Would the Professional Training Sector Take the Advantage of the Virtual Environment that Was Presented Forcefully by COVID-19?

Authors: Maitham Aloraibi, Amira Karam, Amal AlSorani

Affiliation: Bahrain Institute of Banking and Finance (BIBF)

Abstract:

This applied research looks into the effectiveness of the virtual learning environment in the delivery of corporate and professional courses since the training provider was forced to shift to this mode of delivery since March 2020 due to the COVID-19 circumstances.

In literature, the effectiveness of virtual delivery in the basic schooling and higher education sectors is well researched and heavily debated amongst scholars and practitioners, especially during this pandemic. This is not the case, however, in the professional and corporate training field as this sector is often regarded as a voluntary provision that warrants the least priority to invest in during a global crisis; the like of COVID-19. The purpose of the research is to measure the effectiveness of virtual training provision, and how this mode of learning can help in developing skills and supporting learning to achieving their learning objectives. The effectiveness evaluation in this research was measured from the perspective of the end-user (the learner).

The research involved a quantitative questionnaire that was answered by 367 respondents amongst trainees who were enrolled in various professional training courses, post COVID-19, in virtual mode. The questionnaire items were purposely designed to gauge the learners' satisfaction as a measure of effectiveness and quality of the virtual training environment. The questionnaire was distributed and administered electronically via a mass emailing campaign. Upon collecting the responses, the data was quantitatively analysed using descriptive quantitative analysis.

The analysis of the data indicates indeed high satisfaction rates amongst learners (more than 72% were satisfied, or higher). The effectiveness of virtual learning in helping trainees achieve their learning objectives and make good progress, however, was lower than the overall satisfaction rate. After months of riding the learning curve of the virtual learning experience, the learners showed mixed picture of reflection on their preferred mode of delivery in the future. Almost a third of the learners opted for blended learning mode, whereas nearly another third preferred virtual, and the remaining liked to go back to physical classes.

This research indicates that virtual learning is apparently lending itself to be a feasible mode of delivery of professional training courses. Its effectiveness, as perceived by the beneficiaries, is proven to continue improve as it matures over time. The prospect of this virtual learning methodology looks positive indeed despite the newness of its application on a massive scale post the COVID-19 pandemic.

Key words:

Corporate training, professional training, evaluation of training, quality of teaching, virtual learning, online learning, COVID-19

Introduction:

This study focuses on the learning model of online learning. In the past decade, the use of various technologies to support the process of teaching and learning has rapidly developed, with several technologies and e-tools being employed to facilitate teaching and promote active learning in classroom settings. However, with the rapid consequences posed by the COVID-19 Pandemic and the disruption caused to the education sector, this study looks at platforms of online Learning, measures its impact and effectiveness, content delivery, the learning model and expectations, through data collection and analysis done through an online survey. The responses of actively

engaged students, was analysed; students who registered in online courses at the Bahrain Institute of Banking and Finance (BIBF) as a professional training institution.

Literature Review:

Platforms of E-learning and its Impact

E-learning platforms are effective social learning environments to support teamwork and the exchange of opinions and experiences, as these social educational platforms intend to achieve permanent communication between their users without regard to place and time (Ames et al., 2021). Where studies have shown that learners interact to a greater degree in educational materials and courses offered through educational platforms, so e-learning platforms can constitute an information system that schools, universities and institutions can use in the educational process, either entirely through the Internet or by integrating it with the traditional method of education (Zinovieva et al., 2021).

E-learning platforms have many positives as they clearly and significantly help in raising the level of students and scientific communities, as it provides alternatives for people who are unable to go to educational institutions under circumstances that prevent them from doing so (Ergüzen et al., 2021). Also, these platforms work to employ students' abilities and even develop them instead of wasting and losing them. Moreover, it contributes to filling the gaps that may arise from the lack of teaching staff (Vakaliuk et al., 2021). Furthermore, Fiş Erümit (2021) mentioned that the online education platforms help students exchange views and ideas, which helps creative thinking, and enables teachers to create virtual classes for students, in addition to the ease of communication between the teacher and parents, which allows parents to follow the results of their children, since it helps teachers track the performance of their students in performing certain skills, and their progress. In addition, the e-learning platforms have a role in providing learners with the necessary information skills for self-learning, developing creative thinking and making the learner more in control of the educational process and time management (Hash, 2021).

