

Development of Foreign Language Learning Motivation of University Students in Uzbekistan Through English for Specific Purposes Classes

Daler Kironboevich Sirojov

Naruto University of Education, Japan

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ABSTRACT

This study examines the effect of English for Specific Purposes (ESP) classes on the motivation and psychological needs of third-year students at Tashkent State Pedagogical University, Uzbekistan. A total of 91 students participated, with motivation assessed using a 20-item scale based on Self-Determination Theory (SDT), which included measures of amotivation, external motivation, identified regulation, and intrinsic motivation. Psychological needs were assessed using a 12-item scale covering autonomy, competence, and relatedness. Pre- and post-tests were conducted to measure changes in motivation and psychological needs following the implementation of 7 ESP lessons. The results revealed that after the intervention, students showed significant improvements in both motivation and psychological needs, with post-test scores showing higher levels than pre-test results. These findings suggest that the ESP material designed for this study positively influenced students' motivation, highlighting the potential of ESP courses to enhance students' engagement and psychological well-being. The study underscores the importance of aligning language instruction with students' specific academic and professional needs to foster motivation and psychological needs and improve learning outcomes.

1. Introduction

1.1. Reforms in Improving Foreign Language Proficiency

In 2012, a resolution was passed by the President of the Republic of Uzbekistan to implement measures to further improve foreign language teaching and learning. According to the resolution, in all regions of the republic, the learning of foreign languages, mainly English, would begin in the first grade of elementary school in the form of game-style lessons and oral speech lessons. From the second grade onwards, English education would progress from mastering the alphabet towards reading, and grammar.

1.2. Importance of Foreign Language Proficiency in Uzbekistan

Fluency in foreign languages is essential to promote international relations, educational advancement, and economic development. These factors have a direct effect on Uzbekistan

* Corresponding author's E-mail address: sirojev.d@mail.ru

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social development. Effective foreign language communication has become crucial for people, companies, and the nation as Uzbekistan continues to modernize and interact with the outside world. To further education and academic direction, access to global knowledge and research, study abroad opportunities and international collaboration in research is crucially important for the future of the country.

2. Literature Review

2.1 English for Specific Purposes Integrated Reform in Uzbekistan (2016)

To reform the resources and curriculum of non-philological institutions across the nation, the British Council, in collaboration with the Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan Scientific-Practical Innovation Center, launched the EnSPIRe-U (English for Specific Purposes Integrated Reform in Uzbekistan) program in 2016.

2.2 Self-Determination Theory in the Context of ESP

Deci and Ryan (1985) established SDT, which has been widely applied in SLA research, especially by Noels and her colleagues (Lou et al., 2018; Noels et al., 2019a, 2019b; Noels et al., 2000). SDT is a broad framework for understanding human motivation, personality development, and well-being. It focuses on the role of intrinsic and extrinsic motivation and the basic psychological needs that support optimal functioning and growth. ESP is a branch of English language teaching (ELT) designed to meet the specific needs of learners in professional or academic contexts. It differs from General English (GE) by focusing on specialized vocabulary, discourse, and skills required in specific fields such as business, medicine, engineering, and law (Hutchinson & Waters, 1987). ESP courses are need-driven, meaning they are designed based on an analysis of learners' specific requirements in their respective domains (Basturkmen, 2010). Several studies have explored the implementation of SDT principles in ESP context. Hiromori (2006) conducted an instructional intervention with Japanese university students, introducing a task-based activity designed to simultaneously satisfy the three psychological needs outlined by SDT. The study found that such interventions could effectively enhance intrinsic motivation among learners. Rahmanpanah (2017) highlighted the role of autonomy-supportive teaching styles in nurturing intrinsic motivation among EFL learners. The study suggests that when teachers are aware of the impact of their communicative styles, they can better support students' psychological needs, leading to improved motivation and learning outcomes. Following this framework, Agawa and Takeuchi (2017) developed a new questionnaire based on SDT to assess motivation among Japanese university EFL learners. Their research demonstrated the validity and reliability of this instrument in measuring SDT constructs within the ESP context. These scales were used in this research.

