

# Technology Based Training in the Era of Covid 19: An Empirical Study of Best Practice and Proposed Model

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**Abstract:** *Employee training increasing its priority in recent years. This trend is as simple that taken from survey during and before of covid-19 pandemic. From the focus of job-related training whereas pandemic crisis for employers. Present this pandemic condition in our working environment fluctuated due to COVID-19 disease wherever the workplace learning become hardest-hit for business activities. More priority first goes to employee safety even company aspirational transformation widely upgrades like to move rapidly. Such case could be handled via virtual learning programs but still novice employees embrace. This matter overcome exploring alternative digital learning strategies where managers can develop from critical issues during this time of social distancing. From these observations of training methods help to do more investment in human resources that can also enhancing and achieving effectiveness and efficiency. This sophisticated learning experience throughout the method of TBT in Kuwaiti public sectors, help to provide best human instructors in a classroom environment whether hardware and software have done their powerful, reliable, and user-friendly job. Still majority had implemented in both CBT-CAL and TBT whether minority had implemented via email, internet and web-based training. However, employee effectiveness of TBT, technology, and attitude towards of it help to obtaining and identifying the training needs of employees which required time and cost to produce. Various learning factors and survey analysis in this research define the actual result of training materials and suitable study method in Kuwaiti organisations.*

**Key Words:** *Technology based Training, Computer based training, Multimedia based training, Organisation development, Employee development.*

## 1. INTRODUCTION:

In recent years there has been expanding interest in the use of computers in the training field. The concept of computer-based Training (CBT) refers to the user of computers in the training field to improve the interaction between the learning system and the trainee. Rapidly growing this interest has become par to most people's careers. Researchers are stated that "The trend of training via the computer is attracting the interest of would-be visionaries- and Wall Street. Last year alone, 1997, companies spent some \$18 billion world-wide training workers in various information technologies. By 2001, that annual bill could reach \$27.9 billion" (Anon, 1998; Savitz,1998). In some case study reveal that information on learning technologies was an ongoing challenge. The most difficult information to find was information on how to implement new learning technologies and what other companies going execute of learning technologies. Information on leading vendors appeared to be the most accessible type of information. Training based training able to prove information in the field of training where it can influence of technology. Education system bound through organisation via its foster competitive edge, team building as well as many activities. Base on situation and planning training is necessary aspect in terms of your employees as it can be known by more utilization in various training sectors. It also saves time; money and many other things as involve within training materials. Today in the global economy every employee reaching harder and more expensive than ever before so each sectors required training with the minimum efforts from organisations site whether learning tools overcome any building blocks through advance learning tools.

## 2.LITERATURE REVIEW:

Computer based training (CBT) have the ability to gain the power that close the knowledge gaps and training facility. Well-designed comprehensive training program prevents some cost effectiveness, workers injuries and equipment breakdown. Without challenges the essential of training doesn't come for creating and maintaining resources. Effective any training program include both time and money with its facility that make it efficient to trainers and employees. Here employees able to access the training any time through their facility by learning management system.

Most of the CBT application are driven by the need to improve the efficiency or effectiveness of a particular training system. Some of them argues that "The initial costs of investing in computer based training (CBT) may seem high but they need to be put in perspective" (Kearsley, 1983, O'Reilly, 1992). Some application of technology-based

training (TBT) also argued that “CBT is just one of the many technologies which Ladbrokes is using to meet its staff’s varied training needs” (Little, 1992). Last few years, many organizations have decided to adopt CBT within their training programs for different reasons. Specially for attempting to use of CBT which make better to use of their existing technological equipment.

In this case, organisations use it to cope with new technology developments in the market. Sometime organisation uses it to benefit from its advantages such as better training output and saving in training time and cost. Another researcher argued that “As more organisations look for flexible, cost-effective ways to deliver training and education, the future of computer-based training looks bright” Henderickson (1997). The future of CBT holds nothing but good news for training managers and it can be consider the potential cost savings in technical support. CBT will also encourage users to play a more active role in their professional development, reinforcing one of the founding principles of CBT and well known of user-driven learning. Materials of training most convenient for trainee with its effective segments. However, CBT’s better than regular training videos that interactive for its activities.

