategy development for country ExCo 3. Programs supporting ACE pillars and living the CRISP values - to support in the mind-set transformation

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Virtual classes led by an instructor, Game approach (serious game, challenge, 3D immersive learning, etc.), Collaboration space to talk to a coach, to a mentor, to a trainer, Online learning program from external recognised institutions (MOOC, etc.)

Which best in class digital learning practices do you want to see in the Digital Learning offer? 1. Blended learning - with localised content in multiple languages - videos and

reading materials. Books to be recommended for complimenting the learning. 2. Social media / connect@LH engagement - Gamification / scoring 3. Feedback on progress 4. Pause and play - time flexibility to ensure the employees are able to do complete the learning at their own pace

What do we need to do more of in digital learning? 1. More engaging content and shorter timeframes to deliver the learning (skill-pill format). 2. Reduce the dependency on add-on software's (eg: JAVA, flash...) to ensure there is more accessibility

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Mindset - of having traditional classroom trainings / workshops to learn regarding the industrial topics.

Are you aware of any technical constraints or limiting regulations on learning (such as data protection)? None

What are your two major pain points today? 1. Low level of engagement from employees to explore digital learning platform 2. Availability of good content delivered in a short span of time (instead of 1 hour modules) - to address the attention span for adult learners

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Relevant content, Inspirational content, Ability to connect with peers

Respondent eight

Indicate your geographical area (where you are physically located) Middle East Africa

In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation? To offer a quick access and availability of learning

materials to all LH employees

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, creating common culture, Growing talent, Building skills, Increasing awareness, Ensuring compliance, connecting people to experts

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. Leadership Skills, Group ACE behaviours, Commercial Transformation, Health and Safety

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Game approach (serious game, challenge, 3D immersive learning, etc.), Online learning program from external recognised institutions (MOOC, etc.), Podcasts

Which best in class digital learning practices do you want to see in the Digital Learning offer? Videos and How to, Certification programs

What do we need to do more of in digital learning? Leadership and Commercial Transformation trainings

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Internet Speeds

Are you aware of any technical constraints or limiting regulations on learning (such as data protection)? No. Only aware of data/internet speeds

What are your two major pain points today? Internet speeds / Modules don't address business needs i.e. very few LH specific modules developed.

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Relevant content, Inspirational content, Ability to co-design and share content

Respondent nine

Indicate your geographical area (where you are physically located) what challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, creating common culture, Building skills, connecting people to experts

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Key processes about my job (PDF, PTT, tutorials, etc), Virtual classes led by an instructor, Game approach (serious game, challenge, 3D immersive learning, etc.), Collaboration space to talk to the learning cohort, Collaboration space to talk to a coach, to a mentor, to a trainer, Online learning program from external recognised institutions (MOOC, etc.)

What do we need to do more of in digital learning? More following and pre-requests of classic classrooms

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Using this way

Are you aware of any technical constraints or limiting regulations on learning (such as data protection)? Java on computers or any other technical issues

What are your two major pain points today? Communication, self-awareness about this way of learning (perception, and autonomy)

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Anywhere, Relevant content

Respondent ten

Indicate your geographical area (where you are physically located) Middle East Africa

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, creating common culture, Growing talent

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. ensure common learning approach is being deployed ensure key messages relevant to the company business goals are getting through to target audience support other learning and development methodologies connect better with customers and community through proposing learning initiatives *Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)?* Key processes about my job (PDF, PTT, tutorials, etc), Game approach (serious game, challenge, 3D immersive learning, etc.), Collaboration space to talk to a coach, to a mentor, to a trainer, Online learning program from external recognised institutions (MOOC, etc.)

What do we need to do more of in digital learning? Make digital learning platform user friendly and courses attractive ensure that all IT systems and networks support digital learning train the administrators on the tools so they can support their audiences

What are the main barriers inhibiting your audience's ability to learn using new practices

and digital technology? The need to connect to a facilitator, interaction he's in it for me mindset Resistance the time and aging population who find it difficult to adopt new approaches

What are your two major pain points today? Courses attractiveness mindset and support of change initiatives as a whole approach where innovation and new initiatives are carried through

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Relevant content, Inspirational content, user friendly/attractive platform

Respondent eleven

Indicate your geographical area (where you are physically located) Middle East Africa

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) creating common culture, Growing talent, Building skills

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. Commercial Transformation Customer centrism Sales knowledge and techniques Organisation development Leadership skills

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Key processes about my job (PDF, PTT, tutorials, etc), News articles from external media (YouTube, online press), Virtual classes led by an instructor, Online learning program from external recognised institutions (MOOC, *What do we need to do more of in digital learning?*

