

Original Paper

The Relationship of Affective, Behavioral and Cognitive Engagements in ESL Higher Learning Classroom

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Abstract

The 21st Century demands the fresh graduates of the higher learning institutions to be fully prepared for the fast changing industry. Higher learning institutions are measured on their productivity in upholding the demand based on the levels of student engagement in many dimensions. The mostly discussed dimensions are; behavioral, affective and cognitive. The present study uncovered the levels of student engagement in these three dimensions and their relationship with each other in an ESL course in a public university in Malaysia. The population was 180 undergraduates of the second semester and 120 undergraduates were randomly selected by cluster sampling. The researchers adopted a mixed-method approach that focused more on the quantitative approach. A questionnaire with 5-Likert scale items and open-ended questions was utilized. The analysis revealed a moderate level of engagement during instruction, and the affective engagement as the highest form of engagement among the students in the classroom. Pearson Correlation analysis presented moderate to strong, significant and positive relationships among the three dimensions. This study proves the importance of student engagement in higher education learning as an element that is necessary to be considered in the teaching instruction, and program administration planning.

Keywords

student engagement, behavioral, affective, cognitive, higher learning

1. Introduction

In the 21st Century, the learning environment has exponentially advanced from the simple chalk and talk approach to a highly integrative and challenging setting for both the educators and the students. The learners of the 21st Century are to be equipped with the ability to establish met cognitive awareness and self-directed learning, aside from being able to work in a collaborative setting. Moreover, from an intrapersonal dimension, they are expected to have strong flexibility, adaptability, intellectual open-mindedness, initiative, and excellent self-regulation skills (Nir, Ben-David, Bogler, Inbar, & Zohar, 2016).

The necessity for the graduates to be holistic is pivotal in fulfilling the requirement of the stakeholders to produce a generation, who is well prepared physically and emotionally to meet the expectation of the current trends in various fields of the Fourth Industrial Revolution (IR4.0). The industry requires the workforce to not only express productivity and efficiency but also provides meaning and depth in their performance within a digitally-driven ecosystem (Fleming, 2020). Therefore, fresh graduates are presumed to be competent in a plethora of skills such as communicative, creative thinking, leadership, team-building, technical, problem solving, and lifelong-learning among others (Sani, 2019). Tong and Razniak (2017) found collaborative leadership, professional development, and adult learning were the three crucial areas to be developed to enhance effective professional capital in the 21st century.

To address the current demand, the teaching practices in higher institutions are required to be revolutionary to prepare the undergraduates for the competitive market which they will experience upon graduation (Sani, 2019). Among many facets involving teaching and learning practices in tertiary education, student engagement is a widely discussed area in ensuring quality education (Ashwin & Mcvitty, 2015). Research has proven the significance of student engagement in sustaining quality education, especially in higher education. Dunn and Kennedy (2019) investigated the direct benefits student engagement provided to academic attainment. In the study, it was found that intrinsic motivation, which led to the engagement, contributed to the improvement of the students' grades. Another study conducted by Boulton, Hughes, Kent, Smith, and Williams (2019) highlighted the positive relationship between student engagement and their well-being on campus. It was discovered that students who were engaged via the feedback loop would improve in their academic performance, thus becoming happier. Zepke and Leach (2010) related student engagement to the students' success in higher education which further determined employability and retention.

In Malaysia, student engagement in higher education is a pertinent factor. Local literature mostly explores the challenges and strategies to enhance student engagement in tertiary education classrooms. Teaching approaches such as project-based teaching, ICT application and experiential learning were found to be excellent in fostering student engagement in learning, particularly in social science subjects such as Malaysian studies and English language in both private and public institutions (Aiedah & Audrey Lee, 2012; Salam, Mailok, Ubaidullah, & Ahmad, 2016; Lau, Choi Lee, & Ho, 2019). Furthermore, student engagement is observed to contribute to various positive outcomes such as

responsible learning, collaborative, strategic and energetic learning (Aiedah & Audrey Lee, 2012). The impact of engagement on students' achievement was also examined by Jelas, Azman, Zulnaidi, and Ahmad (2016) where they identified student engagement as a predictor of positive perceived learning support which is strongly related to students' academic achievement.

