EFL Students' Psychological Well-Being in Learning across Different Epistemic Beliefs Levels

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Abstract:
Epistemic beliefs of English language learning (EFL) learners are one of the factors that have increased awareness among people due to their pivotal role in influencing students' success and learning strategies and behaviors. The current study aims to compare the two variables above and thus investigate EFL university students' psychological well-being across different levels of Epistemic Beliefs. This quantitative study uses an independent sample T-test to determine the mean difference between two independent groups, which are the psychological well-being (henceforth, PWB) and epistemic beliefs of EFL students. The data was gathered by delivering online questionnaires via Google Forms to 96 students from a reputable university in East Java, Indonesia, majoring in English language education. The results indicate that there is no difference in the psychological and emotional well-being of students in the study area among different levels of epistemic beliefs (i.e., sophisticated and simple). According to the findings, investigating students' epistemic beliefs can provide insights into their educational engagement and well-being when studying. It is found that the PWB of different epistemic beliefs of Indonesian EFL learners is not that significant, and it is implied that epistemic beliefs are a spectrum that can be influenced by other aspects, such as cultural facets.

Keywords: EFL students, epistemic beliefs, psychological well-being

1. INTRODUCTION
Along with the enhancement of technology, the role of English in the 21st century has become more critical as English is widely used across the globe. In this context, the one factor that has also been increasing awareness among people is the epistemic beliefs of EFL learners due to its
pivotal role in influencing not only students’ success but also their learning strategies and behaviors. The knowledge and knowing of learners, or epistemic beliefs (Hofer & Pintrich, 1997; Çuhadaroğlu, 2021; Huang et al., 2023), has surging awareness among educators since it incorporates students’ abilities about the process of gaining knowledge.

In addition, the standards that students set for learning goals during the planning phase may be influenced by epistemic beliefs, which will eventually have an effect on the remaining stages of the learning process (Rahmiati, et al., 2019). This is also in line with 21st-century skills such as critical thinking, lifelong learning, and adaptability to diverse learning environments, which are also important to assist university students majoring in English language education, in this rapidly changing world. Assisting EFL students to have positive epistemic beliefs can be realized inside the classroom, where the educators actively implement project-based learning, where students’ critical thinking is highly encouraged, and gradually change the method from teacher-centered to student-centered. In other words, considering epistemic beliefs has significant benefits in achieving major goals for EFL learning at the high education level (Ressi & Emaliana, 2021).

In the framing of higher education, psychological well-being becomes one of the significant aspects to consider among various other variables related to students’ academic success. Various changes in responsibilities and other challenges are experienced by students during their university lives. In the higher education or university context, anxiety correlates with inappropriate coping, such as the consumption of drugs, among university students, particularly in later years, suggesting the significance of healthy coping actions throughout the university (Böke, 2019). Stress and anxiety during learning might be aspects to consider at the university level. It is scientifically proven that higher subjective well-being corresponds with better educational achievement, emphasizing that subjective well-being is a crucial aspect of a student’s academic life; allowances can be made by paying closer attention to individuals who have shown a lack of academic achievement throughout and at the end of each semester (Chattu et al., 2020). Thus, it is critical for students to be psychologically healthy in order to attain their life objectives and academic performance (Turashvili & Japaridze, 2012). It is safe to assume that students’ higher psychological well-being might also positively influence their academic achievement.

The current study aims to compare the two variables above and thus investigate EFL university students’ psychological well-being across different levels of epistemic belief. This has become a more central reason to conduct this study due to the fact that the information needed to achieve students’ academic goals is demanded by lecturers to develop appropriate teaching strategies, methods, and materials. It is expected that in the future, the learning process at the university will be more focused on becoming more student-centered, and such aspects as epistemic belief and psychological well-being will be taken into consideration. Thus, the research question for the present study is: “Are there any significant differences on EFL students’ psychological well-being levels with different epistemic belief levels?”

2. LITERATURE REVIEW

2.1 Psychological Well-Being

In the university context, the students' mental health has been an indisputable concern among stakeholders such as lecturers, campus administrators, and service providers. This resulted in several studies in this field, such as Goodmans (2017), which found that it is usual for college students to expect stress and to witness stress in their colleagues, contributing to the sense that
misery is a regular component of the college experience. Universities are currently failing to satisfy the needs of students who have mental health issues. With 86% of students suffering from mental illness dropping out.

