Online training: The application of the Society 5.0 concept

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Abstract. Society 5.0 has been introduced, and technology has played an essential role in achieving the aim of improving the prosperity of human beings. Businesses that often provide training to their employees must adapt to how the training course is conducted. While most training courses are conducted face-to-face, online training courses with technology utilization must be considered. Thus, this research intends to look at the effectiveness of online training in the context of Business English training and the perspectives of the subjects on online training methods. Mixed methods research was conducted with 30 subjects in total. A pre-test and a post-test were administered to investigate the effectiveness, and a questionnaire was distributed to explore the subjects’ perspectives. The results have shown that online training is effective as the test results show a dramatic increase. In addition, the subjects also state their approval of training via online methods.

Keywords: online training, Society 5.0 concept

1. Introduction

The world has been through many different revolutionary stages. It started with society 1.0, known as the hunting society and society 2.0, which mainly depended on agriculture. Then, society 3.0 referred to industrial society, and society 4.0 was identified as the information society [1]. Each stage has had its specific characteristics.

Society 1.0 was characterized by hunting processes and living harmoniously with nature. Society 2.0 emphasized agriculture and its benefits to help humanity survive. At this stage, the society formed better organizations to maintain order in society. Then, society 3.0 was recognized with its shift from the workforce to machinery. The move from society 3.0 to society 4.0 was marked by the advancement of technology and the fact that the society was flooded with information [2, 3]. In 2016, the Japanese government first presented the idea of Society 5.0 as the advancement of society 4.0. The main difference between society 5.0 and society 4.0 lies in the idea that the advancement of technology and information is used for a more prosperous society. Society 5.0 or the Super Smart Society emphasizes on the concept of human-centered society supported by a technology application. Technology is used to improve the life quality of humanity [3, 4].

Technology has been mentioned numerous times in the concept of society 5.0 as it plays a very crucial role in ensuring the success of the establishment of a 'Super Smart Society'. The Internet of Things (IoT), Big Data, and Artificial Intelligence have to be maximized and integrated to provide solutions for human beings' growth and future [5]. Technology or Information Communication
Technologies (ICT) must be wholly integrated into knowledge-attainment, and the teaching-learning process [6]. Therefore, technology in the context of society 5.0 is a fundamental element.

Businesses can also take advantage of this for their employee training. The most common training method applied is the conventional face-to-face method. Employees as training participants are gathered in one place and facilitated by a trainer or a group of trainers. To save costs and time, companies and trainers often create full-day training sessions that can last from one to three days or sometimes longer. This conventional training method may not be efficient as participants are often tired by the end of the training.

With the advancement of technology, a large number of applications or programs have been developed to cater to people's needs in all aspects of life, including the education or training sector [7]. There should be no excuse for not utilizing technology for training courses.

Training courses in Indonesia are still conducted in a face-to-face method. Many parties still doubt the effectiveness of this training and the participants' readiness to adopt the new training methods. Some argue that the training course needs to be in physical meetings to be effective. Nevertheless, it may not be the case for language learning as successful online language learning has been realized. The advancement of ICT has catered to the needs of English language learning as businesses get connected due to globalization, leading to various English language online courses [8]. Therefore, this research is intended to shed light on the adoption of online training courses, which are uncommon in Indonesia, before the COVID-19 pandemic forcing the education sector to take the technological option. The research focuses on the effectiveness of online training, in the context of a Business English course.

Two research questions guide this research, namely: "How effective is online Business English training?" and "What are the subjects' perspectives on online training?". This research will benefit businesses as they have an alternative training method, which may be more efficient and will help trainers to consider online training courses as an option.

2. Methodology

This research is categorized as mixed methods research, mixing quantitative and qualitative research for data collection. The quantitative data was obtained from the results of the tests, and the qualitative data was obtained from a questionnaire. The research was performed in a private bank in Jakarta, Indonesia, through an English language training course for its employees. Thirty employees between the age of 23 and 27 participated in this research as the subjects. They were divided into two groups, a control group and an experimental group with 15 subjects in each group. All the subjects were at the same academic level, which was beginner. They had been tested and grouped by the Human Resources department of the bank. It would later be confirmed with a pre-test.

English language training sessions on tenses were given to both the control and the experimental groups for fifteen sessions with an hour per session. This period was also the timeframe of the research. The training focused mainly on grammar lessons focusing on tenses in English. Before the training started, a grammar pre-test consisting of twenty questions about tenses was given to all subjects with two purposes. The first purpose was to confirm that all subjects were at the beginner level, and the second purpose was to use their scores to be compared with their post-test scores, which would be conducted after the training was complete.

The grammar lessons were taught to the control group in the traditional teaching style. The teaching-learning interaction was conducted through face-to-face meetings. The teacher, who also taught the experimental group, spent approximately twenty minutes explaining about the tenses, and then the rest of the time was used to do the exercises, and discuss any difficulties. The class was held on the scheduled days.

On the other hand, technology was utilized to teach the experimental group, which was shown in a full online class mode using Microsoft Teams software. Microsoft Teams was chosen as it was available on all platforms and was an all-in-one platform for communication and collaboration with a simple user interface [9]. The teacher and the group never met for any face-to-face meetings. All the materials, in the form of PowerPoint, were shown with voice-overs, and the assignments were uploaded on Microsoft Teams.
Teams periodically. A video conference was set up for thirty minutes on every scheduled meeting. However, the experimental group subjects were given the opportunity to study the materials independently and submit their assignments at the assigned deadline.

After fifteen sessions, a post-test was administered to both groups. The results of the post-test were later compared to the pre-test. After the post-test, a questionnaire, consisting of five open-ended questions, was distributed to the subjects from the experimental group. This questionnaire mainly asked about the perspectives of the subjects on online learning.

