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Implementing Inquiry-Based Learning at South East European University in North Macedonia

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ABSTRACT

This study addresses the implementation of Inquiry-Based Learning (IBL) in higher education in North Macedonia. IBL is a learner-centred approach based on utilizing students' questions to facilitate learning and is suitable for cultivating critical thinking skills among students. Modern teaching methodologies advocate for its broader classroom application, not only in language instruction but also across various disciplines.

The findings highlighted several benefits associated with the implementation of IBL in EFL instruction. These include the development of communication skills, fostering collaboration among students, promoting critical thinking abilities, and facilitating active learning. These outcomes align with the broader goals of modern teaching methodologies, which emphasize learner-centred approaches and the cultivation of essential skills beyond language acquisition.

Overall, the results suggest that integrating IBL into EFL instruction at SEEU has the potential to enhance the educational experience for both teachers and students. By fostering a more engaging and interactive learning environment, IBL can contribute to the achievement of educational goals while equipping students with essential skills for success in their academic and professional endeavours.

Keywords: Inquiry-based learning, implementation, tertiary level, experiences, SEEU

Introduction

Inquiry-based learning (IBL) is an innovative approach in contemporary teaching, redefining the traditional paradigms of teaching and learning. Rooted in the philosophy of exploration, curiosity, and critical thinking, this approach places students at the helm of their educational journey. Instead of passively absorbing information, learners actively engage in questioning, investigating, and constructing knowledge. IBL is considered a constructive approach because it heavily relies on the work and ideas of Piaget, Dewey, Vygotsky, and Freire, among others, who are the developers of constructivism.

First of all, Inquiry - based learning (IBL) fosters a dynamic environment where questions precede answers; it ignites a thirst for knowledge that transcends the boundaries of the classroom. From kindergarten to postgraduate studies, this methodology empowers individuals to become lifelong learners, equipped with the tools to navigate an ever-evolving world. This introduction discusses the principles, benefits, and implementation strategies of inquiry-based learning, unravelling its transformative potential in shaping the next generation of thinkers, innovators, and problem solvers.

In the vast landscape of educational methodologies, inquiry-based learning shines as an innovative teaching approach which challenges the traditional transmission model of teaching embracing a dynamic, student-centred approach. At its essence, inquiry-based learning is not merely a pedagogical technique but a philosophy that celebrates the innate curiosity and wonder of the human mind. This approach aims to involve students into discovery activities, where questions are the compass guiding their exploration. It encourages learners to delve deeply into topics, to question assumptions, and to seek out their own answers, fostering a sense of ownership and agency over their learning journey. By shifting the focus from rote memorization to active engagement, it cultivates critical thinking skills, creativity, and a thirst for knowledge that extends far beyond the confines of the classroom.

Rooted in the constructivist theory of learning, inquiry-based learning recognizes that knowledge is not something to be passively received but actively constructed through experience and reflection. It acknowledges the diversity of learners and encourages educators to create environments that accommodate different learning styles, interests, and abilities. Regarding the principles, benefits, and implementation strategies of inquiry-based learning, it has potential in preparing students for the challenges of the 21st century. From fostering a deep understanding of content

to nurturing essential skills such as problem-solving, collaboration, and communication, inquiry-based learning equips learners with the tools they need to thrive in an ever-changing world.

Having said all of the above, this study aims to examine learners' perceptions and experiences with inquiry-based learning in learning EFL. The data collection method, students' survey, gathers perceptions and feedback regarding their experiences with inquiry-based learning, their beliefs, and satisfaction levels related to inquiry-based instruction in the classroom.

Theoretical Review

Inquiry-based learning (IBL) has gained significant attention in educational research and practice due to its potential to foster active engagement, critical thinking, and deep understanding among learners across various disciplines. This section provides an overview of key themes and findings from the literature on IBL, encompassing its theoretical foundations, instructional strategies, benefits, challenges, and implications for teaching and learning.