In the present study, researchers bring the purpose of investigating the levels of student engagement in English as Secondary Language (ESL) classrooms in a Malaysian public university.

1.1 Literature Review

1.1.1 Socio-Constructivism Theories in Student Engagement

Education has transformed from a didactic transfer of knowledge to a socio-constructivism approach where knowledge is constructed from interaction and collaboration between two parties, in a learning curve called the Zone of Proximal Development (ZPD) (Vygotsky, 1978 as cited in Kozulin, 2004). Vygotsky (1986) posited the concept of ZPD and mediation that emphasized the idea of interacting with a teacher or peers would help the process of learning to occur. Knowledge was transferred and processed into meaning when the learners were scaffold (Verinikina, 2008). Similarly, Bandura (1971) suggested mediation between responses of students and the stimuli in learning. He also stated behavior was learned from the environment through observation where learners paid attention to people around them and encoded their behavior. In this case, teachers who acted as facilitators in the classroom function as the models who were imitated by the learners. Based on these two socio-constructivist theories, students performed better when they collaborated with their peers and facilitators (Dixson, 2015). Compared to the traditional setting where student involvement in the teaching practices was constrained, student engagement is essential in the learning of the 21st century.

1.1.2 Defining Student Engagement

Student engagement is a generic concept encompassing numerous variables within the study of teaching and learning practices. Concisely, Zepke (2017) summarized engagement in learning as a single construct to involvement of life-wide and lifelong learning. In another general perspective, student engagement was observed as one of the predictors of operative pedagogic strategies which was rooted in socio constructivism theories (Macfarlane & Tomlinson, 2017; Zygnier, 2008). It became a medium to achieve efficacy in various teaching methods such as deep learning and a bridge for the students to explore their social terms in society (Cents-Boonstra et al., 2020; Czerkowski & Lyman III, 2016). Zygnier (2008) also explained that student-centered teaching approach viewed engagement based on the students' discovery and individuals' interest.

Therefore, student engagement was strongly related to the students' time, effort, and a plethora of resources invested by the students and the institutions with the goals to enhance their learning experience and outcomes (Trowler, 2010).

Astin (1984) defined student involvement as the range of physical and psychological energy that students channeled to their academic experience. Hence, teachers should focus their attention to gauge and stimulate students' motivation in parallel to their effort during the process of learning. Similarly,

Kuh (2003) posited engagement as the time and energy spent in an academic environment.

Perez, Ayerdi, and Arroyo (2018) developed three constructs for student engagement namely behavioral, emotional, and cognitive. Behavioral involved academic and multitask activities conducted by students in or outside the classroom. The emotional construct dealt with students' attitudes and interests, as well as values while they were experiencing learning and higher education as a whole. Finally, the last construct was cognitive, which revolved around the students' motivational goals and their self-regulated learning skills. Philip and Duchesne (2016) agreed with Perez et al. (2018) by emphasizing the facets of student engagement consisted of cognitive, behavioral, emotional, and social. Handelsman, Briggs, Sullivan, and Towler (2005) suggested student engagement as a type of involvement within four factors; skills, participation, performance, and emotion.

It can be concluded that the term "student engagement" is a continuous effort of employing different variables in a learning process which will determine academic achievement. Dixson (2015) also stated that engagement was composed of one's attitude, thoughts, behaviors, and communication where learners spent time, energy, thoughts, and feelings to learn. In the present study, the researcher decides to select the most discussed variables as the dimensions to be investigated in student engagement, which is cognitive, affective, and behavioral engagements.