Furthermore, Ramírez-Hurtado et al. (2021) showed that there has become an urgent educational necessity to use e-learning platforms due to the many benefits and advantages they offer to the learner, and the reduction in the burdens that fall on the shoulders of the teacher, as well as an attempt to provide an effective educational climate that helps raise the efficiency of the educational process and achieve the overall quality and produce it in a good way. However, e-learning platforms face many obstacles that stand in their way and limit successes, such as the absence of real support from official institutions, the lack of competencies that are interested in developing self-education, and the absence of a culture of volunteering and initiative to produce educational materials (Engzell, Frey & Verhagen, 2021).

Content Delivery of E-learning

E-learning content refers to the information and knowledge contained in the educational material, which aims to achieve established educational goals (Sobaih, Hasanein & Abu Elnasr, 2020). To achieve success in any educational system, there are some means that teachers and students need in exchanging information, since e-learning depends on a set of main tools that educational institutions of all kinds depend on, thus achieving the objectives of the educational process in conveying the necessary information from the teacher to the students, and then testing the students in the extent of their understanding of the information and knowledge they receive (Bhagat & Kim, 2020). Therefore, e-learning tools are selected by determining the appropriate type of media for each concept or part of the content, represented by static or animated images, video clips, and various fonts, which are determined according to the content and objectives of the programme, and the characteristics of the learners (Parker, 2020).

As creating an appropriate environment for content delivery between students and teachers contributes to improving the outcomes of the learning process, as the multiplicity of communication channels develop the learning process and achieves its goals for students to obtain the greatest possible benefit from the information provided by teachers (Moukarzel et al., 2020). The e-learning system is characterised by its complete dependence on the Internet to facilitate the educational process, as this type uses many means to complete the educational

process that may range from e-mails, dialogue sessions, and live broadcast sessions, in addition to some references and printed materials in some cases, thus, this educational model is managed through an integrated virtual learning system that integrates technologies and multiple media in one place (Shearer et al., 2020). For instance, Edmodo platform is an interactive learning environment that employs Web 2 technology and combines the advantages of electronic content management systems with social networks such as Facebook, as it enables teachers to conduct electronic exams, distributes roles, and divides students into work groups, helps to exchange ideas and opinions between teachers and students, and shares scientific content, and allows parents to communicate with teachers and see the results of their children, which helps to achieve high-quality educational outcomes.

E-learning Effect from the students' Perspective

With the start of adopting the e-learning system in many countries of the world, there were many views on its feasibility and effectiveness (Hebebci, Bertiz & Alan, 2020). As students and parents confirmed that the e-learning system is the platform of the future and contains many features, most notably the interaction between the student and the teacher, as well as retrieving the lesson at any time, and also encourages parents to educate electronically (Zhu & Liu, 2020). In addition, for students who do not fit into the traditional classroom environment, e-learning provides an exceptional opportunity because it provides the flexibility they need to succeed. On the other hand, Tümen Akyildiz (2020) illustrated that many students believe that e-learning cannot be a substitute for traditional education, whatever the circumstances, especially in scientific and technical subjects such as mathematics, biology, chemistry and other subjects that require practical and field applications.

Like all learning models, e-learning suffers from some inherent problems, especially in the areas of isolation, support, technology, and discipline (Aboagye, Yawson & Appiah, 2021). In the beginning, the e-learning system is not simple and requires study and intelligence in implementation and application, so there is a need for qualified staff capable of managing this technical system (Anderson & Rivera-Vargas, 2020). In addition, Fatonia et al. (2020) pointed out

the loss of the human factor in the e-learning system, and the absence of effective dialogue and discussion, as many students are unable to express their ideas in writing, and they need direct verbal communication to express what they believe. Furthermore, Almazova et al. (2020) indicated the lack of an interactive study environment that raises the performance of the teacher and the response of the student, as the scientific material is often limited to the theoretical side and neglects the live experiences, especially in scientific subjects.

One of the most trying challenges facing e-learning is the limited ability of educational institutions to establish large networks and provide large numbers of devices and equipment, in addition to its update, especially as the information and communication technologies are witnessing multiple developments and transformations, in a rapid and continuous manner, which makes it difficult to acquire various types of these technologies (Bhagat & Kim, 2020). Moreover, Karademir, Yaman & Saatçioglu (2020) explained that there are a large number of current academic staff in developing countries who are unable to use digital technology in a way that enables them to teach through it. Also, Gonzalez et al. (2020) revealed that the academic achievement of students in e-learning is very weak, compared to the traditional education system, this is in addition to the fact that learners' withdrawal from school and receiving lessons from a distance lose the sense of prestige and the usual order in school hours, as well as a loss of justice in evaluating learners and a decrease in the level of creativity, innovation and development.

