

Exploring the Influence of the Project-Based Learning Strategy on G9 Students' Motivation to Learn Academic Writing in a Beijing International School

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Abstract: This study investigates the impact of project-based learning (PBL) strategies on high school students' motivation to learn academic writing. Employing a mixed-methods approach, the research spanned two weeks. Quantitative data was collected using Kempler's (2006) adaptation of the Internal Motivation Measurement Survey. Qualitative data was gathered through an open-ended questionnaire exploring intrinsic motivation, extrinsic motivation, and self-efficacy components. Descriptive analyses were conducted on motivation and self-efficacy measures. The findings revealed a lack of motivation among students in their traditional academic writing class, suggesting a need for pedagogical change to enhance student engagement. Additionally, interviews and classroom observations highlighted the importance of careful design and planning when implementing PBL strategies in an academic writing course.

Keywords: Academic writing; Project-based learning (PBL), Motivation.

1. Introduction

Academic writing skills are crucial for success in standardized international tests like TOEFL and IELTS. However, within the context of this international school, foreign language instructors face the challenge of motivating students to actively participate in academic writing classes. This lack of student engagement, manifested in disinterest and sleepiness during lessons, demotivates instructors and hinders their sense of accomplishment.

To address this challenge, this practitioner enquiry project investigates key factors influencing Grade 9 students' motivation to learn academic writing. Notably, the school operates within a unique environment where the Chinese national curriculum serves as the primary foundation for curriculum design despite the focus on international testing.

Research Questions

This enquiry aims to identify effective solutions that enhance student engagement in academic writing classes. Three key research questions guide this investigation:

1. Does the current teaching pedagogy effectively inspire G9 students' motivation to learn academic writing?
2. From the students' perspective, how impactful has the implementation of Project-Based Learning (PBL) been on their academic learning?
3. As the teacher, how effective has PBL been in improving student engagement in academic learning?

Methodology

To answer these questions, a multi-pronged approach will be employed. First, the Motivational Strategies for Learning Questionnaire (MSLQ) will be used to gather data on factors influencing student motivation in academic writing. Additionally, interviews and classroom observations will be conducted to explore the perceived benefits of PBL in enhancing student motivation, as supported by existing research.

Following a detailed presentation of the interview, questionnaire, and classroom observation results, a critical

analysis of the findings will be undertaken. Finally, the project will conclude with a discussion of limitations and potential implications arising from this enquiry.

This revised introduction adopts a formal tone and clarifies the context of the research. It highlights the specific challenges faced by foreign teachers, emphasizes the unique setting of the international school, and clearly outlines the research questions and methodology.

2. Literature Review

2.1. Project-Based Learning (PBL): A Transformative Approach to Education

Traditional education methods often emphasize "instruction delivery rather than student learning" [2] (Shepherd & Cogswiff, 1998), with a teaching paradigm where instructors frequently control and determine the learning process [3] (Dyson, 2010). This lecture-based instruction can lead to a lack of motivation and disengagement among students [4] (Haber-Curran & Tillapaugh, 2015). In contrast, problem-based learning (PBL), a student-centered instructional method, aims to enhance student motivation [5] (Wijnen et al., 2018). Specifically, one goal of PBL is to increase students' intrinsic motivation [6] (Hmelo-Silver, 2004).

Researchers believe that constructivist learning environments significantly increase student participation, interest, and motivation compared to traditional settings, leading to higher task success through engagement and purposeful collaboration [7] (Guthrie, Wigfield, & Vonsecker, 2000); [8] (Hickey, Moore, & Pellegrino, 2001). PBL embodies these constructivist principles. It places students at the forefront of their learning, offering them more responsibility and promoting longer engagement, and when students interact and have options, their creativity and reasoning skills are enhanced [9] (Ocak et al., 2010). High levels of motivation and learning are more evident in environments that encourage student choice and active participation [10] (Holbrook &

Klodner, 2000).

Furthermore, PBL extends beyond problem-solving to include project completion, which is associated with improvements in student motivation, critical thinking, and academic abilities [11] (Tamim & Grant, 2013). Numerous studies [12] (Burris & Garton, 2007); [13] Gordon et al., 2001) indicate that PBL, which requires students to investigate real-world problems, improves performance in science courses, critical thinking, and student attitudes towards learning. Additionally, research shows that students in project groups exhibit higher creative thinking abilities and motivation compared to those in traditional settings [14](Liu, 2003); [15](Doppelt, 2003).

