



Text presentation or video: Malaysian university students' preferences with synchronous and asynchronous learning

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Abstract

In overcoming the obstacles of online learning with the current Covid-19 pandemic crisis, synchronous and asynchronous learning has been a significant part of teaching strategies applied by educators to construct a collaborative online environment with Malaysian university students. Synchronous learning has always been the most effective strategy for social learning, while asynchronous learning allows students to learn on their own schedule. Moreover, despite having many educational platforms created for higher educational settings, the practicality of selection between two teaching–learning approaches of text-presentation and video is still a debate among teachers/ lecturers with students' learning styles. Therefore, this paper explored Malaysian university students' preferences between synchronous and asynchronous learning modes with text-presentation or video. Qualitative and quantitative data from 178 participants from both public and private universities were collected via open and close-ended questions in the designed questionnaire. The findings indicated that 68% of the students preferred synchronous learning mode compared to asynchronous. Meanwhile, 39% of the students favoured both text-presentation and video learning tools to be implemented in synchronous and asynchronous approaches as it provided them better opportunities to grasp the learning content better. Thus, it can be concluded that the synchronous learning mode is preferred if only one method is provided as the students highly value the teacher's presence for ease of communication, but students prefer a range of delivery methods. Moreover, the students also displayed a strong preference for applying both text-presentation and video to achieve their learning outcomes. Thus, it is suggested that the university lecturers need to explore and apply interactive pedagogical methods in online teaching-learning process, while contributing to the development of motivation, participation, and engagement among the university students in acquiring their subjects. As such, the findings of this study have informed the pedagogical implications, and further studies are mandatory.

Keywords Text-presentation · Video · Online learning · Synchronous learning · Asynchronous learning

1 Introduction

Due to the worldwide pandemic outbreak of Covid-19, learners across the globe have been forced to transition from face-to-face classroom learning to online learning instead. Though online learning has long existed in this technological era among higher education institutions, its full benefit has recently been fully utilized by educators and students. Teachers would upload their tasks, assignments, tests, projects, and reading materials into online teaching/ learning platforms such as Google Classroom or Schoology. Students can access those online learning platforms either through their computers, smartphones, or tablets to participate successfully in online learning.

Similarly, videoconferencing platforms such as Google Meet, Microsoft Teams, WebEx, and Zoom have been employed for synchronous learning between the teacher/lecturer and students, where lessons and discussions happen simultaneously. As Ogbonna et al. (2019, p.2) asserted, “synchronous learning is delivered in real-time, and students and instructors are online at the same time.” With synchronous learning, there are a lot of virtual media resources that teachers can apply to their teaching strategies. The most common educational platforms often used are PowerPoint slides and instructional videos from YouTube. Studies have shown positive results on students’ learning performance through this learning method. According to Francescucci and Rohani (2019, p. 61), synchronous online learning provides immediate feedback and interaction with students and teachers; therefore, the students’ feeling of connection to the teachers and their classmates can enhance the students’ engagement in an online learning environment with face-to-face classroom learning features.

On the other hand, several researchers also reported that synchronous learning has its disadvantages for online learning as well. For instance Shukri et al. (2020) found that “though a majority of students perceived synchronous learning is as effective as face-to-face classroom learning” (p.795), several other students had the opposite view.

Meanwhile, several other studies showed that there had been a lag of feedback received from their teachers through asynchronous learning. For example, Hrasinski (2008) explained that asynchronous learning provides flexibility when students can learn at their own time without the restrictions of having to “be online at the same time with their teacher” (p.51), which means that students are given the opportunity for self-study.

The main drawback of online education among students is the time taken to clear doubts and clarification on specific lessons. According to Azar and Iskandar Tan (2022, p. 56), “when it comes to teaching with technology, there are pros and cons to it.” Lawless (2018) also studied to understand tertiary-level students’ perceptions of asynchronous learning. The results showed that interactions were the main concern among the students as they could not get live feedback to clarify from their lecturer. Still, Perveen (2016, p. 22) argued that “the opportunity

of delayed response allows them to use their higher order thinking skills (analysis, evaluation, and synthesis) as they can keep thinking about a problem for an extended time period and may develop divergent thinking.”

Nonetheless, online language learning among college students tends to be in reading and writing format. Moreover, the nature of some lecturers' delivery methods is either through text-presentations (PowerPoint slides, academic papers, eBook) or short educational videos (lecture videos, YouTube) for students' academic development. Others may provide reading materials and require the students to prepare a presentation in both learning tools for the teacher to assess the students' understanding. Still, this kind of teaching approach may not work best for students as some learn best by reading text-based materials, and some learn best with graphics and animations involved. Keller (2009, as cited in Jensen et al., 2018, p. 525), stated “to gain attention and satisfaction, a video lecture may include quick and concise attractive images or animation which can serve as entertainment.” As it has been previously discussed, it seems that many researchers believe in integrating informative texts with instructional videos in synchronous and asynchronous learning modes so that successful learning can be achieved.

