Enhancing English Language Students Productive Skills through Project-based Learning: A Mixed Method Research

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Abstract. Project-based learning (PBL) is an alternative teaching approach which addresses the need for student-centered learning fostering a global shift towards 21st century skills of collaboration and problem-solving. This research examined the effect of PBL on English language students' productive skills during their freshman year at Majmmaah University. The research used a mixed-method design, including pre- and post-tests, semi-structured interviews, and participant observations. The sample size was calculated using Sloven's formula employing a simple random sampling technique. Twelve female freshmen undergraduate students aged 18-22 from Majmmah University's first-year were sampled for writing and speaking IELTS test, observation research and interviews. The researchers used t-test using SPSS 24.0. The significance level was found to be less than the threshold of 0.05, indicating that the students speaking and writing performance improved after getting introduced to the PBL strategies. Semi-structured interviews revealed that PBL significantly improved students' English proficiency, including linguistic proficiency, individual and social attitudes, autonomy, motivation, confidence, research skills, creativity, and collaborative learning skills. It was also noted that during 10 weeks, initially, participants showed reduced use of L2, with L1 being their primary mode of communication. Their writing assignments contained 45% mistakes, plagiarism, and copied words. After the third stage, participants showed progress in linguistic proficiency and learning skills. They became more engaged in class discussions, developed autonomy, and increased personal skills. Thus, the study recommends implementing PBL in the Universities of Saudi Arabia to enhance speaking and writing skills of English as a Foreign Language (EFL) students.

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1. Background of the Study

This research is important as it is useful for teachers and students to meet the criteria of student-centered learning. It explores the alternative teaching methods, particularly those involving students planning lessons, searching for relevant material, and highlighting project-based learning (PBL) as a significant method. The significance of the study lies in addressing the gap between modern and traditional pedagogical approaches to enhance productive English language skills optimizing methodologies of educational landscape of the 21st century.

In recent years, educators have embraced pedagogical approaches to prepare students for the information age since a number of teachers are concentrating on PBL (Virtue & Hinnant-Crawford, 2019). The PBL framework is focused on teaching practices that are opted to ensure ambitious directions for students underlying responsive and conversational education (Almulla, 2020). Technology is also used to facilitate the pedagogy centered on student collaboration for problem-solving, referred to as PBL. In STEM education, PBL offers opportunities for the development of language proficiency and enhancing communication skills from strategic pedagogy using virtual tools. Globally PBL brings potential in the development of communication skills ranging from asking questions, determining main ideas, preparing oral presentations and contributing to discussions countering arguments with data (Owens & Hite, 2022).

In STEM education, communication is the desired skill internationally required for enhancing communication competency and standards identified as understanding key ideas of others, developing active assertions, valuing others' perspectives and creating shared understanding. The key is to ask for clarification, listen actively and be able to interpret information (Owens & Hite, 2022). The effects of PBL are significant on vocabulary reading and learning ability of English as a foreign language (EFL) learner, confirming increased student motivation, participation and academic skills. Consequently, the effect of PBL is significant in contrast and comparison of writing skills of EFL learners developing habits of self-learning and cooperation (Mohamadi, 2018). PBL enhances student-centered learning, focusing on creating an interactive learning environment where students gain in-depth understanding of the topic by practical learning experiences of real-world issues and challenges (Astuti et al., 2021).

English has long been taught as a foreign language in Saudi universities. However, there has been minimal use of PBL in the Saudi classroom (Alsamani & Daif-Allah, 2016). Alnefaie (2016) highlighted Saudi teachers' dominance in classrooms, leaving students without control over content. It explained that since the curriculum development in KSA for EFL, the Ministry of Education has centralized its design, giving room for decision-making to teachers (Alnefaie, 2016). The Saudi education system needs to adapt to the 21st-century learning paradigm and the 2030 vision. Traditional teaching methods, which are often textbook-oriented, have been found to have little impact on students'

collaboration, creativity, communication, and critical thinking (Al-Mwzaiji & Muhammad, 2023).