The study showed that there are different factors preventing Kuwaiti organisations from using TBT as a training delivery method. These included: determining the effectiveness of TBT, employee fear of technology, employee attitude towards technology, obtaining senior management commitment to TBT, identifying the training needs of employees that take huge time and cost as required to produce it. Some finding also reveals the cause of why the status of training and the level of its resourcing in Kuwait have not always reflected the progress of desired changes which might the cause that organisation are still using on out-of-date methodology. This study of this research as focused on this part as required for development sections.

### **3. STUDY MATERIALS AND METHODOLOGY:**

The study of this paper is part of a large research project that aimed to identifying best practice of training and its impact on employees as well as organisations effectiveness. This part being discussed in this flow that had main objective of identifying exploring the technology-based training used by Kuwaiti government organisations. Study materials as to achieve the objective in this study identify that what was present by the literature and published case studies as reward and appraisal best practice and training (Kearsley, 1983; O’Reilly, 1992; Little, 1992; Henderickson, 1997; Candice and Sandra, 1998; Unwin and McAleese, 1988; Patnaik, 1994; Dean and Whitlock, 1983; Barker and Yeates, 1985; James, 1987; Marshall, 1988; Criswell, 1989; Linial, 1998; Buren and Bassi, 1999). These are also reproduced in a generic format and structured in questionnaires to assess for the applicability with the viewpoint of experienced practitioners toward them. Mostly are identical as experienced practitioners.

- **Using Technology as Training Delivery Methods.**

TBT as a training delivery method using with organisations where response show the majority of government using this technology. Indeed, it’s the method where user can use computer-based tools to enhance the process of training that typically involving trainees actively rather to passively. In this case, trainees can skim through the list of topics withing the course module where to find expected answer as they need quickly without wading through many pages. Beside this training, Instructor-Led Training (ILT) between instructor and learners whether groups or individual may be knowledgeable and experienced in the learning materials. Such learning materials could be ability to delivering material to learners and facilitation skills. The only different between these two training have content relation, consistency, interactivity, learning experience and effectiveness that make learner expert more advance in TBT method.

For this study, the questionnaire was designed for piloted to assess for time to required to complete the whole questionnaire, simplicity, clear language, clarity of instructions, comprehensiveness and item sequence. The pilot sample includes Nat West Bank, British Airways, IBM, Elida Faberge, ICL and University of Bradford. The purpose of the study only carries the criteria for sample selection that was the size of the organisations and their financial statutes. The sources used to select the sample were Ministry of Planning and case studies analysis in the literature. The selected populations for this research are training department managers and HRD managers in all government. For the Government sector, there are currently 48 Authorities. In order to explore the kind of technology that based on training which used by Kuwaiti organisations a sample of 48 organisations was selected from the Kuwaiti organisations populations.

### **4. ANALYSIS AND DISCUSSION:**

The survey focused on targeting government organisations in Kuwait to see how many subscribed to the idea proposed thus providing further proof whether these ideas were the right approach to a successful human resource development in the future. Survey of the questions was designed and piloted to assess for time required to complete the questionnaire, simplicity, clear language, clarity of instructions, comprehensive and item sequence.

**5. FINDINGS STUDY AS RESULT :**

Initially, the study participants were presented with several statement to assess the perceived importance of TBT in Kuwaiti organisations. Participants were requested to show how strongly they agreed with these statements on a 5-point Likert scale.

- Technology used as Training Delivery Methods**

In order to investigate whether Kuwaiti organisations use TBT as a training delivery method, the respondent were asked if they have considered using TBT within their organisations. The response shows that the majority of government organisations has been using technology as a training delivery method, while only 7 organisations do not use it.

