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The Role of Training to Trainers and Teachers in the Era of Digital Education

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Abstract
E-learning has grown through several stages and transformations over the last twenty or thirty years. It is an umbrella term representing a continuum of educational and traing technology integration. It offers with the supplemental the use of technology in the classroom, through hybrid uses comprising either a blended learning or/and fully online instruction, which can be either to fully online synchronous or/and asynchronous distance learning environments, that can be delivered to remote learners or/and trainer. Certainly, it is not possible to give an all-encompassing definition of e-learning in just a single paragraph. E-learning is a mode of teaching of complex learning content, other tools offer new possibilities for communication between learners and teachers. Which of these tools should be combined for teaching depends on the learning content, the budge, the technological skills of teachers and learners, the bandwidth of the internet connection, and the technological equipment. It considers that e-learning core products of content, technology, and services. The emphasis is upon the importance of integrated learning paths that very according to student, the subject material, the level of competence, and corporate or student preferences. So, successful implementation of e-learning requires the user needs analysis to ascertain the needs of learners that came before any instructional design phase. The purpose of this study is to collect enough quantitative information from two groups to providing a comparison based on the role of training to trainers and teachers, which is aimed to explore the degree of professional development in designing, delivering, and supporting e-learning, and to provide some understanding of the current state and future direction into the state of certain aspects of e-learning. This study employed a questionnaire as a tool to collect data from both groups and after that analyzed the data to provide a comparison between the relevant aspects of e-learning, then provide a discussion of the related results. Finally, the conclusion of this study is provided with some future work that might be of interest to others in this field.
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1. Introduction

This study sets out to provide a comparison on some aspects of the role of training to trainers and teachers between two groups. The comparison is conducted by using a questionnaire that has been used as a tool to collect related data and to fill in a clear information gap about how it is developing and people's opinions, to provide some understanding of the current state and some of future directions of the related aspects. With the rapidly increasing popularity of the Internet in recent years, there is an increasing demand for methodologies and technologies, especially for e-learning. E-learning is interactive learning in which the learning content is available on-line and provides automatic feedback to the student's learning activities . Therefore, there is an increasing demand for methodologies and technologies, especially for e-learning. e-learning is defined as interactive learning in which the learning content is available on-line and provides automatic feedback to the student's learning activities.

While recognizing that the world at large will continue to use terminology in different and often ambiguous ways, the term of e-learning is used here to refer to on-line interactions of various kinds including on-line that takes place between learners and instructors (Lahwal ., *et.al* 2009, 2016, 2020),(Amaimin ., *et. al* (2021). E-learning is learning supported by Information and Communication Technologies (ICT). It is not limited to digital

literacy. It may include multiple formats and hybrid methodologies such as the use of software, Internet, online learning or any other electronic or interactive media Lahwal ., *et.al* 2009, 2016, 2021). Although it is the potential this has for improving both the quantity and quality of learning. Improving both the quantity and quality of interaction among teachers and students and between students and accelerating the adoption of new and more information and programs (Lahwal *., et.al* 2009, 2016, 2020). For instead the motivation to start learning is as important with e-learning as with other media. The proper will compare different features of e-learning in the Eastern side and make recommendations for the introduction of e-learning in the Eastern side. In order to compare between the and the Eastern side on several directions in the field of e-learning, a questionnaire was developed based on indicators found in Cede fop online surveys and work done in cooperation with (Lahwal *., et.al* 2009, 2016, 2021).The indicators (questionnaire items) were modified to directly tap into each of the sides of the learning field that takes place between learners and instructors (Lahwal *., et.al* 2009, 2016, 2021).

e-learning is learning supported by Information and Communication Technologies (ICT). It is not limited to digital literacy. It may include multiple formats and hybrid methodologies such as the use of software, Internet, CD-ROM, online learning or any other electronic or interactive media. Although it is the potential this has for improving both the quantity and quality of learning. Improving both the quantity and quality of interaction among teacher and student and between students, and accelerating the adoption of new and more information and programs (Lahwal ., *et.al* 2009, 2016, 2021).This paper is structured as follows. A literature review is presented in Section 2, and containing the reasons for choosing the roles of training to trainers and teachers with its limitations is presented in Section 3. Afterwards, a research methodology is explained in Section 4. Besides a significant section, which provides the comparative study centered on the role of training to trainers and teachers between two groups is presented in Section 5. Then again, a brief discussion on the findings is described in Section 6. Finally, the conclusion and future work is provided in Section 7 and 8 respectively.