1.1.3 Level of Cognitive Engagement

A variety of research is conducted to examine the level of cognitive engagement in learning. Koszalka and Lee (2016) stated students' applications of cognitive and metacognitive strategies were able to measure cognitive engagement. Cognitive engagement could be represented by four strategies namely, rehearsal, elaboration, organization, and critical thinking strategies (Koszalka & Lee, 2016). Moreover, group discussions were observed to engage knowledge construction such as conceptual comprehension, elaboration, and justification of ideas (Khosa & Volet, 2014). Literature shows a higher level of engagement among the students with the content leads to a better conceptual understanding on the content discussed (Khosa & Volet, 2014). Nurbiha Syukor, Zaidatun Tasir, Van der Meijen, and Jamaluddin Harun (2013) found students with a high level of cognitive engagement possessed a high sense of self-regulation in learning where they conducted extra research on their own and reported their findings to the class.

1.1.4 Level of Affective Engagement

In parallel, affective engagement is also widely discussed across the literature. Alvarez-Bell, Rosa, Wirtz, Derrick, Bian, and Hui (2017) emphasized on the importance of students' positive feelings to influence their competency on skills like higher-order, group, and self-directed learning. They also found that establishing friendship was one of the contributing factors to affective engagement. Additionally, Khawlah Altuwairqi, Salma Kammoun Jarraya, Arwa Allinjawi, and Mohamed Hammamib (2018) found an interesting Affective Model that could measure student engagement based on their feelings and emotions. Their findings showed strong feelings related to engagement were a surprise, enthusiasm, disappointment and boredom, and students were likely to have high or low

engagement if the tasks given were interesting or boring to them.

1.1.5 Level of Behavioral Engagement

Behavior engagement is also extensively studied in the area of student engagement. Baldwin (2019) discovered an environment where students could express learning-oriented behavior would increase engagement. Positive behaviors like interacting and acting on circumstances were categorized as learning-oriented (Baldwin, 2019). Other examples of positive behaviors in learning included producing regular output and repeating their practices (Baldwin, 2019). Another study conducted by Boheim, Urdan, Knogler, and Seidel (2020) explored the importance of hand-raising behavior as an observable indicator of behavior engagement in a teacher-centered classroom and this was strongly related to academic achievement. This means that the more frequent one raises their hand, the higher their possibility to gain an impressive academic result.

1.1.6 Relationship between Cognitive, Affective and Behavioral Engagement

A study by Wood, Taylor, Atkins, and Johnston (2018) explained the significance of relating cognitive and affective in sustaining engagement in learning. Meaningful learning should evoke the students affectively during the process to encourage them in identifying their interests and desires. On the other hand, deep cognitive understandings were obtained when the students were well-informed and become more pro-active. Referring to Rozinah Jamaludin and Siti Zuraidah Md Osman (2014), students affective engagement increased when they were active in their learning. Students became more emotionally engaged when they participated in the activities, paid attention to the lesson and listen well to the instructions. In terms of behavior, students' cognitive engagement was strongly related to behavior as students' participation and written messages of high-level were observed to lead to high level of cognitive engagement (Nurbiha Shukor, Zaidatun Tasir, Van der Meijen, & Jamaluddin Harun (2014).

Thus, the present study investigates the level of student engagement among English as Secondary Language (ESL) learners in a public university in Malaysia within three dimensions; behavioral, affective and cognitive by answering these research questions:

- 1) What is the level of student engagement in the classroom in terms of cognitive, affective and behavioral dimensions of ESL learners among the undergraduates in higher education learning?
- 2) Is there any relationship among cognitive, affective, and behavioral dimensions of student engagement of ESL learners among the undergraduates in higher education learning?

2. Method

This study adopted an embedded mixed-method approach, emphasizing more on the quantitative approach. The data collection was mainly conducted quantitatively and was triangulated with the qualitative data. The researcher used a set of questionnaire then, utilize open-ended questions to expand the result of the quantitative analysis (Fraenkel & Wallen, 2009).

2.1 Research Design

The research design was a descriptive survey design, utilizing a cross-sectional survey design because the researcher only collected data only at one period of time (Creswell, 2014). In this study, the researcher investigated the levels of student engagement in the aspects of behavior, affective, and cognitive in English Language courses among the undergraduates in higher learning.

