

Learning Environment: What are the University Students' Perceptions?

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Abstract

Research worldwide continues to prove that the quality of the learning environment is very important in determining learning success. This study replicated the study by Hassan, Majid & Hassan (2020). A quantitative survey was distributed using Google Forms. The survey has 5 sections with a demographic profile and 30 items using a 5-Likert scale. In the context of this study, the university students are exposed to four basic types of learning environments, which are learner-centred environment, community-centred environment, assessment-centred environment and knowledge-centred environment. Questionnaires were answered by 102 students from three levels of Japanese language studies in a public university in Malaysia. Findings revealed that the students' perceptions of the learning environment were positive. The findings also showed that all four approaches; learner-centred, community-centred, assessment-centred and knowledge-centred are significant and influenced the learning environment. The learner-centred approach has the highest mean scores, which indicates that the students feel comfortable in this learning environment where they are allowed to have their own language practices. The results also showed that there are strong positive relationships between learner and community-centred, learner and assessment-centred, learner and knowledge-centred, knowledge and community-centred, knowledge and assessment-centred, and assessment and community-centred.

Keywords: Learning Environment, Language Learning, Learner-Centred, Community-Centred, Assessment-Centred, Knowledge-Centred

Introduction

Background of Study

Learning a foreign language is important nowadays for global communication. Thus, foreign languages have become elective subjects in many universities. However, it remains challenging for university students to learn a foreign language without opportunities to interact with the target language-speaking community. In order to find a positive learning environment to motivate students to learn more efficiently, much research has been conducted over the years. The learning environment model introduced by Donovan et al. (1999) showed that students' development is deeply influenced by learning environment aspects including psychological, emotional, social, and cultural. Donovan et al (1999) propose a framework to help guide the design and evaluation of environments that can optimize learning (Figure 1).

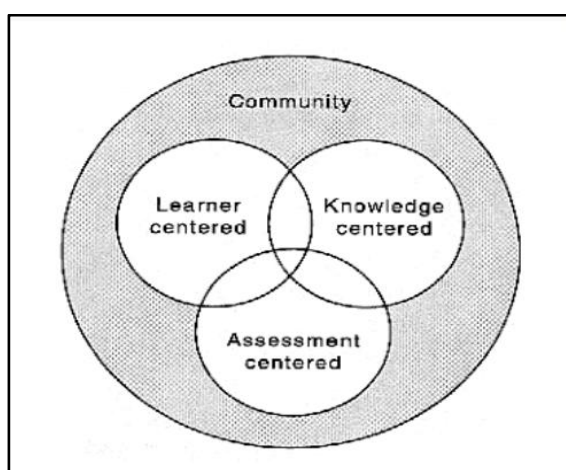


Figure 1: Design of learning environments
Source: Donovan et al (1999)

The model has four inter-related attributes of the learning environment which are learner-centered, knowledge-centered, assessment-centered, and community-centered. These four learning environment dimensions support each other. Reviews of the literature also have been done on the importance of including the characteristics of those dimensions in improving student performances.

Research from the world continues to prove that the quality of the learning environment serves as one of the significant factors influencing student learning outcomes (Bowman-Perrott et al., 2013, Kondratieva, 2013, Abdullah et al., 2014, Zain et al., 2014). Yet how can a learning environment help with classroom practice? Hassan et al (2020) used the same model to validate a measuring instrument related to a learning environment called Learning Environment Inventory (LEI). The findings confirmed the model as an acceptable model. Hassan et al (2020) also suggested that cross-validation of LEI is recommended by including a larger number of secondary school students in Malaysia for future research.

In the Malaysian context, most university students are exposed to the four basic types of learning environments which are learner-centred, community-centred, assessment-centred and knowledge-centred. Hence, it would be meaningful to conduct research to understand the most preferred learning environment by university students in Malaysia.

Statement of Problem

"Learning environment" is a general term that can be used to describe a culture, a background, a method of teaching and learning, or a physical setting where work and

education are conducted. It is undeniable that the learning environment has a big impact on students' learning outcomes. Lizzio (2002) investigated the relationship between university students' perceptions of their academic environment, their approaches to study, and academic outcomes. The findings confirmed students' perceptions as influencing both academic achievement and satisfaction, and the development of key skills learning outcomes, both directly and mediated through their approaches to study. Valtonen (2020) conducted a study on university students' perceptions of preferred learning environments and their thoughts about the best learning environments for the higher-education level. They examined the students' evaluations of their learning environments from the perspectives of physical learning spaces, ICT in education, and pedagogy. Their results were aligned with previous research which showed that there has been a shift away from knowledge transmission toward more student-centered learning practices that emphasize knowledge construction. Previous researchers conducted investigations from a variety of perspectives and frameworks. The literature on learning environment research presents numerous concepts, understandings, and dimensions based on distinct epistemological and ontological stances (Closs et al., 2022). However, there are situations when the angles overlap. Bransford et al (2000) stated that environments that best promote learning have four interdependent aspects. They focus on learners, well-organized knowledge, ongoing assessment for understanding, and community support and challenge.