The existing literature suggests that a limited discussion has been done on application of PBL in EFL classrooms of Saudi Arabia. In addition, most classrooms are dominated with traditional teaching techniques therefore exploring PBL as an alternative modern approach was the purpose of this research. It is evident in Majmaah University, where students often work on textbook-provided tasks, leading to low motivation and enthusiasm for learning activities. This research aims to investigate this issue and propose an alternative approach to enhancing English productive skills. The problem lies in the use of traditional teaching methods, and this research aims to help EFL teachers and students use effective methods, particularly productive skills. By addressing the lack of information about alternative strategies, Saudi Arabia can better prepare its students for the 21st-century educational landscape. Therefore, the following research questions have been studied throughout the research.

1. To what extent does the PBL method improve the learning performance (level) of Majmaah University's first-year students?
2. Is there a significant difference in Majmaah University's first-year students' English productive skills for IELTS, including speaking and writing, before and after the PBL method?

2. Theoretical Framework

The experiential learning theory of Kolb (1983) is a powerful foundational approach to all forms of learning, development, and change based on four processes, including concrete experience, abstract conceptualization, reflective observation and active experimentation (Somjai & Soontornwipast, 2020). According to Smith (2016), experiential learning is known as the learning process based on "learning by doing," that signifies that learners gain knowledge after experiencing or attempting anything novice. Experiential learning is often associated with the PBL method (Smith, 2016). PBL is a natural extension of classroom activities that are already occurring. Students are given a significant amount of time to select a topic, formulate a question, conduct research, and create a final product that addresses a real-world problem or question (Alotaibi, 2020).

PBL is an experience-based learning approach that provides students with a meaningful experience. Kolb's model is effective for providing experiential learning with inquiry-discovery, in which students prefer retaining knowledge more easily as compared to text-based traditional approaches (Handrianto & Rahman, 2019). Besides, PBL and experiential learning, in combination, offer EFL students the opportunity to improve their vocabulary learning ability by reporting positive perceptions and facilitating self-confidence in speaking skills (Somjai & Soontornwipast, 2020). PBL, through Kolb's model, is grounded on a few principles, including learning is a process, learning is based on optimal learning when students implement their ideas and beliefs, learning includes constant conflict resolution, and learning is a holistic approach that is linked with the adaption to the broader and immediate environment (Bohon et al., 2017).

3. Literature Review

3.1. Significance of PBL in Productive Skill Development

The existing literature suggests that a limited discussion has been done on application of PBL in EFL classrooms of Saudi Arabia. The significance of the study lies in addressing the gap between modern and traditional pedagogical approaches to enhance productive English language skills optimizing methodologies of educational landscape of the 21st century.

PBL framework is known for providing active learning, product-oriented teaching, product-oriented, skill-based and authentic assessments, among which the basic skills include listening, technology, thinking, technology, and personal quality skills (Handrianto & Rahman, 2019). According to Somjai and Soontornwipast (2020), EFL students usually receive much emphasis or attention during their classroom sessions for vocabulary learning. PBL is a significant approach that is used for developing productive skills among students rather than only providing passive vocabulary knowledge in both speaking and writing (Somjai & Soontornwipast, 2020).

Multiple previous studies examined why the PBL method is significant for improving the productive skills of EFL students. Written and oral skills are referred to as productive skills, which are significant for learners not only to receive but also to produce information through language. There is a significant impact of PBL on the productive skills of English learners, with an overall improvement in confidence, self-directed learning, creativity, enthusiasm, and collaborative learning skills boosting motivation and satisfaction in teaching (Putri et al., 2017). Similar observations were made by Aryanti and Artini (2017) as they examined the significant impact of PBL on both the attitude and productive skills of English learners in EFL classes. It also develops critical thinking, problem-solving and self-directed skills (Aryanti & Artini, 2017).

The Psycho-productive Skills Performance Test (PSPT) was used in previous research to test the productive-skills performance in PBL and learning by making a teaching approach. Results showed that the collaborative nature of instructional and learning strategies remarkably impacts learning outcomes and psycho-productive skills of students, supporting social and communication skill development in agriculture science education (Onanuga et al., 2021). Notwithstanding, past research proved that PBL increases EFL learners' willingness to take part in the activities planned for language learning, which impacts their writing abilities and skills, enhancing students' productive skills. The instructor's creativity in using PBL is effective for covering the shortcomings in writing learning in a collaborative environment (Aghayani & Hajmohammadi, 2019).