However, student-centered instructional pedagogies like PBL are more commonly found in small-sized schools [16] (Feldman, Lopez, & Simon, 2005). Unlike large public high schools constrained by national curricula, smaller schools, like mine with only 70 students across four grades, offer a more personalized environment conducive to PBL [17] (Quint, 2006).

PBL challenges traditional instruction by focusing on how knowledge can be acquired and applied in practice rather than merely what students should know. This pedagogy also disrupts conventional classroom authority structures, positioning the instructor as a consultant rather than a director. [18] Gijbels et al. (2005) provided extensive evidence of PBL's effectiveness across various disciplines and contexts. [19] Barreda (2016) highlighted PBL as an innovative approach that teaches twenty-first-century skills, fostering independent learners and intellectuals. [20]Sonmez and Lee (2003) noted that PBL engages learners in self-directed problem-solving and skill development.

PBL is considered a construction-based instructional method designed to facilitate more engaged learning [21] (Ravitz, 2010). It uses "projects" to motivate students and provide them with opportunities to demonstrate and explain their learning [22] (Barron & Darling-Hammond, 2008). In practice, PBL encourages "learning by doing," with the teacher acting as a facilitator, replicating real-world professional situations.

In secondary education, PBL has been successfully implemented and shown to improve students' writing skills, engagement, and overall learning [24] (Harris et al., 2001); [25] (Maxwell et al., 2001); [26] (Sojisirikul, 2009); [27] (Hasani et al., 2017).

2.2. Intrinsic Motivation in Project-Based Learning (PBL)

Students' motivation plays a crucial role in their learning and persistence [28] (Deci et al., 1981); [29] (Ryan & Koestner, 1983). Project-Based Learning (PBL) can significantly enhance students' intrinsic motivation by incorporating collaborative learning with peers, setting proximal and tangible goals through applying knowledge to solve complex problems, and giving students responsibility for both the process and the solution.

Prior research has consistently demonstrated the positive effects of intrinsic motivation on performance, self-esteem, persistence, and emotional outcomes [30] (Deci & Ryan, 1995); [31] (Grolnick & Ryan, 1987); [32] Patrick et al., 1993). The assumption that PBL naturally fosters students' intrinsic drive and interest may lead practitioners to become complacent [33](Masek, 2015). However, to prevent frustration among students, the quality and design of PBL

problems are crucial [34](Hung, 2009).

In this context, teachers face the challenge of aligning PBL with specific learning objectives while designing activities that stimulate intrinsic motivation. This is particularly important for academic writing teachers, who must carefully craft PBL tasks to engage and motivate students effectively.

2.3. Extrinsic Motivation in Project-Based Learning (PBL)

While intrinsic motivation is a powerful driver of student learning, teachers cannot always rely on it alone. Understanding various extrinsic motivational styles and how to support them is crucial. Many academic tasks that teachers expect students to complete are not inherently interesting or enjoyable. Therefore, effective teaching requires strategies to encourage more active and intentional forms of extrinsic motivation. Academic accomplishments, such as grade point average (GPA), are closely correlated with student motivation [35] (Richardson et al., 2012).

Research has shown that extrinsic motivation is generally considered inferior to intrinsic motivation in terms of importance and effectiveness [36] (Kohn, 1993). [37]Boggiano and Pitmann (1992) found that relying on extrinsic motivation is ineffective for long-term engagement. Students who received external motivators engaged in less sophisticated learning strategies and performed worse on tests than those motivated intrinsically [38] (Toci, 2000).

Students can exhibit extrinsically motivated behaviors with dissatisfaction, opposition, and apathy, or they can act with a willingness that shows an internal acceptance of the importance or utility of a task [39] (Ryan & Deci, 2000). Understanding these nuances can help teachers design and implement strategies that harness the beneficial aspects of extrinsic motivation while fostering a more profound, intrinsic interest in learning.