2.2 Population and Sampling

The group of interest for this study was the second semester student of the diploma program in UiTM Sarawak Branch. The population was 180 undergraduates who studied in an ESL course in the university and the researcher selected 120 students to participate in the study following the Krejcie and Morgan table (1970) which stated the sample size for a population of 180 respondents was 123 respondents. The researcher applied cluster sampling to select the 5 clusters (5 groups) of respondents to collect data. All respondents were asked to fill in a consent form before agreeing to participate in the study.

2.3 Instrumentation

The instrument adapted for data collection was a questionnaire with five point Likert-scale in the range of strongly agree to strongly disagree. As for the open-ended questions, the questions were derived from the first research question. To ensure validity, the items were adapted from existing questionnaires of the same field of study. The questionnaire was adapted from the National Survey of Student Engagement (2020), Schreiner and Louise (2011) and Alvarez-Bell, Wirtz, and Bian (2017). Furthermore, the questionnaire was also reviewed by two experts in student engagement in the education field on the validity of the items.

Table 1. Reliability Analysis of the Overall Questionnaire

| Cronbach's Alpha | N. of items |
|------------------|-------------|
| .911 | 27 |

The reliability of the questionnaire was examined using Cronbach Alpha analysis. Creswell (2014) stated that the accepted reliability value for Cronbach Alpha was . (>.7) and above. All 27 items in the questionnaire gained more than .7 value (.911) based on Cronbach Alpha Analysis.

3. Result and Discussion

3.1 The Levels of Student Engagement in Classroom in Terms of Cognitive, Affective and Behavioral Dimensions of ESL Learners among the Undergraduates in Higher Education Learning

3.1.1 The Level of Student Engagement in the Classroom in the Cognitive Dimension of ESL Learners among Undergraduates in Higher Education Learning

Table 2. The Level of Student Engagement in the Classroom in the Cognitive Dimension of ESL Learners among Undergraduates in Higher Education Learning

| Overall Items | Mean | SD |
|----------------------------------------------------------------------------------------------|------|------|
| Cognitive Dimension | 2.91 | .412 |
| Items | Mean | SD |
| It is hard to pay attention in my class | 3.65 | .729 |
| I form a new understanding from various pieces of information. | 2.96 | .627 |
| I can usually find ways of applying what I'm learning in class to something else in my life. | 2.93 | .624 |
| I examine the weakness of my own views on an issue. | 2.91 | .648 |
| I find myself thinking about what I'm learning in class even when I'm not in class. | 2.80 | .693 |
| I evaluate the opinion discussed in the classroom. | 2.79 | .593 |
| I examine the strength of my own views on an issue. | 2.78 | .638 |
| I memorize important course notes after the lecture. | 2.73 | .576 |
| I summarize what I have learned in class. | 2.73 | .721 |

Table 2 shows the level of student engagement in the classroom in the cognitive dimension of ESL learners among undergraduates in higher education learning. In general, the mean for Cognitive Dimension of ESL Learners in Student Engagement was ($M=2.91$, $SD=.412$). The item which gained the highest mean was "It is hard to pay attention in my class." ($M=3.65$, $SD=.729$). The item "I summarize what I have learned in class." was the lowest mean ($M=2.73$, $SD=.722$). Other items were "I form a new understanding from various pieces of information." ($M=2.96$, $SD=.627$), "I can usually find ways of applying what I'm learning in class to something else in my life." ($M=2.93$, $SD=.623$), "I examine the weakness of my own views on an issue." ($M=2.91$, $SD=.648$), "I find myself thinking about what I'm learning in class even when I'm not in class." ($M=2.8$, $SD=.693$), "I evaluate the opinion discussed in the classroom." ($M=2.79$, $SD=.592$), "I examine the strength of my own views on an issue." ($M=2.78$, $SD=.637$) and "I memorize important course notes after the lecture." ($M=2.73$, $SD=.575$). The result showed a weak level of cognitive engagement among the ESL learners as the mean was below 3 ($M=2.91$, $SD=.412$). The respondents agreed that they paid attention in class but they least agreed in summarizing after the class. This was congruent with the findings from the open-ended questions gathered from the students. Several students expressed their frustration of failing to be engaged cognitively in the classroom, mostly on their understanding and inability to gather information during the class.