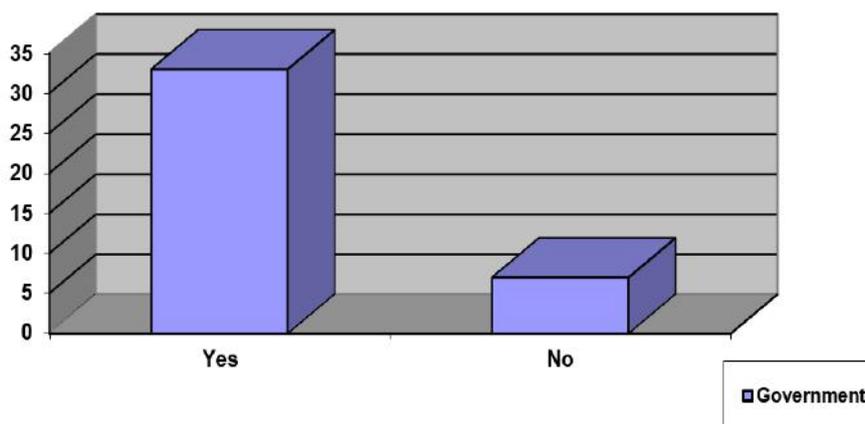


Figure 1: Using Technology as a Training Delivery Method

This finding reveals that investing in learning technology is widespread importance to Kuwaiti organisations. Also, it shows that there has been expanding interest in the use of technology in the training field. This interest is growing rapidly and may become an integral part of most employees’ careers as present on figure 3.

- Extent of Planning for Using TBT**

Before implementing the TBT, organisations should see TBT as a training resource or tool they should think about, and they cannot assume its successful adoption, so they should plan carefully for its implementation.

**Table 1: Level of Planning for Using TBT**

Training tools	Planned				Total
		Small extent	Considerable extent	Great extent	
Computer-based training-computer assisted learning	Government		30%	70%	100%
Technology-based training (audio tape, video, Interactive video)	Government	5%	10%	85%	100%
Internet \ Intranet \ Web based training	Government		33%	67%	100%
Multimedia	Government	88%	4%	8%	100%
E-mail	Government	2%	18%	80%	100%

To investigate the degree of planning for TBT implementation, the respondents were asked about the level reached in their planning. The majority of government organisations have some planning for using technology-based training (audio-tape, video, and interactive video). Furthermore, more than 67% of the government organisations have planned to a great extent to use internet, intranet, web-based training, CBT / CAL and e-mail as training delivery methods, while only 8% of them have planned to a great extent to use multimedia as a training delivery methods as presented in above Table 1.

This finding shows that a large part of the tremendous change in the delivery of training is driven by learning technology such as internet, intranet, web-based training, CBT / CAL and e-mail. The positive attitude and financial ability of Kuwaiti organisations are such as to make TBT a possibility. On the other hand, this finding also indicates that Kuwait government organisations still using the training delivery methods which commonly are used in the less developed countries, such as audio tape and video (Kerrigan and Luke,1987).

• **Extent of TBT Implementation**

To proceed with the investigation about TBT adoption in Kuwaiti organisations, the respondents were asked about the level that they had reached in implementing TBT.

**Table 2:** Extent of TBT Implementation

Training tools	Implemented				
		Small extent	Considerable extent	Great extent	Total
Computer-based training-computer assisted learning	Government	16%	38%	46%	100%
Technology-based training (audio tape, video, Interactive video)	Government	20%	60%	20%	100%
Internet \ Intranet \ Web based training	Government	32%	68%		100%
Multimedia	Government	65%	35%		100%
E-mail	Government	30%	67%	3%	100%

Their answers indicate that 84% of the government organisations sample have implemented CBT-CAL; 80% have implemented TBT (audio-tape, video, interactive video). 70% of them have implemented e-mail as a training delivery method, and only 35% of the government organisations’ sample have implemented multimedia to a considerable extent. In addition, 68% of them implemented internet, intranet and web-based training to a considerable extent as seen on above table 2. This finding gives a clear view of the level of TBT implementation in Kuwaiti organisations; more than 80% of the government sector have implemented CBT, CAL, and more than 60% have implemented internet, intranet and web-based training. This means that Kuwaiti organisations are moving fast towards developing their employees’ skill and knowledge, at the time and place where needed.