Measure of effectiveness of E-Learning:

One of the challenges that remain in this field of research is measuring the effectiveness of learning, especially in adult and continuous learning. One of the widely acceptable models of evaluation of learning is the Kirkpatrick's four-level model: reaction, learning, behaviour, and results (Bates, 2004). Phillips' Model, nevertheless, extends the classical model of Kirkpatrick by adding a fifth level that goes into assessing the return on learning investment (Strother, 2002). Most of the readily accessible research works use the first level, that is the assessment of learners' reaction to the learning programme towards the end of the program (Ramayah et al., 2012; Joo et al., 2009; and Capece & Campisi, 2013), although some research used various models

that combines level one (reaction) and level two (learning), as with the work of Ho & Dzeng (2010) and that of Ozturan & Kutlu (2010); or even higher levels of learning evaluation such as the work of Abraham & Chengalur-Smith (2019).

Regardless of the learning evaluation used, learners' satisfaction in the various forms of adultlearning is considered to be a strong measure of the effectiveness of the learning experience, and is directly associated with the development of knowledge and skills in these programmes (Abraham & Chengalur-Smith, 2019; Capece & Campisi, 2013; Ozturan & Kutlu, 2010; Ho & Dzeng, 2010; and Joo et al., 2009)

Instrument:

The online survey was purposely designed by the Institute. It has 18 question items; most of which are quantitative, using five-point Likert scale, though some questions were on threepoint scale for ease of design. This paper analyses the quantitative part of the survey, and for analysis purposes, the survey items were divided into five aspects. The first aspect (one question) checks the demographic distribution of respondents based on the industrial sector they work in. The second aspect (4 questions) is about the "**learning and expectation**" which aims at measuring the extent to which learners were satisfied with their learning, quality of programmes and the overall experience with online learning. The third aspect "**online learning platform and resources**" has 2 questions that look into reflections of learners on the effectiveness of the online learning platform that was used, and the related online learning resources. Measuring the effectiveness of logistical support and online guidance learners receive, the fourth aspect on **"support and guidance"** has 3 questions. The last aspect "**preferred mode of learning**" has one question that explores the overall reaction of learners to this online learning and how it might have shaped their personal learning preferences in terms of mode of learning (physical vs. online).

Data collection and analyses:

Online survey was designed and distributed to 4000 learners on the Institute database of learners who were enrolled in various professional and corporate training courses during the Pandemic, out of which, 367 responded (response rate = 9.2%). The distribution of the survey was done through online mass emailing system (Survey Monkey).

Upon collecting the data, standard descriptive statistical analyses were conducted. This paper discusses the results of the quantitative type questions of the survey.

Results:

Demographic distribution of respondents

This survey was distributed specifically amongst the previous and current learners on the Institute database. The learners come from various private and public organisations, with the majority in the banking, finance and accounting industry (44.9%). This was expected as the Institute serves mainly the banking and finance sector in the Island. Table 1 shows the distribution of the respondents.

Table 1: Demographic Distribution of Respondents

ANSWER CHOICES	RESPONSES	NUMBER
Banking, Finance, Accounting	44.87%	140
Telecommunication	3.21%	10
IT / Digital Transformation	4.49%	14
Insurance	12.50%	39
Education	5.13%	16
Government / Ministry	4.49%	14
Current Student	10.26%	32
Others	15.06%	47
Total	100%	312

Learning and expectations

This is the first aspect of the survey and was explored by four questions. When respondents were asked about how effective the courses in meeting their learning goals (Figure 1), 54% thought that online courses were extremely or very effective. They then expressed their overall high satisfaction with the online experience (Figure 2), as 72% expressed that they were very satisfied or satisfied. The high level of satisfaction amongst learners with the quality of the online courses in meeting their expectations (Figure 3) was even higher (85.5% were satisfied or very satisfied), which in turn was reflected on the overall satisfaction with their experience (Figure 4) in the Institute (86.1% were satisfied or better).