2.4. Self-Efficacy in Project-Based Learning (PBL)

Self-efficacy significantly influences task selection, effort, persistence, and success. Students with a strong sense of self-efficacy for specific tasks participate more willingly, work harder, persevere longer when faced with challenges, and achieve higher levels of success compared to those who doubt their learning abilities [40] (Margolis & McCabe, 2004). Conversely, students tend to avoid activities they perceive as likely to result in unfavorable outcomes [41] (Schunk, 1999).

It is widely acknowledged that many struggling students will not invest the necessary effort to master academic tasks if they lack sufficient self-efficacy—the belief that they can succeed in specific academic endeavors, such as homework. Without this belief, they are more likely to give up or avoid attempting tasks at which they have previously failed [42] (Lynch, 2002); [43] (Walker, 2003).

Research suggests that teachers can enhance the self-efficacy of struggling students by connecting new tasks to recent successes, teaching essential learning strategies, praising effort and perseverance, emphasizing peer modeling, encouraging students to attribute their success to controllable factors, and helping them set personally meaningful goals [44] (Schunk et al., 2014); [45](Pajares, 2003). However, for these strategies to be effective, it is crucial that struggling students experience success in tasks they typically expect to fail. Their work should challenge but not overwhelm them [46](Strickland et al., 2002).

Therefore, if teachers aim to engage students, they should foster expectations of success rather than disappointment. This involves assigning challenging work that is appropriate for the students' instructional and independent levels and employing instructional strategies that are likely to enhance self-efficacy. By doing so, teachers can create a learning environment that encourages persistence, effort, and ultimately, academic success.

3. Methodology

This research project aims to address the following questions:

1. Does the current teaching pedagogy inspire Grade 9 students' motivation to learn academic writing?
2. How helpful have the students found the implementation of Project-Based Learning (PBL) in terms of academic learning?
3. How helpful have I found the implementation of PBL for improving students' engagement in academic learning?

A mixed-methods strategy, incorporating both qualitative and quantitative approaches, was employed to comprehensively address these questions. The study involved 44 Grade 9 students from classes A and B at the international school where I work in Beijing. The research was conducted over a two-week period.

To ensure clarity of the results, the 44 students were given a thorough introduction to the study and its research goals [47](Hopkins, 2008). Subsequently, each participant received a questionnaire (Appendix 1), designed for clarity and simplicity to ensure objectivity. The primary aim of this survey was to identify key factors that influence Grade 9 students' motivation to learn academic writing.

Motivated Strategies for Learning (MSL) is a complex construct that has inspired numerous studies in recent years, serving as an effective tool to assess students' learning motivation across various countries. The "Motivated Strategies for Learning Questionnaire" (MSLQ) is a well-established instrument used to evaluate college students' motivational orientations and learning strategies. Based on a general cognitive understanding of motivation and learning techniques, the MSLQ comprises two sections: the motivation component (31 questions) and the learning strategies component (50 questions). In this study, the 31 questions from the motivation component were used to assess high school students' motivation in learning academic writing. The six scales in the motivation section represent a coherent, empirically validated framework for assessing students' motivation and use of strategies [48] (Pintrich et al., 1993). Numerous studies support the factor structure of the MSLQ [49] (Jacobson, 2000); [50] (McClendon, 1996).

While questionnaires have been the primary research methodology in the field of English as a Second Language (ESL) learning motivation [51] (Dörnyei & Dewaele, 2022), it is important to recognize that ESL students' motivation can fluctuate over time and context [52](Ortega & Iberri-Shea, 2005); [53](van Lier, 2005). Thus, a more comprehensive research method is necessary to study ESL motivation effectively. Interviews, from the perspective of ESL teachers, may have more direct educational effects [54] (Kim, 2006).

Interviews can be categorized into open-ended, semi-structured, and structured formats, ranging from less formal to more rigid structures [55] (Fontana & Frey, 2000). For this study, semi-structured interviews were chosen to gain insights into students' thoughts on academic writing lessons delivered

using PBL. Given that most students are capable of presenting on various topics in English, it was convenient to conduct and later transcribe the interviews in English.

Additionally, observation was employed as a data collection method to capture events during the teaching and learning process, as well as problem resolution and the development of learning strategies [56] (Latief, 2011). The researcher and a collaborator conducted observations using an Observation Checklist during the learning process. This instrument aimed to measure and assess students' progress throughout the teaching and learning process, specifically focusing on motivation. The analysis outcomes were used to determine the success of the PBL implementation.

