



INTERNATIONAL JOURNAL OF
EDUCATION, PSYCHOLOGY
AND COUNSELLING
(IJEPC)

www.ijepec.com



STUDENTS' PREFERENCE FOR TYPES OF ONLINE
ENGAGEMENT

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Article Info:

Article history:

Received date: 06.04.2025

Revised date: 20.04.2025

Accepted date: 13.05.2025

Published date: 24.06.2025

To cite this document:

Rahmat, N. H. (2025). Students' Preference for Types of Online Engagement. *International Journal of Education, Psychology and Counseling*, 10 (58), 665-678.

DOI: 10.35631/IJEPC.1058044

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Abstract:

Teaching in this post COVID era has prompted instructors to depend on online teaching modes. There are as much studies on exploring the advantages and drawbacks of online learning as there are on the challenges that students and instructors faced. Studies on online learning are also focused on improving online teaching so students/learners gain as much in online learning as they would in face-to-face classrooms. However, are online classes providing enough engagement to students? Do the students feel engaged during online sessions? This study explores the perception of students on the types of engagement students preferred for online classes. 75 students participated in the study. The instrument used is a questionnaire with 27 items using a 5 Likert scale such as 1 for Strongly Disagree, 2 is for Disagree, 3 is for Undecided, 4 is for Agree and 5 is for Strongly Agree. The categories in the questionnaire are emotional engagement, social and behavioural engagement. In addition to that, categories such as collaborative engagement and emotional engagement were also explored. Findings revealed students were positive towards the different types of engagement. This study also showed students put high value on collaborative and emotional engagement in online class. The findings of this study contributed to the body of conceptual and pedagogical knowledge towards online learning.

Keywords:

Teaching, Online Engagement, Emotional, Social, Behavioural, Collaborative, Cognitive

Introduction

During COVID, teachers/lecturers/instructors who were used to teaching face-to face, asked themselves “how can we manage online teaching?” Few years have passed and online learning has become the new norm. Now, it is no longer “is online learning as good as face-to-face learning?” Studies are now focused on ways to improve online learning. The study by Akpen, et.al. (2024) explored the challenges students and instructors faced during online learning. Interestingly, they reported that the success of online learning was not whether the platform is suitable or even if internet capability was the culprit. Another recent study by Tran & Nagirikandalage (2025) reports on engagement dimensions that are important in online classrooms and they include cognitive, behavioural, emotional, social, collaborative and technological. Similarly, the study by Wang, et.al (2025) also found that online learning engagement is pertinent to enhance learning quality.

Indeed, several studies have shown that engagement issues during online learning is important. The studies by Akpen, et.al. (2024), and Heilporn, et.al. (2024) reported that the challenges in students’ engagement remained a challenge for online success. Interestingly, as long as online learning has started, the issue of engagement is the main factors for success in learning. Way back in the study by Handlesman, et.al. (2010) reported distinct boosters to online learning and they are skills engagement, and also participation or interaction engagement. They also added emotional and performance engagement as equally important for online learning success.

Some researchers are focusing on reporting disengagement issues in online learning. According to Bergadahl (2022), when learners feel disengaged, they lost interest in the online sessions and this affects their learning. Disengagement issues again pushed more researchers to explore the types of engagement that online learners need. Mohd Nasir, et.al (2020) listed types such as applied engagement, goal-oriented engagement, self-discipline engagement, and interactive engagement as the categories of engagement that instructors need to pay attention to. In addition to that, Heilporn, et.al. (2024) reported that emotional-cognitive, social, agentic, and behavioral are good forms of engagement that bring about online learning success. This study is therefore done to explore perception of learners on their different types on online engagement. Specifically, this study is done to answer the following questions;

- How do learners perceive social engagement in online learning?
- How do learners perceive cognitive engagement in online learning?
- How do learners perceive behavioural engagement in online learning?
- How do learners perceive collaborative engagement in online learning?
- How do learners perceive emotional engagement in online learning?
- How do the total means of all types of engagement differ?

Literature Review

The literature review section discusses the theoretical framework of the study, past studies as well as the conceptual framework of the study.

Theoretical Framework

This study is anchored on Social Cognitive theory and connectivism theory.