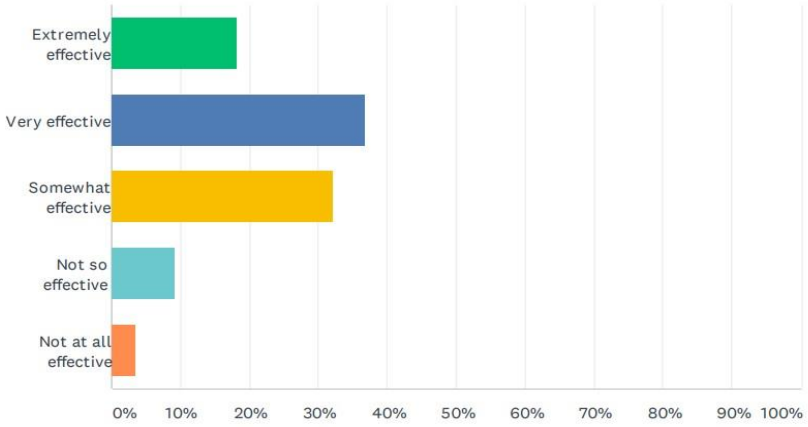

Figure 1: Effectiveness of e-learning in meeting learning goals

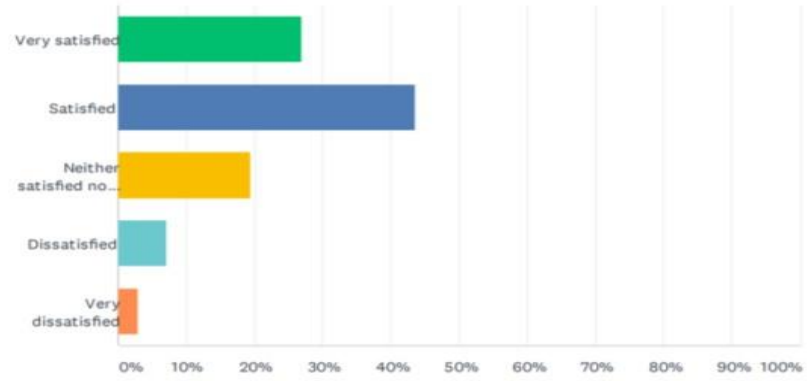

Figure 2: Satisfaction of e-learning experience

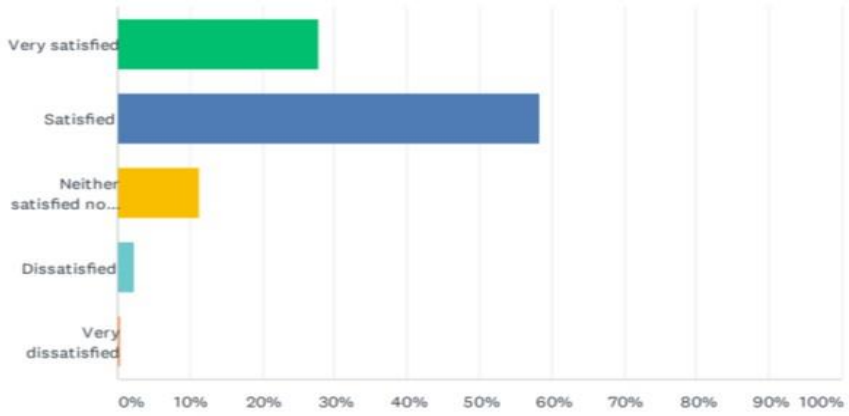

Figure 3: Satisfaction with programs in meeting expectations

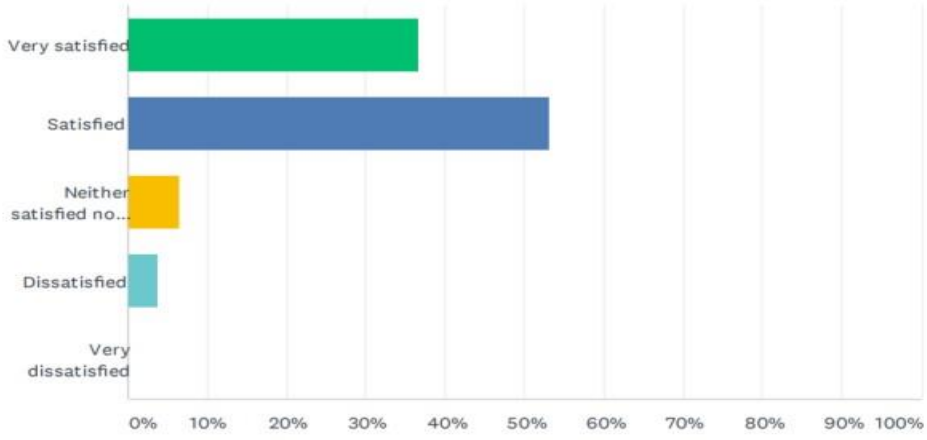

Figure 4: Overall satisfaction rate

Online learning platform and resources

The Institute uses a customised online learning platform (MyClass 3.0). The online platform is also supported with associated support systems and learning resources, that 67.1% of respondents found to be very or extremely helpful (Figure 5). The platform and the online learning features it offers to learners was very well received by learners, as 84.4% of them were satisfied or higher indeed (Figure 6). This level of satisfaction