2.3 Advantages of SDT Model in the Context of ESP

The theory is well established in a variety of fields, including organizational behavior, sports, health, and education. For example, SDT has influenced tactics to promote healthier habits, increase employee engagement at work, and boost student motivation in classrooms (Vallerand et al., 2012). This adaptability shows how versatile SDT is and how valuable it is in a variety of sectors. SDT has had a significant impact on our knowledge of the connection between wellbeing and motivation. Environments that foster relatedness, competence, and autonomy have been linked to improved mental health and psychological well-being, according to research (Ryan & Deci, 2001). SDT emphasizes the need to establish surroundings that support favorable mental health outcomes by concentrating on these fundamental needs.

2.4 Designing Effective ESP Classroom Content

Whenever designing ESP classroom, needs analysis should be considered. ESP instruction that incorporates learners' disciplinary needs has been shown to improve motivation and comprehension (Ibrahim, 2020; Bocanegra-Valle, 2016). By following needs of learners, ESP materials can be chosen which might give the way to improve motivation. A student-centered approach in English for Specific Purposes (ESP) emphasizes active learner participation, autonomy, and real-world application, shifting the focus from teacher-led instruction to student engagement (Hutchinson & Waters, 1987). Unlike traditional methods, this approach tailor's instruction to students' academic and professional needs through needs analysis, ensuring relevance and practicality (Dudley-Evans & St John, 1998). In my ESP classroom, students identified their language challenges and engaged in task-based learning, such as role-plays, case studies, and collaborative projects. For instance, biology students are involved in biology related content. By fostering autonomy, problem-solving, and interactive learning, the student-centered approach in ESP enhances motivation and equips learners with practical language skills essential for success in their respective fields (Littlewood, 1996; Dörnyei, 2005).

3. Methodology

3.1 Research Question and Objective

This research aims to investigate the effect of ESP classes on the motivation and psychological needs of third-year students at Tashkent State Pedagogical University, Uzbekistan.

Research question:

- How does ESP material impact students' motivation?
- How does ESP material impact students' psychological needs?

Research objective:

The objective of this study is to find out how ESP material affects the motivation of learners in an experimental group by surveying a sample of 91 students from Tashkent State Pedagogical University.

3.2 Research Design

The research design used in this study is a quasi-experimental design, as it involves pre-test and post-test assessments to evaluate changes in students' motivation and psychological needs following the implementation of ESP lessons. The study does not involve random assignment of participants, which is a characteristic of experimental designs, but instead focuses on measuring the same group of students before and after the intervention. Angrist and Pischke (2010) argue that while quasi-experiments are inherently less controlled than Randomized Controlled Trial (RCT), techniques such as instrumental variables, regression discontinuity, and differences-in-differences can help researchers achieve credible causal estimates in non-randomized settings.

3.3 Participants

The participants in this study were a total of 91 third year of students (19-25 years old) enrolled at natural science faculty of Tashkent State Pedagogical University in Uzbekistan. This study employed convenience sampling, as the participants were selected based on their accessibility. These students were selected to examine the impact of ESP classes on their motivation and

psychological needs. Biology students in Uzbekistan were chosen for this study due to the growing demand for English proficiency in scientific disciplines. As Uzbekistan continues to reform and internationalize its higher education system, English has become a key tool for academic and professional advancement (Tilavova & Jabborov, 2020). In scientific fields such as biology, English is the dominant language for academic publishing, international collaboration, and access to up-to-date research (Flowerdew, 2013). Therefore, proficiency in English for Specific Purposes (ESP), particularly in scientific contexts, is increasingly necessary for biology students to participate effectively in the global academic community.

Despite this importance, many students face challenges in understanding scientific texts and terminology in English, which can hinder both their academic performance and motivation (Tarnopolsky, 2018). Addressing this gap through ESP instruction tailored to their specific field may not only improve their language skills but also enhance intrinsic motivation by aligning learning content with their academic and professional goals, as suggested by Self-Determination Theory (Deci & Ryan, 2000).

By focusing on biology students in Uzbekistan, this study responds to both national educational priorities and discipline-specific language needs, contributing to the development of more effective and motivating ESP materials.

The sample consisted of undergraduate biology students, who were assessed both before and after participating in the ESP intervention.