Hence, this study is done to investigate how the four types of learning approaches introduced by Bransford, Brown, and Cocking (2000) for online learning, including learner-centred, community-centred, assessment-centred and knowledge-centred influence the learning environment. This investigation is done to answer the following questions:

- How does a learner-centred approach influence the learning environment?
- How does a community-centred approach influence the learning environment?
- How does Assessment-centred approach influence the learning environment?
- How does Knowledge-centred approach influence the learning environment?
- Is there a relationship across variables for the learning environment?

Literature Review

Characteristics of Learning Behaviour of University Students

The majority of university students currently are considered generation Z learners who are born after 1995, tend to be digital natives, fast decision makers, and highly connected (Consultancy.uk, 2015; Daukseviciute, 2016). Educators must understand the characteristics of the learning behaviour of university students. If we do not pay attention to the students' characteristics, the classroom teaching designed for these students might not be relevant. In a study done by Cilliers (2017), who explored the characteristics of university students, findings revealed that students expect a teaching environment in which they can interact the same as they do in their virtual worlds. According to Cilliers (2017), moving beyond traditional teaching-learning strategies and teaching in order to catch the imagination, interest and understanding of generation Z or university students has become a challenge. There is a need to understand the elements of technology, social media and social networking that will attract students' intention into teaching and learning. Tjiptono et al. (2020) have examined the unique shaping factors, characteristics, and learning expectations of Generation Z in order to provide suggestions which could support tertiary education in future. According to Tjiptono (2020), Malaysian Generation Z is a tech-savvy generation and is heavily dependent on smartphones and social media. Hence, it may infer that for

university students who belong to Generation Z, various shaping factors have impacted them, contributing to their unique learning characteristics.

Learning Environment in the University

Educational research paid concerns to the learning environment after it was introduced by Murray (1938). Murray (1938) introduced the concept of the 'environmental press' in which the learning environment is almost like an interaction of personal needs and environmental press. Person needs are indicating the drives, motives, and goals of the learners. On the other hand, 'press' can be classified as a stimulus, treatment or process variable. Both personal needs and environmental press are required in order to create a supportive learning environment. The research review in *How People Learn* (Donovan et al., 1999) concludes four interrelated attributes of learning environments that need cultivation. The first of the four proposed learning environments is a learner-centred environment where teachers must pay close attention to the knowledge, skills, and attitudes of every individual learner in the classroom. The following is a knowledge-centred environment, where attention must be given to what is taught, why it is taught and what competence or mastery looks like. Besides that, an assessment-centred environment where teachers design formative assessments to understand the students' preconceptions and help monitor teaching and learning is important as well. Finally, a community-centred environment is important as well, as learning is influenced in fundamental ways by the context in which it takes place. A community-centered approach requires the development of norms for the classroom and school, as well as connections to the outside world that support core learning values.

Past Studies on Learning Behaviour of University Students

The Coronavirus Disease 2019 (COVID-19) outbreak pushed the majority of universities to opt for online distance learning (ODL). Ploj-Virtič, et al (2021) sought to determine how college students reacted to a novel circumstance. The entire university students received a questionnaire. Responses from 606 students demonstrated an increase in the utilisation of all ODL applications. However, only the usage of Microsoft Teams increased significantly, whilst the use of the other apps (email, Moodle, e-textbooks) increased in a range of low to medium impact sizes, and even non-significantly for apps like Padlet and Kahoot. A Model of Forced Distance Online Learning Preferences (MoFDOLP) based on Structural Equation Modeling was constructed using the responses of 414 respondents. The prediction is about 20% variance for e-materials, more than 50% variance for Continuance Preferences in MS Teams apps, and 95% variance for Satisfaction using a carefully chosen mix. Only attitudes, not organisational support, perceived ease of use, or learner attitude towards online learning, are important predictors of satisfaction among the anticipated characteristics. After the lockdown ended, preferences for using information technology are well predicted by satisfaction.