I am not too active cognitively

I still have a lot of misunderstanding and I'm lacking on information

On the other hand, some other students stated that when they had difficulties in understanding certain topics and realized there was a missing piece of information to comprehend the lesson completely, they would resolve to ask peers for guidance as well as research through the web.

In my opinion, my perceived engagement in terms of cognitive in the undergraduate classroom is mostly slow compared to my friends. It is because sometimes I do not understand what the topic my lecturer is teaching. After that, I am slow to understand the key point. So from that, it's hard for me to come up with my ideas to make them complete. My solution to this problem is to ask my friends for guidance

In my opinion, in an undergraduate classroom, I sometimes understand less what the lecturer is trying to convey because of some issues such as poor internet connection and reception which lead me to do my own research and searching through various webs so that I can fully understand what the lecturer has thought during the class.

Students also responded by saying paying attention in class was an effective way to be engaged cognitively during lectures especially by staying focus, asking questions and following the lecturer's instruction.

Focus and ask questions to the lecturer who gives the lesson in the classroom on what we do not understand

I think I'm doing quite well as I'm able to do tasks or assignments given by my lecturer with some specific instruction

Always follow all the instructions from the lecturer

In my opinion, I perceive my engagement in terms of cognitive in the undergraduate classroom is by always paying attention to the lecturer and by asking questions that I don't understand. This will help me more to understand what the lecturer has explained

One student in particular highlighted his strategy to be more cognitively engaged by comparing lessons learned to the authentic environment, thus, making the lesson more interesting.

I also try to compare the lessons learned with real-life problems to make it more interesting in relation to the topic taught

Cognitive engagement in the study was low, however, students were perceived to practice various strategies to enhance their engagement. Nurbiha Syukor et al. (2013) found that cognitively engaged students were mostly independent and relied heavily on self-directed learning. This means students who possessed more autonomy in their learning would help in their cognitive engagement. This is in parallel to the findings of the open-ended questions where students who perceived themselves as cognitively engaged stated they were determined to stay focus in class, to listen carefully to the lecturer's instruction and to relate the lesson to the outside world. Contrastingly, students who perceived themselves as less cognitively engaged did not practice any self-regulated learning strategies.

In conclusion, despite the low cognitive engagement level, students claimed themselves to practice several strategies to improve engagement during the lesson.

3.1.2 The Level of Student Engagement in the Classroom in the Affective Dimension of ESL Learners among Undergraduates in Higher Education Learning

Table 3. The Level of Student Engagement in the Classroom in the Affective Dimension of ESL Learners among Undergraduates in Higher Education Learning

| Overall Items | Mean | SD |
|--------------------------------------------------------------------------------------------|------|----------------|
| Affective Dimension | 3.14 | .460 |
| Items | Mean | Std. Deviation |
| I feel energized by the ideas that I am learning in most of my classes. | 3.53 | .809 |
| I feel that the course is challenging but hard work can help me to succeed. | 3.33 | .724 |
| I feel that the interaction with my classmates helps me to understand better. | 3.30 | .763 |
| I feel excited about the activities that we experience in the classroom. | 3.21 | .620 |
| I realize that I have learned something that changed the way I understand a concept. | 3.13 | .607 |
| I feel as though I am learning things in my classes that are worthwhile to me as a person. | 3.08 | .602 |
| In the last week, I've been bored in class a lot of the time. | 3.07 | .857 |
| I feel fascinated about the course content. | 2.88 | .611 |
| I feel that I am an important member of my learning team. | 2.78 | .769 |