2. Literature Review

This study provides a review from the papers that concern the e-learning technologies in the information and communication technology environment to be used for comparison between western and Arabic countries. This review only focuses on the more recently published papers. This is to get the newest knowledge on how the engineering or information and communication technology applied the e-learning technology into their environment and tries to find out the advantages that they obtained from the comparison of this technology. Lewis and Whitlock believe that e-learning is no longer new. It fills a growing role in most education and organizations. It makes the lives of individuals easier, helping people learn whilst at work or in the home, flexibly and at times that suit them. It also meets corporate objectives for cost effective training and for introducing new procedures quickly. As technology and software improve, e-learning is becoming faster, more reliable, more portable and easier to use (Lahwal *., et al* 2009; 2016; 2020; 2022) , (Amainim., *et al* 2021), (Lewis and Whitlock 2003).

e-learning in higher education is a developing area for study in modern institutions. For the purposes of the research, Massy defines e-learning as ‘learning supported by information and communication technologies (ICT)’. It is not limited to digital literacy. and may encompass multiple formats and hybrid methodologies such as the use of software, online learning or any other electronic or interactive media (Massy., *et al* 2002). Joachim, Werner and Dirk explain that traditional means of education are no longer enough to meet the needs of lifelong learning. Even where available, the quality of education does not meet the high standards of international business and also point to many countries' public and private funding for educational services are declining while costs rise faster than income levels (Hasebrook., *et al* 2003:29). Therefore, electronic education became a major source for ongoing education in the international knowledge-based economy (Romer 1993; OECD 2001). It changed public opinion about how much education is necessary, and when and where learning and training can take place (Lahwal*., et al* 2009;2020).

For instance, once education is a purely local affair, due to not enough enrolment highly specialized courses are not viable sometimes. There are also many people who would like to take courses but who do not have the time

or cannot commit to attending a regular class (Hasebrook., *et al* 2003). So, e-learning aims to encourage collaboration between education and training institutions. Motivation to start learning, and to continue it, is as important with e-learning as with other media. The project will compare different directions of e-learning in the Western and the Arabic side and make recommendations for the introduction of e-Learning in Libya. In order to compare between the UK and the Arab side in several directions in the field of e-learning, a questionnaire was developed based on indicators found in Cedefop online surveys and work done in cooperation with Massy (2002). The indicators (questionnaire items) were modified to directly tap into each of the facets of the field (Lahwal ., *et al* 2009; 2018; 2016; 2020; 2022) , (Amainim., *et al* 2021).

3. The Role of Training to Trainers and Teachers

This comparison aims to choose suitable principles of trainer's skills of e-learning for consideration in this study. The comparison focuses on two kinds of principles. The first is the level of e-learning skills, technical specification, pedagogical specification, working in a cooperative virtual environment, and how important do trainers rate each of these skills. The second is acquisition of these skills, including Formal education and training programmes, learned through participation in e-learning activities with others who have formal training in e-learning, learned through trial and error without formal expertise being, or have not acquired any of these skills to date. Nevertheless, Clarke suggests that e-learning will become central to the knowledge economy with the development of e-learning products and services. However, he points it is necessary to remove fears, two connected believe imagination that are both misleading and causing harm such as :

1) The imagination that e-learning represents a more cost effective mode of training and education, and also he points out that e-learning involves at least as much, if not more financial investment, than traditional modes of education and training.

2) The imagination that e-learning involves the obsolescence of universities and training colleges. He also points out that; e-learning does not represent a cheap alternative, which makes traditional education and training investment redundant.

Clarke believes that, to providing the most fulfilling forms of educational and training experience, the existence of universities and colleges will remain necessary ,but also for developing the technology and content of the e-learning industry (Clarke 2001).On the other studies, Alexander and McKenzie, for instance, have reported that e-learning would fail for the following reasons (Alexander at el1998):

- Overly achievement in terms of wonted outcomes for the budget and time available; and failed to obtain copyright clearance.
- The usefulness of particular information technologies for their own sake, without sufficient regard for appropriate learning design.
- No change in the assessment of learning to suit the changed learning outcomes; commenced software development without adequate planning.
- Failed to prepare students for participation in learning experiences such as working in groups. The new emergence of widespread application of computer-based education and training, as well as distance education in many parts of the world is an indication that academia and industry have welcomed technology as a method of making education and training more effective, flexible, efficient and immediate (Abouchedid 2004; Amainim., *et al* 2021) . The demand for flexible access to learning and the need to overcome skills gaps with development technologies and processes has stimulated the increasing application of computer and communications systems to the delivery of education and training, In the meantime a technology called streaming is alleviating the problem for transmitting video, audio and animation sequences, where an application or file is broken down into small pieces and delivers the of the application while at the same time sending the other compressed pieces. Hall and Steed believe that security is an important aspect of e-learning technology, and a major area of worry for scents. If company training involves sensitive company information, or if payment is necessary over the Internet, then a greater amount of security should be used. Solutions to this are being improved by the telecommunications industries (Hall 2000; Steed 1999), (Lahwal ., *et al* 2009; 2018; 2016; 2020; 2022;Amainim., *et al* 2021).

As a conclusion of the extensive literature reviews in this section, it can be understanding that the e-learning technologies has credibility to give educational and training institutions opportunities to improve their pedagogical standards and provides high quality educational opportunities for all those wishing to receive education, breaking all the traditional barriers that usually stood on their way. However, employing the web of e-learning into a higher education environment also needs comprehensive analysis to make sure the user requirements are complete and the system running as intended.