Blended learning, which is the integration of PBL and modern technology, is also a potential way of enhancing productive language skills, increasing the psychological flow level of EFL students. Additionally, receptive and productive skills in EFL learning are both categories of language skills significant for transmitting information with good command of speaking skills and written skills, including letters, reports, short stories, and forms (Mohammed, 2021). Similarly, Praba et al. (2018) evaluated that PBL helps learners improve their

language proficiency, communicative competence, confidence, cooperation, and inventiveness by focusing on language as a practical tool relevant to their daily lives. This approach promotes self-reliance and self-control and allows learners to explore their aptitudes and interests. It encourages students to take charge of their education, creating a fun and useful learning environment that incorporates their knowledge, attitudes, and abilities (Praba et al., 2018).

3.2. Application of PBL in English Language Skills and Development

Multiple past studies have examined the PBL's effects on various aspects of language proficiency, including productive skills, learning skills, personal development, and teacher effectiveness. These studies analyzed how PBL has been proven to positively impact language proficiency among learners, with studies in various teaching contexts providing both quantitative and qualitative validation. The study of Newprasit and Seepho's (2015) investigated if project-based lessons may enhance students' overall language proficiency by finding a methodical strategy to include them in routine foreign language teaching scenarios. The research evaluated the impact of PBL classes on students' total language ability using a single-group pre-test-post-test approach, utilizing various data collection methods. The results demonstrated that the respondents' overall English language competency was significantly enhanced by exposure to the recommended PBL. Additionally, Aghayani and Hajmohammadi (2019) mentioned in their research that writing skills are one of the skills to be mastered in EFL, thus known as cognitive skills, which involves understanding, learning, applying and synthesizing new knowledge with the delivery of learners' feelings and thoughts.

A past study investigated how the PBL method enhanced the EFL speaking abilities of ninth-graders in Colombia. Thirty EFL ninth graders worked in small groups to accomplish three projects that prompted them to talk about their environments and lives. According to the results, PBL assisted students in overcoming their anxiety related to speaking English, developing their lexical competence, and increasing their interest in learning about their school and community (Vaca Torres & Gómez Rodríguez, 2017). In addition, Bakar et al. (2019) carried out a quasi-experimental research on the efficacy of the PBL technique in cultivating the oral communicative skills of EFL learners in Malaysia. Their findings showed a significant improvement in the learners' overall oral communication skills after exposure to PBL.

Furthermore, research by Wuryantari Winasih et al. (2019) found that using an e-poster in a PBL method significantly improved students' speaking skills compared to conventional methods. Similarly, Alotaibi (2020) examined the impact of the PBL paradigm on Saudi EFL secondary students' persuasive writing skills. A quasi-experimental design was used, with pre-and post-tests for both groups. The results showed a significant difference in post-test mean scores between the two groups, favoring the experimental group. The research concluded that the explicit PBL approach significantly improved respondents' persuasive writing skills.

Syarifah and Emiliasari (2018) explored the implication of PBL in enhancing students' narrative text writing abilities and creativity. Respondents were asked to create a book containing narratives about their interests. The analysis of field notes, project deliverables, and interviews revealed that the students improved their writing skills by understanding the topics and linguistic characteristics of narrative essays. Most students gave positive feedback, stating that working on projects was more enjoyable as they could choose the final output based on group interest and agreement. Additionally, research by Van Loi (2017) in Vietnam found that PBL significantly improved the autonomy of English language teacher education students. The students' learner autonomy was also evaluated using self-evaluation questionnaires and group interviews. The results showed that the students' autonomy increased due to their involvement in PBL, primarily due to increased learning through self-directed decisions. Other aspects of learner autonomy include self-regulated learning behaviors, self-responsibility, and attitudes toward social interaction.