Table 1. Summary of Study Population, Sampling Approach, And Sample Size

Population of the Study	Sampling Approach	Sampling Method	Sampling Size
Students	Pre-Post-test	University(third-year of students)	91
	Reflection		
Total			91

3.4 Data Collection

The research data was collected in the autumn semester of the 2024-2025 academic year. Students were administered at the ELMS and PN Scale (A&T, 2017).

3.4.1 English Learning Motivation Scale

The English Learning Motivation Scale is a comprehensive tool designed to evaluate the motivational factors influencing learners' engagement in English language acquisition. This scale comprises 20 5-point Likert-scale items across for subscales: Amotivation, External regulation, Identified regulation, Intrinsic motivation.

3.4.2 Psychological Needs Scale

The Psychological Needs Scale is a structured assessment tool designed to measure the satisfaction of fundamental psychological needs essential for optimal functioning and well-being. Comprising 12 items divided into three subscales—autonomy, competence, and relatedness—this scale provides insight into individuals' experiences and fulfillment of their psychological requirements.

3.5 Data Analysis

Data was analyzed using JASP (version 0.18.3) and Excel for statistical analysis (JASP Team, 2020). Descriptive analysis was conducted to examine the components of SDT, providing an overview of key variables related to motivation and psychological needs (Field, 2013). To assess the effect of the ESP intervention, “a paired samples t-Test” was performed to compare pre-test and post-test scores for both the English Learning Motivation Scale and the Psychological Needs Scale, which is a widely used statistical method to evaluate the impact of an intervention on paired data (Cohen, 1988). This analysis allowed for the identification of significant changes in students' motivation and psychological needs following the intervention. Additionally, the distribution of each subscale within the motivation scale (amotivation, external regulation, identified regulation, intrinsic motivation) and the psychological needs scale (autonomy, competence, relatedness) was assessed to gain a deeper understanding of the specific areas of improvement (Brace, Kemp, & Snelgar, 2016).

4. Result

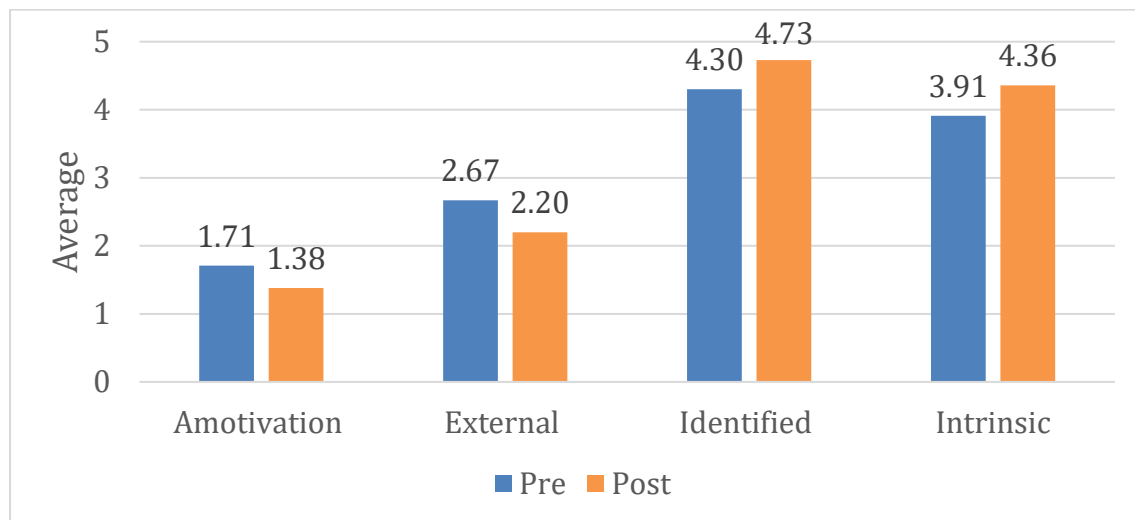


Figure 1. Distribution of Motivation Subscales

Figure 1 compares the means of four motivational factors—Amotivation, External, Identified, and Intrinsic—before (Pre) and after (Post) the intervention. The data reveals that Amotivation decreased slightly from an average of 1.71 (Pre) to 1.38 (Post). Similarly, External motivation also showed a reduction, dropping from 2.67 to 2.20. On the other hand, both Identified and Intrinsic motivation increased post-intervention. Identified motivation rose from 4.30 to 4.73, while Intrinsic motivation increased from 3.91 to 4.36. This suggests that the intervention may have effectively reduced less desirable forms of motivation (Amotivation and External) while enhancing more autonomous and self-determined types of motivation (Identified and Intrinsic).