3. Findings and discussion
There are two types of findings, namely the results of the pre-test and the post-test and the results of the questionnaire.

The pre-test about tenses in English was administered before the training started, and both groups had to take the pre-test. As mentioned in the methodology, the pre-test results would be used mostly to identify their English level and as a comparison.

![Figure 1. The Results of the Pre-Test.](image)

Figure 1 shows the results of the pre-test for both the control group and the experimental group. The results clearly showed that the subjects in both groups shared similar levels of ability. Six subjects from the control group scored less than 40, while the other six subjects scored between 40 and 60. Only three subjects scored within the range of 61 to 80, and nobody attained more than 80. Similar conditions occurred in the experimental group. Seven subjects scored less than 40. Six subjects had scores between 40 and 60. None of the subjects scored more than 80, and two subjects did get between 61 and 80.
Figure 2. The Results of Post-Test.

As shown in Figure 2, the results of the post-test showed some improvement in both groups. In the control group, two subjects scored less than 40, and three subjects scored between 40 and 60. In addition, eight subjects improved their scores to the range of between 61 and 80, and two subjects scored more than 81. Meanwhile, in the experimental group, no subjects scored below 40. Two subjects scored in the range of 40 to 60. In addition, four subjects received their scores between 61 to 80, and nine subjects scored in the range of 81 to 100.

Based on the results of the pre-test seen in figure 1, it can be inferred that the subjects in both groups were at the beginner level of English as most of them scored in the range of below 40 to 60. However, Figure 2 clearly showed that the subjects in both groups improved. The subjects in the experimental group showed more significant improvement.

In the control group, two subjects succeeded in scoring above 80 in the post-test while none did in the pre-test. The biggest improvement happened in the group scoring between 61 and 80 from three subjects in the pre-test to eight in the post-test. The number of subjects who scored below 40 and between 40 and 60 decreased from six to two subjects and six to three subjects.

On the contrary, the subjects in the experimental group performed strongly in their training. It was shown in their improvement through the results of the post-test. While no subjects scored above 80 in the pre-test, nine subjects reached above 80 in the post-test, which was the biggest improvement. There was also an increase in the number of subjects scoring between 61 and 80 from two subjects to four subjects. A drastic decrease happened in the number of subjects scoring between 41 and 60 and below 40, from six to two subjects and from seven subjects to none.

Besides the quantitative results from the pre-test and the post-test, this research also employed the qualitative research method through a questionnaire with five open-ended questions. It was only given to fifteen subjects of the experimental group. The questions mostly asked about their perspectives on the use of technology for teaching and learning.

The first question asked the subjects whether they were familiar with online learning applied in their training. Most of the subjects, thirteen subjects, were unfamiliar with online learning as they learned mostly through conventional face-to-face meetings when they were previously in school. However, two subjects said that they were quite familiar as they had taken some online courses offered on the Internet.

The subjects were then asked about their experience when they first tried online learning. One subject mentioned that it took her quite some time to adapt to online learning. She then added that she
felt more comfortable learning online after three meetings. Nevertheless, the other fourteen subjects revealed that they were fine and had no significant problems. They only needed a very short time to get familiar with the Microsoft Teams software. They also stated that the user interface was simple yet practical and used most of the features.

When they were asked to discuss the benefits or advantages of online learning, they mentioned that they were given the files before the scheduled conference to learn beforehand. Online file sharing also enabled them to search for more information online easily. The second point they mentioned was about the online conference style. They were comfortable with video calling and chatting on the forum, which made them think it was enjoyable and less formal compared to studying in a traditional class. This feeling motivated them to learn. The third point which they emphasized as the most important point was about discussion and collaboration. They shared that they could easily discuss and help one another regardless of the time and place. The subjects in the control group could not have been done as they could only discuss during the training, and rarely communicated with each other outside of the training course. Microsoft Teams helped connect all the subjects to learn together.

The subjects were later asked to point out any disadvantages of their online learning. They agreed that they did not encounter any significant problems during their course. They only briefly talked about intermittent internet connection problems they experienced. However, they also said that it was not a big issue for them as it did not happen for long. Aside from connection issues, they believed that they did not face any significant problems related to online learning.

Finally, the subjects were asked about their overall opinion regarding the use of technology to learn English. All fifteen subjects unanimously expressed their happiness with their experience of being trained online and underlined their approval on the use of technology to learn. This result came without any surprise. Their age range was between 23 and 27, so they were all Millennials or Generation Y, whose characteristics included familiarity with technology in their daily life and their work or study [10, 11].

4. Conclusion and recommendations
With the introduction of society 5.0 or the ‘Super Smart Society’, businesses and employees must adapt by integrating technology in their work and daily lives. Businesses often provide training courses to their employees. However, most training courses have been conducted via face-to-face methods, while online methods may be a better alternative. Despite being uncommon before the worldwide COVID-19 pandemic, the online method was applied in this research to assess its effectiveness, and it was embraced wholeheartedly by the subjects.

Overall, the results of the training courses, which were conducted both face-to-face and online, showed that online training was more effective as the improvement happened drastically. Moreover, the subjects experiencing online training stated their acceptance and approval for online training. Besides not experiencing any significant difficulties, the subjects also felt more benefits compared to face-to-face training. This result comes to no surprise as the subjects Generation Y or millennials are familiar with information technology.

This research has shown that online training can be a viable alternative to traditional education. Today's employees who are mostly Generation Y will be able to adopt the online methods quickly. In addition, they would not experience the perceived 'technology gap' that prevails in older populations, which will suggest a natural fit for online education and training.

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