Estacio and Raga Jr.'s paper (2017b) aims to propose a proposal for a data-driven analysis to see if students' learning behaviour can be retrieved and visualised from action logs captured by Moodle. The study also attempted to demonstrate whether there is a relationship between students' online activity levels and their academic performance as measured by their final grades. Log data from multiple courses distributed in a university using the Moodle platform was used for the analysis. In order to examine how these characteristics affect students' levels of activity in the online environment, the study also gathered demographic profiles of students and compared them with their degree of activity. The results have demonstrated that a data mining approach like the vector space model may be used to combine student

action logs and quantify them into a single numerical value that can be used to provide visualisations of the degree of activity among the students. According to the current analysis, there is a great deal of variation in the association between these two factors.

Past Studies on Learning Environment in the University

There have been many past studies on the learning environment. The study by Sağlam and Sali (2013) was done to find out what pre-service EFL (English as a Foreign Language) teachers think about various characteristics of foreign language learning environments. 50 EFL teachers-to-be participated in the study. They were in their fourth year of a four-year undergraduate degree in English Language Teaching in Turkey. Through the use of open-ended questionnaires, qualitative data were collected and analyzed. Most of the time, future EFL teachers typically highlight “language teaching resources” and “teaching strategies and approaches” as components of the foreign language learning environment. This understanding could be improved by doing exercises called “awareness-raising exercises,” in which pre-service EFL teachers are asked to think about what a foreign language classroom is and how to create a productive learning environment.

Kameli et al (2012) seek to figure out how to understand the impact of a formal language learning environment (classroom, teachers, and peers) on vocabulary acquisition processes. The study showed how the school environment and mediators may hinder or help ESL students' vocabulary acquisition strategies. This study employed a qualitative methodology. The researcher obtained data through in-depth interviews and analyzed it using open coding and constant comparative methodologies. The data suggested that teaching methods, the quantity of encouragement students received, their classmates' negative and positive attitudes, classroom activities, and textbooks had a substantial impact on the learners' selection of vocabulary acquisition tactics in school.

Conceptual Framework

This study (figure 2) is replicated from the study by (Hassan et al., 2020). In the context of this study, the university students are exposed to four basic types of learning environment. The learning environment is very important to determine learning success (Rahmat, 2018). A positive environment provides a positive learning experience, and vice versa. The first type is learner-centred environments. Learners like this type of learning environment because they are able to use their past experiences and knowledge to create new knowledge. The second type is community-centred environments. “community” can be representative of the class, an institution of learning's system, residents, industries, etc. A community-centred environment is a place where learners feel comfortable taking risks, making mistakes and also by being themselves. The third type is assessment-centred environments. This type of environment allows learners to keep track of their learning progress and also gives teachers feedback on how to best improve the learning experience. The last type is knowledge-centred. This type of environment allows learners to engage themselves in learning activities and in the process, they learn to make connections from their old to new knowledge.

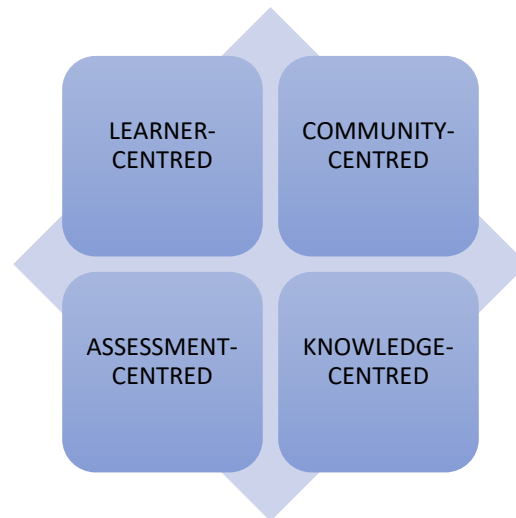


Figure 2-Conceptual Framework of the Study-Learning Environment: What are the students’ perceptions?

Methodology

This quantitative study is done to explore students’ perceptions on their learning environment. A purposive sample of 102 participants responded to the survey. The instrument used is a survey. It has 5 sections. With reference to table 1, Section A has 2 items on demographic profile. Section B has 7 items on the learner-centred environment. Section C has 7 items on the community-centred environment. Section D has 8 items on the assessment-centred environment. Section E has 8 items on the knowledge-centred environment.