Social Cognitive Theory and Classroom Interaction

Classroom interaction involves the interconnection between several aspects. The main interaction is between the teacher and the students. However, this interaction is affected by the surrounding in the classroom setting. One theory that depicts the dynamics of classroom interaction is the social cognitive theory by Bandura (1986). The social cognitive theory (figure 1) states that the key elements in learning are; (a) the learner (personal), (b) what the learner does (behaviour) and also the environment of the learning task. The arrows show how the elements affect one another. For instance, how a learner (personal) thinks about the learning task is displayed in his/her behaviour in the classroom. Learners' behaviour can cause a change in classroom decisions (environment) and this environment in turn affects the learner and his/her attitude towards the learning task. Although in online learning, the environment becomes online setting, the concept of classroom learning is maintained. Imagine an online setting, there is no difference whether the learner accepts the learning task as part of the learning activity. Even is the learning activity, each individual learner brings in his/her input and attitude into the task. This attitude can influence the behaviour of the learner and may influence the flow of the learning activity.

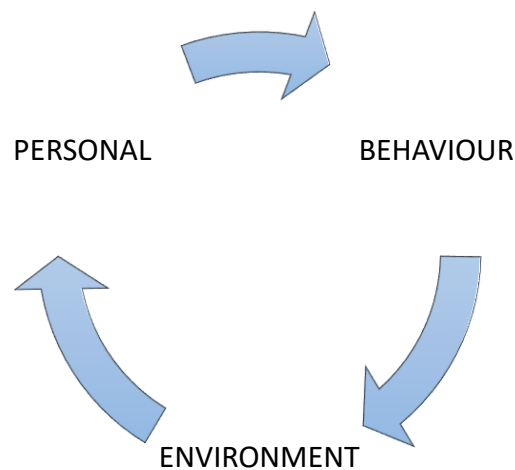


Figure 1- Social Cognitive Theory (source: Bandura, 1986)

Connectivism and Online Learning

Although online learning has long been done before COVID days, post COVID times now has acceptance the prevalence of online classes as normal, and maybe even necessary. One theory that backs up online learning is connectivism. It was first introduced by Siemens (2005) and has encouraged many researchers to justify online learning with more theories. Connectivism is based on four main principles and they are (a) autonomy, (b) connectedness, (c) diversity, and (d) openness. In terms of types of engagement, autonomy is achieved when learners can engage emotionally online. Next, online learners can get connectedness through social and behavioural engagement. Learners get diversity in online classes through collaborative engagement. Finally, learners can feel openness through cognitive engagement.

Past Studies on Online Engagement

The study by Turk, et.al. (2024) explored perceptions of students who learn online. The study focused on their expectations of the online classes. It also investigated the students' communication with their peers, and their instructor. This mixed mode study also looked at online strategies of four elements- peers, instructors, self-directed learning and multimodal engagement. Data collected data from interviews and also a survey. Quantitative findings showed students perceived their engagement with the instructors as important. Analyzed data from qualitative findings revealed that students found all four elements as important.

Hollister, et.al (2022) investigated three dimensions of engagement in online learning. The dimensions are social interactions with peers, teachers and administrations. 187 participants responded to the survey of 50 questions. Findings revealed some interesting students' perception of the three dimensions of engagement. Firstly, data revealed that the students felt low engagement with their teachers during online learning. Next, the students felt that they struggled with peer engagement as well. Findings also showed that the students felt comfortable asking and answering questions via online indicating there were some online features students were comfortable with.

The quantitative study by Sathe,et.al (2022) explored the effect of online learning on student engagement in several universities in Malaysia. This study employed cluster sampling. Six public and private universities were chosen. Data was collected from a questionnaire. 389 students responded to the questionnaire. Findings revealed there was a positive significant relationship between the course design and digital literacies.

Hisham,et.al. (2021) conducted a study to explore the level of student engagement on online learning. The study explored four dimensions and they are skill engagement, emotional engagement, participation engagement and performance engagement. This study also looked at the challenges students face that affect the online engagement. The study employed a modified version of Student Course Engagement Questionnaire (SCEQ). The questionnaire has 40 items. 125 students participated in this study. Findings showed that there is a positive engagement (from moderate to high).

A qualitative study was done by Farrell & Burnton (2020) to look into the engagement experiences faced by students in higher institutions in Dublin City University. This case study was done over a span of one academic year. Findings revealed five central themes and they are students' sense of community, their support network, how they balance their study with life, their confidence and their learning approaches. The study also reported that online success is caused by peer community, engaging online instructor, students' confidence and good structural structure by the institutions.