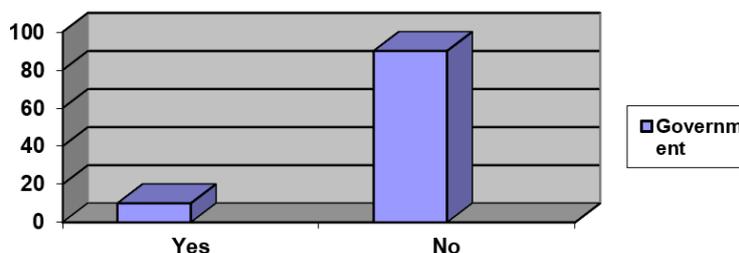
Growth of Kuwait, in terms of economic and social development, will not be achieved unless it develops its human resources. This requires extensive and intensive preparation and continual efforts to prepare employees who are able to face the challenges of the future and deal with the present ones effectively. However, Kuwait has to face the problem of the shortage of qualified and trained human resources. According to the World Bank report (1994), the guaranteed employment in the government sector of 92% affects productivity and causes a gradual decline in the quality of Kuwaiti human capital. In addition, Kuwait’s labour market is highly distorted, reflecting the public sector total remuneration differential, and there is a consequent lack of inducement to Kuwaitis to be employed in the private sector or for private employers to hire them.

Technology has the potential to improve training and productivity dramatically (Fitzgerald, 1999). The instructional potential of technology has improved to the point where it can provide very sophisticated learning experiences (Sandler, 1998). According to Bentley (1991), if applied to an appropriate training situation, technology can present a more effective learning environment than that provided by the best human instructors in a classroom environment. The hardware and software involved have become very powerful, reliable, and user friendly, both for the development and delivery of courseware. The level of implementation must be treated carefully, and its credibility may be questionable, because, it could be misleading concerning the use of CBT and CAL, TBT, Email, Internet, Intranet and Web-based-training, because most of the sample consider training employees how to use computer (WinWord, Excel, SPSS, and other applications) is a CBT or CAL . This situation is also relevant to TBT, e-mail, internet, intranet and web-based training.

However, there are still some organisations in Kuwait which have planned for using TBT but have not implemented it in their organisation. According to Buren (1997) organisations in the USA are ready, willing, and (almost) able to move full speed towards implementing training that relies heavily on the use of learning technologies. This was the foregone conclusion of a recent HRD executive survey that was conducted by the American Society for Training & Development (Buren, 1997). The survey, which was sent to 275 HRD executives from US organisations, explored the extent to which they use or expect to use electronic learning technologies as delivery systems. The results reveal that companies are more ready than ever to reap the benefits of using learning technologies, but there are still many hurdles to overcome.

• **Multimedia as Training Delivery Method**

Unique and new learning technologies like the multimedia is increasingly being used in traditional T&D events, and also in open and flexible learning modules. With a move towards more flexible working practices, it is necessary to provide a more flexible approach to learning, training and development, particularly with regard to timing, location, and the needs of the learner and trainer. Multimedia provides that flexibility.



**Figure 2:** Multimedia as training delivery method

The respondents were asked whether they use MBT or not. Their answer shows that only 10 government organisations use multimedia as a training delivery method as seen from above Figure 2, representing 10% of the government sample. The uses of MBT in these organisations are mainly for technical training, and it is not designed to train other employees. This finding is consistent with ASTD (Buren and King, 2000). They have conducted a study on international comparisons and present data on six regions or countries, namely Asia, Australia/New Zealand, Canada, Europe, Japan, and the United States. The study combined the numbers for technical processes and procedures training with information technology skills’ training. They found that training in technology-related skills accounted for 34% of all training expenditures in Australia/New Zealand, but only 6% in Japan, down from 11% in 1997. In Asia, the amount was 17%, and the remaining regions ranged from 22 to 28% of all training expenditures.

• **Factors Contributing to Preventing Organisations from using Technology as a Training Method**

In order to investigate the kind of factors which prevent Kuwaiti organisations from using TBT as a training delivery method, the respondents were asked to choose from a list of factors handed to them. Their answers reveals that determining the effectiveness of TBT, employee fear of technology, employee attitude towards technology, obtaining senior management commitment to TBT, identifying the training needs of employees, and the huge time it consumes to produce are the most important factors which prevent government organisations from using technology for training, as seen by more than 50% of the sample (Table 3).