To be user friendly and easily accessed Active & smart search engine Attractive interface and smooth inter-section movement

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Language barrier (Many employees are not English speakers) IT related complications

What are your two major pain points today? We cannot easily find all the learning subjects/topics we need. Searching process is time consuming

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Relevant content, Inspirational content, Ability to co-design and share content

Respondent twelve

Indicate your geographical area (where you are physically located) Middle East Africa

In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation? Enhance Knowledge and skills base for employees

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, creating common culture, Growing talent, Building skills, Increasing awareness, Ensuring compliance, connecting people to experts

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. Supervisory Skills Sales Skills Health and Safety knowledge

Which kind of Digital Learning content would be most relevant and engaging for your

selected audience(s)? Expert's and manager's analysis (videos, articles, books), Key processes about my job (PDF, PTT, tutorials, etc), Virtual classes led by an instructor

What do we need to do more of in digital learning? Improve access for all

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Lack of sophisticated gadgets such as tablets. *Are you aware of any technical constraints or limiting regulations on learning (such as data protection)?* We are unable to access YouTube videos

What are your two major pain points today? Leadership/Supervisory Skills

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Anywhere, Relevant content, Inspirational content, Ability to co-design and share content

Respondent thirteen

Indicate your geographical area (where you are physically located) Middle East Africa

In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation? Driving self-managed personal development and reduction of all costs from face to face training delivery

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, growing talent, Building skills, Increasing awareness, Ensuring compliance

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. Competency Gaps across

the business for both Technical and Support teams, Leadership skills gaps to equip managers with the skill to motivate and inspire employees

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Key processes about my job (PDF, PTT, tutorials, etc), Virtual classes led by an instructor, Collaboration space to talk to the learning cohort, Collaboration space to talk to a coach, to a mentor, to a trainer, Online learning program from external recognised institutions (MOOC, etc.), Podcasts

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Time away from their normal work schedule and ownership of their own development

What are your two major pain points today? Limitation of time and paper/manual processes

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Anywhere, Relevant content, Inspirational content, Ability to co-design and share content

Respondent fourteen

Indicate your geographical area (where you are physically located)

Middle East Africa

In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation? Provide same learning opportunities for the Group within approved governance framework

What challenges should be solved by the new digital learning environment? Check the

applicable answer(s) creating common culture, Growing talent, Building skills, Increasing awareness, Ensuring compliance, connecting people to experts

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. Leadership behaviours aligned to our core values (CRISP), programmes to drive and embed ACE

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Expert's and manager's analysis (videos, articles, books), Key processes about my job (PDF, PTT, tutorials, etc), News articles from external media (YouTube, online press), Virtual classes led by an instructor, Game approach (serious game, challenge, 3D immersive learning, etc.), Collaboration space to talk to the learning cohort, Collaboration space to talk to a coach, to a mentor, to a trainer, Online learning program from external recognised institutions (MOOC, etc.)

Which best in class digital learning practices do you want to see in the Digital Learning offer? Targeted online courses addressing specific employee/ functional competency needs

What do we need to do more of in digital learning? Easily accessible, proper approvals from N+1 for programmes that link into IDP

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? None

Are you aware of any technical constraints or limiting regulations on learning (such as data protection)? None that i know

What are your two major pain points today? None

What factors will contribute most to the success of our Digital Learning strategy?

Accessibility, Anytime, Anywhere, Relevant content, Inspirational content

Respondent fifteen Middle East Africa

In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation? To reinforce lessons and skills gained through out and face to face training.

What challenges should be solved by the new digital learning environment? Check the applicable answer(s) Aligning employees around a common understanding of the company goals, growing talent, Building skills, and connecting people to experts

Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs. 1. Industrial competencies 2. Leadership competencies 3. Commercial competencies

Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)? Virtual classes led by an instructor, Game approach (serious game, challenge, 3D immersive learning, etc.), Collaboration space to talk to a coach, to a mentor, to a trainer

What do we need to do more of in digital learning? Interactive learning. Gamification.

What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology? Sessions that are too long. Internet connectivity time during working hour's certification and accreditation

Are you aware of any technical constraints or limiting regulations on learning (such as data protection)? n/a

What are your two major pain points today? Time

What factors will contribute most to the success of our Digital Learning strategy? Accessibility, Anytime, Anywhere, Relevant content, Inspirational content, Ability to connect with peers, Accreditation

QUESTIONNAIRE

Digital Learning Going Forward

The survey below is designed for you to express your Digital Learning needs and aspirations.
Thank you for taking 10 minutes to answer the following questions.