Table 1
Distribution of Items in Survey

SECTION	TYPE OF LEARNING ENVIRONMENT	NO OF ITEMS
B	Learner-Centred	7
C	Community-Centred	7
D	Assessment-Centred	8
E	Knowledge-Centred	8
		30

Table 2
Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.967	30

Table 2 shows the reliability of the survey. The analysis shows a Cronbach alpha of .967; thus, revealing good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

Findings

Findings for Demographic Profile

Q1 Gender

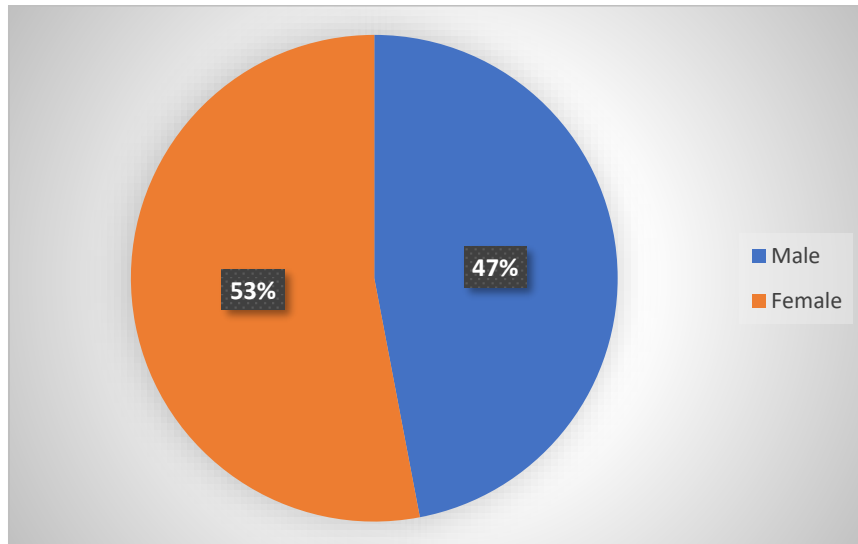


Figure 3- percentage for gender

Figure 3 above shows the percentage based on gender. A total of 53% are female respondents, while another 47% are male respondents. This is due to the fact that female students outnumbered male students at the university in which data were collected.

Q2 Level of Japanese Language Course

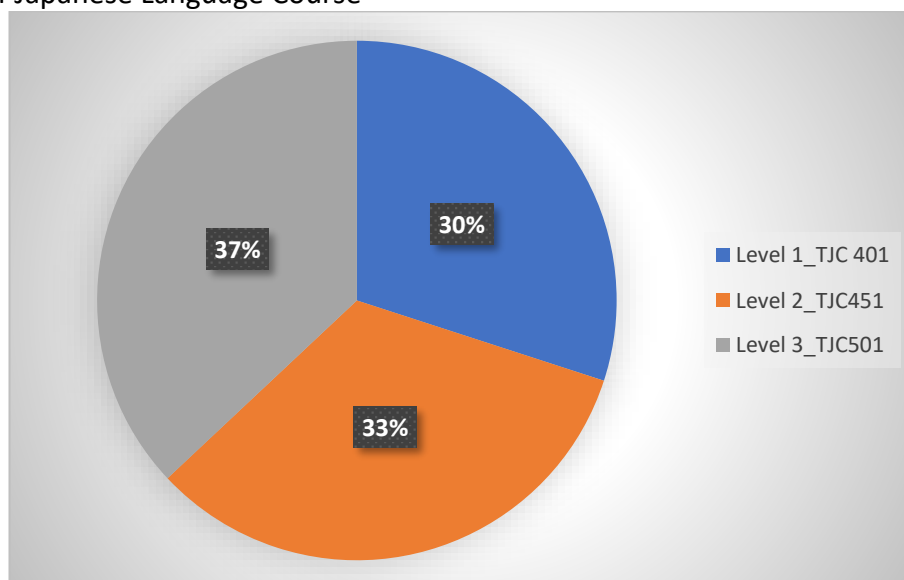


Figure 4- Percentage for Level

Figure 4 above illustrates the percentage of respondents based on the level of the Japanese language they are taking. 30% are Level 1 students, 33% are Level 2 students, and 37% are Level II students.

Findings for Learner-Centred

This section presents data to answer research question1: How does a learner-centred approach influence the learning environment?

Learner-Centred (LC)