This teaching approach is grounded in constructivist learning theories, which posit that learners actively construct knowledge through their experiences, interactions, and reflections. Jonassen (1999) emphasizes the importance of designing learning environments that support learners' active engagement in inquiry and discovery. Additionally, Vygotsky's theory of social constructivism highlights the role of social interactions and collaborative learning in knowledge construction (Vygotsky, 1978). In IBL settings, students work collaboratively to pose questions, investigate phenomena, and construct meaning through dialogue and shared inquiry.

When it comes to the instructional theories, IBL employs a variety of instructional strategies to promote student-centered inquiry and discovery. These include problem-based learning (PBL), project-based learning (PBL), case-based learning (CBL), and inquiry-driven laboratory activities. Problem-based learning, for instance, presents students with authentic, ill-structured problems that require critical thinking and problem-solving skills (Savery & Duffy, 1995). Project-based learning involves students in extended, interdisciplinary projects that culminate in tangible outcomes (Thomas, 2000). Case-based learning immerses students in real-world scenarios to analyse complex issues and make informed decisions (Herreid, 1994). Inquiry-driven laboratory activities provide opportunities for hands-on exploration and experimentation, fostering scientific inquiry skills (Bell, Smetana & Binns, 2005).

Regarding the benefits and challenges of IBL, it offers numerous benefits for learners, including enhanced engagement, deeper understanding, and transferable skills development. Studies have found that students engaged in IBL demonstrate increased motivation, curiosity, and ownership of their learning (Hmelo-Silver, 2004). Additionally, IBL promotes the development of critical thinking, problem-solving, and metacognitive skills, which are essential for success in academic and professional contexts (Prince & Felder, 2006). Furthermore, IBL fosters a deeper conceptual understanding of subject matter by providing opportunities for students to actively construct knowledge through inquiry and reflection (Kirschner, Sweller & Clark, 2006).

Despite its potential benefits, IBL poses challenges for both instructors and students. Implementing IBL requires careful planning, resource allocation, and ongoing support to ensure effective implementation (Dochy et. al., 2003). Instructors may encounter resistance from students accustomed to traditional, lecture-based instruction, necessitating a shift in pedagogical practices and classroom culture (Erdogan, Stuessy & Maday, 2017). Moreover, assessing student learning in IBL settings can be challenging due to the open-ended nature of inquiry tasks and the emphasis on process over product (Chin & Chia, 2004). Additionally, providing adequate scaffolding and support for student inquiry while promoting autonomy and independence remains a delicate balance (Blumenfeld et al, 1991).

In light of the theoretical foundations, instructional strategies, benefits, and challenges associated with IBL, several implications emerge for educators and educational policymakers. First, professional development programs should equip instructors with the knowledge, skills, and resources necessary to design and facilitate inquiry-based learning experiences effectively. Second, curriculum design should integrate IBL approaches to promote active learning, critical thinking, and disciplinary expertise across disciplines and educational levels. Third, assessment practices should align with the goals and processes of inquiry-based learning, emphasizing formative feedback, self-assessment, and authentic performance tasks. Finally, further research is needed to explore the long-term effects of IBL on student learning outcomes, attitudes, and career readiness in diverse educational contexts.

In summary, inquiry-based learning offers a promising approach to fostering active engagement, critical thinking, and deep understanding among learners. By drawing on theoretical foundations, employing effective instructional strategies, addressing challenges, and considering practical implications, educators can harness the potential of IBL to enhance teaching and learning in the 21st century.

Recent Studies

Several studies explored the efficacy and benefits of inquiry-based learning across various educational settings and disciplines.

The first study was conducted by Jones & Lee (2024). Jones and Lee conducted a mixed-methods study exploring the implementation of inquiry-based learning in language arts classrooms. Their findings indicated that inquiry-based approaches enhanced students' reading comprehension, writing proficiency, and communication skills. Students exhibited greater creativity and confidence in expressing their ideas, as well as a deeper appreciation for literature and language.