Conceptual Framework

This study (refer to figure 2) is anchored in the theories of social cognitive theory (SCT) and connectivism. These two theories are used to set the base for the investigation of the types of engagement in online learning. Social cognitive theory (SCT) by Bandura (1986) sets the scene for classroom learning. Online classroom can be seen as a normal traditional classroom. The only improvisation is the environment is changed to online. Next, online learning is supported by the theory of connectivism (Siemens, 2005). This theory states that successful online

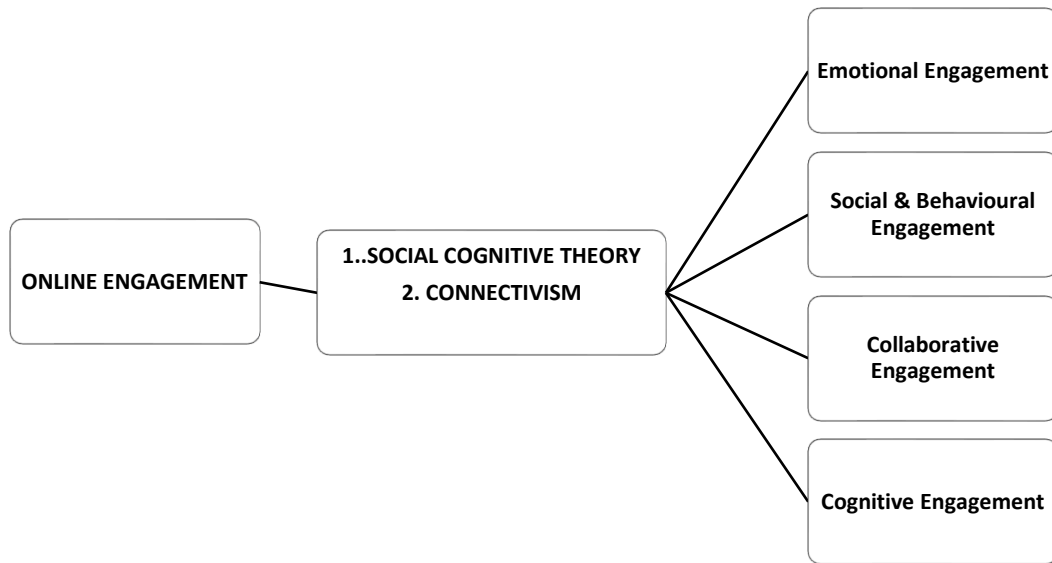
learning needs to adhere to four aspects such as (a) autonomy, (b) connectedness, (c) diversity, and (d) openness.

These two theories are used to indicate that (i) the make-up of a classroom environment needs to comply to three main criteria and they are the person's (students) personal factors. Teachers need to be aware of students' thoughts and feelings in the learning process. Next is the environment. The teacher is responsible to make the learning environment conducive. The third criteria is the behaviour. The classroom task coupled with the conducive environment may then lead to a change in behaviour on the part of the students when learning has taken place.

In addition to that, the inclusion of these two theories in this framework also revealed that with the inclusion of online mode, there is a need to include the theory of connectivism as a check-and-balance indication that online classrooms needs to comply to the four aspects (autonomy, connectedness, diversity and openness) in order for learners to feel engaged.

Hence, this study is conducted based on the concept that online engagement in the online class needs to take into consideration that the traditional classroom still exists to facilitate teaching (Bandura, 1986); and the conditions are personal factors, environment, and behaviour. The only thing that makes online classes different is the environment. Next. In to determine if online classroom is successful, there is a need to check if they fulfil the criteria of connectivism (Siemens, 2005) and taking "connectedness" into consideration, this study focuses on the types of engagement students get when they enter online mode classrooms.

In the context of this study, the types engagement by Redmond,et.al. (2018) was used as measurement. The first type of engagement by Redmond,et.al. (2018) is emotional engagement and this type of engagement provides autonomy for learners during online sessions. Next, social and behavioural engagement provide learners with a sense of connectedness. Collaborative engagement allows for diversity of ideas and opinions in online classes. Finally cognitive engagement encouraged openness among learners during online sessions.



**Figure 2– Conceptual Framework of the Study-
Types of Online Engagement**

Methodology

This quantitative study is done to explore motivation factors for learning among undergraduates. A convenient sample of 75 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted from the types of engagement by Redmond, et.al.(2018) to reveal the variables in table 3 below. According to Redmond, et.al. (2018), five types of engagement can be identified in online learning and they are social, cognitive, behavioural, collaborative and emotional engagement. Table 4 below shows the categories used for the Likert scale; 1 is for Strongly Disagree, 2 is for Disagree, 3 is for Undecided, 4 is for Agree and 5 is for Strongly Agree.