In addition, the study conducted by Turashvili and Japaridze (2012) examines the relationship between psychological well-being and academic achievement in students in Georgia. As a complex term, well-being is frequently regarded as one of the trademarks of the liberal arts experience, derived from educational experiences that both educate students in their search for what they want in life and assist them in reaching their actual capabilities. It can be concluded that the student’s psychological well-being might be one of the indicators used to determine EFL students’ academic success. Higher well-being means that students are happier and have less stress during their academic year, which results in higher academic achievement.

### 2.2 Epistemic Beliefs

Several studies related to epistemic beliefs among EFL learners have been done by researchers, and the data indicates that epistemic belief plays a significant role in students' academic performance (Sheehy & Rofiah, 2021). According to Emaliana (2017), there are two levels of epistemic belief: simple and sophisticated. In addition, according to Ketabi (2014), EFL learners with simple epistemic beliefs consider English learning something stable and certain. On the other hand, sophisticated-level students have the view that English is continuously developed, complex, and dynamic.

It is also implied in Emaliana’s (2017) research that epistemic beliefs in EFL settings include what EFL learning is and how to learn EFL. Students who hold simple epistemic beliefs think that teachers are the only source of learning (teacher-centered learning) for them to learn English. Students commonly focus on the results regardless of the process, hence the use of the grammar-translation approach and cognitive ways to learn English. Whereas, students with sophisticated epistemic perspectives contemplate that sources of knowledge are vast and not only in the class. Practicing can increase their ability to learn English over time. They also feel that making mistakes while learning is acceptable because learning is a process rather than an ultimate result. Advanced students mostly use second language acquisition and communicative learning methodologies (Rahmiati & Emaliana, 2020).

### 3. RESEARCH METHODOLOGY

This quantitative study uses an independent sample T-test to determine the mean difference between two independent groups: EFL students' psychological well-being and epistemic beliefs. The participants involved were 96 students from English language education at Universitas Brawijaya, selected through random sampling.

The questionnaire titled Student Questionnaire on EFL Epistemic Beliefs Blueprint, adapted from Emaliana (2017), was used as the research instrument to obtain data on EFL epistemic beliefs among respondents, particularly how they view learning English and how they learned English. The questionnaire consists of two dimensions: 1) What is knowledge and 2) How to learn knowledge. The first dimension has one dimension, namely Certain Knowledge. The second dimension has three subdimensions, which are: fixed ability (the learning ability is inherited); Omniscient authority (Schraw et al., 2002): whether learning comes from authority or can be done individually by everyone; and Simple knowledge (whether the study process is given by authority or knowledge is obtained through logical reasoning and experiences).
Table: 1 Valid questions of epistemic beliefs instrument

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Sub dimensions</th>
<th>Questionnaire</th>
<th>Total Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is knowledge</td>
<td>a. Certain Knowledge</td>
<td>Items 4, 5</td>
<td>2</td>
</tr>
<tr>
<td>2. How to get knowledge</td>
<td>a. Fix Ability</td>
<td>Items 10, 14</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>b. Omnicient Authorities</td>
<td>Items 16, 19</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>c. Simple Knowledge</td>
<td>Items 22, 23</td>
<td>2</td>
</tr>
</tbody>
</table>

As for the data about students' psychological well-being, it was obtained using The Ryff Scales of Psychological Well-Being adapted from Ryff et al., (2010), which cover six dimensions (Autonomy, Environmental mastery, Personal Growth, Positive relations with others, Purpose in life, and Self-acceptance). From the total of 18 questions, the validity result of the PWB instruments showed that there were 15 valid and used items. Can be seen in Table 2.