Poonpon (2017) emphasized that a main factor to take into account in teaching and learning is the amount of time and resources needed to necessitate deeper learning and commitment. Enough time should be allotted to each student for balanced involvement, proper understanding of the material, productive cooperation, project creation, specialized simulation and chip tools, access to top-notch resources for the subject matter, the design process, finishing difficult assignments, and evaluation. However, another research concluded that PBL improves learners' autonomy, as they are provided with self-access learning, self-instruction, self-direction, and individualized instruction (Yuliani & Lengkanawati, 2017).

Moreover, Shin (2018) examined the impact of PBL on students' motivation in an English language classroom. There were 79 students collaborated on a "resume and cover letter video" project to prepare for future job interviews. The results showed a significant increase in post-test mean scores, indicating that the project significantly influenced students' motivation to learn English. The research also found a significant difference in motivational factors, including attention and relevance, and confidence and satisfaction between pre-and post-test results. Owens and Hite (2022) conducted a 3-week PBL research which was focused on French and Chinese students who participated in EFL classrooms via Canvas. Their findings revealed that PBL evidently enhances the communication skills of students when teachers utilize pedagogies. Likewise, students' abilities are developed to share multiple ideas, understand them and become more receptive to varied perspectives.

However, based on the presented literature review, it was noted that there were limited number of empirical investigations assessing the effects of PBL in the context of EFL instruction that connects the theory and practice of productive skills development, particularly in the context of Saudi Arabia. Therefore, this gap was assessed in the current research as it studied the effectiveness of PBL in improving English productive abilities for first-year students at Majmaah University.

4. Methodology

4.1. Research Design

This research focused on implementing PBL in EFL situations, connecting theory to practice. It used a mixed-methods design involving the collection, analysis, and application of both quantitative and qualitative data to examine the effects of PBL on English language productive skills of first year students at Majmaah University. Mixed-methods research follows a pragmatic philosophy that analyzes and explains people's experiences in complex situations using both subjective and objective findings. Qualitative research explored teaching practices in this research. Quantitative research, was employed using pre-tests and post-tests, students' grades and academic achievement before and after PBL implementation.

4.2. Population and Sample

Twelve female freshmen undergraduate students aged 18-22 from Majmmah University's first-year were sampled in this research to assure feasibility, representativeness and homogeneity. The chosen sample size was convenient for the researcher as it is the most accessible and representative of the population (384) being studied. The sample size was calculated using Sloven's formula applying a simple random sampling technique. This sampling approach allowed selecting a subset of participants from a large population to meet a desired prevision level.

$$n' = \frac{n}{1 + \frac{n = (n-1)}{N}}$$

Given:
- Total population size (N) = 384
- Sample size (n) = 12
- Effective population size (n') ≈ 11.66

The research's feasibility is a key reason for choosing twelve students due to limited time and financial resources. The sample size is also representative of the population being studied, as 12 freshmen students are adequate to provide a representative sample. Additionally, the smaller sample size (students with limited English proficiency) ensures homogeneity within the sample, allowing for more meaningful comparisons. Respondents were reassured that their participation is voluntary and not required for their educational pursuits and that it will not impact their grades or the instructor's relationship with them.

4.3. Data Collection

Data gathering involved action research, including observing and recording respondents' actions and asking them for their experiences and views. The respondent covert observation was conducted to determine the efficacy of PBL in fostering productive skills development. Students are the sampled respondents. Researcher as a teacher collaborated with students for 10-week activity of PBL. Six respondents chose writing projects, and six chose speaking projects based on their lowest pre-test scores and then post-test IELTS results showed PBL's efficacy in enhancing students' productive skills. Semi-structured interview questions were used to gather precise data on respondents' progress in each stage of

implementing PBL methods. The data for the current research was gathered during second semester of the 2022-2023 school year, conducting a 10-week research after obtaining university permission. The data collection methodology followed four stages by Kriwas: speculation, designing the project, conducting the project, and evaluation (Kriwas, 1999).

4.3.1 PBL Implementaiton

The implementation of the PBL adopted ten steps of Stoller (2002), as shown in Figure 1, to accurately implement PBL methods, making them easier for teachers and students to manage.