The second study was the initiative by the Next Generation Science Standards (NGSS) to conduct a longitudinal study on the implementation of inquiry-based learning in STEM education marks a significant step forward in understanding the effectiveness of teaching methodologies. Inquiry-based learning, which emphasizes hands-on exploration, critical thinking, and problem-solving, has long been advocated as a powerful approach to STEM education. The findings of the study shed light on the tangible benefits of inquiry-based learning for students. Firstly, students who were exposed to this approach demonstrated higher levels of scientific inquiry skills. This suggests that they were not only absorbing content knowledge but also developing the ability to think like scientists, to question, investigate, and analyse information.

Finally, the qualitative study conducted by Smith et al., in 2022: Smith et al., investigated the impact of inquiry-based learning in social sciences education. Through interviews and classroom observations, the researchers found that inquiry-based learning fostered critical thinking, empathy, and a deeper understanding of complex societal issues among students. Additionally, students showed increased engagement and enthusiasm for learning when given the opportunity to explore real-world questions and problems.

All the aforementioned studies showed the benefits of inquiry-based learning as a pedagogical approach that promotes deep learning, critical thinking, and student engagement across diverse subject areas. As educators continue to implement the inquiry-based practices, further research is needed in North Macedonia to explore its effects on student learning outcomes and to refine implementation strategies for optimal effectiveness.

Method

The paper aimed to explore perceptions, benefits and challenges that IBL pose for language teachers and students at SEEU. Three research questions focus on implementing inquiry-based learning at the university level are as follows:

- What are students' perceptions with inquiry-based learning experiences and how does this affect their motivation?

- How does the implementation of inquiry-based learning impact students' critical thinking skills, problem-solving abilities, and overall academic performance?

By addressing these research questions, the results of this research can contribute to the understanding of the effectiveness, challenges, and implications of implementing IBL in university-level language learning contexts.

The first research method is student survey which contains 12 Likert-scale questions, and open-ended prompts which explores attitudes, beliefs, and satisfaction levels related to inquiry-based instruction in English language classrooms. In research, surveys are valuable tools for gathering perceptions and feedback from both teachers and students regarding their experiences with inquiry-based learning.

The research involves a group of 46 students enrolled in BA studies in English language and literature at the Faculty of Languages, Cultures, and Communication at South East European University (SEEU) in Tetovo, North Macedonia. These students represent a diverse group with varying levels of proficiency and backgrounds in language learning.

To gather data, the researchers conducted a survey created on Google Docs and shared with students of the Department of English Language and Literature at SEEU. The survey contained two parts, namely, items related to students' perception of IBL and their classroom experiences.
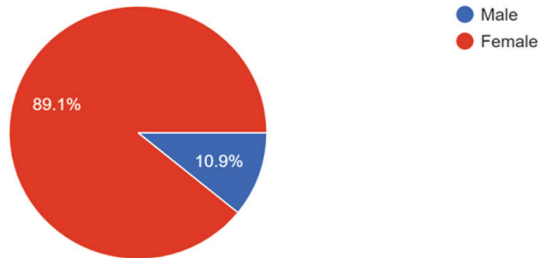
Results

This chapter presents the data collection results obtained from the students' survey. The data collection aimed for 60 participants initially but obtained responses from 46 participants. This implies a response rate of approximately 76.67%.

Figure 1:

Participants' Gender

Gender
46 responses

According to figure 1, 89.11% of the participants identified as female and 10.9% of the participants identified as male. The gender distribution is significantly skewed towards females, with nearly nine times as many females as males participating in the study simply because the student body at the Faculty of languages. Cultures and Communication is mainly female students who study English and German.

Figure 2:

Participants' age

Age
46 responses
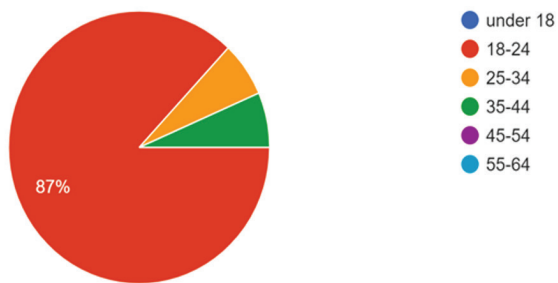
Results in figure 2 showed that the majority of participants fall within the 18-24 age range, constituting 87% of the total participants, while 6,5 % are 25-34 age range and 6,5 % are 35-44 age range. This suggests that the study primarily attracted younger individuals, likely reflecting a sample of college or university students or young adults in a specific demographic.