4. Research Methodology

This section describes the research methodology that was adapted in this study, which can be understood as a set of procedures or/and guideline in problem solving and to make sure that the aim of the study is achieved. The main aim of this study is to collect enough quantitative information on the role of training to trainers and teachers to fill a clear information gap between two groups, and to find out about how it is developing and trainer's and teacher's opinions of it, in order to provide some understanding of the current state and future directions of certain aspects of e-learning. The following activities have been carried out for this study: design of research methods, development of research instruments, collect of research data, analysis of data and finding, discussion of results, and finally a conclusions and recommendations for future work such as:

Design of research methods: For ethical reasons, at the early planning stage it was decided that a permission would always be obtained in writing from all participants whose details and responses were recorded, to use the data gathered for reporting in this study. For this study we used a mixture of different methods, such as an e-mail, telephone calls or visits were decided once it was needed to obtain the required data and clarify broad aims of the main study.

Development of research instruments: The key source shaped the content of the was adapted from reviewing the user's views on e-learning carried out by European Centre for the Development of Vocational Training (Cedefop 2002) .This study have been very carefully structured, topics have been selected on the starting point of issues identified as of particular interest to target this study , and the questions were prepared in consultation with experts in vocational education and training.

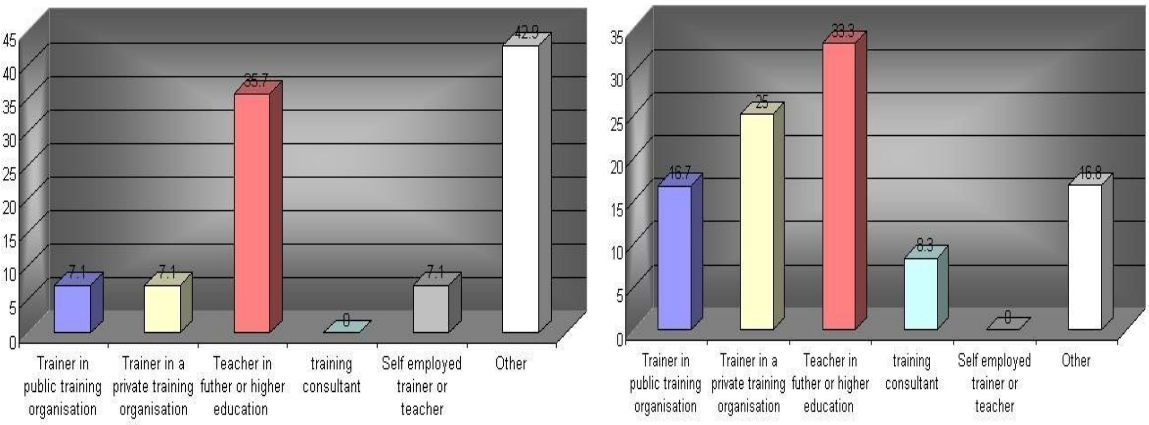
Data Collection: Planning and arrangement of visits and contacts between two groups with the intention to gather data of interest to specialists and researchers in vocational education and training. Three approaches were used to fill in the questionnaires, which depend on the participations and where they are. *The first approach* was by giving out a questionnaire. *The second approach* was by sending the questionnaires by email to some higher education trainers and teachers and their ICT class tutor who are interested to participate (filled in and sent back again). *The third approach* was conducted by phone calls to clarify some unclear questions. The distribution approach of printed questionnaires was with the majority at UK education institutions (filled by pen-in printed copy of questionnaire to avoid intimidating the group members), In this case, Arabic group is representing group A, and UK is representing group B).

Data Analysis and finding: This study aims to compare between two groups on some aspects about the role of training to trainers and teachers in the e-learning field. The questionnaires have received over 25 responses out of 50 questionnaires have been sent and together build up a picture of development in some key areas of the role of *training to trainers and teachers*.

Discussion of results: discuss the findings obtained from the data analysis for each group, and then compare between them to identifying any gaps between them. Then a conclusion will shed light on some difference's aspects of information between the two groups. Finally, the results of this study will be permitted to formulate a number of recommendations and future work for the main study.

5. Comparative Study Centred on the Role of Training to Trainers and Teachers

This section highlights some of the main findings and aims to present a snapshot of how training and vocational teachers are acquiring new expertise in e-learning, what training and professional development they are undertaking, whether it is taking place in work time or their own time, and if it's through formal or informal learning and finally who is bearing the cost of the investment. In terms of who did respond? more than half (53.8 per cent) of respondents from group A which is representing a sample of western side and a further (46.1per cent) for representing group B which is representing Almost of them (26.9 per cent) from