Table 3- Distribution of Items in the Survey

SECTION	TYPE OF ENGAGEMENT	ITEM	Cronbach Alpha
B	SOCIAL	5	.833
C	COGNITIVE	6	.889
D	BEHAVIOURAL	6	.917
E	COLLABORATIVE	5	.909
F	EMOTIONAL	5	.851
		27	.969

Table 4- LIKERT SCALE Used

1	STRONGLY DISAGREE
2	DISGAREE
3	UNDECIDED
4	AGREE
5	STRONGLY AGREE

SPSS analysis was done to determine the reliability of the instrument. Table 1 also shows the reliability of the survey. Table 5 shows the Cronbach Alpha interpretation for the instrument chosen in the study. The analysis shows a Cronbach alpha of .833 for the Social Engagement (Section B) items. Next, Section C -Cognitive Engagement shows a Cronbach Alpha of .889. Section D- Behavioural Engagement has a Cronbach Alpha od .917. Section E -Collaborative Engagement has a Cronbach Alpha of .909. Finally, Section F-Emotional Engagement has a Cronbach Alpha of .851. The overall Cronbach Alpha for all 27 items is .969; thus, revealing a good reliability (Konting,et.al, 2009) of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

Table 5- Interpretation of Value of Cronbach Alpha (Source: Konting,et.al., 2009)

Cronbach Alpha Value	Interpretation
0.91-1.00	Excellent
0.81-0.90	Good
0.71-0.80	Good and Acceptable
0.61-0.70	Acceptable
0.01-0.06	Not acceptable

Findings

The findings section presents analysed data to answer the research questions. The first section presents the findings for demographic profile.

Findings for Demographic Profile

Table 6- Demographic Profile

Question	Demographic Profile	Categories	Percentage (%)
1	Gender	Male	21%
		Female	79%
2	Semester	Part 1-4	45%
		Part 5 and above	55%
3	Cluster	Science & Technology	41%
		Social Sciences & Humanities	59%
4	Learning Preferences	Online	38%
		Face-to-face	62%

Table 6 above on the demographic of the respondents. 21% of the respondents are male while 79% are female students. Next, 45% of the respondents are studying in Part 1-4 while 55% are studying in Part 5 and above. When it comes to cluster, 41% are studying science & technology courses while 59% took social sciences & humanities courses. Finally, 38% preferred online classes while 62% preferred face-to-face classes.

Descriptive Analysis

This section presents the analysis based on the research questions.

Findings for Social Engagement

The answer to research question 1 is presented in the analyzed data below; How do learners perceive social engagement in online learning? According to Redmond, et.al.(2018), social engagement is measured by how students build community, create a sense of belonging, develop relationships and establish trust. Five items were used in this section to measure that.

Table 7- Mean for SOCIAL ENGAGEMENT (SE)

NO	STATEMENT	Mean	SD
1	SEQ1 Online learning allows me to participate in academic activities	3.9	.74132
2	SEQ 2Online learning allows me to participate in non-academic activities	3.7	.77273
3	SEQ 3Online engagement gives me a sense of belonging to my course mates	3.6	.71836
4	SEQ 4Online learning gives me a purposeful relationship to help me improve on my studies	3.8	.81936
5	SEQ 5Online learning allows me to establish trust with my peers	3.6	.79932

Table 7 above shows the mean for social engagement. The participants reported the highest mean (mean=3.9; SD=.74132) for the item that states that online learning allowed them to participate in academic activities. Next, the second highest of 3.8 (SD=.81936) reported that the learners perceived that online learning gave them a purposeful relationship to help them improve their studies. Finally, the two items shared the lowest mean of 3.6. Students reported the lowest mean on “online engagement have them a sense of belonging (mean=3.6; SD=.71836. The students also reported that online learning allowed them to establish trust with their peers (mean=3.6; SD=.79932).

Findings for Cognitive Engagement

The answer to research question 2 is presented in the analyzed data below; How do learners perceive cognitive engagement in online learning? Redmond, et.al.(2018) listed several indicators for cognitive engagement and they are thinking critically, activating metacognition, integrating ideas, justifying decision, developing deep discipline understandings and distributing expertise. For that, six items were used to measure cognitive engagement.