* Required

1. **Email address** *

2. **Indicate your geographical area (where you are physically located)** *
   Mark only one oval.

   - Asia – Pacific
   - India
   - Middle East Africa
   - Europe
   - Americas

Please read this definition before moving forward

To ensure all of us share a common definition for digital learning, we have created the following:

Common definition used for Digital Learning at LH

Digital Learning is a learning approach that uses technology to strengthen an individual's learning experience. It emphasizes high-quality instruction and provides access to opportunities for learning anytime and anywhere, feedback through formative assessment, and individualized approach to ensure all learners reach their full potential.

Digital Learning encompasses many different facets, tools, and applications to support and empower both learners and instructors/company trainers, including online courses, blended or hybrid learning, or digital content and resources.

PART I: STRATEGIC CONTEXT FOR DIGITAL LEARNING

Please, structure your answer in maximum four statements, organized by importance (your first statement is the most important).

3. **In your opinion what is the role of LH Digital Learning strategy in the country / region business strategy implementation?**

4. **What challenges should be solved by the new digital learning environment? Check the applicable answer(s)**
Check all that apply.

- [ ] Aligning employees around a common understanding of the company goals
- [ ] Creating common culture
- [ ] Growing talent
- [ ] Building skills
- [ ] Increasing awareness
- [ ] Ensuring compliance
- [ ] Connecting people to experts
- [ ] Other:

PART II: AUDIENCE

5. **Which audience do you expect to be supported by your Digital Learning strategy?**
Mark only one oval per row.

	Yes	No
All country employees		
Senior Management Level		
Middle Management Level		
First Management Level / Supervisors		
Non-managerial Level / Specialists		
High Potential Group		
Shopfloor Employees		
Third parties / External Partners		
University graduates		
Customers		

PART III: LOCAL EXPECTATIONS

A - Key expectations

6. **Based on your context, learning audience selected, LH strategy deployed and current business priorities, what are the three to five major needs you would like to see addressed by our Digital Learning strategy? Please explain these needs.**

B - Learning experience expectations

7. **Which kind of Digital Learning content would be most relevant and engaging for your selected audience(s)?**
Select only most impactful options in your opinion
Check all that apply.

- Expert's and manager's analysis (videos, articles, books)
- Key processes about my job (PDF, PTT, tutorials, etc)
- News articles from external media (Youtube, online press)
- Virtual classes led by an instructor
- Game approach (serious game, challenge, 3D immersive learning, etc.)
- Collaboration space to talk to the learning cohort
- Collaboration space to talk to a coach, to a mentor, to a trainer
- Online learning program from external recognized institutions (MOOC, etc.)
- Podcasts
- Option 10
- Other:

PART III: LOCAL EXPECTATIONS

C - User Preferences and Expectations

8. **Which best in class digital learning practices do you want to see in the Digital Learning offer?**

9. **Thinking of the best way to engage learners while using technology, rank the importance of different devices using the scale**
Mark only one oval.

	1	2	3	4	5	
Not at all important						Most important

10. **TABLET**
Mark only one oval.

	1	2	3	4	5	
Not at all important						Most important

PART III: LOCAL EXPECTATIONS

D - Challenges & Barriers

Our aim is to design and execute a Digital Learning strategy with top learning and IT technology.

15. **What do we need to do more of in digital learning?**

16. **What are the main barriers inhibiting your audience's ability to learn using new practices and digital technology?**

17. **Are you aware of any technical constraints or limiting regulations on learning (such as data protection)?**

18. **What are your two major pain points today?**

PART IV: KPIs & SUCCESS MEASURES

How would you measure digital learning effectiveness?

19. **The individual employee metrics**

20. **The overall performance metrics**

21. **What factors will contribute most to the success of our Digital Learning strategy?**
Check all that apply.

- [ ] Accessibility
- [ ] Anytime
- [ ] Anywhere
- [ ] Relevant content
- [ ] Inspirational content
- [ ] Ability to connect with peers
- [ ] Ability to co-design and share content
- [ ] Other:

Thank you very much for your time and effort in responding to this questionnaire.

APPENDIX B – LANGUANGE EDITOR

SURY BISETTY

EDITORIAL SERVICES

To whom it may concern,

I have edited the dissertation entitled: *How e-Learning from a multinational corporate is accepted and used in Africa*, by Ashley Latchu, submitted in accordance with the requirements for the degree of Master's in Computer Science at the University of South Africa.

Sury Bisetty
21 November 2019
Language and Technical Editor

MEMBER OF:
Professional Editor's Guild (BIS002)
South African Council of Educators (222277)
South African Monitoring and Evaluation Association (761237008553)
CERTIFICATION:
Pegsa: Critical Reading
Editing Mastery: How to Edit to Perfection
Complete writing, editing master class.