Since the language learners are constantly encouraged to enhance their critical thinking skills and communication skills, integrating these materials such as text presentation and instructional video in synchronous and asynchronous learning, is inevitable. Therefore, further investigation is needed to understand students' insights into both instructional tools in online language learning. Hence, the primary purpose of this study is to explore the student's preference for text presentation or video with synchronous and asynchronous learning modes.

2 Research questions:

1. What are the Malaysian University students' opinions on the synchronous and asynchronous learning method?
2. Which learning mode do Malaysian university students prefer between synchronous and asynchronous learning?
3. What are the Malaysian university students' perceptions on text presentation and video for online language learning?
4. Which learning tool (text presentation vs video) would mostly be preferred by Malaysian university students for synchronous and asynchronous learning modes?

3 Literature review

3.1 Multimedia learning

Ever since the introduction of technology, educational researchers have applied and practiced Mayer's cognitive theory of Multimedia Learning and Constructivist Learning Theory to determine the effectiveness of multimedia learning on students' learning outcomes. As stated by Mayer (2003, p.43), “We define multimedia

learning as learning from words and pictures, and we define multimedia instruction as presenting words and pictures that are intended to foster learning.” This theory has been a powerful tool in assisting researchers in analyzing how students learn and process information with various factors considered. Korbach et al. (2017) highlighted that “Within cognitive theories of learning and instruction, the cognitive load has been stressed as an important factor for successful and efficient learning.”

Mayer’s theory suggests that instructional multimedia learning materials can present information effectively for learners to develop their learning more accessible. As highlighted by Mayer and Moreno (2003), “meaningful learning requires a substantial amount of cognitive processing to take place in the verbal and visual channels.” (p.44).

3.2 Synchronous and asynchronous learning

In terms of online learning, synchronous and asynchronous education is often compared among educators on which best fits students’ learning styles and needs. Moore and Kearsley (1996) proposed a theory called the Transactional Distance Theory, defined as “the universe of teacher-learner relationships that exist when learners and instructors are separated by space and/or by time.” As Gorky and Caspi (2005, p. 2) asserted that “Advances in communications technology, which made synchronous and asynchronous interaction readily available, enabled interaction to become a key factor in distance education systems.” Moreover, synchronous learning can ensure students’ learning satisfaction effectively, while asynchronous learning offers the students unlimited access to learning materials at their leisure and pace. Hrastinski, (2008, p. 52) specified that “asynchronous learning is generally more thoughtful than an e-learning environment and synchronous sessions help students feel less isolated.”

3.3 Text-presentation and video

As technology has dramatically advanced through its innovation, online language learning through text has been an effective instructional tool since the late 1990s. E-books are sometimes characterised as text that is available in an electronic format such as Word’s doc, txt, HTML, or XML (Hawkins, 2000; Orme, 2021; McKnight & Dearnley, 2003). Other meanings of e-books relate to the conversion of print to electronic features, such as printed text turned into digital form to be viewed on a computer screen (Saurie & Kaushik, 2001). Johnston et al. (2015, as cited in Abuloum et al., 2019, p. 81) stated that “while print is at present the dominant format of textbooks, the rising condition is supporting a move toward electronic textbooks.”

Alternately, “Video-based learning (VBL) has a long tradition as a learning method in educational classes.” (Yousef et al. 2014, p. 112). There are various kinds of videos utilized by educators to fit visual learners in the learning process, such as graphic animation from YouTube, Lecture videos, etc. Chun and Pluss (1996, p. 183) stated that “words associated with actual objects or imagery techniques are learned more easily.” Thus, researchers have begun to recognize the potential of video-based learning to facilitate students’ language learning. “Video are portable

and can be studied when a student wants and at the student's individual learning pace." Brecht (2012, p. 228).

Ultimately, Mayer and Moreno (2002, p.102) pointed out that "computer-based multimedia learning environments that consists of pictures such as animation and words such as narration would offer a potentially powerful venue for improving student understanding."

3.4 Conceptual framework

Ever since the global spread of Covid-19 around the globe, all methods of instruction have been used to acquire course information through multimedia learning, and the presence of ICT has since played a significant role for educators in guiding the students through synchronous and asynchronous learning. In addition, the development of technology provides both educators and students with various platforms and resources for online language learning purposes. As pointed out by Özdal et al. (2021, p. 700), "distance education, online learning, or virtual classes for the purpose of promoting language acquisition can provide for language students' needs such as developing language skills." Hence, the proposed conceptual framework was adapted from Mayer's cognitive theory of Multimedia Learning and Constructivist Learning Theory.

In accordance with that, each student has different learning abilities to process any information their educators provide for successful learning in a higher educational setting. Their learning characteristics can be varied from being a visual to a kinaesthetic learner with a preference from reading printed or digital text to watching videos to acquire and perceive information for online language learning. According to Mayer (2009), the dual-channel assumption dictates that "humans possess separate channels for processing visual and auditory information" (p. 63). The first is the visual-pictorial channel, which is responsible for processing pictures perceived via the eyes (including text presented on a screen). The auditory-verbal channel processes spoken words.