paralleled the overall satisfaction of learners with their online experience, which shows that having effective digital platform is essential to effective online learning.

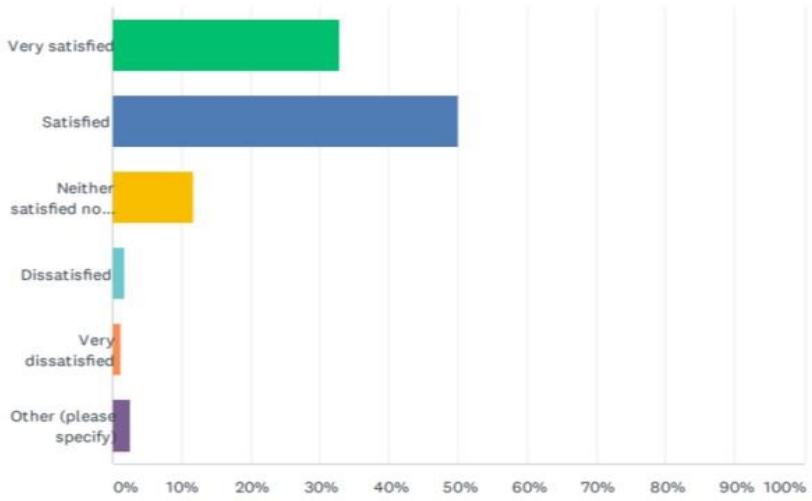

Figure 5: Satisfaction with e-learning platform

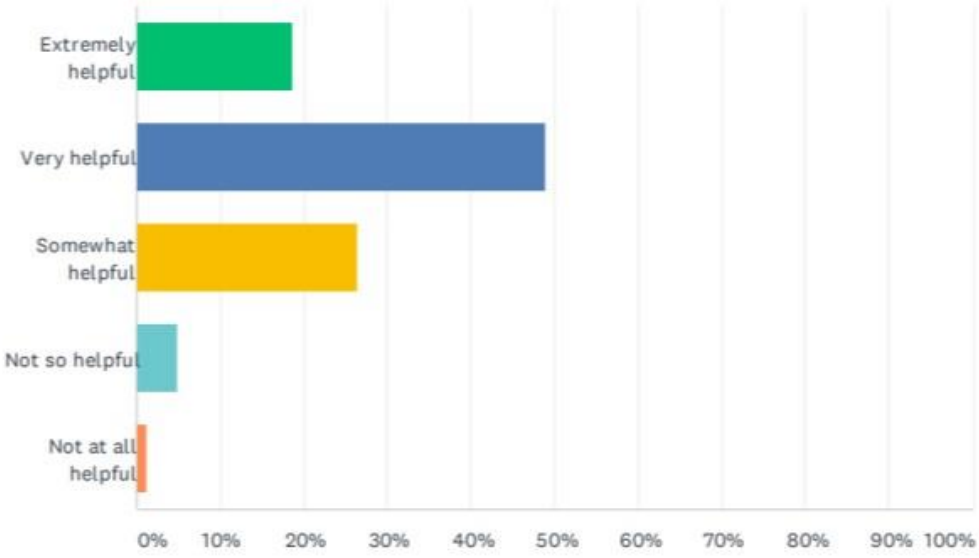

Figure 6: Satisfaction with e-learning resources

Support and guidance

In anticipation of the importance of that other support and guidance activities learners need in their learning journey, the fourth aspect of the survey measured the satisfaction level of learners with the instruction received (Figure 7) prior to joining a course (82.9% were satisfied

or higher), the friendliness of customer service experienced (Figure 8) (78.5% were satisfied or higher); as well as ease of the registration process (Figure 9) (91.8% were satisfied or higher).