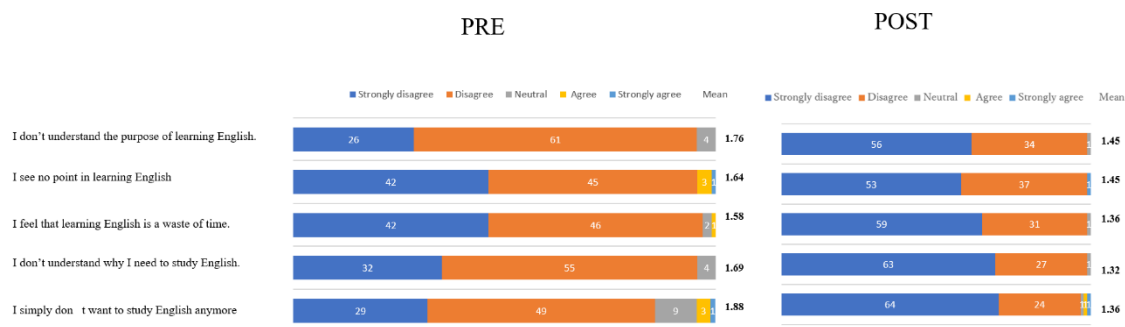


Figure 2. Distribution of Pre- and Post-Amotivation

As it is shown in Figure 2, amotivation towards learning English decreased after an intervention, highlighting key shifts in perspectives. In the "PRE" section, a significant number of respondents expressed confusion about the purpose of learning English, with 26% strongly disagreeing and 61% disagreeing with the idea of its necessity. However, in the "POST" section, amotivation decreased dramatically, showing 64% strongly disagree and 24% disagree with the item, "I don't want to study English anymore". Additionally, the mean scores indicate an overall positive shift in perceptions, suggesting that the intervention effectively decreased amotivation and increased understanding of the importance of English language learning among participants.

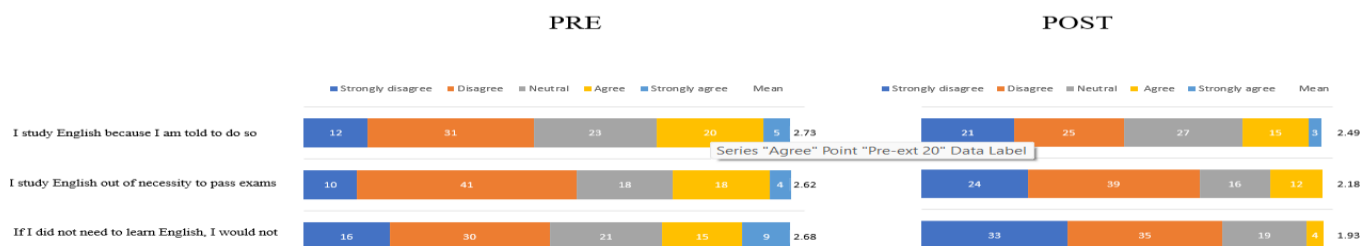


Figure 3. Distribution of Pre- and Post-External Regulation

According to Figure 3, shows the distribution of Pre- and Post-External Regulation. Strongly disagreement on items measuring External Regulation almost doubled from the pre to post survey, increasing from 12% to 21%; 10% to 24% and 16% to 33%.

