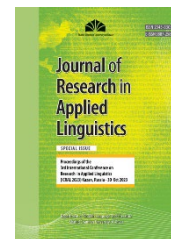




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## Strengthening the Motivation of English Language Students to do Research Work along with Interdisciplinary Interaction

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### Abstract

Most employers look favorably upon graduates who can work well on projects that cross several academic fields. An attempt was made to concentrate on interdisciplinary instruction in English classes for students studying the language in the current study. In order to increase English language learners' passion for research, this study aims to critically evaluate research publications on case studies, language difficulties, and creating multidisciplinary research projects. Open interviews were employed as a research method to monitor the students' attitudes toward learning, their interest in studying, and their opinions regarding research projects. Two control and treatment groups were taken into consideration for the trial. As a result of their collaboration in creating multidisciplinary research projects and peer review, the students in the treatment group at the end of the trial reported feeling confident about their choice of research topic, scientific self-efficacy, and a drive to learn and explore. Outcomes Students now feel more comfortable speaking in front of groups, have more group work experience, and are speaking English more fluently. In the control group, there was no observation of the same qualitative dynamics. The findings collected demonstrate the effectiveness of the ecology subject and the used instructional methodologies. This study's practical significance lies in the fact that its conclusions can be used to inspire research in a variety of fields, including English language learners.

**Keywords:** English Language Students; Motivation; Interdisciplinary Interaction.

### 1. Introduction

Economic, social, and linguistic concerns combined with technology are fundamental public concerns that serve as the foundation for social policy, government regulation, and significant industrial progress. Because of these worries, educational institutions need to produce graduates who can contribute to our future and who have the fundamental 21st-century abilities of questioning, critical thinking, problem solving, and deliberate decision making. Higher education institutions have been emphasizing the development of research skills in master's students as a learning objective (Vogler et al., 2018). Many articles emphasize how crucial it is for master's students to improve their research abilities since master's programs foster the development of problem-solving and teamwork skills, which are essential for the majority of employment. The goal of academic research has been to identify and improve the necessary research abilities and qualities for scientific students. According to Guo et al. (2020), skills associated to research include an inquiring mind, core knowledge, critical assessment, comprehension of the body of evidence supporting professional practice, awareness of ethics and governance, teamwork abilities, and communication skills. Core research abilities according to Divan and Mason (2016) include producing research papers, critical and literature reviews, research proposals, communicating research findings, passing judgment, and thinking critically about pertinent scientific issues. Teachers encounter certain difficulties when they help graduates build research skills and related qualities. According to Lucrezi et al. (2018), common challenges include student resistance, a lack of cooperation from teachers in different disciplines, selecting successful teaching tactics, and maintaining students' motivation. In this study, the factors that influence English language learners' motivation to perform research are examined through an experiment conducted in two distinct groups.

### 2. Literature Review

Mebert et al. (2020) assert that in addition to collaborative learning and project-based learning, there exist other pedagogical approaches that could be considered to enhance students' research motivation. Role-playing, for instance,

can foster collaboration, critical thinking, and useful experiences. The results support the hypotheses put forth by Weitzel and Blank (2020) regarding the beneficial effects of peer evaluation on small-group work. The study shows that when students could verbally explain what they understood and defend their work, as well as when they received feedback from peers and teachers on early versions of their work, the process of increasing their motivation for research was aided. The results of this study corroborate the assertion made by Stack and Battey & Stack (2013) that giving group work a higher overall mark motivates students to take ownership of the entire project and boosts their self-esteem. Out of all the exercises, designing research projects seemed to be the most successful way to build students' knowledge and increase their enthusiasm for studying. This discovery aligns with the research conducted by Finlay et al. (2019) and Koch et al. (2017), which indicates that interdisciplinary study projects are beneficial in imparting discipline-specific competencies. Students that participate in these projects develop into self-organized, responsible, and valuing multidisciplinary teams. Project-based learning is an approach to education where students are the ones who make decisions about the projects they work on (Bell, 2010).

Project-based learning exposes students to a broad range of work in skills and competencies and provides them with opportunities to collaborate with peers in the creation of challenging and real-world projects, decision-making, and production (Westwood, 2008). Additionally, they point out that project-based learning creates a link between what happens in the classroom and real-world experiences. In light of this, it is impossible to dispute the importance of the Internet, printed materials, and audiovisual media as knowledge sources in the information age since they facilitate project-based learning more than they did in the past (Zhong, 2008). According to Kusmartini (2014), student engagement is increasing when the project's elements and challenge are diverse, authentic, and challenging, covered with real artifacts, offer choices for the project's content and methodology, and enable team collaboration.

### **3. Methodology**

Open-ended interviews and unstructured observations were used in this study's qualitative design of the experiment to answer the research question because they made it possible to gather the information needed to characterize students' perspectives, which is a crucial component of the research. (1) The curriculum was created for this study; interdisciplinary articles and instructional techniques were selected to inspire students to conduct interdisciplinary research. (2) The assignments for the course, and (3) The instruments for evaluating the students' perspectives were chosen. The qualitative study was the better choice since it makes use of complementary methodologies that enable teachers to track students' motivation, assess their attitude toward real scientific material and activities, and watch their experiences in the classroom (Finlay et al., 2019). According to Ludwig et al. (2018), using open-ended interview questions as a means of informal discourse can facilitate communication between educators and students while also measuring the latter's experience.