Step 1: The students and teacher agree on a project theme, which determines the project's organization, semi-structured or unstructured nature.

Step 2: Students and teacher collaborate on a project, deciding on its outcome and audience. They select project types and topics and conduct individual meetings to determine the best approach. This stage involves selecting appropriate audiences.

Step 3: The project's theme and outcome are determined by students and their teachers. They establish project details, including roles, responsibilities, and collaborative work groups. After a deadline, students schedule information collection, sharing, and presentation.

Step 4: The teacher specified language, expertise, and strategy requirements for information collection designing instructional activities for each activity. Activities required students to formulate questions, ask follow-up questions, seek clarification, take notes, and understand formal letters, internet searches, and search techniques.

Step 5: Data was gathered using various techniques, including interviews, questionnaires, observations, letter writing, and library searches, with constant feedback and topic resources provided for collaborative efforts.

Step 6: Teachers helped students develop language, skills, and techniques for data collection and evaluation using various methods like interviews, brochures, library research, and note-taking.

Step 7: Students worked in groups to analyze collected data, discuss its worth, and decide which to retain or discard for project completion.

Step 8: The project involved language enhancement activities to help students present their final products. These included practicing oral presentations, receiving feedback, and revising written texts. Students collaborate with creatives to finalize visual displays and design a flyer advertising the presentation. Feedback on content, word choice, and intonation is provided.

Step 9: Students presented their completed projects as per Step 2 of the procedure

Step 10: The project work process involved students reflecting on their experience, learning a new language, content, and steps taken. Reflection helps students understand their learning and provides valuable insights for future projects. Both students and teachers realize the benefits of PBL. The final phase involved project evaluation, using Cambridge Assessment International Education 2020 for speaking and writing assessments based on IELTS band descriptors for the public. Both teachers and classmates administered the evaluation, with each providing feedback on their classmates' performance. The instructor then evaluated teaching and learning.
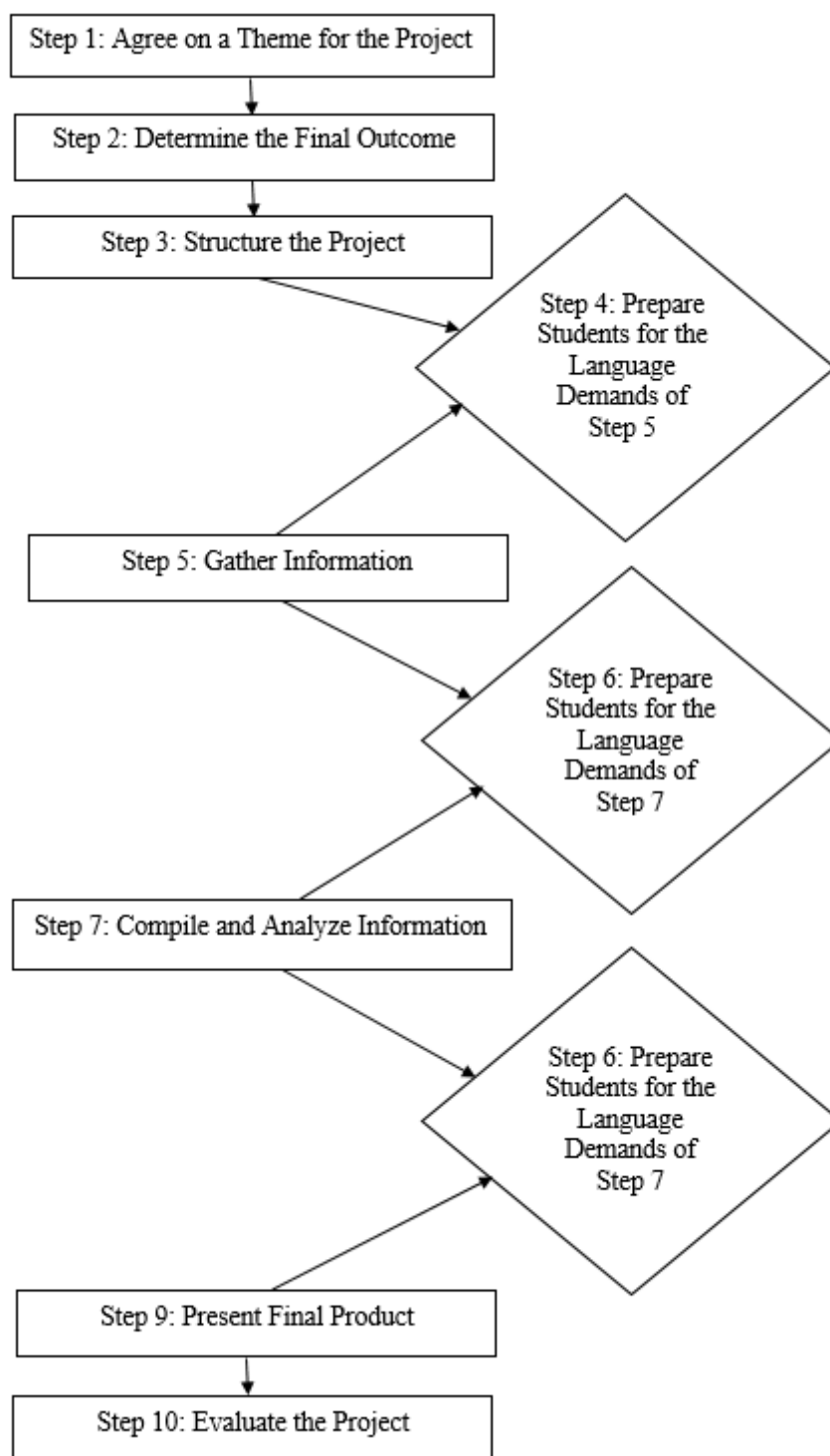
Figure 1: Steps of Project Implementation (Source: Author)