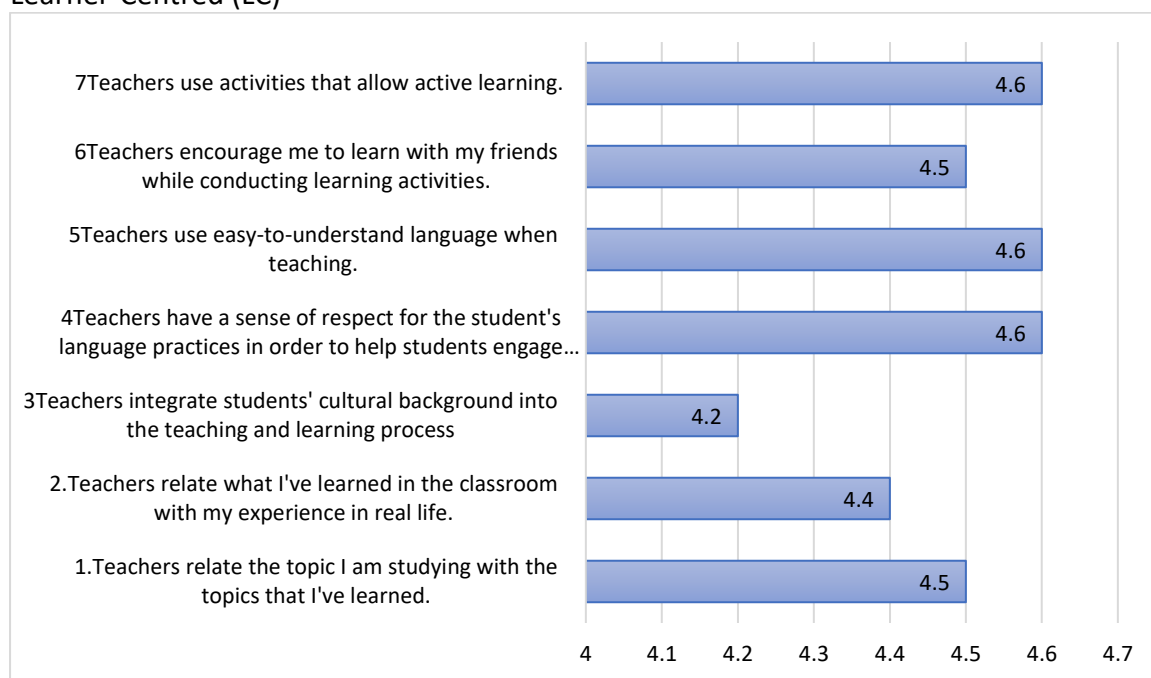


Figure 5- mean for learner-Centred Environment

The mean score for a learner-centred environment is presented in figure 5. The highest mean is 4.6 with 3 items and they are “Teachers have a sense of respect for the student’s language practices in order to help students engage in meaningful learning”, “Teachers use easy-to-understand language when teaching” and “Teacher uses activities that allow active learning”. The lowest mean (4.2) is for “Teacher integrates students' cultural background into the teaching and learning process”.

Findings for Community-Centred

This section presents data to answer research question 2: How does a community-centred approach influence the learning environment?

Community-Centred (CC)