Table: 2 Valid questions of PWB instrument

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Questionnaire</th>
<th>Total Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Autonomy</td>
<td>Item 17</td>
<td>1</td>
</tr>
<tr>
<td>2. Environmental mastery</td>
<td>Items 4, 8, 9</td>
<td>3</td>
</tr>
<tr>
<td>3. Personal Growth</td>
<td>Items 11, 12, 14</td>
<td>3</td>
</tr>
<tr>
<td>4. Positive Relations with others</td>
<td>Items 6, 13, 16</td>
<td>3</td>
</tr>
<tr>
<td>5. Purpose of life</td>
<td>Items 3, 7</td>
<td>2</td>
</tr>
<tr>
<td>6. Self-acceptance</td>
<td>Items 1, 2, 5</td>
<td>3</td>
</tr>
</tbody>
</table>

The data was gathered by delivering online questionnaires via Google Forms to 96 students at Universitas Brawijaya majoring in English Language Education. After the data was analyzed using the JAPS independent sample T-test, the result was obtained as a mean. The highest mean score in every question was used to decide the direction of students’ epistemic beliefs, which are calculated from the total score of the questionnaire.

Graph 1. Epistemic Belief of EFL Students
EFL Students' Psychological Well-Being in Learning across Different Epistemic Beliefs Levels

The epistemic beliefs of EFL students are divided into Group 1 for sophisticated epistemic beliefs and Group 2 for simple epistemic beliefs. The demographic score of 10–17 indicated participants with sophisticated’ epistemic beliefs and 18–25 for simple’ epistemic beliefs. A total of 16 participants are considered to have sophisticated epistemic beliefs, while the other 80 are students with ‘simple” epistemic beliefs. Additionally, a descriptive-qualitative approach was applied to analyze the data to derive a broader discussion and perspective.

4. RESULTS

After collecting the data and conducting the analysis using the independent sample T-test of JAPS, the results indicate that the psychological well-being of EFL students at Universitas Brawijaya among different epistemic belief levels was not significant. The null hypothesis and alternative hypothesis are stated below:

The null hypothesis is

\[ H_0: \mu = \mu \]  Scores are equal in the population. There is no difference in PWB between simple and sophisticated levels of epistemic beliefs

The alternative hypothesis is:

\[ H_A: \mu \neq \mu \]  Scores are not equal in the population. There is a difference PWB between simple and sophisticated level of epistemic beliefs.

Table 3. Independent Sample T-Test

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWB</td>
<td>1.011</td>
<td>93</td>
<td>0.315</td>
</tr>
</tbody>
</table>

*Note: Student’s t-test*

In Table 3, it can be implied that the result is not significant. The p-value is 0.315 (\(p > 0.05\)) and it’s significant if the value is less than 0.05 (\(p < .05\)). There was no significant difference in PWB between students with sophisticated and simple epistemic beliefs \(t(96) = 1.01, p = .315\).

Table 4. Test of Normality (Shapiro-Wilk)

<table>
<thead>
<tr>
<th></th>
<th>W</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWB</td>
<td>1</td>
<td>0.895</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0.986</td>
</tr>
</tbody>
</table>

*Note: Significant results suggest a deviation from normality*

Table 4 is regarding the assumption check of the independent sample t-test. In T-test analysis using JAPS, there were several steps that needed to be done before counting the final results, namely the assumption check, which is divided into two types that is normality assumptions and equality of variance assumptions. As shown in Table 4, the significance values of groups 1 and 2 are 0.067 and 0.562, respectively. The \(p\) values of both epistemic belief levels are significant since the \(p\) values are greater than 0.05 (\(p > .05\)). Therefore, the assumption of homogeneity in variances is met.
Table 5. Group Descriptives

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>SE</th>
<th>Coefficient of variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWB</td>
<td>1</td>
<td>16</td>
<td>76.938</td>
<td>9.903</td>
<td>2.476</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>79</td>
<td>74.165</td>
<td>10.027</td>
<td>1.128</td>
</tr>
</tbody>
</table>

In Table 5, the result indicates that the mean for Group 1 is 76.90 (M = 76.90). Also, the mean for Group 2 is 74.20 (M = 74.30). The statistical outcomes show that the difference in students' PWB among the two groups of epistemic beliefs is not notable. As can be seen in Graph 2.