Nonetheless, even though various research was made to investigate and explore the students' perceptions and preference over reading materials and videos, synchronous and asynchronous learning, a few research was conducted in the Malaysian higher educational context that combines these four variables altogether. Instead, it was either students' preference for printed or digital text and video, their perceptions in learning with ICT or multimedia, or their perceptions for synchronous and asynchronous learning. List (2018) affirmed that little investigation had been done to investigate students' perceptions in processing information and learning through text and video.

As from one of the researchers, Bailey et al., (2021, p. 2579) stressed that "additional investigation into using Zoom and other learning and teaching platforms is required to determine its effectiveness on student engagement and learning."

Eventually, Fig. 1 presents a visual illustration of the concept to find out Malaysian university students' perceptions and preferences for synchronous and asynchronous learning. Next, the second variable is to determine their perceptions of

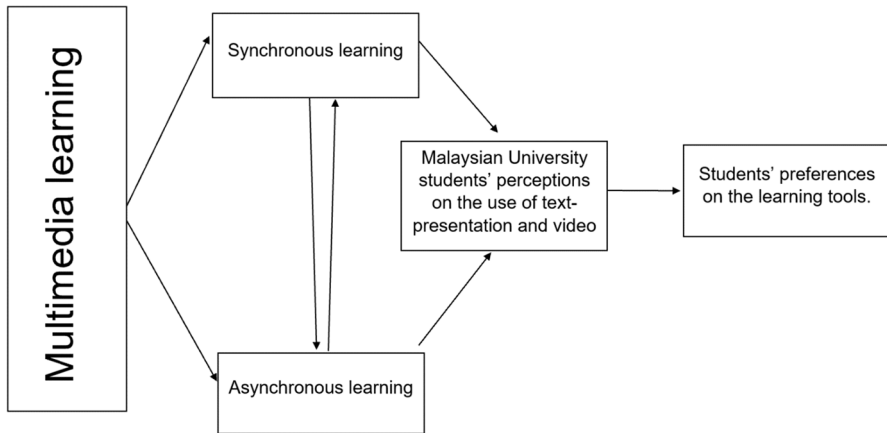


Fig. 1 The conceptual framework of this research

text-presentation and video for both learning mode. Finally, the last variable would verify the students' preference for both learning tools with synchronous and asynchronous mode.

4 Methodology

This study applied both qualitative and quantitative approaches to answer the research questions through the convenience sampling method to consider the objectives of this paper due to the restrictions caused by the Covid-19 pandemic in Malaysia and the time frame given for this research. Convenience sampling was considered the best method to collect data from respondents through an online survey. “The rationale behind using convenience sampling method for researchers would be where target population meets certain practical criteria such as availability, geographical proximity, or the willingness to participate for the study” (Dörnyei, 2007, p. 99).

4.1 Participants

The primary consideration for this research will be among university students in Malaysia. In order to have enough representation for all year levels, the target population will be a minimum of 150 students from both public and private universities in Malaysia. The questionnaire will then be distributed to the participants through the Google Form link.

4.2 Instruments

When designing the survey, the researcher could hardly find any references for text-presentation. Therefore, specific questions had to be adapted through various articles with reference to PowerPoint presentations. However, the items vary from PowerPoint to text-presentation instead. Furthermore, the items taken from these researchers were then revised accordingly to associate with the current study.

Next, the questionnaire used the 5-point Likert scale and was divided into four sections; the first part would be the demographic profile with some open-ended questions containing age, gender, university type, programme, and learning style. The second part will be based on the students' preference for synchronous and asynchronous learning. Their perceptions on the use of text-presentation and video would be the third and fourth parts of the questionnaire. And the last part would be where the students would have to choose their preferred learning tool between text-presentation or video for synchronous and asynchronous learning mode. They would also provide a justification based on the selected learning tool for online language learning.

Before proceeding with the data collection procedure, a total of 35 sample responses was run through SPSS to calculate the results of the reliability coefficient for all items categorically.

Excluding the demographic profile and justification, Table 1 presents the data calculated from the pilot study sample. The last part of the survey contained only two items, one being an open-ended question and another for justification. Therefore, it was deemed appropriate to first analyze each item individually and then combine the last three sections to calculate its reliability score.

Furthermore, although the first section showed a lower reliability test score, the value was still above 0.7, which was deemed as acceptable according to Cronbach's alpha measure of internal consistency. Followed by the rest that demonstrated much higher statistics, these results were reliable for further collection and analysis.