4.3.2 Pre-tests and Post-tests

The research used a pre-test to assess students' initial knowledge level and feedback, followed by a post-test to compare academic achievement before and after PBL using a standardized IELTS test. Respondents' test results were used to observe their development during PBL implementation, and semi-structured interviews were conducted to monitor and provide feedback on project

performance. This comprehensive approach provided valuable insights into students' experiences with PBL.

The IELTS General Training Speaking test was conducted over two days, assessing students' writing and speaking skills. The test was conducted using a rubric from the IELTS website and was conducted face-to-face with a recording. The test consists of three parts: Part One, where respondents were asked general questions about familiar topics; Part Two, where respondents were given a task card to talk about a topic; and Part Three, where respondents had a two-way discussion with the examiner.

The General Training Writing Test consisted of two tasks: Writing Task 1 and Writing Task 2. Task 1 involved writing a letter to explain a situation and request information, while Task 2 involved writing an essay responding to a problem, argument or point of view (See Appendix A). The respondents were assessed on their ability to provide general information, outline a problem, present a solution, justify an opinion, or evaluate and challenge ideas, evidence, or arguments.

The IELTS General Training Speaking test took between 11 and 14 minutes and consisted of three parts (See Appendix B). The respondents were given one minute to prepare before speaking for up to two minutes. The results were presented to the students directly after correcting their papers.

4.3.3 Observations

During 10 weeks of implementing PBL, a covert respondent observation was compiled to illustrate PBL's efficacy in enhancing students' productive skills. Researchers followed Brancati's (2019) steps for conducting respondent observations, which involve choosing a case, obtaining access to the observed group, establishing rapport, observing, interacting, recording behaviors, and interpreting data. These steps are continuous throughout the observation period.

A conceptual framework with coding themes containing linguistic competence and personal skills was designed, enabling a thematic analysis as data analysis approach of respondents' development during PBL implementation to enhance their productive English skills (See Appendix C).