![Graph 2](image)

**Graph 2.** Mean difference of PWB among two levels of epistemic beliefs

In conclusion, as can be seen in Table 5 and Graph 2, there were 16 students with sophisticated epistemic beliefs (Group 1) and 79 with simple epistemic beliefs (Group 2). An independent-sample t-test was analyzed to determine if there were differences in psychological well-being (PWB) among students with sophisticated and simple epistemic beliefs. There were no outliers in the data, as assessed by inspection of a boxplot. PWB scores for each level of epistemic beliefs were normally distributed, as assessed by Shapiro-Wilk's test (Group 1 p = .067, Group 2 p = .562), and there was homogeneity of variances, as assessed by Levene's test for equality of variances (p = .315). The PWB was slightly higher for students with Group 1/sophisticated epistemic beliefs (M = 76.90, SD = 9.90) than for Group 2/simple epistemic beliefs students (M = 74.20, SD = 10.00), not a significant difference (t(96) = 1.01, p = .315).

5. DISCUSSION

According to the results of this study, there was no significant difference in students’ psychological well-being between different epistemic belief levels among EFL students at a university in Indonesia. The results indicate that the respondents who participated in this study don't have that much different academic success, even though their epistemic beliefs are different. The results show that Group 1 students or students with sophisticated epistemic beliefs have a mean score of 76.90 (M = 76.90). Also, students with simplistic epistemic beliefs have a 74.20 (M = 74.30) mean score. In the previous study related to the same field, there were many reports that the higher the students’ epistemic belief level, or sophisticated, the higher their
academic success, resulting in a higher PWB. However, this seems inaccurate, according to the findings of this current study. Several possible aspects might be why this type of occasion occurs. This is in accordance with the research conducted by Merk et al., (2018) discovered indications that topic-specific and general epistemic views influence each other and that contextual circumstances connected to specific topics might considerably impact topic-specific epistemic beliefs.

The first possible justification relates to the participants in the study. Researchers have conducted several studies on epistemic belief in EFL learners, and the data show that epistemic belief has a major impact on students' academic achievement (Sheehy & Rofiah, 2021). Emaliana (2017) distinguishes two types of epistemic beliefs: simple and sophisticated. Sophisticated epistemic beliefs include a nuanced understanding of knowledge acquisition, recognizing its complexities and the influence of various sources. Simple epistemic beliefs, on the other hand, frequently regard knowledge as absolute and stable, relying on authoritative persons or established sources. Epistemic belief itself might be such a broad spectrum that it is easily influenced by many factors. In the research conducted by Baytelmann et al., (2020), the students’ epistemic beliefs were influenced by their prior knowledge. It was found that students with sophisticated epistemic beliefs about the structure of knowledge and relatively more robust prior knowledge scores tend to make more arguments of better quality, quantity, and diversity compared to students with simple epistemic beliefs and low prior knowledge scores (Baytelman, 2020). This shows that epistemic belief is a complex and sensitive idea, and other factors might contribute to the difference.

The next reason is about the area of study. Cultural factors substantially impact the establishment and representation of the aforementioned epistemological beliefs. The statement is in line with several previous studies. The increasing number of studies on comparison indicates that epistemic beliefs are responsive to cultural circumstances, ranging from the conditions present in the student's parental home to the larger geopolitical region in which the student lives (Dandotkar, et al., 2022; Bernholt et al., 2021; Chan & Elliott, 2004). The study conducted by Chan and Elliot (2004) compared and investigated epistemological beliefs in North America, Hong Kong, and Taiwan. The results were then assessed in light of the various cultural contexts and methodologies employed in the study projects. Bernholt et al., (2021) conducted a latent regression analysis for students in Sweden and Germany. It was revealed that the observed classroom characteristics were important indicators of pupil beliefs about justification and knowledge acquisition and that the prediction pattern differed between nations. Researchers recently carried out additional studies involving massive education datasets (e.g., the Program for International Student Assessment, or PISA). The studies were conducted to identify statistically significant links between epistemic beliefs and student learning in various national contexts (Dandotkar, 2022; Khine et al., 2020; She et al., 2019). For example, Karakolidis et al. (2019) found epistemic beliefs to be significant mediators between high motivation and low achievement in 5,532 Greek students. Taken together, these secondary student studies have not only established the feasibility of epistemic belief as a construct but also linked it to student success. Thus, differences in the geographical region might result in differing epistemological beliefs since individual upbringing in their environment is also one of the factors contributing to their epistemic belief levels. Indonesian students might possess varying cases as well.