Figure 3:

Participants' current year of study
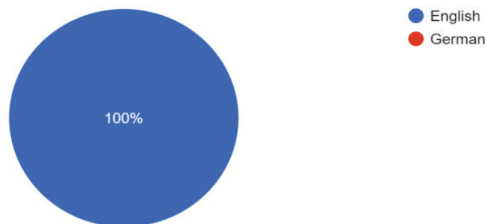
Current year of Study
46 responses
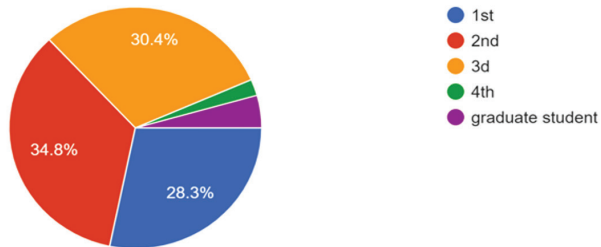
Looking at the results in Figure 3, we can conclude that 34,8% are in their second year of study, 30, 4% in their third year, 28,3% in their first year of study while 2,4 % are in the fourth year and 4.3% have graduated.

Figure 4:

Study program of the students

Study program
46 responses

As it can be seen in Figure 4, all participants 100% are students who study English language and Literature at SEEU. Even though the study intended to include the students of the German language and literature for unknown reasons, the uniformity of participants suggests that the study exclusively involved this particular group. This indicates a focused approach to understanding the experiences, perspectives, or behaviours of this particular student demographic.
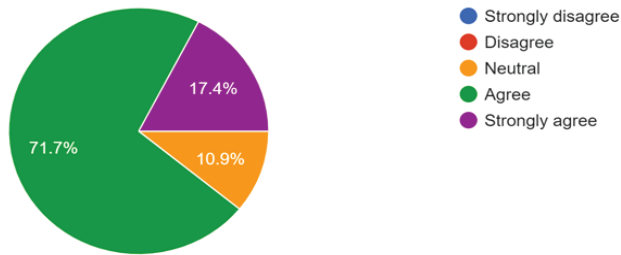
Figure 5:

Familiarity with IBL

1. I am familiar with inquiry-based learning
46 responses

Data in Figure 5 provides insight into participants' perceptions of their familiarity with inquiry-based learning. The findings indicate that a majority, specifically 71.7%, acknowledge being familiar with this approach. While 17,4% strongly agreed and 10,9% were neutral in regard with this statement. This suggests a notable level of awareness or exposure to inquiry-based learning among the respondents.

Figure 6:

Participation in inquiry-based learning

2. I have participated in activities that incorporate inquiry-based learning methods?
46 responses
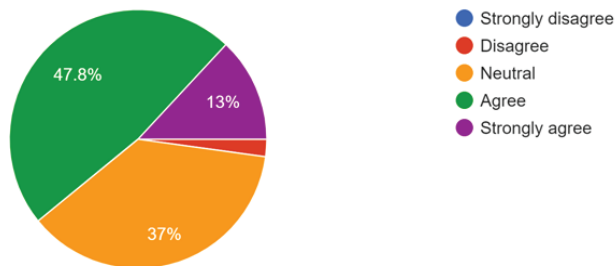
Based on the results presented in figure 6, the majority of the participants, 47,8% agreed on their participation in such activities, 37% were neutral, 13% strongly agreed and a small percentage of participants, 2.2%, expressed outright
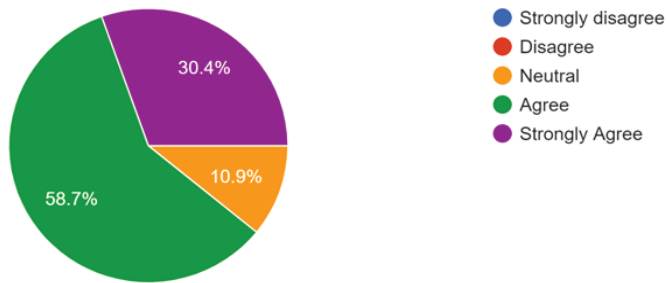
disagreement with the proposed activities. Overall, participants' agreement indicates a level of interest or openness to the proposed initiatives, reflecting a positive attitude towards participation.