4.3 Data collection

The survey was designed with an open and close-ended questionnaire for this research. The open-ended questions would be the demographic profile and preferred learning tools with justification. In contrast, the close-ended questions would be students' preference for synchronous and asynchronous learning and their perceptions on the use of text-presentation and video. Furthermore, this survey contained 35 questions overall, and the 5-point Likert scale concept was used for the close-ended questions. The scale ranges from 1 to 5, where 1 being strongly disagree and 5 being strongly agree.

The data were collected via a self-administered questionnaire (SQA) through the Google Form. This method was regarded as the best way for researchers to manage a large population of responses with accurate data and at the same time allowed the respondents to maintain their anonymity as well. Thus, this research has collected a

Table 1 Reliability statistics for each category

Reliability Statistics			
Item	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of items
Students' preference for synchronous and asynchronous learning	0.710	0.708	7
Students' perceptions on the use of text-presentation	0.879	0.907	10
Students' perceptions on the use of Video	0.968	0.970	10
Combining students' perceptions on the use of text-presentation and video with students' preference on learning tool for online language learning	0.943	0.946	21

Table 2 Demographic profile

Items		Frequency	Percentage
Age	18–22 years old	128	71%
	23–26 years old	33	18%
	27–30 years old	8	4%
	Over 30 years old	9	5%
Gender	Male	32	18%
	Female	146	82%
University type	Public university	103	57%
	Private university	75	42%
Programme	Foundation	8	4%
	Diploma	28	15%
	Degree	107	60%
	Master	26	14%
	PhD	9	5%
What is your learning style?	Visual (Spatial)	107	60%
	Aural (Auditory-Musical)	34	19%
	Verbal (Linguistic)	17	9%
	Physical (Kinaesthetic)	9	5%
	Logical (Mathematical)	7	3%
	Social (Interpersonal)	2	1%
	Solitary (Intrapersonal)	2	1%

total of 178 responses, which have passed a little over the minimum targeted population of 150 respondents from the public and private universities in Malaysia.

As transcribed in Table 2, out of the 178 sample population, the majority of the participants with 71% range from age 18–22 years old, with 82% female respondents. In addition, most of them studied in a public university (57%, $n = 103$), with 60% of them were studying for a bachelor's degree.

The preference of learning styles among these students was dominated by visual (spatial) style (60%, $n = 107$) as the primary preference, and the second preference (19%, $n = 34$) would be the aural (auditory-musical) style.

4.4 Data analysis

In this analysis, the data were classified and analysed into two main categories: qualitative and quantitative. While the qualitative data was evaluated through coding, the quantitative data were examined descriptively using the SPSS software from IBM Version 23. The quantitative data would be shown as tables form to present the descriptive analysis collected from the respondents in terms of frequency and percentage for each item. To protect the participants' identities, the abbreviation of "S" with numbers would be used to represent the student's justification for the qualitative data.

5 Findings

As mentioned previously, this study was conducted to explore students' preference for text presentation or video with the synchronous and asynchronous learning method. Therefore, four research questions were created to present the analyzed data. For each item, the abbreviations of "SL" represent synchronous learning, "AL" represents asynchronous learning, "T" for text-presentation, and "V" for video. Consequently, findings will be demonstrated according to these research questions.

RQ1: What are the Malaysian University students' opinions on the synchronous and asynchronous learning method?

The findings for this first research question indicated (33%, $n=60$) agreed that synchronous learning mode had supported the participants' learning process through other communication types more often than asynchronous learning mode (SL1). In addition, 44% of the participants strongly agreed that learning synchronously was more interesting as they could directly interact with the instructor (SL2).

Although (32%, $n=58$) has stated that asynchronous learning mode allowed them for a more intensive self-study (AL1). However, 34% strongly agreed that asynchronous learning has made them feel isolated (AL2).

Nonetheless, half of them (45%, $n=81$) viewed synchronous mode to be better for online language learning (SL3), while (36%, $n=65$) considered online language learning was much better through asynchronous mode (Table 3).

RQ2: Which learning mode do Malaysian university students prefer between synchronous and asynchronous learning?

As the results for (SL3) and (AL3) was parallel, therefore, the next item would determine the participants most preferred learning mode. Hence, this would also answer the second research question (Fig. 2).

With a majority (68%, $n=121$), the participants have chosen synchronous learning as their primary preference that facilitates online language learning better. Meanwhile, the rest of the respondents (32%, $n=57$) preferred asynchronous learning to better promote their online language learning.