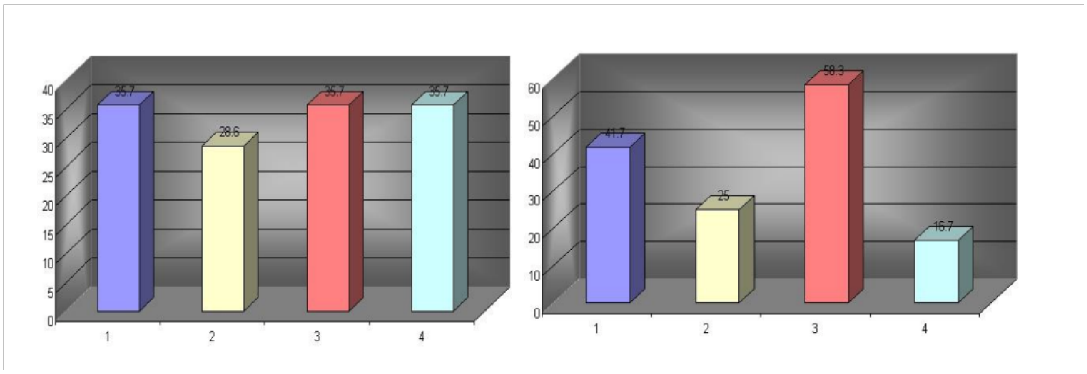
(Group A) **(Group B)**

Figure 1: Type of the main employment (Group A and B)

Figure 1 shows the main employment as respondents from Group A, over (42.8 percent) from public training organizations, vocational schools, or higher and further education. In the private training organization, only (7.1per cent) are employed in private firms, and the same percentage represent independent teachers and trainers. Also, of the (42.8 percent) that list themselves as other, most are also directly involved in training. While Figure Group B, shows the main employment as a sample of respondents that came from the Arab side, almost half (50 per cent) came from public training organizations, vocational schools, or higher and further education. In the private training organization, nearly (25 percent) are employed in private firms and only (8.2 percent) who are training consultants., and the (16.7 percent) that list themselves as other, some of them are computer programming or researcher.

5.1.Professional development in relation to e-learning

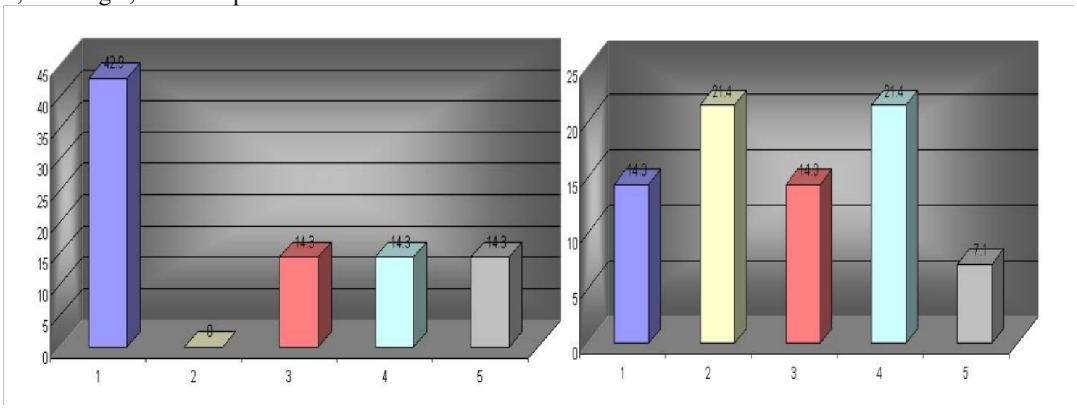
Figure 2 Group A shows most respondents from group A use informal means of professional development to improve their e-learning expertise when asked to what training and/or professional development relating to e-learning have they undertaken in the last 12-24 months. Some (35.7 per cent) have undertaken informal self-development through a range of media. Informal learning tends to be highest among respondents from teachers in higher education. Some (28.6per cent) have undertaken formal web-based training programmes; this is much lower among respondents from public training organisations nearly (35.7 per cent) have had formal classroom-based training; this is lowest among consultants and self-employed teacher, also, some (35.7 per cent) said they had not undertaken any professional development in relation to e-learning in the last 12 to 24 months and gave a same reason. The most common reasons for not undertaking any professional development were lack of time or funds.



(Group A) **(Group B)**

Figure 2: Types of training and /or professional developments relating to e-learning (Group A and B)

While Figure 2 Group B indicates that many respondents use informal means of professional development to improve their e-learning expertise. Some (58.3per cent) have undertaken informal self-development through a range of media. Informal learning tends to be highest among respondents from teachers in higher education. Some (41.7 percent) have had formal classroom-based training; this is lowest among consultants and self-employed teachers. Only (25 percent) have undertaken formal web-based training programmes, this is much lower among respondents from private training organisations. Some (16.7 percent) said they had not undertaken any professional development in relation to e-learning in the last 12 to 24 months and gave the same reason. All of them represented other categories that had no professional development in relation to e-learning. The most common reasons for not undertaking any professional development were it too new, did not know enough about it, no budget, or not required.