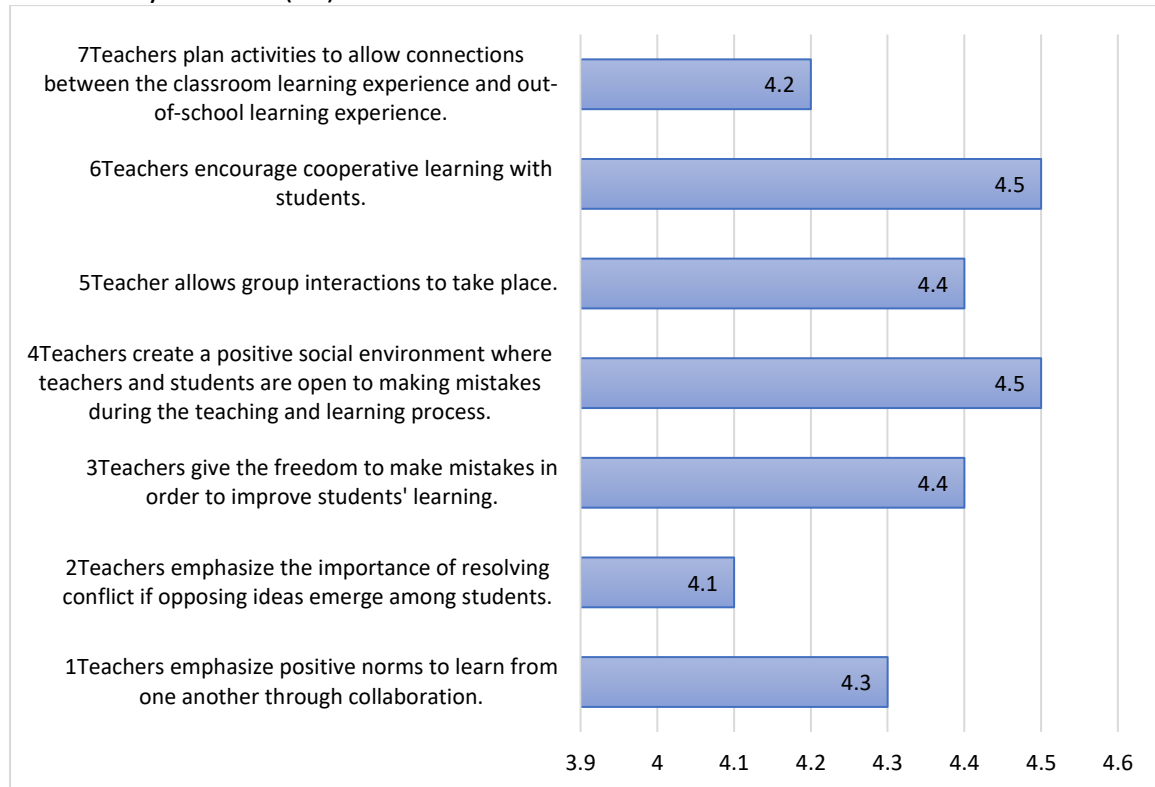


Figure 6- mean for Community-Centred Environment

According to the information in Figure 6, the highest mean of 4.5 shows that teachers need to create a positive social environment in the process of teaching and learning Japanese. The same mean of 4.5 also shows that teachers need to encourage students to cooperate in the process of teaching and learning Japanese. Respondents also want to have group interaction with the freedom to make mistakes in order to improve learning (4.4). Teachers need to emphasize the positive norm during the learning process (4.3). Teachers also have to plan activities to allow connections between the classroom learning experience and out-of-school learning experience. With a mean score of 4.1, teachers who tell their students the importance of resolving conflict when different ideas emerge among students have the lowest mean scores.

Findings for Assessment-Centred

This section presents data to answer research question 3: How does Assessment-centred approach influence learning environment?

Assessment-Centred (AC)

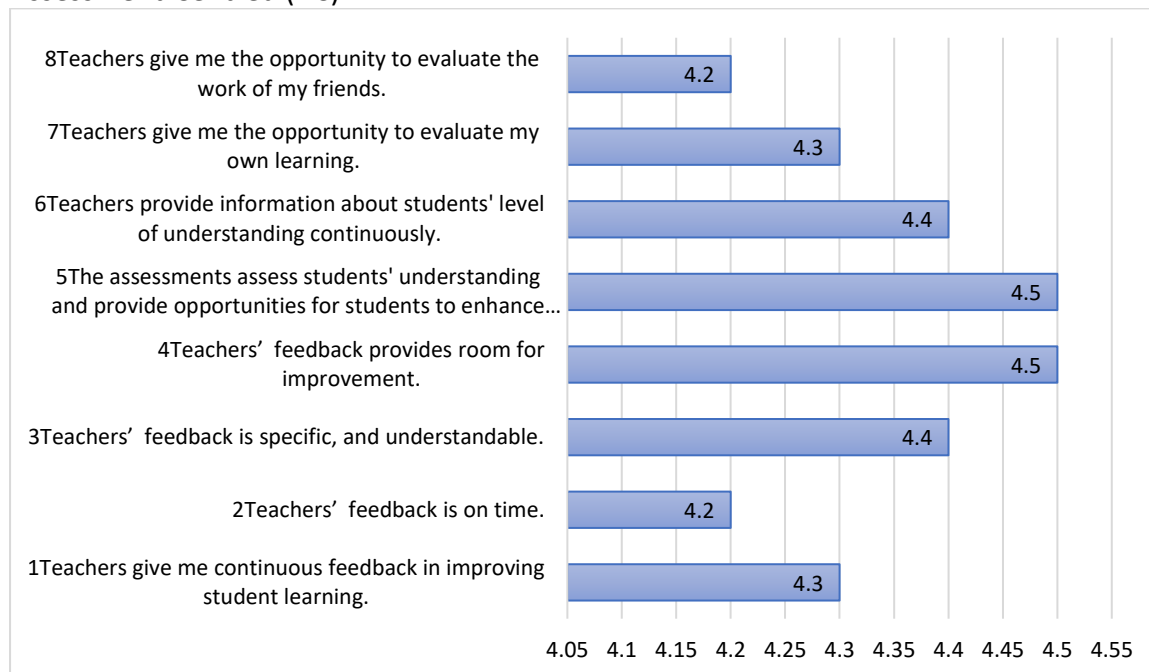


Figure 7- mean for Assessment-Centred Environment

Emotion has a substantial influence on the cognitive processes in humans, including learning. Tyng et al (2017) stated that emotion has a particularly strong influence on attention, and this attentional control is intimately linked to learning processes. Referring to Figure 7, respondents show that they are very satisfied and pleased with the approach of their teachers. The assessments managed by the teachers are very efficient, and they influence the learning environment. Respondents feel that the learning environment is very positive. The positiveness is shown on the mean of all questions in the survey, i.e, 4.2-4.5. The most positive feedback by respondents, with a mean of 4.5, which shows that respondents feel that their teachers give them opportunities to improve and enhance their learning. Respondents find that teachers also continuously provide information about their achievements in their studies (mean score 4.4). The mean scores of 4.2 & 4.3 show that respondents are also happy when their teachers always allow them to check on their own and friends' work too. Respondents find it helpful with the up-to-date and endless feedback from their teachers.