4. Findings and Discussion

Forty-four secondary school students from Grade 9 were asked to complete the Motivated Strategies for Learning Questionnaire (MSLQ) regarding their current academic writing course. To ensure anonymity and confidentiality, the questionnaire was encoded without any identifying information. Participants were instructed to complete and return the questionnaire directly to their instructors. Ultimately, 35 completed questionnaires were returned and utilized for data collection. The demographic information revealed that 16 participants (45.7%) were male and 19 (54.3%) were female, with all participants being typical full-time students. The following tables provide a comparison of my research results with those from reference studies. Additionally, 10 students from the Grade 9 A and B classes were selected for interviews to discuss their experiences with the implementation of Project-Based Learning (PBL) in their academic writing courses.

Table 1. Intrinsic Goal Orientation

| Item | Mean (my research) | Mean (MSLQ reference) | Item |
|------|--------------------|-----------------------|------|
| 1 | 4.54 | 5.05 | 1 |
| 16 | 4.51 | 5.68 | 16 |
| 22 | 4.6 | 5.23 | 22 |

Table 2. Extrinsic Goal Orientation

| Item | Mean (my research) | Mean (MSLQ reference) | Item |
|------|--------------------|-----------------------|------|
| 7 | 4.69 | 5.07 | 7 |
| 11 | 5 | 5.32 | 11 |
| 13 | 5.09 | 5.31 | 13 |

Table 3. Self-Efficacy for Learning and Performance

| Item | Mean (my research) | Mean (MSLQ reference) | Item |
|------|--------------------|-----------------------|------|
| 5 | 3.97 | 4.95 | 5 |
| 6 | 4.17 | 5.18 | 6 |
| 12 | 4.54 | 6.36 | 12 |

Students were tasked with indicating their level of agreement or disagreement with statements regarding their motivation in the current academic course on a scale ranging from 1 to 7 (strongly disagree to strongly agree, respectively). Higher scores indicate a greater level of engagement with the course material. From the comparison presented above, it is evident that students exhibit a heightened interest in item 30 compared to their engagement with learning academic writing

overall. Therefore, providing a platform for students to showcase their academic achievements in front of their peers and parents could potentially enhance their interest in the course. In this scenario, Project-Based Learning (PBL) could serve as a valuable tool for the teacher in orchestrating such an activity to captivate the students. Moreover, the lower mean scores of other items related to intrinsic motivation, extrinsic motivation, and self-efficacy in my research suggest that the current teaching pedagogy falls short in effectively engaging students in the academic writing course.

Through interviews and the utilization of a classroom observation checklist, this study explores the impact of a project-based learning environment on student motivation. The findings of the study indicate that academic writing courses structured around project-based learning have a positive influence on student engagement. Quantitative analysis revealed that students thoroughly enjoyed the academic writing course activity of designing their own paper aeroplane, perceived the course as a collaborative learning environment, and acquired valuable knowledge. Additionally, qualitative data analysis supported these findings, indicating that students engaged in extensive research to fulfill assigned tasks and sought information from multiple sources. Analysis of the observation checklist data unveiled various challenges encountered by students during group work, attributed partly to difficulties in genuine collaboration and perceived issues with task distribution. Courses incorporating project-based learning necessitate meticulous planning and organization. Furthermore, the academic writing course based on PBL stimulated peer learning. Students' access to information was seen as a contributing factor to the development of academic pressure. This finding aligns with previous research by [57] Ryan & Deci (2000), suggesting that environments fostering intrinsic motivation among students result in the cultivation of traits such as effort, high-quality work, and a sense of connection to the learning environment. Within an academic writing course featuring a collaborative learning environment, students were tasked with completing a task within a competitive setting, with the quality of the end product and exemplary work serving as benchmarks.

The results gleaned from student interviews and observation checklists underscore the significant contribution of PBL to the activation of a repertoire of behaviors that render practical skills enjoyable, engaging, and exhilarating. This finding lends credence to the notion that students engaged in PBL develop the self-assurance and conviction necessary to execute the behaviors essential for achieving specific outcomes, thereby heightening their engagement. These findings are consistent with those of [58] LaForce et al. (2017), who observed that student evaluations of PBL predict intrinsic motivation, beliefs in ability, and engagement in practical skills.