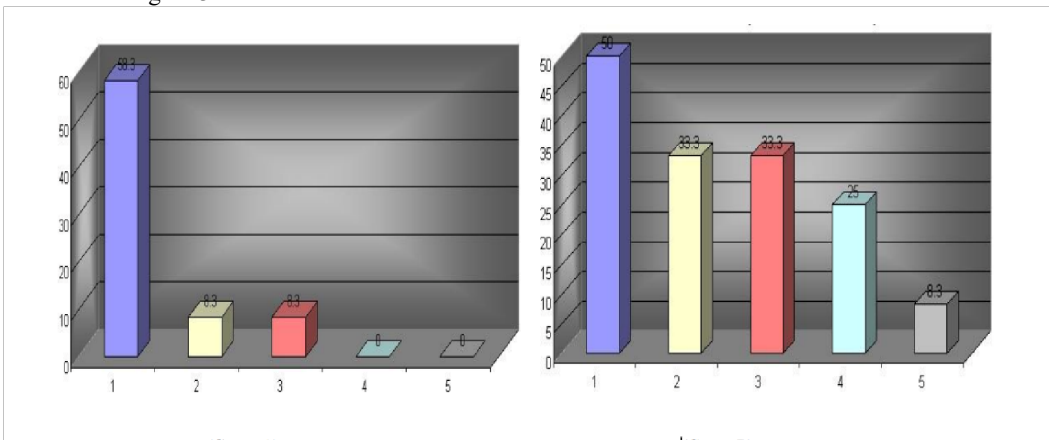
(Group A) ***(Group B)***

Figure 3: Subject domain was the focus of your e-learning professional development (Group A and B)

Trainers and vocational teachers are undertaking less information and communication technology skills development and moving into improving expertise in pedagogical and designing e-learning content. Figure 3A and 3B show over (42.8 percent) of respondents from the UK had training in information and communication technology skills in 2014 but this had dropped significantly in 2015 to just over (14.3 per cent) indicating a move away to other areas of competence. This finding is common across almost all types of respondents. This move away from information and communication technology skills is supported by the fact that exploration of new pedagogical approaches in e-learning increased from (0 per cent) in 2014 to (21.4 percent) in 2015 and

skills relating to managing e-learning projects including integration of learning management system into respondent's workplace stay the same (14.6 per cent).

Some interesting differences appear here in terms of employment characteristics and learning preferences. Pedagogical interests are much lower among private training firms and self-employed trainers or teachers. On the other hand, training in developing skills relating to management is much lower among public training providers, training consultants and self employed teachers and trainers. Overall, however, the results suggest a maturing of expertise as trainers and vocational teachers recognise that being able to use the technology is only a first step towards integrating technology in learning. Interestingly, the proportion of those spending time on learning how to design e-learning content has increased from (14.3 per cent) in 2014 to (21.4 percent) in 2015 as shown in Figure 3.



(Group A) ***(Group B)***

Figure 4: Subject domain will be the focus of your e-learning professional development (Group A and B)

Similarly, the result of another sample found that trainers and vocational teachers are undertaking slightly less information and communication technology skills development and moving into more improving expertise in pedagogical skills relating to management and designing e-Learning content as emerge here in Arab sample (see Figure 4 A and B). Additionally, over (58.3 per cent) of respondents from the Arab side had training in information and communication technology skills in 2014 (see Figure 3A and B) but this had dropped slightly to nearly (50 per cent) indicating a move away to other areas of competence. This move away from information and communication technology skills is supported by the fact that exploration of new pedagogical approaches in e-learning increased from (8.3 percent) to (33.3 percent) and this is similar with skills relating to managing e-learning projects including integration of learning management system into respondent's workplace (see Figure 3A).

In terms of employment characteristics and learning preferences, some interesting differences emerge here. Pedagogical interests are much lower among training consultants and teachers in higher education, this is similar across respondents from the same type of organization with training in developing skills relating to management. Overall, however, the results discuss a maturing of expertise as trainers and vocational teachers recognise that being able to use the technology is only a first step in the direction of joining technology in learning. Interestingly, the proportion of those spending time on learning how to design e-learning content has increased significantly from (0 per cent) in 2014 to (25 percent) in 2015 as shown in (Figure 4A).

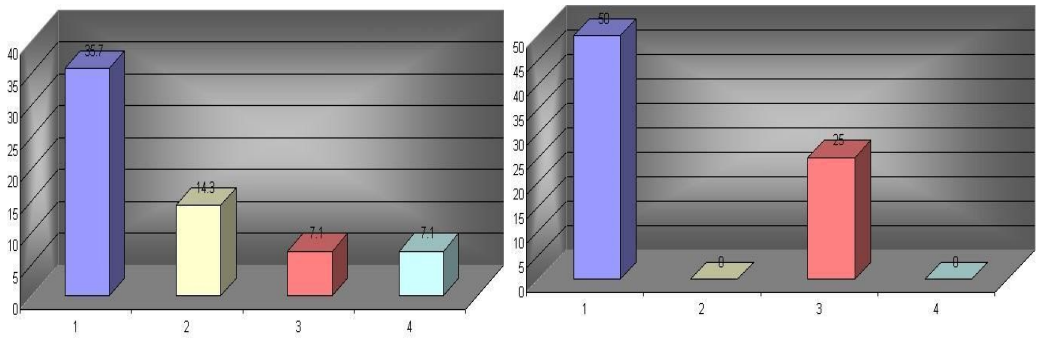
When asked to give rate the quality of professional development programmes provided to teachers and trainers to improve their capacity to provide and support e-learning. Almost (85.7 percent) did not answer this question and only (14 .2 per cent) give either a good or poor rating based on their experiences. Ratings concerning the quality of training and professional development programmes are generally quite low as respondents representing UK sample. The overall low rating may be attributable to the fact that teacher and training programmes in this domain are very immature and often somewhat experimental. When it comes to Arab side, the ratings about the quality of training and professional development programmes are generally slightly low. Some (8.3 percent) rate them poor, (33.3 percent) only fair and only (16.6 per cent) give a very good and (8.3 percent) give an excellent rating based on their experiences. Highest of not being pleased is among public

organization and consultants. The overall low ratings may be caused by the fact that teacher and trainer training programmes in this area of knowledge are not fully developed and often somewhat experimental.