Findings for Knowledge-Centred

This section presents data to answer research question 4: How does Knowledge-centred approach influence the learning environment?

Knowledge-Centred (KC)

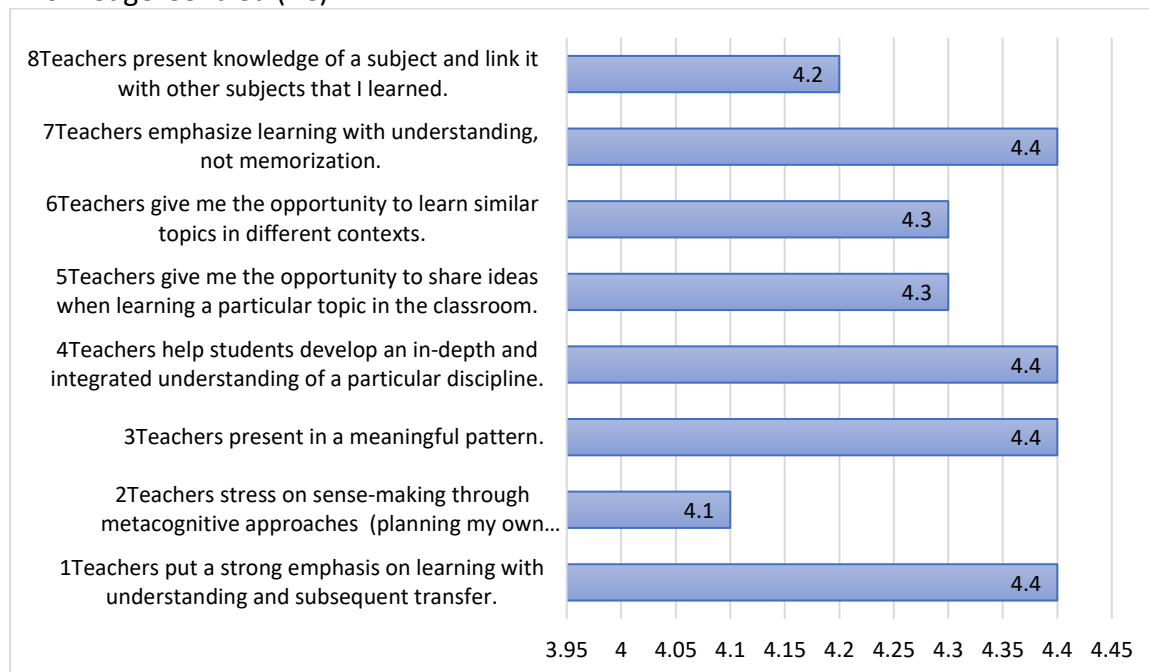


Figure 8- mean for Knowledge-Centred Environment

Mart (2013) in his study mentioned that passionate teachers create an effective learning environment and increase the learning motivation of students. Another study by Nagler (2016) stated that teachers' classroom management provides students with the opportunity to carry out their maximum potential. It is important that teachers are not only competent in the subject they teach, but teachers must also have a good understanding of their student's interests and styles of learning. Figure 8 shows that respondents are very happy with the way the teachers conducted the lesson. The mean from 4.1-4.4 for all the survey questions proved that the learning environment is very positive and students show their engagement in learning. A mean score of 4.4 was obtained for the question that shows how the teachers assist the students in the learning process. The students feel that teachers encourage them to learn with understanding and not just memorization. The mean of 4.2-4.3, respondents feel that their teachers put effort into teaching them and always make learning a two-way process. Teachers also allow students to integrate the knowledge they have just learned with topics, contexts, and subjects that they have learned in other classes.

Findings for Relationship across variables

This section presents data to answer research question 5: Is there a relationship across variables for the learning environment?

To determine if there is a significant association in the mean scores between learner, community, assessment and knowledge-centred data is analysed using SPSS for correlations. Results are presented separately in tables 3, 4, 5 and below.

Table 3

*Correlation for LEARNER VS COMMUNITY***Correlations**

		TOTALLEARNER	TOTALCOMMUNITY
TOTALLEARNER	Pearson Correlation	1	.791**
	Sig. (2-tailed)		.000
	N	102	102
TOTALCOMMUNITY	Pearson Correlation	.791**	1
	Sig. (2-tailed)	.000	
	N	102	102

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

Table 3 shows there is an association between learner and community centred. Correlation analysis shows that there is a high significant association between learner and community centred ($r=.791^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between the learner and the community centred.