Table 3 represents the level of student engagement in the classroom in the affective dimension of ESL learners among the undergraduates in higher education learning. The overall mean of affective dimension for student engagement among ESL learners in higher education was ($M=3.16$, $SD=.460$) which was at a moderate level. The item which obtained the highest mean was “I feel energized by the ideas that I am learning in most of my classes” ($M=3.53$, $SD=.809$) and the least mean score item was “I feel that I am an important member of my learning team.” ($M=2.78$, $SD=.769$). The other items were “I feel that the course is challenging but hard work can help me to succeed.” ($M=3.33$, $SD=.724$), “I feel that the interaction with my classmates helps me to understand better.” ($M=3.30$, $SD=.763$), “I feel excited about the activities that we experience in the classroom.” ($M=3.21$, $SD=.620$), “I realize that I have learned something that changed the way I understand a concept.” ($M=3.13$, $SD=.607$), “I feel as

though I am learning things in my classes that are worthwhile to me as a person.” (M=3.08, SD=.602), “In the last week, I’ve been bored in class a lot of the time.” (M=3.07, SD=.857) and “I feel fascinated about the course content.” (M=2.88, SD=.611). Students were found to be moderately engaged affectively when the lesson was fun, active and collaborative from the open-ended questions.

In the terms of affective, I find that I enjoy my lesson in class because my lecturer is fun and active. Helping me to understand others and helping me to be more open to my friends and I enjoy every class and I like the “haha” moments in the classroom.

One student highlighted that she felt excited when the lecturer paid attention to her.

In my opinion, I feel excited and sometimes overwhelmed that the current lecturer gives attention to the students often by actively walking around, monitoring the students’ progress. I also feel safe and not afraid to ask questions as the lecturer is a soft-spoken and straightforward person. It makes the lesson exciting and easier to understand

Some other students emphasized how having the right perspective would keep you positive during the class.

First, keep your mind set in a good and better condition. Apart from that, we might feel excited to learn new things if we are being positive. Some of us might think that some of the subjects that we have learned is difficult but with hard work, nothing is impossible. Keep smiling and show your interest to study so that the lecturer also feels ready and happy to teach.

I tend to chill myself before studying. For example, I tend not to let my emotions get attached when I’m inside the classroom as it will make me not focus while the lecturer is explaining

Students were found to be moderately engaged affectively in ESL classrooms. It was the highest engagement among the three dimensions. Students agreed that they felt energized by the ideas they were currently learning. From the open-ended questions, the researchers found the demand of a two-way commitment to produce a highly affective engaged learning environment whereby, both the students and the lecturer had to portray significant roles; the lecturer was responsible to prepare an instruction that was engaging, while the students had to be mentally prepared to engage during learning. Khawlah Altuwairqi et al. (2018) discovered the emotions that were strongly related to engagement; a surprise, enthusiasm, disappointment and boredom which led to levels of engagement. This proves the roles of lecturer and students as the contributors to engagement, in instilling these feelings in learning. Additionally, Alvarez-Bell et al. (2017) found that the more positive students were in class, the higher possibility for them to portray excellent higher-order thinking skills, leadership skills and self-directed learning skills.

Conclusively, students were moderately engaged in the affective dimension of engagement. The lecturer played a significant role in sustaining affective engagement in providing a supportive and safe environment for the students to be affectively engaged. Likewise, students must play their role to be mentally prepared in order for them to be positively engaged.

3.1.3 The Level of Student Engagement in the Classroom in the Behavioral Dimension of ESL Learners among Undergraduates in Higher Education Learning

Table 4. The Level of Student Engagement in the Classroom in the Behavioral Dimension of ESL Learners among Undergraduates in Higher Education Learning

| Overall Items | Mean | SD |
|---------------------------------------------------------------------------------------------|------|------|
| Behavioral Dimension | 3.03 | .476 |
| Items | Mean | SD |
| I review the completed task given before submitting it to my lecturer. | 3.29 | .679 |
| I watch videos suggested by my lecturer. | 3.15 | .657 |
| I identify key information from reading assignments, videos and PowerPoint lecturer slides. | 3.11 | .646 |
| I attend the lecture venue before the session starts. | 3.09 | .789 |
| I always complete the task given by the lecturer in class during lessons. | 2.96 | .666 |
| I regularly participate in class discussions in most of my classes. | 2.95 | .732 |
| I often discuss with my friends what I'm learning in class. | 2.95 | .798 |
| I ask my professors questions during class if I do not understand. | 2.89 | .776 |
| I take advantage of available learning resources other than what my lecturer has provided. | 2.84 | .767 |