Table 3 The students' perceptions on synchronous and asynchronous learning

Items	SD	D	N	A	SA
SL1	5, 2%	25, 14%	38, 21%	60, 33%	50, 28%
SL2	6, 3%	10, 5%	32, 18%	51, 28%	79, 44%
SL3	3, 1%	9, 5%	29, 16%	56, 31%	81, 45%
AL1	13, 7%	25, 14%	48, 27%	34, 19%	58, 32%
AL2	6, 3%	26, 14%	35, 19%	49, 27%	62, 34%
AL3	6, 3%	22, 12%	39, 21%	46, 25%	65, 36%

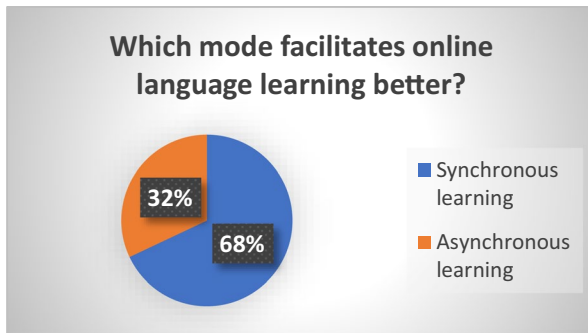


Fig. 2 Learning mode preference

RQ3: What are the Malaysian university students’ perceptions towards text presentation and video for online language learning?

To answer the third research question, Table 4 would demonstrate the findings for students’ perceptions of using text-presentation. And Table 5 presents the results for students’ perceptions on the use of video.

In the third section of the questionnaire, 48% agreed that their lecturer maintained a good balance of communication between lecture and text-presentation (T1), and 28% also agreed with text-presentation being a vital learning tool during the learning process (T2).

Additionally, 41% of the participants also agreed that text-presentation could help the students follow the lesson easily (T5).

However, T3 and T4 showed similar data from the participants when asked if “the use of text-presentation provides the opportunities for broader discussion,” 27% opted for neutral. Followed by 24% chose neutral regarding “text-presentation could help students follow the lesson easily.” The same goes with T6 and T8, (28%, n=51) felt neutral to consider that text-presentation could improve

Table 4 Students’ perceptions on the use of text-presentation

Items	SD	D	N	A	SA
T1	2, 1%	10, 5%	48, 27%	86, 48%	32, 18%
T2	12, 6%	29, 16%	47, 26%	50, 28%	40, 22%
T3	25, 14%	39, 21%	49, 27%	37, 20%	28, 15%
T4	22, 12%	41, 23%	43, 24%	42, 23%	30, 16%
T5	6, 3%	32, 18%	39, 21%	74, 41%	27, 15%
T6	22, 12%	31, 17%	51, 28%	43, 24%	31, 17%
T7	16, 9%	39, 21%	49, 27%	49, 27%	25, 14%
T8	41, 23%	44, 24%	46, 25%	27, 15%	20, 11%
T9	9, 5%	10, 5%	28, 15%	51, 28%	80, 44%
T10	5, 2%	20, 11%	28, 15%	56, 31%	69, 38%

Table 5 The students' perceptions on the use of Video

Items	SD	D	N	A	SA
V1	14, 7%	27, 15%	51, 28%	53, 29%	33, 18%
V2	6, 3%	7, 3%	33, 18%	41, 23%	91, 51%
V3	64, 36%	46, 25%	25, 14%	22, 12%	21, 11%
V4	94, 52%	34, 19%	18, 10%	15, 8%	17, 9%
V5	11, 6%	24, 13%	44, 24%	50, 28%	49, 27%
V6	21, 11%	40, 22%	39, 21%	36, 20%	42, 23%
V7	24, 13%	31, 17%	48, 27%	43, 24%	32, 18%
V8	18, 10%	30, 16%	60, 33%	36, 20%	34, 19%
V9	9, 5%	25, 14%	31, 17%	53, 29%	60, 33%
V10	11, 6%	28, 15%	64, 36%	34, 19%	41, 23%

their learning comprehension, and (25%, $n=48$) answered neutrally favoring bullet point and text-only presentations over the presentation with audio, video or graphics.

Surprisingly, T7 showed similar data when (25%, $n=49$) respondents answered both neutral and agreed to consider that they could understand the subject better through text presentation.

For the last two items, 44% strongly agreed that text-presentation could improve their vocabulary and grammar (T9). And 38% also strongly agreed with the statement “text-presentation should not replace lecturers. But it is definitely an asset to learning.” (T10).

In the fourth section of the questionnaire, 29% agreed that discussing the videos provided by their lecturers would make the online class more interesting (V1). And 51% strongly agreed that watching videos has helped increase their comprehension of the lesson content (V2).

Even so, the findings revealed that 36% strongly disagreed with V3 and 52% strongly disagreed with V4. The participants felt that when the lecturer used a video, it did not make their learning more accessible, and it did not support the critical aspects of the learning material.

Nonetheless, (28%, $n=50$) agreed that using the videos does enhance the effectiveness of learning (V5), and (23%, $n=42$) strongly agreed that this learning tool helped meet the learning objectives (V6).

Subsequently, 27% felt neutral about watching the videos to improve their language skills (V7). Although 33% did not agree or disagreed on finding the video to be more enjoyable when learning (V8), 33% still strongly agreed that the video lessons were highly interesting (V9). The same finding could also be found in the last item (V10), (36%, $n=64$) felt neutral with the statement “using videos in online class has been more effective than looking at slides.”