Table 4

*Correlation for LEARNER & ASSESSMENT***Correlations**

		TOTALLEARNER	TOTALASSESSMENT
TOTALLEARNER	Pearson Correlation	1	.778**
	Sig. (2-tailed)		.000
	N	102	102
TOTALASSESSMENT	Pearson Correlation	.778**	1
	Sig. (2-tailed)	.000	
	N	102	102

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

Table 4 shows there is an association between learner and assessment-centred. Correlation analysis shows that there is a highly significant association between learner and assessment-centred ($r=.778^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between the learner and the assessment-centred.

Table 5
Correlation for LEARNER & KNOWLEDGE

		TOTALLEARNER	TOTALKNOWLEDGE
TOTALLEARNER	Pearson Correlation	1	.774**
	Sig. (2-tailed)		.000
	N	102	102
TOTALKNOWLEDGE	Pearson Correlation	.774**	1
	Sig. (2-tailed)	.000	
	N	102	102

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

Table 5 shows there is an association between learner and knowledge-centred. Correlation analysis shows that there is a high significant association between learner and knowledge-centred ($r=.774^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between learner and knowledge-centred.

Table 6
Correlation for KNOWLEDGE & COMMUNITY

		TOTALKNOWLEDGE	TOTALCOMMUNITY
TOTALKNOWLEDGE	Pearson Correlation	1	.782**
	Sig. (2-tailed)		.000
	N	102	102
TOTALCOMMUNITY	Pearson Correlation	.782**	1
	Sig. (2-tailed)	.000	
	N	102	102

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

Table 6 shows there is an association between knowledge and community-centred. Correlation analysis shows that there is a high significant association between knowledge and community-centred ($r=.782^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between knowledge and community-centred.

Table 7

*Correlation between KNOWLEDGE & ASSESSMENT***Correlations**

		TOTALKNOWLEDGE	TOTALASSESSMENT
TOTALKNOWLEDGE	Pearson Correlation	1	.766**
	Sig. (2-tailed)		.000
	N	102	102
TOTALASSESSMENT	Pearson Correlation	.766**	1
	Sig. (2-tailed)	.000	
	N	102	102

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

Table 7 shows there is an association between knowledge and assessment-centred. Correlation analysis shows that there is a high significant association between knowledge and assessment centred ($r=.766^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between knowledge and assessment-centred.

Table 8

*Correlation between ASSESSMENT & COMMUNITY***Correlations**

		TOTALASSESSMENT	TOTALCOMMUNITY
TOTALASSESSMENT	Pearson Correlation	1	.832**
	Sig. (2-tailed)		.000
	N	102	102
TOTALCOMMUNITY	Pearson Correlation	.832**	1
	Sig. (2-tailed)	.000	
	N	102	102

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

Table 8 shows there is an association between assessment and community-centred. Correlation analysis shows that there is a high significant association between assessment and community-centred ($r=.832^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between assessment and community-centred.

Conclusion*Summary of Findings and Discussion*

The overall mean score obtained in this study indicated that the student's perceptions of the learning environment were positive. The findings reported that all four approaches; learner-centred, community-centred, assessment-centred and knowledge-centred approaches are significant and influence the learning environment. All four learning approaches showed a high value of mean score which is between 4.0 - 4.6. The learner-centred approach has the highest mean scores, which means teachers have paid close attention to the knowledge, background, and attitudes of every learner in the classroom. It shows that the students feel comfortable and meaningful in this learning environment where they are allowed to have their own language practices. They also appreciate activities that allow active learning. The assessment-centred approach also has high mean scores, especially for teachers' feedback that are specific, understandable and provides room for improvement. These findings confirmed the model suggested by Hassan et al (2020) as an acceptable model.

This study also investigated the association in the mean scores between learner, community, assessment and knowledge-centred approaches. The results showed that there are strong positive relationships between learner and community-centred, learner and assessment-centred, learner and knowledge-centred, knowledge and community-centred, knowledge and assessment-centred, and assessment and community-centred. It shows that these four learning environment dimensions support each other (Donovan et al., 1999). In all, this study contributes to the current foreign language learning by exploring students' perceptions of learning environment. In the meantime, the empirical findings will contribute to a positive learning environment to motivate students to learn more efficiently.

Pedagogical Implications and Suggestions for Future Research

It is suggested that future researchers investigate the correlation between the learning environment and students' performance. Understanding the preferences of the learners is also crucial in order to provide a positive learning environment. It is also recommended that additional qualitative research be conducted in order to corroborate and fully comprehend this finding.

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