5.2. Investment in their professional development

Without considering the amount of professional development time spent on e-learning, slightly more of it was formal than informal in 2014 as respondents from the UK. Just over (7.1 per cent) in both 2014 and 2015 spend between (1-10%) of their work time in professional development relating to e-learning. Some (21.4 percent) spent (10-25%) of work time on professional development relating to e-learning in 2014, with (35.7 per cent) doing so in 2015. Some (21.4 percent) spent (10 - 25%) of their professional development time outside work hours on relating to e-learning in 2014, increasing to (28.6 per cent) in 2015.while zero percentages of respondents in both 2014 and 2015 spent more than (25 percent) of their informal professional development outside work time on e-learning. In fact, respondents overall spend a higher percentage of their professional development in work time on e-learning than they do outside work time, these results as respondents from the UK.

While another side, just over (7.1 per cent) spend between (1-10%) of their work time in professional development relating to e-learning in 2015, it has a slightly increased from zero per cent in 2014.Nearly (33.3 percent) in both 2014 and 2015 spent (10-25%) of work time on professional development relating to e-learning. Some (50 per cent) spent (10-25%) of their professional development time outside work hours on relating to e-learning in 2014, dropping to (41.7 percent) in 2015.over (41.7 percent) in 2014 spent more than (25 percent) of their informal professional development time on e-learning, dropping to (33.3 percent) in and 2015.In fact, respondents overall spend a slightly higher percentage of their professional development time outside work on e-learning than they do in work time, these results as a respondents from Arab side.



(Group A) (Group B)

Figure 5: Who has paid for your professional development in e-learning in 2014 and 2015?

As might be expected, employers cover the costs of formal and informal professional development in work time much more than they do outside work time. It would be interesting to know the degree to which employers are aware of their contribution to informal professional development. Figure 5 shows over (35 per cent) say their employers pay for 100 % of the costs for formal programmes in work time with some (7.1 per cent) more sharing costs for these programmes with their employers. A higher percentage of respondents from higher and further education say they have 100% of their costs covered by their employer. Only (28.4 percent) of those taking formal programmes outside work time have these programmes funded either by employers or share costs In the case of informal learning, (7.1 per cent) of respondents pay for the full costs themselves although they are doing so outside work time with a further (14.3 per cent) sharing the costs with employers in work time. Informal programmes and activities outside work time are largely funded by learners themselves (21.4per cent), although about (7.1per cent) have their employers pay some or all of the costs associated with this professional development.

While on the other side, the same employers cover the costs of formal and informal professional development in work time much more than they do outside work time as well as the UK. Figure 5 Group B shows over half say their employers pay for 100 % of the costs for formal programmes in work time with almost (25 percent) more sharing costs for these programmes with their employers. Many respondents also from higher and further education say they have 100% of their costs covered by their employer. Almost (33.3 percent) of those taking

formal programmes outside work time have these programmes funded by employers, in addition over (16.7 percent) share costs. In the case of informal learning, (16.7 percent) of respondents pay for the full costs themselves or share the costs with employers in work time, although they are doing so within work time. Informal programmes and activities outside work time are largely funded by learners themselves (16.7 percent), although about (33.3 percent) have their employers pay some or all of the costs associated with this professional development.

5.3.Forthcoming

When we asked to give personal expectations for spending more or less time in the future acquiring skill in e-learning. Half respondents have answered, and the other half did not. In the survey, the individual judgments summed up to a natural attitude towards e-learning. More aspects that many see as a necessity because: There is expected the demand for online short courses and degrees to go up within the next few years, also it will become increasingly necessary for clear learning needs to be established. Also, getting training to develop themselves within their job role, which is an essential part in the mixture of present and future learning tools. As well, it should always be alert of what is going on as the technology improves so fast. Besides, some are interested in learning about innovative technology, they cannot do their work without learning. On The Other hand, seeing it as not necessary, could be constructive in providing formal feedback to learners or they have no time to spend any more in this field. Greatest respondents from group B also expect spending more rather than less time on e-learning professional development in the future. The majority see it as a necessity because:

- e-learning materials will increase, and it may be more complicated, and it may take more time to acquire skills in either designing, developing, implementing, supporting or assessing e-learning .
- e-learning will be used worldwide , Because much of it really does need a lot of new educational roles. For example, teachers need to direct students on how to use the technology to make best use of it, whilst students need to take care in using it, because things like online have a lot of junk.

The respondents gave the evaluation of the role of training to trainers and teachers on aspects of e-learning, pointed out the abilities of those who use e-learning to apply acquired knowledge and skills in practice, as well as the missing skills of those who use e-learning as well. This section summarizes the analyses of the questionnaire as the main part of the comparison on the role of training to trainers and teachers' aspects of e-learning between two groups.