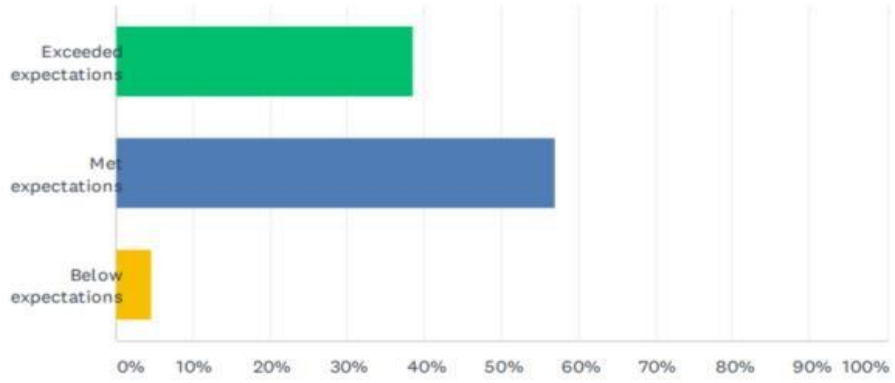

Figure 7: Satisfaction on support instructions

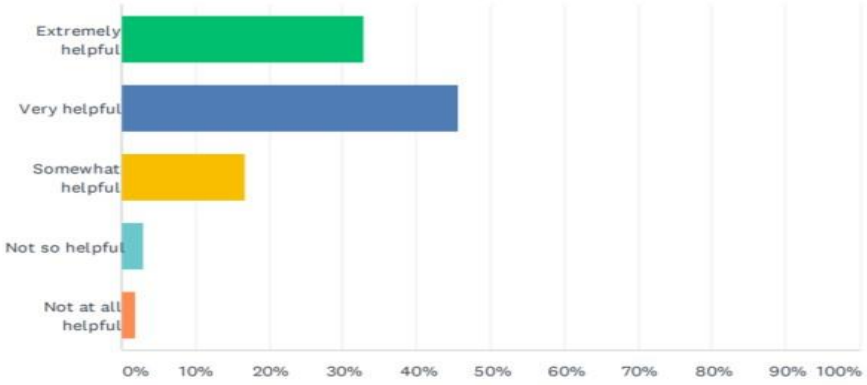

Figure 8: Satisfaction with customer service support

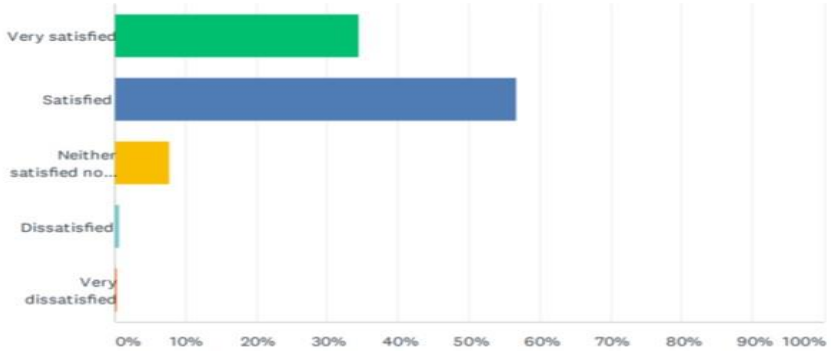

Figure 9: Satisfaction with registration process

Preferred mode of learning

In an attempt to explore how this short online learning experience might have affected the acceptability of virtual classes, the question was formulated to measure the mode of learning that learners prefer going forward in the future. The responses to this question (Figure 10) draw a mixed picture. Whilst a small majority prefer to go back to physical classes (39.2%), the rest of the learners either prefer virtual classes (27.3 %), or blended (physical and virtual) classes (33.4%).