Through unstructured observation, the researcher can record the behavior of the students and their responses to various activities, focusing on the ones that elicited the greatest enthusiasm from them (Fortus & Vedder-Weiss, 2014). Given that motivation is a contextual process, information regarding the factors influencing students' motivation can be gained through classroom observations and interviews, which can further the field of motivation research (Lammers et al., 2019).

Open-ended interviews were utilized in this study to gauge how the intervention affected students' beliefs over time. Unstructured observation was chosen since it allowed the author to be adaptable and document events as they happened. The course was offered as a part of a two-term English language program at Kazan Federal University (Volga area) for master's students studying English language sciences. During the first semester of the academic year 2022–2023 the course was offered from September 2022 to October 2022. The author conducted the instruction once a week. The course had thirty enrolled students. The two groups each had the equal number of participants: 15 students in the treatment group and 15 students in the control group. Before and after the experiment, the students in both groups served as the sample for the observation and interview investigations (Corbacho et al., 2021).

It was decided to create a framework for improving students' motivation for research projects. Three modules were created out of research-related abilities, learning resources, instructional techniques, and learning activities: 2. "Promoting scientific discussion" (two weeks); 3. "Designing interdisciplinary projects" (four weeks); Module 1. "Fostering critical reading" (Andersen & Nielsen, 2013). The control group's students read and discussed research papers in accordance with the English language program's schedule, which was backed by the textbook "Cambridge English for

Scientists" (Bathgate et al., 2014). They did not participate in any of the previously listed activities. Application of the Curriculum. Three modules, which are listed in the Appendix, were used to deliver the training.

#### **4. Results**

An analysis of the data gathered via the use of interviews and observation has been done in order to respond to the research question posed in the paper's introduction. Student Selects Topic for Research Project. Students in both groups were unsure about their study topic selection prior to the intervention. In response to the query "Have you selected the subject of your study? "Are you sure? Have you made up your mind yet?" was met with "I'm not sure." By the end of the course, students in the treatment group responded with confidence, while those in the control group were still unsure about their decision. The students in the treatment group were able to use English to explain the phases of their research project. They stated that they wanted more instruction in data gathering, fieldwork techniques, and hypothesis testing. The notion that the project they were working on might have an impact on their lives, they claimed, served as inspiration. Their perception of reading and debate as the primary activities and as "common learning formats" prevented them from becoming more interested in conducting research. Students in the treatment group gave far more encouraging comments. They were all happy with how the learning process was set up and how they interacted with other students in small groups. Their interest was piqued by the possibility of working with others and assisting them, as well as the chance to put classroom topics into practice while designing the research projects.

From the standpoint of the students, taking part in the design of multidisciplinary research projects was the most beneficial activity because it affected their comprehension of pertinent professional viewpoints and the development of skills like teamwork and personal growth. Their enhanced self-assurance in showcasing their work to an audience was evident from the observation.

Their comprehension was enhanced and made more efficient by their collaborative experience in groups when debating the design of the research project and the peer-assessment assignments. It was clear that they had become more fluent in English during the two months. The fact that every student in the treatment group enjoyed the course despite the intellectually demanding and time-consuming nature of peer assessment was also encouraging to the author.

#### **5. Discussion**

The study's findings are consistent with the hypothesis, which states that students' interest in research work would be piqued by having them critically read research papers that represent case studies of sustainable urban planning, write critical and literature reviews, collaborate on linguistic challenges, and design interdisciplinary projects in groups. Results that are satisfactory have been obtained, indicating the efficacy of both the content and the methodology used. The new study emphasizes how crucial it is to analyze the difficult problems. Language problems seemed to be a driving force behind research interest and language acquisition, as was to be predicted. A lack of interest on the part of the students in studying the content could account for the control group's lack of drive for research and interest in science throughout the trial. Additionally, this study shows how the use of active learning tools can boost students' interest and sense of fulfillment in a subject. The learning exercises stood in stark contrast to every other type of communication that the treatment group's students had previously been exposed to. Students appreciated having the chance to talk and prepare for the projects in groups with their group members. The findings imply that learners should alternate between independent study and collaborative projects.

#### **6. Conclusion**

It is important to note the limitations of this research. It had a short duration of eight weeks and a tiny sample size of thirty people. As a result, implementing an intervention over a longer time frame and with a bigger sample size might be beneficial. It may take more than eight weeks to observe any possible influence on pupils' motivation. Results with a bigger sample size could be more trustworthy. Even though the current findings are encouraging, more research is required. Future study, according to Miller et al. (2019), might have students from various academic backgrounds collaborate in multidisciplinary teams; for instance, biology students might work with ecology students or biology students with engineering students. According to Battey & Stack (2013), an evaluation format suitable for transdisciplinary courses has to be updated and created. The planned course emphasizes interdisciplinarity within the English language program, which makes this research novel. Examining the study's results to increase master's students'

research motivation in groups of diverse specializations as they choose new material for research articles, discussions, and group projects represents the study's practical usefulness. Researchers studying active learning and motivation theories, as well as academics involved in the planning, carrying out, and assessing of multidisciplinary projects, may find value in the study's findings when developing a curriculum and methodology for enhancing master's students' research motivation in ESL classrooms.

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