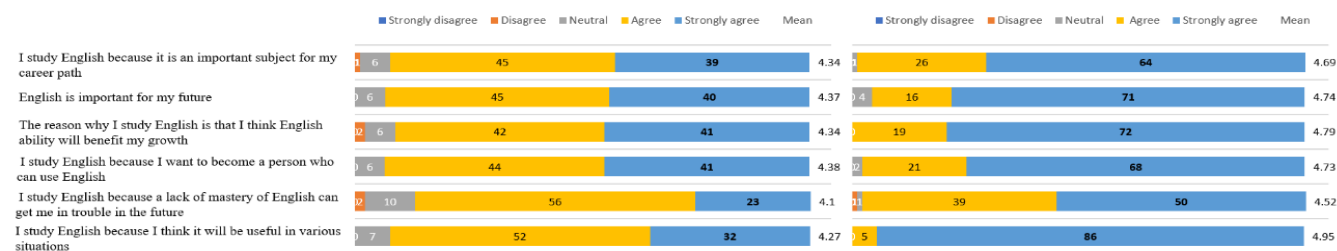


Figure 4. Distribution of Pre- and Post-Identified

In Figure 4, there was a significant change seen in the agree and strongly agree option from the pre-to-post surveys. The last item showed a dramatic change, showing an almost threefold increase, from 32% to 86% while agree dropped from 52% to 5%. After intervention, participants corroborated that learning English is fruitful in different situation.

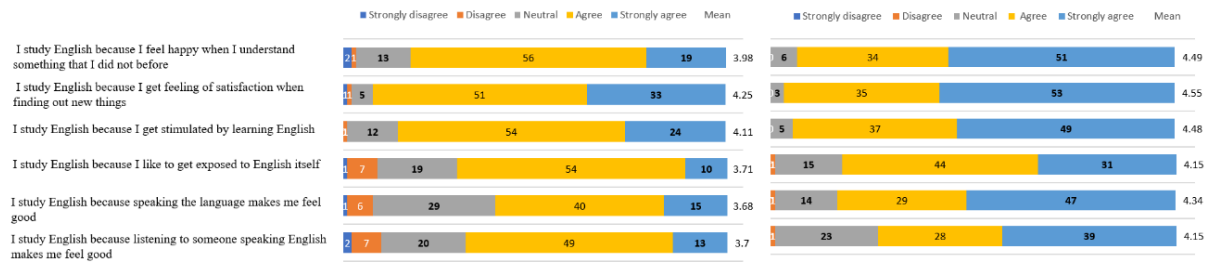


Figure 5. Distribution of Pre- and Post-Intrinsic Motivation

Distribution of pre- and post-intrinsic items are presented in Figure 5. The result indicates that post-test scores are significantly higher compared to pre-test scores. In the pre-test, half of participants agreed with these items, but after the treatment, most of the learners' opinion changed from agree to strongly agree option.

Table 2. Paired Samples T-test for English Learning Motivation Scale

Measure 1	Measure 2	W	z	df	p
Pre-Intrinsic 6	- Post-Intrinsic 6	308.500	-4.116		< .001
Pre-Intrinsic 7	- Post-Intrinsic 7	150.500	-5.282		< .001
Pre-Intrinsic 8	- Post-Intrinsic 8	315.000	-3.681		< .001
Pre-Intrinsic 10	- Post-Intrinsic 10	230.000	-3.805		< .001
Pre-Intrinsic 13	- Post-Intrinsic 13	214.500	-2.963		0.001
Pre-Intrinsic 15	- Post-Intrinsic 15	117.000	-4.730		< .001
Pre-Identified 1	- Post-Identified 1	0.000	-6.509		< .001
Pre-Identified 2	- Post-Identified 2	129.000	-4.496		< .001
Pre-Identified 12	- Post-Identified 12	198.000	-3.742		< .001
Pre-Identified 16	- Post-Identified 16	37.000	-5.014		< .001
Pre-Identified 18	- Post-Identified 18	185.000	-3.753		< .001
Pre-Identified 19	- Post-Identified 19	147.000	-3.936		< .001
Pre-External 5	- Post-External 5	1745.500	4.718		< .001
Pre-External 14	- Post-External 14	1363.000	3.298		< .001
Pre-External 20	- Post-External 20	611.000	2.339		0.012
Pre-Amotivation 3	- Post-Amotivation 3	1165.000	4.705		< .001
Pre-Amotivation 4	- Post-Amotivation 4	884.500	4.143		< .001
Pre-Amotivation 9	- Post-Amotivation 9	433.000	2.725		0.002
Pre-Amotivation 11	- Post-Amotivation 11	531.500	1.975		0.032
Pre-Amotivation 17	- Post-Amotivation 17	944.000	4.021		< .001
Pre-Total	- Post-total	787.000	-4.340		< .001

Note. Wilcoxon signed-rank test.