RQ4: Which learning tool (text presentation vs video) would mostly be preferred by Malaysian university students for synchronous and asynchronous learning modes?

In answering the last research question, Fig. 3 below revealed that (39%, $n=70$) had chosen both text-presentation and video as their most preferred learning tool for both learning mode. Followed by the second most chosen learning tool would be the video only (34%, $n=61$).

According to the respondents, the least favored learning tool for online language learning would be the text-presentation only with (27%, $n=47$).

Furthermore, regarding the participants' justification for the most preferred learning tool for synchronous and asynchronous learning mode, they pointed out that mixing both learning tools together would help improve their understanding of subject matter and provide opportunities to gain more knowledge. It could also help increase their motivation and attention and enhance their language skills. Most importantly, text-presentation was deemed as necessary as video in acquiring a second language. Therefore, mixing both learning tools in the teaching–learning process was considered a balanced tool that would suit each individual's learning style. "Affective features of an instructional message can influence the level of learner engagement in cognitive processing during learning." (Mayer, 2014, p. 175).

Below are some of the responses obtained from the respondents.

S1: A balanced tool will provide better understanding and cater the interest and needs.

S2: It is more balance rather using one method, because not all students have the ability/interest in text only or video only method. Hence, using both methods are suitable for both lecturers and students.

S3: Provide broader ways in gaining knowledge and information.

S4: Because most of the students are kinaesthetic learners so video is suitable for them but still students can't catch up everything through video so text should be there to help them understand the content better.

S5: the lesson is easier to understand with video to support the text.

S6: seem more interesting when the teacher uses both when teaching.

S7: it provides various opportunities for us as learners to develop as well as enhancing our English language.

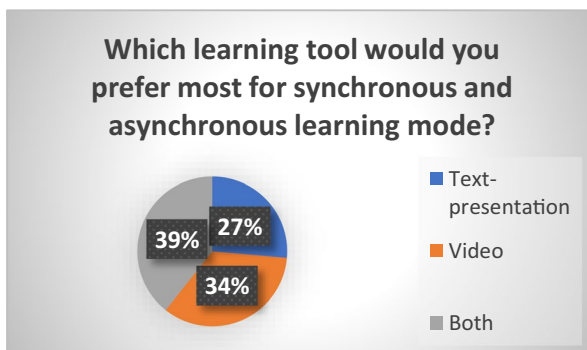


Fig. 3 Learning tool preferences for both learning modes

S8: certain topic i prefer to learn with video, and for some more difficult courses, I prefer to learn through reading texts.

S9: in online learning, I think video is just as important as text when it comes to acquiring a second language, text is for formal learning and video is created for informal learning.

S10: both has the same function to improve language learning.

As for choosing video only for synchronous and asynchronous learning mode, the participants mentioned that this learning tool offered more opportunities for teacher-learner interactions, took less time to process information, and was more effective than text-presentation. Moreover, they also expressed that they could understand better by watching videos rather than reading texts in the learning process, enhancing their English speaking and listening skills while learning Western cultures and slang. Some even stated that they preferred videos as they were identified as visual learners. Consequently, some of their justifications were written as follows:

S11: it is more effective for me to learn from video than slides.

S12: the advantages are in terms of pronunciation; we can immediately know pronunciation and how to pronounce it correctly.

S13: video help to enhance my speaking skill.

S14: i can learn different accents and new words that i never heard before.

S15: personally, I prefer to learn through visual.

S16: videos are always useful for explaining.

S17: it has helped to understand difficult concept so far.

S18: I find the video contents hugely motivating for learning English.

S19: The exposure from video improves my English language skills.

S20: an amazing tool for learning languages.

Finally, the participants chosen text-presentation only for synchronous and asynchronous learning mode stated that it helped to improve their reading skills and correct their spelling errors. They could also obtain more information through English vocabulary by extensive reading. Furthermore, they also indicated that they learn the subject better through text than by watching videos. These were some of the comments/ feedbacks taken from their responses.

S21: It helps me a lot to understand difficult words.

S22: easier to filter and manage information with text.

S23: easier for me to comprehend with text.

S24: I can learn new vocabularies with reading

S25: lot of information I can get from text.

S26: It is the best way to help us study.

S27: I learn new words and the correct spelling for complex words.

S28: I read to understand the meaning of words in the text.

S29: PowerPoint or academic papers are actually an interesting medium in learning to read English.

S30: I choose text because sometimes video is much more difficult to understand when learning new subject.

6 Discussion

This research has examined the students' preferences for synchronous and asynchronous mode and further investigated the students' perceptions for the use of text-presentation and video for online learning. Finally, this study has also determined the students' preferences for learning with text-presentation or video with synchronous and asynchronous mode.