Table 4 portrays the level of student engagement in the classroom in the behavioral dimension of ESL learners among undergraduates in higher education learning. The overall mean of the behavioral dimension for student engagement among ESL learners in higher education was (M=3.03, SD=.476) which was at a moderate level. The highest item was "I review the completed task given before submitting it to my lecturer." (M=3.29, SD=.679), and the lowest item was "I take advantage of available learning resources other than what my lecturer has provided." (M=2.84, SD=.767). Other items included were "I watch videos suggested by my lecturer." (M=3.15, SD=.657), "I identify key information from reading assignments, videos and PowerPoint lecturer slides." (M=3.11 SD=.646), "I attend the lecture venue before the session starts." (M=3.09, SD=.789), "I always complete the task given by the lecturer in class during lessons." (M=2.96, SD=.666), "I regularly participate in class discussions in most of my classes." (M=2.95, SD=.732), "I often discuss with my friends what I'm

learning in class.” ($M=2.95$, $SD=.798$) and “I ask my professors questions during class if I do not understand.” ($M=2.89$, $SD=.776$). Similar findings were collected from the open-ended questions. Students, who were engaged behaviorally explored on their own after the class, attended the class voluntarily and asked their friends and lecturers when they had difficulties to understand the lesson.

I think I can do better, like I can find other resources to help me enhance my learning and not be too dependent on lecturer's notes only. Besides that, I'm always trying my best to stay focus during the lecture.

In my opinion, my engagement in terms of behavioral is above average. I attend classes without feeling forced or bored and I never had the intention to skip any of the classes as it doesn't only affect my attendance, it'll also affect my learning progress. I am an introvert and I am not actively participating in most classes. I prefer approaching others when they're not in big groups or through social media platforms.

Another student clarified that because they collaborated with their peers to finish the task, their studying and social skills improved. Students also agreed that behaviors that kept them to stay focus such as not copying while the lecturer was explaining and bringing water to refresh themselves helped them to understand the topic better.

Our study skills and social skills have improved. It is because in class, we have to work together to make our work or assignment become perfect.

I would actively participate in a discussion regarding to basic knowledge of the world such as Geology class and would prefer to listen and do more practices in logic and calculations class.

I will stay focus, and make sure my mobile phone is always silent. I will focus more on teaching rather than copying notes as I can do it later. The lecturer is also nice as they give some time for students to copy after they are done with teaching. This way can help me understand better as my focus will be on the whiteboard instead of copying at the same time. I would also bring water to class to drink and refresh myself in class. It is a small effort but it definitely can increase the chance for me to understand the topic better.

Behavioral engagement gained a moderate level of engagement in ESL classrooms in higher education. The majority of the students claimed themselves to review the assignment before submitting it to their lecturer, while only the minority practiced further research on the topic discussed in class. Based on the findings of the open-ended questions, students perceived themselves as being engaged when they attended the class on time, regularly participated during group discussions and asked questions when they did not understand a discussed topic. According to Baldwin (2019), an environment that allowed learning-oriented behavior would improve engagement. Boheim et al. (2020) agreed with the current findings where observable positive behaviors in the classroom such as raising hands could be inferred as an indicator for high engagement and this led to academic achievement.

Therefore, even though the students were only moderately engaged in terms of behavior, students who were engaged behaviorally gained new skills and experienced better understanding in the class.