Figure 7:

Benefits of inquiry-based learning

3. Inquiry-based learning encourages curiosity and exploration?
46 responses

Results presented in Figure 7 show that the majority of participants, comprising 58.7%, expressed agreement with the statement that inquiry-based learning encourages curiosity and exploration. While a significant subset of participants, totalling 30.4%, strongly endorsed the idea that inquiry-based learning fosters curiosity and exploration and a relatively small percentage of participants, 10.9 %, remained neutral towards this issue. All this this indicates a widespread recognition among the sample population that this approach to learning has a positive impact on fostering curiosity and promoting exploration among learners.

Figure 8:

Motivation for engaging in inquiry-based learning activities

4. I am motivated to be engaged in inquiry-based learning activities
46 responses
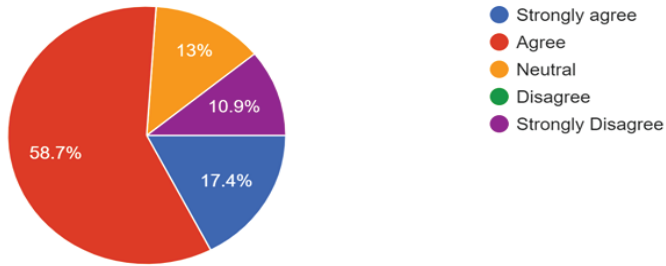
As data in Figure 8 show, it can be clearly seen that 58,7% of the respondents agreed that they were motivated for inquiry-based learning, 17,4% strongly agreed, 13 % reported that they were neutral and 10,9% strongly disagreed that they were motivated to participate in inquiry-based activities. These results suggest that they see value or benefit in this approach, perhaps finding it engaging, stimulating, or conducive to their learning style.

Figure 9:

Enhancement of critical-thinking and problem-solving skills among participants

5. Inquiry-based learning enhances critical thinking and problem-solving skills
46 responses
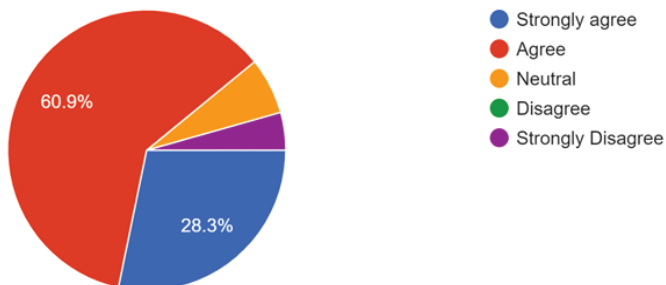
Results presented in Figure 9 indicated that more than half of the respondents, 60,9% agreed that inquiry-based learning enhances critical thinking and problem-solving skills, while 28,3% strongly agreed on this. However, 6.4% of them strongly disagreed and 3,6 % were neutral. This suggests that a significant portion of the respondents recognize the value and benefits of inquiry-based learning in developing these essential skills. They likely perceive inquiry-based approaches as effective methods for fostering analytical thinking, creativity, and problem-solving abilities.

Figure 10:

Collaboration during inquiry-based learning

6. Inquiry-based learning fosters collaboration skills among students
46 responses
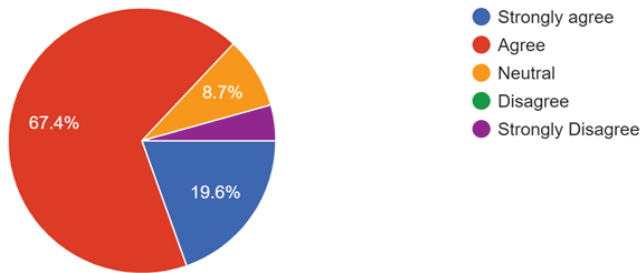
Based on results presented in Figure 10, the vast majority, 67,4% agreed that inquiry-based learning promote collaboration among students, 19,7% strongly agreed in this matter, 8,7% were neutral and only 2,2% strongly disagreed. Overall, the results in Figure 10 highlight a strong consensus among respondents regarding the role of inquiry-based learning in promoting collaboration among students. However, it's important to acknowledge the perspectives of those who were neutral or strongly disagreed, as they provide insights into potential areas of scepticism and alternative viewpoints.