5. Conclusion

This study demonstrated that PBL is a significant factor in motivating students to master academic writing. It was discovered that PBL had an effect on both ability beliefs and intrinsic motivation, which led to increased student engagement. These results enhance my comprehension of the role that active instructional strategies, such as PBL, can play in the design of academic writing courses. In this instance, the practical significance of conducting such a project is to assist teachers in identifying factors affecting students' motivation to learn academic writing and in identifying an effective

learning and teaching strategy for fostering students' motivation in learning the subject, thereby fostering an active learning environment.

This research suggested a set of sample PBL instructional practices based on the study's successful outcomes. The teacher has created PBL lesson that lays a strong emphasis on helping students establish their own intrinsic drive for learning, which they will ideally find useful throughout their lives as learners. It also implies that by assisting students in moving towards a more intrinsic or extrinsic orientation, a well constructed learning environment might positively affect students' motivational orientation. Given this understanding, educators must seek to build learning environments that enable students to pursue and develop crucial traits that will help them to be not only successful but also better equipped to lead happy and fulfilling lives. We are putting students in a position to survive and thrive in a world that is transforming more quickly than ever. They will work in occupations that do not yet exist, and they will play and unwind in ways that are substantially dissimilar from those we already experience. A motivational orientation and drive to learn will be encouraged by, and may even be necessary for, success and pleasure in this rapidly changing environment. This study offers early evidence that these qualities can be promoted by cutting-edge learning environments run by qualified teachers who form deep connections with their charges.

In addition, the research will also examine how helpful I found the implementation of PBL learning for the improvement of students' engagement in academic learning through classroom observation, as well as how helpful the students found the implementation of PBL learning in terms of academic writing learning through an interview. In this situation, if teachers themselves are highly motivated to experiment with and enhance project-based learning in the classroom, it will be more likely to produce the desired effects, such as increased student motivation.

PBL teaching strategy demonstrated an effective educational experience for foreign instructors of academic writing. It reassures high school teachers that their students have the potential to appreciate academic writing learning if they adopt a more PBL-style teaching approach and they are born with an aversion to that course. In PBL activities, they are more engaged in learning than in traditional teacher-centered instruction. Their learning motivation can be stimulated, and PBL could be the catalyst. This study also indicates that PBL could enhance secondary school students' problem-solving abilities. In addition to improving the classroom environment, it fosters a desire to learn. In the majority of Chinese international high schools, practical knowledge and skills are prioritised. Teachers have always been at the forefront of educational reform. Students would acquire problem-solving skills and be able to transmit those skills to future practical situations if high school instructors designed more PBL activities during instruction. However, many parents and instructors in China place an emphasis on their children's test scores and grades. It not leads to students lacking the ability to apply what they have learned in the classroom to real-world situations but also they are unable to solve problem when they confronted with them in the actual world. In the case of addiction, such parental pressure will also prevent instructors from implementing PBL in the classroom.

In conclusion, project-based learning is one of the learning techniques for enhancing writing abilities. This tactic compels

students to engage in reflective thinking that improves their competencies. Additionally, this approach places an emphasis on creating writing practically under the instructor's guidance. observations and studies in my research lead me to the following conclusions:(1) Students' perspectives on a topic are influenced by writing-based project instruction, which goes beyond simply developing students' theoretical writing skills. (2) Writing is now viewed as a skill that may be developed in addition to a subject to be studied.

However, the current study's generalizability may be limited due to its focus on a classroom with a predominance of foreign teachers. These findings might not be directly applicable to Chinese teachers delivering similar courses. While student-centered teaching methods are officially encouraged, many Chinese English teachers continue to rely on teacher-led approaches for delivering instructional materials. This is likely due to the significant differences between PBL and the methods currently employed by these teachers, or those they themselves experienced as students. Consequently, Chinese teachers instructing in these writing courses face a dual challenge: adapting to a novel teaching style and designing effective PBL courses. For educators advocating for this innovative pedagogy, understanding the motivations of both teachers and students in the context of project-based learning is crucial. Furthermore, this study's findings highlight an intriguing area for future research: the potential correlation between teacher motivation and student motivation in academic writing instruction.

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