3.1.4 The Relationship among Cognitive, Affective, and Behavioral Dimensions of Student Engagement of ESL Learners among the Undergraduates in Higher Education Learning

Table 5. Pearson Correlation Analysis on the Relationship among Cognitive, Affective, and Behavioral Engagement of ESL Undergraduates in Higher Education Learning

| <i>Dimensions of student engagement</i> | | <i>Cognitive</i> | <i>Affective</i> | <i>Behavioral</i> |
|-----------------------------------------|-----------------------------------|------------------|------------------|-------------------|
| CCOMPUTE | Pearson Correlation | 1 | .541** | .708** |
| | Sig. (2-tailed) | | .000 | .000 |
| | Sum of Squares and Cross-products | 12.979 | 9.782 | 13.248 |
| | Covariance | .109 | .082 | .111 |
| | N | 120 | 120 | 120 |
| DCOMPUTE | Pearson Correlation | .541** | 1 | .659** |
| | Sig. (2-tailed) | .000 | | .000 |
| | Sum of Squares and Cross-products | 9.782 | 25.160 | 17.150 |
| | Covariance | .082 | .211 | .144 |
| | N | 120 | 120 | 120 |
| ECOMPUTE | Pearson Correlation | .708** | .659** | 1 |
| | Sig. (2-tailed) | .000 | .000 | |
| | Sum of Squares and Cross-products | 13.248 | 17.150 | 26.956 |
| | Covariance | .111 | .144 | .227 |
| | N | 120 | 120 | 120 |

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5 above depicts the relationship between cognitive, affective and behavioral in student engagement of students in higher education. Pearson Correlation test was conducted between the three constructs. There was an average, positive and significant relationship between cognitive and affective dimensions ($r=.541$, $p\text{-value}=.000$), while a strong positive and significant relationship between cognitive and behavioral dimensions ($r=.708$, $p\text{-value}=.000$). Moreover, a strong, positive and significant correlation was also found between affective and behavioral dimensions ($r=.659$, $p\text{-value}=.000$). Based on the result, the coefficient of determination was calculated. The positive relationship between cognitive and affective dimensions brought $r^2=29\%$ of the total variation which meant there was a minimal influence of cognitive to affective dimension and vice versa. On the other

hand, the total variation between cognitive and behavioural was $r^2=50\%$ which illustrated moderate influence of cognitive on behavioural dimensions and vice versa. Lastly, the total variation between affective and behavioral was $r^2=43\%$ in which the influence of affective and behavioral dimensions on each other was moderate.

According to the result, an average, positive and significant relationship between affective and cognitive engagements was observed. Wood et al. (2018) explained the importance of relating cognitive and affective in ensuring engagement in learning. By establishing an affectively engaging learning environment, the instructor was able to promote various cognitive skills during learning such as elaborating, critical thinking and self-directed learning (Koszalka & Lee, 2016). On the other hand, a strong positive and significant relationship between cognitive and behavioral engagements were tabulated. Based on the literature, students' positive behavior in learning such as their participation were observed to lead to high level of cognitive engagement (Nurbiha Shukor et al., 2014). Moreover, a strong, positive and significant relationship was also discovered between affective and behavioural engagements. Similarly, Rozinah Jamaludin and Siti Zuraidah Md Osman (2014) found students affective improved when they participated in class activities. This shows that learning should promote positive emotions if the instructor requires participation in class.

4. Conclusion

In summary, the researchers in the present study discussed on the levels of student engagement among ESL learners in a public university in Malaysia within three dimensions; behavioral, affective and cognitive. All three dimensions showed a moderate level of engagement and the analysis revealed affective engagement as the highest engagement. Moreover, behavioral, affective and cognitive engagements presented moderate to a strong, positive and significant relationship among each other. From the present study, it is concluded that all three dimensions of engagements are equally important and interdependent among each other. Pedagogical implications gained from the present study include the lecturers to be advised on instructions that enhance behavioral, affective and cognitive engagements. Both parties (lecturer and students) play major roles in sustaining strong engagement during a lecture. The lecturer is required to facilitate a supportive environment and students should be equipped with positive motivation and autonomous learning strategies. From a higher education administration perspective, student engagement is a strong determinant of efficacy in an academic program or department. A highly engaged program is deemed successful in its administration and program planning, thus, leading to an astounding academic achievement. Future work in the field of student engagement shall delve into more variables related to student engagement in learning such as the students' performance aspect and demographic influence aspect.

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