Table 2 shows the pre-to-post change for each of the 20 items. The Wilcoxon Signed Rank test was utilized to see if the changes were statistically significant. The table shows that changes in the majority of individual items were significant at the $p < 0.001$ level, and all changes in all items were significant at the $p < 0.05$ level.

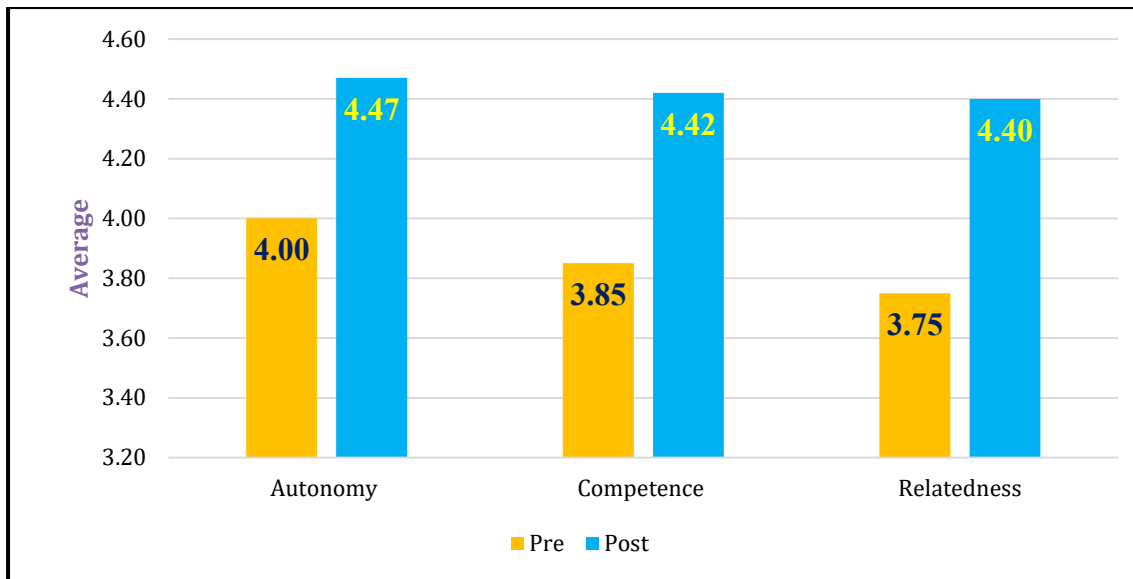


Figure 6. The average between psychological subscales of pre and post scores

Figure 6 illustrates the average levels of the three psychological needs Autonomy, Competence, and Relatedness before and after an intervention. The data indicates a positive change in all three areas. Autonomy increased from an average of 4.00 (Pre) to 4.47 (Post), showing a significant improvement. Similarly, Competence rose from 3.85 to 4.42, reflecting enhanced perceptions of ability or effectiveness. Relatedness also improved, with an increase from 3.75 to 4.40, suggesting stronger feelings of connection with others. Overall, the results indicate that the intervention positively impacted all three psychological needs, with noticeable growth across the board.