In planning and implementing research, there are bound to be strengths and weaknesses identified in every study. For instance, this study has the advantage when applying both research methodologies with close and open-ended questions to investigate and achieve the research objectives. And the overall available academic reading materials were able to be defined under one classification of text-presentation. However, considering the estimated number of students studying at higher educational settings in Malaysia, a total of 178 responses of this study could not represent a whole sample for overall students in this country. Still, considering the time length given to conduct this research, this sample can be regarded as a significant proportion of the population size since the students were equally from both public and private universities in Malaysia.

Next, despite the data being quite similar in their perceptions for both learning modes, the following information clearly showed that many students have chosen the synchronous learning mode over the asynchronous learning mode in facilitating their online learning. This can best be interpreted that the students most likely preferred this learning mode because it may provide them with the sense of learning as in a physical classroom environment with the discussions happening in real-time. Compared to the asynchronous learning mode, the students can easily communicate with their lecturer with synchronous learning mode. It would also make them feel less isolated when the lecturer is present virtually. Moreover, the lecturer could apply various learning platforms to make the class more interesting during synchronous learning, such as break-out rooms and chat boxes for interactive discussion. Unfortunately, there were not many platforms the lecturer could utilize compared to the asynchronous learning mode. As it was pointed out (Park & Bonk, 2007, as cited in Memari, 2020, p. 96), "synchronous virtual environments provide immediate feedback, enhance dynamic interactions among participants, strengthen social presence, and foster the exchange of emotional supports and supply verbal elements."

Yet, this result was not in line with the previous studies from Bailey et al. (2021), as their students preferred the latter option. Still, their study was focused on finding out the motivation for asynchronous collaborative writing practice and video-synchronous speaking practice and while the findings of the current research was the opposite.

Even so, many of the students preferred their lecturers to apply both learning tools for online language learning. "When words and pictures are presented, the learner is more likely to build verbal and visual representations and to make connections

between them” (Mayer & Moreno, 2002, p. 113). Their justifications can support this by using both text-presentation and video in a lesson balanced with each student’s learning styles. As mentioned previously, not all students can learn solely on text, and not all can comprehend with only video. Mayer & Moreno (2002, p.111) stated that “from constructivist learning theory, meaningful learning occurs when learners actively select relevant information, organize it into coherent representations, and integrate it with other knowledge.” In other words, it means that cognitive construction varies based on the learner’s cognitive processing during learning in relation with text and video.

Besides, while the students can take note when the teacher explains with the text materials presented for synchronous learning, they can also do the same with video. “Students learned more deeply both from narration and animation than from narration alone” (Mayer & Moreno, 2002, p.112).

Furthermore, this can also be applied in an asynchronous learning mode where the lecturer may open an online interactive discussion board. The students can have an access to inquire for clarification, explanation on the topic, and obtain immediate feedback for their learning course, i.e., assignments or projects. According to List, “Variety of strategies supporting single text comprehension, were identified as also supporting both text and video integration” (2018, p. 44). As Gorsky and Caspi (2005, p. 2) emphasized that the “advances in communication technology, which made synchronous and asynchronous interaction readily available, enabled interaction to become a key factor in distance education systems.”

Likewise, the students perceived both learning tools helped them gain more information on the lesson. This may relate with Moore’s transactional theory where distance teaching and learning involves dialogue, structure, and learners’ autonomy. Presumably, the lecturer presents the video first during the introductory stage and text-presentation after; this would engage the students in a broader discussion. Be that as it may, these results were found to be inconsistent with the hypotheses stated by Tarchi et al. (2020) that “the text condition would bring an advantage to reading comprehension as compared to the video and subtitles conditions” (p.9). One of the students stated that it provides an opportunity for them to “work through difficult concepts with multiple resources” (S31). Another also mentioned that “they are keener to study when the lecturer apply both learning tools in teaching a course” (S32). It can be explained from the results that text-presentation improved their attention during lectures and discussing the videos could engage the students’ interest in learning the course. “A dialogue is purposeful, constructive, and valued by each party. Each party in a dialogue is a respectful and active listener; each is a contributor and builds on the contributions of the other party or parties. The direction of a dialogue in an educational relationship is towards the improved understanding of the student” (Moore, 1993, p.24).

Moreover, Mizrachi et al. (2018) compared students’ preference for in-print and on-screen text and their findings were quite similar to the current study as students perceived reading text materials “for effective comprehension and retention” (p.13). The present study demonstrated that it helped increase their language ability. The students regarded text-presentation as an essential tool in assisting them in learning the course effectively as the lecturer maintained a good balance of communication between lecture and discussion.

Alternately, Foong et al. (2021, p. 17) highlighted that learning through the teaching video helped “enhance their understanding of the lessons.” As found in this study, the use of video for online language learning with synchronous and asynchronous mode “provides a much clearer explanation for the topic” (S33). The students also noticed that the videos met the learning objectives effectively which enhanced their comprehension on the lesson content. Moreover, the students viewed the video as highly interesting because it was rather effective than to reading text.