CONTACT DETAILS

Email: surybisetty11@gmail.com
Cell no: 0844932878
Tel.: 031 7622 766

Disclaimer: I provided only language and technical editing as per discussion with the client. The content of the research proposal was not amended in any way. The edited work described here may not be identical to that submitted. The author, at his/her sole discretion, has the prerogative to accept, delete, or change amendments/suggestions made by the editor before submission.

SURY BISETTY

EDITORIAL SERVICES

To whom it may concern,

I have edited corrections/amendments requested by the examiners on the dissertation entitled: How e-Learning from a multinational corporate is accepted and used in Africa, by Ashley Latchu, submitted in accordance with the requirements for the degree of Master's in Computer Science at the University of South Africa.

Sury Bisetty
13 September 2020

Language and Technical Editor
BA. UHDE

MEMBER OF:
Professional Editor's Guild (BIS002)
South African Council of Educators (222277)
South African Monitoring and Evaluation Association (761237008553)

CERTIFICATION:
Pegsa: Critical Reading
Editing Mastery: How to Edit to Perfection
Complete writing, editing master class.

CONTACT DETAILS

Email: surybisetty11@gmail.com
Cell no: 0844932878
Tel.: 031 7622 766

Disclaimer: I provided only language and technical editing as per discussion with the client. The content of the thesis was not amended in any way. The edited work described here may not be identical to that submitted. The author, at his/her sole discretion, has the prerogative to accept, delete, or change amendments/suggestions made by the editor before submission.

APPENDIX C – ETHICAL CLEARANCE

UNISA university of south africa

UNISA COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY'S (CSET) RESEARCH AND ETHICS COMMITTEE

22 November 2017

Ref #: 104/AL/2017/CSET_SOC
Name: Ashley Latchu
Student #: 43406424

RECEIVED
2017 -11- 24
OFFICE OF THE EXECUTIVE DEAN
College of Science, Engineering and Technology

Dear Ashley Latchu

Decision: Ethics Approval for 3 years (Secondary Data)

Researcher: Ashley Latchu
43406424@myunisa.ac.za, +27 78 458 5898

Supervisor(s): Dr. S. Buckley, sherbuck@gmail.com, +27 82 574 7457

Proposal: How e-Learning from a multinational corporate is accepted and used in Africa.

Qualification: Msc in Computing

Thank you for the application for research ethics clearance by the Unisa College of Science, Engineering and Technology's (CSET) Research and Ethics Committee for the above mentioned research. Ethics approval is granted for a period of three years from 22 November 2017 to 22 November 2020.

1. The researcher will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Unisa College of Science, Engineering and Technology's (CSET) Research and Ethics Committee. An amended application could

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Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
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be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.

3. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.
4. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.

Note:

The reference number 104/AL/2017/CSET_SOC should be clearly indicated on all forms of communication with the intended research participants, as well as with the Unisa College of Science, Engineering and Technology's (CSET) Research and Ethics Committee

Yours sincerely

Adè da Veiga

Dr. A Da Veiga

Chair: Ethics Sub-Committee School of Computing, CSET

Prof I. Osunmakinde

Director: School of Computing, CSET

Prof B. Mamba

Executive Dean: College of Science, Engineering and Technology (CSET)

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APPENDIX D – LETTER FOR PERMISSION

To,

Sylvie Grosdemange,

Organization Development & Learning and Development,
Learning & Development - Digital Learning Manager

Lafarge S.A.

61 rue des Belles Feuilles

BP 40 - 75782 Paris cedex 16, France

23 May 2016

Subject: Permission to use Lafarge as a Research Subject

Dear Sylvie Grosdemange,

As head of e-Learning for Lafarge global can I am seeking permission to continue my research using Lafarge as a case study.

We have had numerous engagements via emails, and discussions with yourself and your team on surveys and secondary data to assist in my research and how Lafarge e-Learning is adopted and used in Africa.

This information will be vital to understand how Eurocentric e-Learning systems are adopted and used in the African continent where Lafarge has many locations.

Thanking you,

Ashley Iatchu

On Thu, Jun 23, 2016 at 6:29 PM, Sylvie GROSDEMANGE <sylvie.grosdemange@lafargeholcim.com> wrote:
Ashley

I'm really sorry not to answer before but I'm not sure about your expectations.

What do you need?

My approval to continue your research? If this is the case, yes I approve.

Best regards

Sylvie Grosdemange
Organization Development & Learning and Development,
Learning & Development - Digital Learning Manager

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