Figure 11:

Personal growth and inquiry-based learning

7. Inquiry-based learning experiences influences my personal growth
46 responses
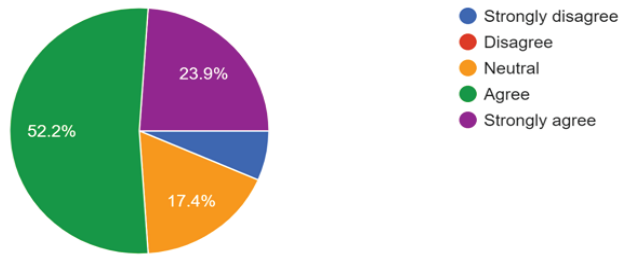
As data in Figure 11 show, 52,2% of the respondents agreed that inquiry-based activities can increase their personal growth, 23,9 % strongly agreed on this matter, while a notable proportion of respondents were neutral 17,4% were neutral. This finding suggests that a substantial portion of the participants recognize the potential benefits of engaging in inquiry-based learning experiences for their personal development. Personal growth may encompass various aspects such as intellectual curiosity, self-awareness, adaptability, and resilience.

Figure 12:

Effectiveness of inquiry-based learning in comparison to traditional learning

8. Inquiry-based learning is more effective compare to traditional learning
46 responses
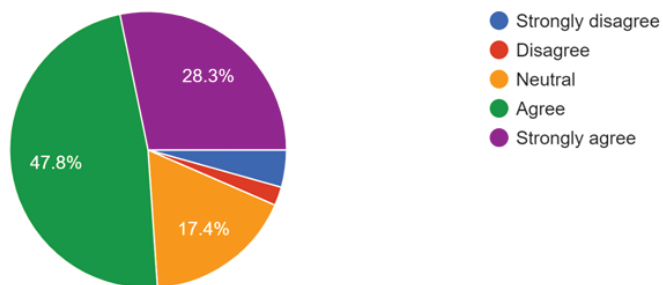
Analysing the results presented in Figure 12, which compares the effectiveness of inquiry-based learning to traditional learning, reveals a range of perspectives among the respondents. Nearly half of the respondents, 47,8%, agreed that inquiry-based learning is effective when compared to traditional learning methods. 28,3% strongly agreed, while a notable proportion of respondents, 17,4%, were neutral regarding the effectiveness of inquiry-based learning compared to traditional methods. A small percentage of the respondents 4.4% strongly disagreed and 2% disagreed that with the statement that inquiry-based learning is more effective than traditional learning.

Figure 13:

Communication skills development through inquiry-based learning

9. Inquiry-based learning fosters communication skills among students
46 responses
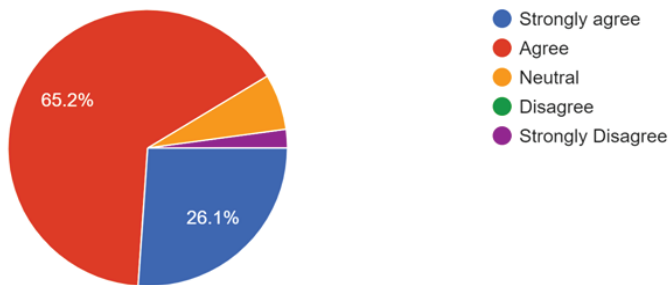
Data in Figure 13 show that more than half of the respondents, that is 65,2%, agreed that inquiry-based learning fosters communication skills among students. Moreover, 26,1% strongly agreed on this while only a small percentage of the respondents either disagreed or strongly disagreed that inquiry-based learning fosters communication among students in the class. The high percentage of strong agreement suggests a strong conviction among a substantial subset of respondents regarding the effectiveness of inquiry-based learning in enhancing communication skills.