Table 8- Mean for COGNITIVE ENGAGEMENT (CogE)

NO	STATEMENT	Mean	SD
1	CogEQ1 Online learning gives a chance to think critically	3.7	.71610
2	CogE2 Online learning gives me a chance to pay attention to my learning	3.6	.81606
3	CogEQ3 Online learning gives me the opportunity to integrate what I. already know to what I need to learn	3.6	.69308
4	CogEQ4 Online learning allows me the opportunity to compare ideas from different sources	4	.76217
5	CogEQ5 Online learning allows me to learn beyond my course requirement	3.8	.69826.
6	CogEQ6 Online engagement allows me to check my sources from different experts	4	.72485

Table 8 presents the mean for cognitive engagement. Two items share the highest mean. The first item states that the students reported that online learning allowed them the opportunity to compare ideas from different sources (mean=4; SD=.76217). Sharing the same highest mean of 4 (SD=.72485) is also the item that reported that online engagement allowed them to check their sources from different experts. Two items shared the lowest mean of 3.6. Firstly, students reported that online learning gave them a chance to pay attention to their learning (mean=3.6; SD=.81606). The next item with the same lowest mean (mean=3.6; SD=.69308) is when students reported that online learning gave them the opportunity to integrate what they already knew to what I needed to learn.

Findings for Behavioural Engagement

The answer to research question 3 is presented in the analyzed data below; How do learners perceive behavioural engagement in online learning? The indicators for behavioural engagement according to Redmond, et.al.(2018) are developing academic skills, identifying opportunities and challenges, developing multidisciplinary skills, developing agency, upholding online learning norms, and supporting and encouraging peers.

Table 9- Mean for BEHAVIOURAL ENGAGEMENT (BE)

NO	STATEMENT	Mean	SD
1	BEQ1 Online learning allows me to learn about academic skills	3.9	.69282
2	BEQ 2 Online learning gives me the opportunities to ask questions and contribute to discussions	3.7	.83461
3	BEQ 3 Online learning gives me the opportunity to learn skills out of my discipline/course	3.7	.65705
4	BEQ 4 Online learning allows me to engage with industries related to my course	3.8	.84747

5	BEQ5 I follow the rules of online norms when I study online courses	3.9	.77692
6	BEQ 6 I am able to communicate with my peers well in online learning	3.8	.80023

Table 9 above shows the mean for behavioural engagement. Two items share the highest mean of 3.9. Firstly, the highest mean reported by students who said online learning allowed them to learn about academic skills (mean=3.9; SD=.69282). Another item with the same mean of 3.9 (SD=.77692) is reported by students who said they followed the rules of online norms when they studied online courses. Two items shared the same lowest mean of 3.7. Firstly, students reported that online learning gave them the opportunities to ask questions and contribute to discussions (mean=3.7; SD=.83461). Finally, the respondents also reported that online learning gave them the opportunity to learn skills out of their discipline/course (mean=3.7;SD=.65705).

Findings for Collaborative Engagement

The answer to research question 4 is presented in the analyzed data below; How do learners perceive collaborative engagement in online learning? There are several indicators for collaborative engagement and they are learning with peers, relating to faculty members, connecting to institutional opportunities, and developing professional networks.

Table 10- Mean for COLLABORATIVE ENGAGEMENT (CoIE)

NO	STATEMENT	Mean	SD
1	CoIEQ1 My peers helped me to understand the online classes	3.9	.79820
2	CoIEQ2 I enjoy learning with my peers in online learning	3.9	.85044
3	CoIEQ3 My lecturers are helpful to respond to my queries about learning via online	4.1	.77040
4	CoIEQ4 I am able to connect to other institutions via online learning	4	.68760
5	CoIEQ5 I am able to develop professional networks via online	3.9	.74568

Table 10 presents the mean for collaborative engagement. The highest mean is 4.1 (SD=.77040) for the item about the lecturers being helpful to respond to the students' queries about learning via online. Next is the item that states that students were able to connect to other institutions via online learning (mean=4; SD=.68760). Next, the students reported that their peers helped them understand the online classes (mean=3.9; SD=.79820). The students also reported they enjoyed learning with their pers in online learning (mean=3.9; SD=.85044). They also reported that they were able to develop professional networks via online (mean=3.9; SD=.74568).

Findings for Emotional Engagement

The answer to research question 5 is presented in the analyzed data below; How do learners perceive emotional engagement in online learning? Redmond, et.al.(2018) listed managing expectation, articulating assumptions, recognizing motivations and committing to learning as the indicators for emotional engagement.