6. Discussion

This section presents the results from this study and a related discussion between two groups. First, based on the analyses of the respondents and their findings on the previous section results of comparison between the two groups will be presented. Second, based on the results of comparison, it describes the current situation on each side and investigates who it should be in the future to reach the highest position in almost all individual parts of e-learning. The results of the analyses part of the study are presented below using relevant quotations from this study and evidence reasons to support the findings of study. The result of the analyses found that most of respondent their main employment from the UK either teacher in further or higher education or as other also directly involved in training as shown in Figure 1 Group A. While the majority of another side of respondents their main employment is teacher in further or higher education shown in Figure 1 Group B.

Professional development in relating to e-learning

The results relating to professional development relation to e-learning analyses found a quite different trend that almost all professionals have undertaken for development in each sample. One of the most interesting data analyses have appeared from Figure 3.55 and 3.56, that almost percentages of respondents from the UK side are the same across all types of training, only slightly low with formal web-based courses. When it comes to another side it has different percentages of respondents. The self-development through a range of media came in the highest percentage from the Arab side. Second one appeared with a formal classroom-based training course, but the lowest percentage appeared with a formal web-based course. The reasons could be that the WBT have much

content not directly targeted to the different departments of the company, too many reviews and indices, or a too limited learning time.

Therefore, a range of media remains hugely important in e-learning professional development and classroom-based training courses remain incredibly significant with very similar spending patterns to a range of media in both groups. Feature, most training trend was toward self-development and classroom-based courses which are more wide and opportunity to target directly to the different departments of the company on both sides. WBC learners stick to traditional learning methods and have to be guided and trained to pick up new ones, such as cooperative and selective learning methods (Hasebrook *et al*, 2003:120)

The focus of subject domain

In this context, the results of the data analyses relating to the main focus of subject domain found that developing professional skills through e-learning is well established but in the Arab side (see Figure 4 A and B) quite higher than the UK side (see Figure 3 A and B). From both UK and Arab sides trainers and vocational teachers are undertaking less information and communication technology skills development and moving into improving expertise in pedagogical and designing e-learning content, however, the Arab side appears extra moving with these skills to skills relating to managing e-learning including integration of learning management systems as well. One of the most interesting is that development in the Arab side has increased in almost all skills by the same percentage (25 percent), which indicates that professionals intended to improve their skills in parts relating to e-learning skills. While from the UK side, it has appeared quite different across all types of skills. ICT has dropped significantly in 2015 and moved away supported by the fact that exploration of new pedagogical and designing e-learning content, only (7.1 per cent) for each category, while skills relating to managing e-learning projects has not changed.

Overall, the results suggest a maturing of expertise as trainers and vocational teachers recognise that being able to use the technology is only a first step towards integrating technology in learning. This emphasizes how important it is to believe that the evaluation of learners in an e-learning system requires the same basic skills and should be judged by the same standard as other forms of evaluation.

Investment in their professional development

When asked to give their percentage, they spent on their own personal learning relating to e-learning. The results of the data analyses found that significantly different in both sides, which indicated that respondents overall spend a higher percentage of their professional development in work time on e-learning than they do outside work time as respondents from the UK side. While respondents from the Arab side indicated to spend a slightly higher percentage of their professional development outside work time on e-learning than they do in work time. On the Arab side the reason could be that they spent more time outside their work time to improve their skill, while another side likely to be especially expensive technological infrastructure cannot or will not be offered outside or they have enough time to learn in their work time.

Cover the costs of formal and informal professional development in e-learning

The results of the study relating to the question that has been asked to know how has covered the costs of formal and informal professional development found that employers cover the costs of formal and informal professional development in work time much more than they do outside work time in both groups (A and B). It would be interesting to know the degree to which employers are aware of their contribution to informal professional development. In this case, one of the most interesting is that it appears significantly different between tow samples. Employers paying 100 % of the cost for formal programs in work time has the highest percentage of respondents in group (B) than group (A). The costs that employers pay came in second higher in the group (B) higher than the group (A) as well. This is suggesting that most personal development programmes are relatively within work time and perhaps reflecting the need for more advanced and less available outside work.. There is an obvious need to improve the quality of formal and informal professional development programmes and resources.

This section summarises the discussion of results based on the data analyses and comparison of respondents on the highlighted aspects of e-learning between the two groups. In many cases the focus is that data from this study showed findings that traditional skills are essential to e-learning but are not enough. Successfully designing and managing an e-learning project requires new skills to handle the complexity of e-learning projects, to properly exploit the potential of new technology and to manage the special problems arising from the lack of face-to-face contact with learners. A key requirement for participation in e-learning teams is the ability to work effectively in a team whose members may have quite different skills backgrounds.Training of teachers and trainers by providing them with necessary skills to make effective use of the internet and multimedia technologies is certain to be very influential for the future of e-learning in the Arab side. Fortunately, teachers and trainers at large are optimistic and keen to acquire, develop and maintain these skills. Overall, the results suggest a full development of expertise as trainers and vocational teachers recognise that being able to use the technology is only a first step towards integrating technology in learning. This emphasizes how important it is to believe that the evaluation of learners in an e-learning system requires the same basic skills and should be judged by the same standard as other forms of evaluation.