Figure 14:

Learner-centeredness in inquiry-based learning

10. Inquiry-based learning is a learner-centred approach
46 responses
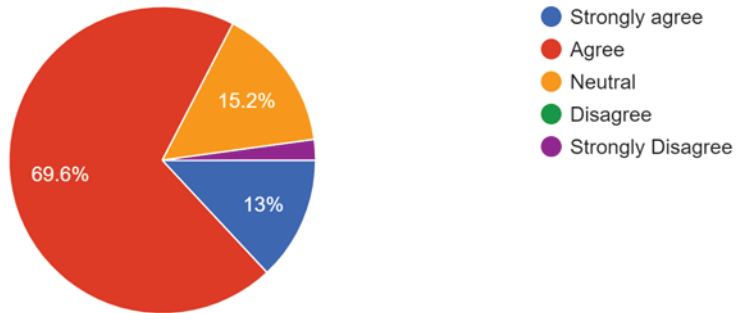
As data in Figure 14 show, a high portion of the respondents reported that they agreed that inquiry-based learning is a learner centred approach. However, 15,2% of the respondents felt neutral on this issue. A notable proportion of respondents, 13%, strongly agreed that inquiry-based learning is a learner-centred approach. In conclusion, these data underscore a widespread perception among respondents that inquiry-based learning is indeed learner-centred. The high percentage of agreement and strong agreement indicates a strong consensus regarding the learner-centric philosophy of inquiry-based approaches.

Open-ended questions

Regarding questions 15, related to respondents' experiences with inquiry-based learning, and their recommendations for instructors and institutions, they have listed the following:

Table 1:

Recommendations for instructors and institutions

- Ensure clear goals, support guidance, and ongoing professional development for teachers
- Foster a supportive environment within institutions to implement inquiry based learning
- Implementing assessment methods that align with inquirybased learning activities
- Foster on developing critical thinking and problemsolving skills
- Encourage curiosity and questioning technique through the use of this approach
- Integrate technology during its implementation
- Try to approach introvert learners more and encourage them to participate in inquiry based learning
- Teachers should try to increase students' talking time and encourage learner autonomy
- Every lesson should be meaningful with positive learning outcomes
- Teachers should develop questions which require critical thinking not only YES/ NO answers
- I strongly advice teachers to implement this approach
- Get students more involved in projects
- Projects that allow students to delve into topic deeply and develop their own understanding
- Provide regular feedback, offer resources, encourage curiosity
- Provide guidance, promote critical thinking, embrace real world connections to enhance inquiry
- The teachers should be aware that it is more interesting and effective than traditional teaching

Regarding questions 16, related to students' experiences they shared the following:

Table 2:

Students' experiences with inquiry – based learning

- When my professor used it, I strengthened my learning
- I had a really great time and the professor was great in her class
- No I don't have anything to add.
- I think it's a great learning technique because you feel like a detective for your own learning journey. You ask questions, search for answers and learn new things along the way.
- Inquirybased learning can be incredibly rewarding for both students and instructors and it can provide new learning outcomes compared to traditional teaching
- I don't have any specific to be added but never leave aside this technique because is the best one to build future learners
- I do not have much experience
- Inquirybased learning empowers students to actively engage in their learning, fostering critical thinking, problemsolving, and a love for lifelong learning.
- Inquirybased learning enhances students critical thinking, collaboration, and fuels curious, which can be very helpful for the future.
- My experience with inquirybased learning has been very good.
- Everything should be balanced. Giving students opportunities to express themselves and have more control over their learning is important, however teachers should also guide them and teach them. So there should be a mix of traditional and contemporary methods of teaching.
- Incorporating critical thinking, creativity, and realworld problemsolving into assessments can significantly enhance inquirybased learning
- Only that is a better learning method than the traditional one where the teachers "serve" the definitions to the students.
- This type of learning enhances students' critical thinking skills.
- Foster curiosity, provide scaffolded support, encourage collaboration, offer realworld connections, embrace flexibility, and assess reflectively to enhance inquirybased learning
- Inquirybased learning empowers students to explore, think critically, and learn independently, fostering lifelong skills essential for success.