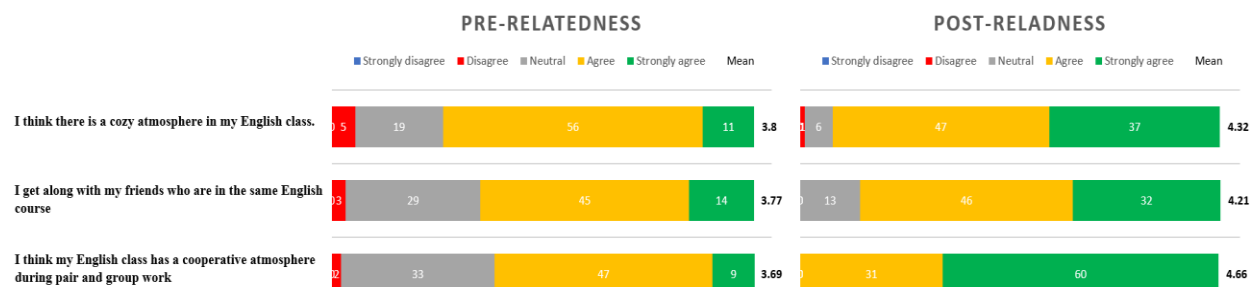


Figure 7. Distribution of Relatedness

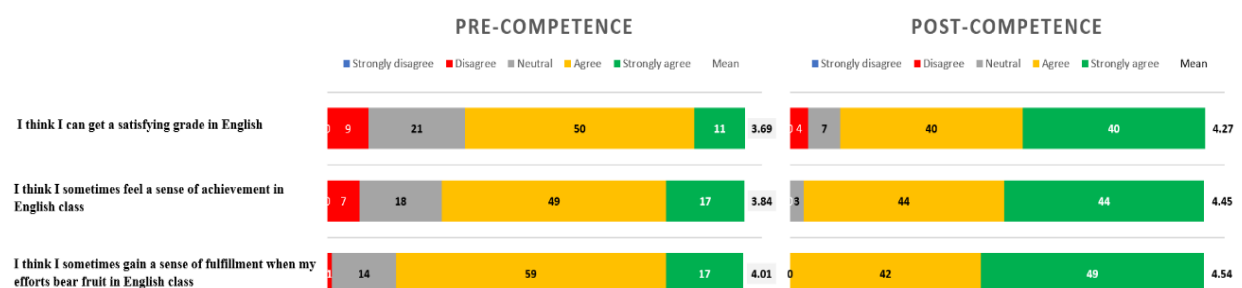


Figure 8. Distribution of Competence

As it is shown in Figure 7, the Relatedness item, “I get along with my friends who are in the same English course” remained unchanged in agree option before and after intervention. A large change occurred in the item, “I think my English class has a cooperative atmosphere during pair and group work”, showing 60% response rate for strongly agree in the post-test.

This Figure 8 shows the distribution of pre and post items measuring competence on the Psychological Needs Scale. Half of participants agree for these three items in pre-test, having the highest number of rates. 9% respondents disagree with the item “I think I can get a satisfying grade in English” in pre intervention and it decreased to 0.4% after intervention. As for posttest, the majority changed their opinion to strongly agree, showing 49%, 44% and 40% accordingly.

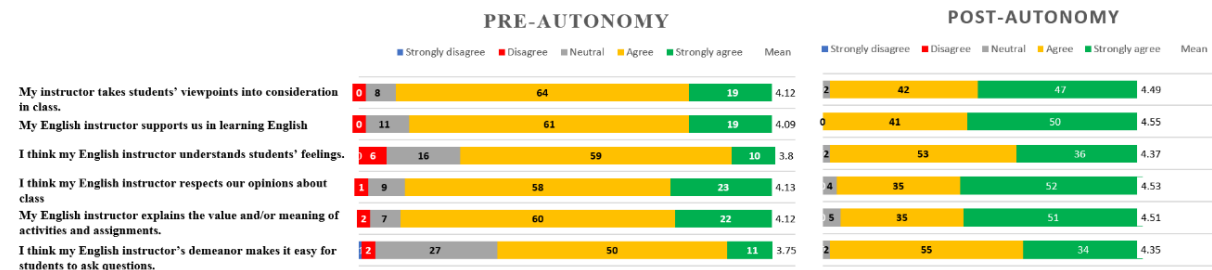


Figure 9. Distribution of Autonomy

Figure 9 shows the result for items measuring autonomy. Students felt higher levels of autonomy following the intervention, as indicated on all six items. There is a notable increase in students perceiving respect for their opinions (mean rising from 4.13 to 4.53) and higher rate in the item of “My English instructor supports us in learning English” (mean rising from 4.09 to 4.55). These findings suggest the intervention positively impacted the students' perceptions of their instructor's engagement and teaching approach.