**Table 3 :** Factors Contributing to Preventing Organisations from using Technology as a Training Method

Factors prevent using technology as a training method		Small extent	Considerable extent	Great extent	Total
Obtaining senior management commitment to technology-based training	Government	25%	20%	55%	100%
Identifying the training needs of employees	Government	15%	30%	55%	100%
Determining the effectiveness of technology-based training	Government	16%	10%	74%	100%
Finding qualified and skilled technology-based instructor	Government	30%	20%	50%	100%
Employee fear of technology (computer)	Government		25%	75%	100%
Employee attitude towards technology (computer)	Government	3%	25%	72%	100%
It is not available in the training market	Government	8%	50%	42%	100%
Cost of buying a computer- training course is very high.	Government	24%	30%	46%	100%
It consumes huge time to produce	Government	10%	35%	55%	100%
Training budget	Government	40%	26%	34%	100%
Most of work conducted manually	Government	30%	40%	30%	100%
Organisation policy	Government	20%	50%	30%	100%
Existing training systems are sufficient for the organisations current needs	Government	36%	54%	10%	100%

The above finding indicates that both sectors are almost sharing the same factors that prevent them from using technology as a training method. In addition, this finding is consistent as stated: “Neither the administrative capability nor the experience in Kuwaiti organisations are in a position to apply CBT” (Al-Mureafa, 1993).

Furthermore, these factors could be international, which affect any organisation and preventing it from using TBT. The Rate of change was identified as the biggest challenge which faces US organisations (Buren,1997). Considering the time, it takes to develop and implement new learning technologies for the rapid rate at which are introduced the learning technologies that is no longer state-of-the-art by the time which is fully operational. Finding information on learning technologies is also an ongoing challenge. Respondents ranked information on how to choose among learning technologies as the most difficult type of information to find. Information on how to implement new learning technologies and what other companies or HRD executives are doing regarding learning technologies was also listed as difficult to find. Information on leading vendors appears to be the most accessible type of information. Some other challenges also include:

- i. Assessing the effectiveness of learning technologies
- ii. Determining when and where to apply new learning technologies.
- iii. Integrating new learning technologies with existing ones
- iv. Getting management buy-in
- v. Delivering existing courses/training using new learning technologies
- vi. Developing new courses/training for new learning technologies
- vii. Encouraging employees to use new learning technologies.
- viii. Finding HRD professionals knowledgeable about new learning technologies.

In order to implement TBT in Kuwaiti organisations, there are too many steps and actions had to be taken first to minimise the effects of these factors. The most important steps are to encourage employees to use new learning technologies and to get management to support TBT. These two factors might be the most important factors for the Kuwaiti scenario, and to minimise the effects of these two factors is not an easy task. It require a tremendous effort, and some of the following steps may to be undertaken in order to implement TBT in Kuwaiti organisations:

- i. Contract with a professional company to introduce TBT.
- ii. Study the best practice companies around the world and transfer their experience.
- iii. Contract with leading edge universities to conduct the necessary research.
- iv. Set up a working party from top managers, training mangers, professional, and academic staff.
- v. Prepare a long-term plan for implementing TBT.
- vi. Up-grade administrative capability in general, and in particular, training and HR managers. Reward and encourage employees to use new learning technologies.

## 6. DISCUSSION AND RECOMMENDATIONS:

Most respondents indicated that learning technologies currently plan to use as deliver training. This finding reveals the cause of why the status of training and level of resourcing in Kuwait have not always reflected the progress of desired changed. The reason finds that Kuwaiti organisations are still using an out-of-date methodology, “instructor classroom training”. To meet the required changes, organisations in Kuwait must look for more effective methods of training delivery. While increasing competition, globalisation and change that produce key of success to any organisation as recommended. Kuwaiti organisations have obsessed with the pursuit of learning if they are going to keep up with the place of change. They must therefore look at more flexible, consistent and time with cost-effect ways of delivering training to their employees without their necessarily having to attend courses off-site.

## 7. CONCLUSION:

Most Kuwaiti organisation are willing and able to move full speed toward to implementing training that relies heavily on the use of learning technologies. This study as conclude that learning technologies can raise the training bar and leverage corporate assets but a lack of information on wise investments and oftentimes lack of “know-how” can impede implementation efforts. Research also revealed that different factors preventing Kuwaiti organisations from using TBT as a training delivery method. It also finds information and learning technology is ongoing challenge whether sometime difficult to find. Overall, this research concludes that Kuwaiti organisation have a lot to do that minimise the effect of these factors whether some of the things that encourage employees to use new learning technologies and to get management to support TBT in order to implement TBT. During Covid-19 pandemic such technological advantages forward the learning capabilities which enhanced as in the manageable in Kuwaiti learning organization.

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