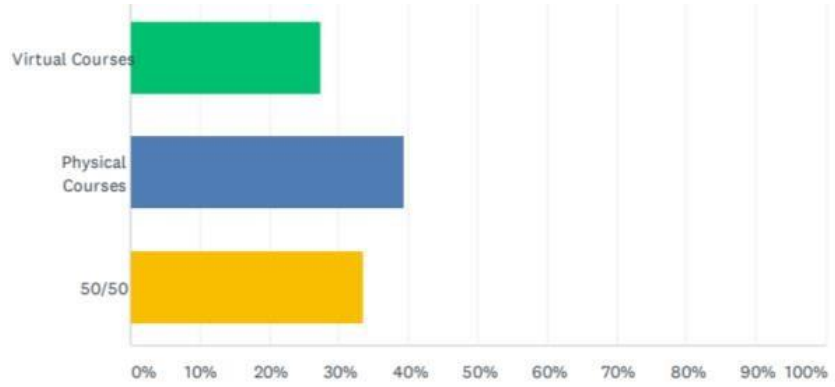

Figure 10: Preferred mode of learning

Discussion and Conclusion:

This paper discusses the analysis of the quantitative part of an online administered survey amongst learners who benefited from virtual corporate training courses during the COVID-19 pandemic. The survey attempted to measure the effectiveness of the new mode of learning through earners' satisfaction and reflection on their online learning experience, using level one (self-reflection) of Kirkpatrick's learning evaluation model; a widely used measure to indicate the learning effectiveness using learner's reaction at the end of the learning experience (Abraham & Chengalur-Smith, 2019; Capece & Campisi, 2013; Ozturan & Kutlu, 2010; Ho & Dzeng, 2010; and Joo et al., 2009)

It is clear that the learners received the online learning experience in this type of courses very well indeed, as 72% or learners showed satisfactory level or higher with their overall learning experience, and 85.5% thought that the online courses satisfactorily met (or better) their expectations and needs. This high level of overall satisfaction is in line with the findings of Joo et al (2010) and Capece & Campisi (2013).

The effectiveness of virtual learning in helping trainees achieve their learning objectives and make good progress, however, was lower than the overall satisfaction rate. Only 54% of the respondents recognised the virtual training to be effective or highly effective, despite the very high satisfaction rate with the online and virtual facilities, support and quality of teaching and programmes (ranging from about 84% to 95% for these aspects). This variance might indicate that teaching in a virtual environment still needs to be matured to ensure that learners objectives are effectively met. This finding is not at all at odds with the findings of other recent research on the effectiveness of e-learning, which suggest that it might be indeed limited in developing certain set of skills and competence that rely of physical interaction and face-to-face discussions (Engzell, Frey & Verhagen, 2021, Tümen Akyildiz, 2020; Fatonia et al., 2020; and Gonzalez et al., 2020).

As a reflection of this short learning experience on the preferred mode of learning in the future, the responses showed rather a mixed but interesting picture. Almost a third of the employees opted for blended learning mode, whereas nearly another third preferred virtual, and the remaining liked to go back to physical classes. Although this is an early indicator, the results suggest that learners started embracing online and virtual courses as a viable mode of learning environment. More research needs to be done in the future to confirm if this trend continues to establish amongst the community of corporate training. A similar conclusion of a conditional or evolving picture can be deduced from the findings of (Engzell, Frey & Verhagen, 2021) which suggest that e-learning still faces obstacles that hinder its full utilisation, of which is the availability of technical support and capacity building amongst instructors in using the new learning platform (Aboagye, Yawson & Appiah, 2021; and Karademir, Yaman & Saatçioglu, 2020).

References

Aboagye, E., Yawson, J. A., & Appiah, K. N. (2021). COVID-19 and E-learning: The challenges of students in tertiary institutions. *Social Education Research,* 1-8.

Agasisti, T., & Soncin, M. (2021). Higher education in troubled times: on the impact of Covid-19 in Italy. *Studies in Higher Education, 46*(1), 86-95.

Al Lily, A. E., Ismail, A. F., Abunasser, F. M., & Alqahtani, R. H. A. (2020). E-learningas a response to pandemics: Coronavirus and Arab culture. *Technology in society, 63*, 101317.

Almazova, N., Krylova, E., Rubtsova, A., & Odinokaya, M. (2020). Challenges and opportunities for Russian higher education amid COVID-19: Teachers' perspective. *Education Sciences, 10*(12), 368.

Ames, K., Harris, L. R., Dargusch, J., & Bloomfield, C. (2021). 'So you can make it fast or make it up': K–12 teachers' perspectives on technology's affordances and constraints when supporting e-learninglearning. *The Australian Educational Researcher, 48*(2), 359-376.

Anderson, T., & Rivera-Vargas, P. (2020). A critical look at educational technology from a elearningperspective. *Digital Education Review,* 37, 208-229.