Table 3. Paired Samples T-test for Psychological Needs Scale

Measure 1		Measure 2	W	z	df	p
Pre-Autonomy 2	-	Post-Autonomy 2	84.000	-5.427		< .001
Pre-Autonomy 3	-	Post-Autonomy 3	168.000	-4.070		< .001
Pre-Autonomy 6	-	Post-Autonomy 6	157.500	-4.302		< .001
Pre-Autonomy 8	-	Post-Autonomy 8	117.500	-5.294		< .001
Pre-Autonomy 9	-	Post-Autonomy 9	78.000	-4.866		< .001
Pre-Autonomy 12	-	Post-Autonomy 12	37.000	-4.745		< .001
Pre-Competence 5	-	Post-Competence 5	135.000	-5.045		< .001
Pre-Competence 10	-	Post-Competence 10	86.000	-5.408		< .001
Pre-Competence 11	-	Post-Competence 11	160.500	-5.011		< .001
Pre-Relatedness 1	-	Post-Relatedness 1	40.000	-6.747		< .001
Pre-Relatedness 4	-	Post-Relatedness 4	188.500	-4.218		< .001
Pre-Relatedness 7	-	Post-Relatedness 7	37.000	-5.265		< .001
Pre-Total	-	Post-Total	5.500	-8.124		< .001

Note. Wilcoxon signed-rank test.

Table 3 presents the Wilcoxon Signed Ranks Test Statistics when comparing the pre and post-test scores. There is a significant difference on all items at a $p < 0.01$ level.

5. Discussion, Recommendation and Conclusion

5.1 Discussion

This study investigated the impact of ESP instruction on the motivation and psychological needs of third-year students at Tashkent State Pedagogical University. The findings indicate that the intervention significantly improved both intrinsic and extrinsic motivation, as well as psychological needs such as autonomy, competence, and relatedness. These results are

consistent with Self-Determination Theory (SDT), which emphasizes the role of intrinsic motivation in fostering meaningful engagement and long-term learning outcomes (Ryan & Deci, 2001). The post-test results revealed notable increases in students' intrinsic motivation and reductions in amotivation, highlighting the effectiveness of the ESP materials designed for the study.

The observed changes in motivation and psychological needs underscore the importance of tailored ESP lessons in enhancing students' learning experiences. Needs analysis, a foundational element of ESP course design, plays a critical role in aligning language instruction with students' academic and professional goals (Hutchinson & Waters, 1987). By addressing these specific needs, the ESP curriculum provided a sense of relevance and practicality that may have contributed to increased student engagement and satisfaction.

Despite these positive outcomes, the study also identified significant challenges faced by teachers in ESP instruction. Key issues included difficulties in collaborating with industry professionals, adapting materials to diverse learners' needs, and integrating authentic and field-specific content into the curriculum. These challenges are consistent with findings in prior research, which highlight the complexities of balancing linguistic and subject-specific knowledge in ESP contexts (Agawa & Takeuchi, 2017). Addressing these barriers requires targeted professional development and institutional support to bridge the gap between academia and industry.

5.2 Recommendation

Addressing instructional barriers through professional development and institutional support is essential for further enhancing ESP effectiveness for educational policy.

Future research should include a larger and more diverse sample to validate the results.

Collaborating with Uzbek pharma companies or medical research institutions or using clinical trial summaries, safety data sheets, or WHO guidelines are important as input texts.

5.3 Conclusion

This study demonstrates the potential of ESP courses to positively impact students' motivation and psychological well-being by aligning language instruction with specific academic and professional demands. The findings affirm the value of SDT in guiding the design of educational interventions that foster autonomy, competence, and relatedness. By meeting these psychological needs, ESP instruction can enhance student engagement and improve learning outcomes.

However, the challenges faced by educators underscore the need for systemic support. Strengthening teacher training programs, fostering collaboration with industry experts, and providing access to authentic teaching materials are essential steps in addressing these challenges. These improvements will not only enhance the effectiveness of ESP instruction but also ensure that they continue to meet the evolving demands of students and industries.

Future research should explore the long-term effects of ESP interventions and investigate additional strategies to overcome the challenges reported by teachers. Such efforts will further strengthen the role of ESP in contributing to Uzbekistan's educational reforms and preparing students for success in their professional and academic pursuits.

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