Table 11- Mean for EMOTIONAL ENGAGEMENT (EG)

NO	STATEMENT	Mean	SD
1	EGQ1 I am able to communicate easily with my university if I need to get some information via online	3.9	.74132
2	EGQ 2I am able to make complaints to my university via online	3.9	.79140
3	EGQ 3I feel motivated to learn online	3.8	.78108
4	EGQ 4I am fully committed to learning even if it is online	3.9	.74905
5	EGQ I will continue learning in my future	4.2	.82680

Table 11 shows the mean for emotional engagement. The highest mean is 4.2 (SD=.82680) for the item that states that students would continue learning in the future. The lowest mean is 3.8 (SD=.78108) for the item that states that the students felt motivated to learn online.

Comparison of Means for all Types of Engagement

The answer to research question 5 is presented in the analyzed data below; How do the total means of all types of engagement differ? This study reported students' perception on several types of engagement in online classes. The five types are social, cognitive, behavioural, collaborative and emotional engagement.

Table 12- Comparison For Total Mean Of All Types Of Engagement

SECTION	TYPE OF ENGAGEMENT	Total Mean	SD
B	SOCIAL	3.7	.59729
C	COGNITIVE	3.8	.59027
D	BEHAVIOURAL	3.8	.64873
E	COLLABORATIVE	4	.66173
F	EMOTIONAL	3.9	.61614

Table 12 presents the comparison of the total mean scores for the five different types of engagement in online class. The respondents in this study reported that the highest total mean for types of engagement is collaborative engagement (mean=4; SD=.66173). This lowest reported engagement in this study is social engagement (mean=3.7; SD=.59729).

Conclusion

Summary of Findings and Discussions

When it comes to social engagement, data reported the highest mean for students wanting to participate in academic activities online. The participants felt that this social belonging gave them a purposeful relationship. The study by Hollister, et.al (2022) also emphasized that social interaction is as much needed in fac-to-face setting as well as online setting. This is in line with the belongingness theory (Baumeister & Leary, 1995)) who said that people need to feel gratitude in social relationships to help them feel a sense of relatedness and belonging to a social circle. This is done through social connection and the connection can be both face-to-face or virtual.

Next, online learning needs to allow students to feel they have cognitive engagement. Findings revealed that students felt that being online gave them the opportunity to compare ideas from different sources. Online learning allowed them to check their sources from different experts. This finding is in accordance with the study by Sathe,et.al (2022) who reported that online learners felt engaged to the course contents and this engagement gave the learners more motivation to learn more.

Online learning also calls for behavioural, collaborative and emotional engagement. This study reveals that students depended on lecturers being helpful to respond to their queries about learning via online. The participants also reported that online learning mode encourages them to connect to other institutions via online learning. Besides that, the students reported that their peers helped them understand the online classes. This finding is in accordance with the study by Hisham,et.al. (2021) who agreed that the learners' behaviour is influenced by the activities done collaboratively online. The sense of togetherness further made students motivated to learn in the online class. This is also reported by Farrell & Burnton (2020) who found that motivation among learners helps build confidence in them. This confidence can further encourage the learners to search for learning beyond the classroom.

Finally, this study reported that learners perceive collaborative and emotional engagement as the most important type of engagement. Similarly, Hisham,et.al. (2021) also reported that online learners had positive reaction towards participation engagement, as well as emotional engagement. This situation complies with the theory of needs by McClelland (1961) which states that for motivation, people wanted to feel a sense of achievement, affiliation and power. In the context of online learning, learners get motivated when they feel that they have achieved the learning task. This task was achieved through their collaboration with their peers. The feeling of achievement gives the learners a sense of power of their own learning and can be motivated to seek further learning on their own.

Implications and Suggestions for Future Research

This study not only reported that learners wanted to have social, cognitive behavioural and emotional in online classes. In addition to that, in the context of this study, learners put high preference on collaborative and emotional engagement. This is interesting to note that even in non-face-to-face mode, learners preferred collaboration. Interaction in face-to-face classes are inevitable because learners either (a) can see their peers or (b) need to communicate in group interactions to complete learning tasks. It is interesting to note that learners expected interaction and collaboration even in the online mode. Just like what McClelland (1961) said, people need a sense of affiliation to be motivated. In the online setting, affiliation is in the form of

collaboration. The interactions can help learners to feel they belong to the class (even if it is online). Instructors preparing for online sessions could consider collaboration activities as part of the online learning process to make learners belong to the class. Future researchers could look into other types of engagement needed in online classes. Perhaps the research could also go in-depth and look into what type of engagement helps with learning performance.

Acknowledgements

The authors would like to acknowledge and extended special gratitude to the students of semester 20252 of the university for being part of the respondents in this study.

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