To conclude on the data obtained, more than half of the participants were familiar with this approach and are in favour of it. They also demonstrated high level of motivation when it comes to implementation of inquiry-based learning at the university level because it offers a multitude of benefits that extend beyond traditional lecture-based approaches. By actively engaging students in exploration, critical thinking, and problem-solving, inquiry-based learning fosters deeper understanding, promotes independent thinking, and cultivates lifelong learning skills. This approach empowers students to take ownership of their learning journey, encourages collaboration, and prepares them for success in complex, real-world environments.

Conclusion

This study aimed to reveal potential benefits of inquiry-based learning in Higher Education level and it showed that the implementation of inquiry-based learning (IBL) at the university level, specifically within the context of students learning English, holds immense promise and potential for transformative educational experiences. This research paper has explored various facets of IBL implementation, shedding light on its benefits, challenges, and implications for English language education.

Through the lens of inquiry-based learning, students are not merely passive recipients of knowledge but active participants in their learning journey. By engaging in authentic, real-world tasks and investigations, students develop critical thinking skills, linguistic proficiency, and cross-cultural competencies essential for success in today's globalized society. Moreover, the learner-centred nature of IBL empowers students to take ownership of their learning, fostering autonomy, motivation, and a sense of agency in their language acquisition process.

Furthermore, the collaborative nature of inquiry-based learning encourages peer interaction, communication, and collaboration, creating rich opportunities for language practice and social interaction among students. In addition to linguistic development, students also cultivate essential 21st-century skills such as problem-solving, teamwork, and communication skills, which are highly valued in academic and professional contexts.

While the benefits of implementing inquiry-based learning in English language education are evident, it is essential to acknowledge the challenges and considerations that accompany its implementation. Factors such as curriculum design, instructor training, resource allocation, and assessment methods require careful

attention to ensure the successful integration of IBL into university English language programs.

As we move forward, it is imperative to continue researching and refining best practices for implementing inquiry-based learning in English language education. By leveraging innovative pedagogical approaches, leveraging technology, and fostering a supportive learning environment, universities can harness the full potential of inquiry-based learning to cultivate engaged, empowered, and proficient English language learners equipped for success in an increasingly interconnected world.

To this very end, the implementation of inquiry-based learning at the university level offers a transformative approach to English language education, fostering critical thinking, linguistic proficiency, and 21st-century skills essential for students' academic and professional success. Through continued research, collaboration, and innovation, inquiry-based learning holds the promise of reshaping the landscape of English language education and preparing students to thrive in a rapidly evolving global society.

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APPENDIX 1

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__Demographic Information:

Gender: Male / Female

Age: Under 18 ; 18-24 ; 25-34 ; 35-44 ; 45-54 ; 55-64

Current Year of Study: 1st, 2nd, 3d,4th, graduate student

Study program: English/ German

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_____

Perception questions:

1.I am familiar with inquiry-based learning   1   2   3   4   5

2. Have you participated in activities that incorporate
inquiry-based learning methods?

3. Inquiry-based learning encourages curiosity and exploration

4.I am motivated are you to engage in inquiry-
based learning activities

5. Inquiry-based learning enhances critical thinking
and problem-solving skills

6. Inquiry-based learning fosters collaboration
skills among students

7. Inquiry-based learning experiences influences
my personal growth

8. Inquiry-based learning is more effective compare
to traditional learning

9. Inquiry-based learning fosters communication
skills among students

10. Inquiry-based learning is a learner-centred approach

_____

Open ended questions:

11. Based on your experiences with inquiry-based learning, what recommendations would you provide to instructors and educational institutions to enhance the effectiveness of this approach?

12. Is there anything else you would like to share about your experiences, perceptions, or suggestions regarding inquiry-based learning?