Bhagat, S., & Kim, D. J. (2020). Higher Education Amidst COVID-19: Challenges and Silver Lining. *Information Systems Management, 37*(4), 366-371.

Engzell, P., Frey, A., & Verhagen, M. D. (2021). Learning loss due to school closures during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences, 118*(17).

Ergüzen, A., Erdal, E., Ünver, M., & Özcan, A. (2021). Improving Technological Infrastructure of Elearningthrough Trustworthy Platform-Independent Virtual Software Application Pools. *Applied Sciences, 11*(3), 1214.

Fatonia, N. A., Nurkhayatic, E., Nurdiawatid, E., Fidziahe, G. P., Adhag, S., Irawanh, A. P., ... & Azizik, E. (2020). University students online learning system during Covid-19 pandemic: Advantages, constraints and solutions. *Systematic Reviews in Pharmacy, 11*(7), 570-576.

Fiş Erümit, S. (2021). The e-learningprocess in K–12 schools during the pandemic period: evaluation of implementations in Turkey from the student perspective. Technology, *Pedagogy and Education,* 1-20.

Gonzalez, T., De La Rubia, M. A., Hincz, K. P., Comas-Lopez, M., Subirats, L., Fort, S., & Sacha, G. M. (2020). Influence of COVID-19 confinement on students' performance in higher education. *PloS one, 15*(10).

Hash, P. M. (2021). Remote learning in school bands during the COVID-19 shutdown. *Journal of Research in Music Education, 68*(4), 381-397.

Hebebci, M. T., Bertiz, Y., & Alan, S. (2020). Investigation of views of students and teachers on elearningpractices during the Coronavirus (COVID-19) Pandemic. *International Journal of Technology in Education and Science (IJTES), 4*(4), 267-282.

Marek, M. W., Chew, C. S., & Wu, W. C. V. (2021). Teacher experiences in converting classes to distance learning in the COVID-19 pandemic. *International Journal of ElearningTechnologies (IJDET), 19*(1), 40-60.

Moukarzel, S., Del Fresno, M., Bode, L., & Daly, A. J. (2020). Distance, diffusion and the role of social media in a time of COVID contagion. *Maternal & child nutrition, 16*(4).

Parker, A. (2020). Interaction in distance education: The critical conversation. *AACE Review (formerly AACE Journal),* 13-17.

Ramírez-Hurtado, J. M., Hernández-Díaz, A. G., López-Sánchez, A. D., & Pérez-León, V. E. (2021). Measuring Online Teaching Service Quality in Higher Education in the COVID-19 Environment. *International Journal of Environmental Research and Public Health, 18*(5), 2403.

Shearer, R. L., Aldemir, T., Hitchcock, J., Resig, J., Driver, J., & Kohler, M. (2020). What students want: A vision of a future online learning experience grounded in e-learningtheory. *American Journal of Distance Education, 34*(1), 36-52.

Sobaih, A. E. E., Hasanein, A. M., & Abu Elnasr, A. E. (2020). Responses to COVID-19 in higher education: Social media usage for sustaining formal academic communication in developing countries. *Sustainability, 12*(16), 6520.

Tümen Akyildiz, S. (2020). College Students' Views on the Pandemic Distance Education: A Focus Group Discussion. *International Journal of Technology in Education and Science, 4*(4), 322334.

UNESCO. (2020). 290 Million students out of school due to COVID-19: UNESCO releases first global numbers and mobilizes response. *UNESCO.*

crisis, envisioning the recovery. 2020 *UNDP*

Vakaliuk, T. A., Spirin, O. M., Lobanchykova, N. M., Martseva, L. A., Novitska, I. V., & Kontsedailo, V. V. (2021, March). Features of distance learning of cloud technologies for the organization educational process in quarantine. *In Journal of Physics: Conference Series, 1840*(1), p. 012051, IOP Publishing.

Zhu, X., & Liu, J. (2020). Education in and after Covid-19: Immediate responses and long-term visions. *Postdigital Science and Education, 2*(3), 695-699.

Zinovieva, I. S., Artemchuk, V. O., Iatsyshyn, A. V., Popov, O. O., Kovach, V. O., Iatsyshyn, A. V., ... & Radchenko, O. V. (2021, March). The use of online coding platforms as additional distance tools in programming education. *In Journal of Physics: Conference Series* (Vol. 1840, No. 1, p. 012029). IOP Publishing.