7 Conclusion

To sum up, the current study had adapted Mayer’s cognitive theory of Multimedia Learning and Constructivist Learning Theory to investigate the students’ preference for synchronous and asynchronous learning mode, along with their perceptions on the use of text-presentation and video for online language learning. And their preferences in learning via text-presentation or video with synchronous and asynchronous learning mode.

Ultimately, the results concluded that students preferred synchronous learning over asynchronous learning. Many of them have chosen the integration of both text presentation and video for online language learning. Although the visual image of graphics and animations may increase the student’s learning outcome, text-based materials were also highly effective to develop their learning comprehension. The findings may help other researchers further understand the students’ preferences of instructional materials in online language learning. The text-presentation in this study could be a significant reference for researchers to apply in the future. It would be difficult to separate the text materials because students with a different program in higher education may learn from different text learning tools presented by their lecturer to determine and compare their preference with video. “In order to maximize learning, when designing a course, different learning styles should be taken into account and different formats for presenting the content should be made available” (Fidalgo & Thormann, 2017, p.155).

7.1 Implications

The findings of this study have significant implications for the understanding of how to overcome the obstacles of online learning. Taken together, these results suggest that it is better in online classrooms to emphasise student’s engagement with tasks, peers and teachers. It is asserted that “learning in an online classroom can be optimized when teaching methods focus on student engagement with course content and student–student interactivity” (Swartzwelder et al., 2019, p.1). The interactivity of students needs to be emphasized in the classroom level. Therefore, when the teachers prepare their lesson plans for online classrooms, they should employ the interactive texts and tasks to increase the students’ engagement with the content. It should be highlighted that interactive multimedia can play a significant role in the students’ meaningful learning procedure. Interactive multimedia is digital material that allows the students to participate dynamically and interactively. It combines several types of media, including

text, audio, video, photos, and animation, to create an immersive and interactive experience. The benefits of employing this type of interactive text include enhancing the students' engagement, increasing the attention, improving the learning outcomes, and increasing collaboration and interactivity among the peers. Employing the user-friendly interface, educators and teachers may upload instructional materials on their online teaching platforms (such as google classroom or schoology) and allow students to download and learn at their own speed. Similarly, because evaluations are necessary for tracking and observing students' learning progress via online education, some platforms provide interactive interfaces such as discussion Forums and chat rooms. This strategy enables lecturers to provide tailored feedback to each student, boosting online engagement with students and preventing them from feeling socially isolated while learning online (Azar et al., 2022). Thus, the positive impact of technology has provided numerous alternatives for lecturers to create a teaching and learning process that is more enjoyable and productive for students (Azar & Tan, 2020).

The practical implications of synchronous versus asynchronous learning differ for students, teachers, and educational institutions. Here are some practical consequences for each learning style.

I. Practical implications for synchronous learning:

- a) **Schedule:** Because synchronous learning requires students and teachers to be accessible at the same time, a specific timetable must be developed and followed.
- b) **Technology:** Synchronous learning necessitates the use of technology that allows students and teachers to connect in real time, such as video conferencing software, chat platforms, or collaborative whiteboards.
- c) **Interactivity:** Synchronous learning enables for real-time feedback and interaction between students and teachers, which can help explain ideas and answer queries.
- d) **Engagement:** Because it allows for group conversations and collaborative learning activities, synchronous learning can be more engaging.

II. Practical implications for asynchronous learning:

- a) **Flexibility:** Asynchronous learning allows students to learn at their own speed and on their own schedule, which can be advantageous for students who have other responsibilities or want to work independently.
- b) **Technology:** Asynchronous learning necessitates the use of technology that allows students to access learning materials at any time, such as online learning platforms, pre-recorded films, or digital textbooks.
- c) **Self-discipline:** Because asynchronous learning demands students to manage their time and remain on top of their assignments without the framework of a regular classroom, they must be self-disciplined and motivated.
- d) **Accessibility:** Asynchronous learning can be more accessible for students with disabilities or other learning requirements since they can access and review learning materials as required.

Finally, the decision between synchronous and asynchronous learning is influenced by a number of elements, including the students' requirements, course content, and the educational institution's resources. Both styles of learning have practical ramifications, which educators should consider when creating and delivering courses.

7.2 Limitations and future works

Considering the small population sample in this study, future research that ought to do an investigation in a similar field should consider increasing the size of target participants to obtain more accurate data. Furthermore, though the theory was deemed to be appropriate for this study, researchers may apply other available theories to prove current research's validity. Finally, more extensive research should be done using the same methodology with a comparable topic as it provides insights into the students' perceptions during distance learning in Malaysia.

Similarly, the limitations of this study suggest that research involving synchronous and asynchronous learning mode should include a section where the students could provide inputs for reasons in choosing the learning mode concerning their learning styles. This could help educators to understand the students' point of view and determine the success of distance learning during this pandemic of Covid-19. As Syakur et al. (2020, p.763) asserted that "in the industrial era 4.0, digital technology can have a negative impact on education if its use is not appropriate."

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Data availability The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

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Competing interests None.

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