This present study took 96 respondents, who are EFL students from an Indonesian university in Southeast Asia. Cultural environments influence epistemic beliefs, which are cognitive structures
that influence knowledge acquisition and decision-making. This is aligned with what has been stated by Schommer (2019), that cultural, familial, and educational forces may have influenced the development of these beliefs. The individual's developmental level determines whether epistemological beliefs are domain-specific or not. With its diverse civilizations, Southeast Asia provides an ideal context for investigating the interaction between culture and epistemic beliefs. Although Southeast Asian cultures are rich and diverse, certain cultural characteristics and norms can be discovered that influence students' epistemic ideas in the region. Indonesia is one of the countries in Southeast Asia that values authoritarian figures. This is also common in a university context. Students are most likely to believe authority-transmitted knowledge. This point of view is not necessarily incorrect since, according to Sengoz (2020), the relationship between hierarchical authority and knowledge authority is important. Students in Indonesia are heavily influenced by norms that state they should respect teachers or lecturers. In several countries other than Indonesia, the teacher authority is quite high as explained by Gil Madrona et al., (2020). Even the instruments are needed for this factor. The Scale of Pedagogical Authority Meanings in the Classroom (ESAPA) is a reliable instrument for investigating students' perceptions of instructors as authority figures in the classroom. Especially for learning English, teachers are often seen as the main sources of knowledge, so their attentiveness to learning from other sources is likely lower. This leads to simplistic epistemic beliefs. Therefore, Indonesian EFL students are most likely to have simplistic epistemic beliefs.

One important result of this study is that epistemic beliefs are influenced by individual cognitive processes and cultural circumstances. Cultural background, cultural norms, and educational institutions can all alter a person's epistemic views, influencing their psychological well-being when learning a language. In Indonesia, the different levels of epistemic belief that are scientifically proven did not have any significant difference. The factor might be that Indonesia is one of the countries in Southeast Asia where a teacher's perspective as the sole language source is quite strong. These findings emphasize the necessity of considering cultural factors when researching epistemic beliefs and their relationship to psychological well-being in EFL learners.

6. CONCLUSION

From this study, we can conclude that the epistemic beliefs of EFL students are critical in defining their educational experiences and, thus, their general psychological well-being. However, there were other factors that influenced it, such as the culture of EFL students. Awareness of the importance of creating appropriate epistemic beliefs can result in developing techniques and interventions that improve language acquisition and contribute to students' psychological and emotional well-being. In this study, it is scientifically proven that the psychological well-being of EFL students at Universitas Brawijaya among different epistemic beliefs is not statistically significant. This kind of occasion is possible since epistemic belief is a spectrum that can be influenced by other aspects, such as cultural facets.

As a result of personal experiences, education, exposure to varied ideas, and interactions with people from other cultures, it is crucial to emphasize that epistemic views are not set and can change over time. Understanding how cultural characteristics affect epistemic beliefs is critical for encouraging cross-cultural understanding, effective communication, and collaboration in a globalized world. It also emphasizes the significance of cultural sensitivity in the development of educational programs. Recognizing the impact of culture on epistemic beliefs among Southeast Asian students is critical for educators. Educators should try to create learning settings that
respect cultural values while stimulating critical thinking and studying different points of view. Understanding and tolerating various epistemic ideas can also improve intercultural communication and collaboration.

A suggestion for research that will be conducted in the future would be to focus more on the intricate relationship between epistemic notions and well-being, indicating how educators and institutions might best assist EFL students in the twenty-first century. As well as paying more attention to culture that might affect students’ level of epistemic beliefs. Future studies should include demographic questions related to cultural background, or perhaps not, as this finding also suggests that the long-standing constructs used in the epistemic beliefs may need to be critically evaluated for their suitability in measuring epistemic beliefs in cross-cultural contexts. Previous studies utilizing epistemic beliefs have often incorporated qualitative components to provide deeper insight.

7. ACKNOWLEDGEMENT
Funding for this work was provided by Hibah Penelitian Unggulan grant from Research and Community Service at Universitas Brawijaya, Indonesia (612.8/UN10.C20/2023).

8. REFERENCES
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