It is also important and useful to identify the factors influencing e-learning to help owner/managers and learners themselves identify the various potential barriers whether a position is financial or technological. It is also important to help them better judge the quality of, and in this way select, content materials. The most significant factor influencing learners' experiences were the extent to which the computer-based learning material was perceived as being user friendly. Factors influencing trainers included the lack of trust, the difficulty determining the cost of e-learning and the physical lack of technology. Feature, most training trend was toward self-development and classroom-based courses which are wider and opportunity to target directly to the different departments of the company on both sides. While learners stick to traditional learning methods and have to be guided and trained to pick up new ones, such as cooperative and selective learning methods (Hasebrook *et al*, 2003:120). The reasons could be that the WBT has much content not directly targeted to the different departments of the company, too many reviews and indices, or a too limited learning time.

Therefore, a range of media remains hugely important in e-learning professional development and classroom-based training courses remain very significant with a very similar spending pattern to a range of media on both sides. The demand to improve the value of content with better pedagogical quality and evidence of improved performance impact, demonstrating real cost effectiveness, or could be the concern about the poor quality of current e-learning offers is widespread, due to these they calculate the cost by comparison with the cost of classroom training to make education more effective but not better, because technology is aimed to enhance the efficacy of processes (Hasebrook *et al.,* 2003), (Lahwal *et al*., 2009; 2016; 2022) , (Amainim *et al.,* 2021). This indicates many respondents felt they lacked the expertise and the models to calculate the costs and returns on e-learning investment. New skills are required by those involved in training and beginning to adopt e-learning, new return on investment models need to be developed and shared to increase effective decision making. A comprehensive cost analysis helps to identify and calculate alternative forms of training, forms the basis of prognoses and planning processes and is necessary to perform comparative analyses.

The most important skills are likely to be the ability to 'read' a pre-existing analysis and translate it into practical guidelines for the design of the project. Although specific skills required may differ from project to project. In particular, while user needs analysis may require specific technical skills, technical skills on their own are not enough. In successful projects awareness of user needs informs every aspect of project design and implementation (Battezzati *et al.,* 2014:79), (Lahwal ., *et al* 2009; 2018; 2020) , (Amainim., *et al* 2021). More important than anything else, consideration should be that the technology is still in its infancy and developing at an unprecedented pace. Features that are unusual today would have been impossible to accept some five years ago. In this context, it is not possible to predict accurately what technologies of the future may enable search to do but enhanced level of utilisation and experimentation will inevitably bring about a greater awareness and understanding in this field.

7. Conclusion

In many cases the focus is that data from this study showed findings that traditional skills are essential to elearning but are not enough. Successfully designing and managing an e-learning project requires new skills to handle the complexity of e-learning projects, to properly exploit the potential of new technology and to manage the special problems arising from the lack of face-to-face contact with learners. A key requirement for participation in e-learning teams is the ability to work effectively in a team whose members may have quite different skills backgrounds.Training of teachers and trainers by providing them with necessary skills to make effective use of the internet and multimedia technologies is certain to be very influential for the future of e-

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8. Recommendations and Future Work

The results of this study allow us to formulate several recommendations for a particular target group, such as trainers, universities, enterprises. It is possible to suggest that the extent to which e-learning is used in the Arab countries is lower than expected. This is probably in part due to the lack of national infrastructure, particularly in Libya. e-learning requires investment in infrastructure at a national and regional level, and the hardware requirements at an organisational level. Future research on attitudes toward e-learning should take into consideration not only assessment of views on e-learning, but also the psychological and social aspects relating to inter-group attitudes and relationships in organizations. This comparison surveyed is not a statistical analysis of development but aimed to collect enough quantitative information from two groups and make comparisons between them to provide some understanding into the state of certain issues of e-learning.

Therefore, to consider e-learning for the development of the Arab region, the management of education, curricula design and quality education is required for future work. Identify and build upon existing effective practices. Before deciding on a particular e-learning strategy, explore the full range of alternatives and particularly for beginner development teams, inform the involvement of an experienced e-learning project manager or programmer in the starting phase of the project. Determine and formalise any own e-learning strategy remembering in mind that there is no one best way in e-learning and do not choose a solution because it is more advanced than another. Make own decision in line both with the goals, needs and possibilities (strengths and weaknesses) of own organisation and environment threats and opportunities (commercial, financial

constraints). An e-learning project development is context dependent. Build strong back office sub- system: at beginning ensure high and adequate levels of central technical support and provider willing to give real-time technical support and advice for both ICT development team and learners Use a service provider willing to give real time technical support. The back office is also in change of contents and pedagogical organisation revisions all along the project life cycle, taking trainees comments, critics, suggestions, etc. into account. The financial change of this back office sub-system is often to give too little despite its importance. Also, in terms of future study that can focus in how to prepare for global e-learning, the overall finding and key trends in almost global e-learning.

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