4.3.4 Interviews

The research utilized semi-structured interviews to assess attitudes and language skills acquired through the use of PBL. The interview form consisted of four parts, each with semi-structured questions related to each stage of Kriwas' (1999) four-stage PBL implementation. Researcher conducted interviews from all respondents at four different stages during the implementation of PBL in writing and speaking skills. These interviews were conducted privately, face-to-face, or via Zoom, lasting 20-30 minutes. The responses were recorded and transcribed. As an English instructor, the researcher provided constructive feedback to facilitate project progress. The aim was to gather precise data on respondents' progress, linguistic ability, and communication. The research followed Stoller's (2002) ten-step procedure to tailor questions for each interview, starting with the student's choice of project theme and ending with their final presentation. It helped develop an understanding of PBL's effectiveness in enhancing productive skills.

The six steps of thematic analysis in Braun & Clarke's framework were used in this research for data analysis. These six steps phases include data familiarization, initial code generation, searching themes, reviewing themes, naming themes and producing reports (Clarke et al., 2015).

5. Results and Discussion
5.1. Quantitative Results:
5.1.1. RQ1: To what extent does the PBL method improve the learning performance (level) of Majmaah University's first-year students?

The research examines the impact of the PBL approach on students' English productive skills, examining pre and post-test results using paired t-test analysis in SPSS for independent samples.

The descriptive data of the two quantitative samples for writing and speaking before and after utilizing PBL are displayed in Table 1 below. The mean speaking score of the students was 3.12 before the PBL and increased to 3.66 after the PBL, demonstrating a clear and discernible improvement. Additionally, there was a rise in the mean writing scores of the students both before and after the PBL, coming in at 4.7.

Table 1: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Speaking	Pre-Test Score	3.1250	12	1.31642	.38002
	Post-Test Score	3.6667	12	1.21231	.34996
Writing	Pre-Test Score	4.0000	12	1.20605	.34816
	Post-Test Score	4.7083	12	1.23322	.35600

The association between students' speaking and writing results before and after utilizing the PBL is displayed in Table 2 below. In both situations, the data revealed extremely substantial connections. Speaking and writing showed a correlation of 0.926 and 0.917, respectively, with a significant level of 0.000 in both cases.

Table 2. Paired Samples Correlations

		N	Correlation	Sig.
Speaking	Pre-Test Score & Post-Test Score	12	0.926	0.000
Writing	Pre-Test Score & Post-Test Score	12	0.917	0.000

Table 3 below depicts the application of the T-test for paired samples to assess the impact of the PBL on students' speaking and writing exam results both before and after the PBL. It is noted in the results that both the speaking and writing performance of the students significantly differ after exposing them to the PBL.

The level of importance outweighs the statistical significance. The calculated value of t on students speaking performance during pre and posttest is 3.767 with a significant value of 0.003 which is lower from the critical value of 0.05 implied that the students speaking performance improved after exposing to the PBL strategies.   In the case of writing, the calculated value of t is 4.926, with a significance level of 0.000, which is less than the significance threshold of 0.05. It means that the students writing performance also significantly improve after exposing to the PBL techniques.

Table 3: Paired Samples Test

		Paired Differences					t	df	Sig. (2tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Speaking	Pre-Test Score & Post-Test Score	.54167	.49810	.14379	.85815	.22519	3.767	11	0.003
Writing	Pre-Test Score & Post-Test Score	.70833	.49810	.14379	.02481	.39185	4.926	11	0.000

Based on the analysis of data, PBL method of teaching English language to the students has impacted their productive skills, learning skills and personal development skills.

5.1.2. RQ2: Is there a significant difference in Majmaah University's first-year students' English productive skills for IELTS, including speaking and writing, before and after the PBL method?

• *Productive Skills*

The research found significant differences in students' scores before and after using PBL, with an increase in writing and speaking tests. It supports previous study findings by Putri et al. (2017), which analyzed that the efficacy of PBL methods in improving students' speaking and writing skills significantly impacts English learners with an overall improvement in confidence, self-directed learning, creativity, enthusiasm, and collaborative learning skills. PBL also significantly impacts students' academic achievement in English language skills. Similarly, Alotaibi's (2020) study also found that the explicit PBL approach significantly improved the persuasive writing skills of Saudi EFL secondary students, with a significant difference in post-test mean scores between the experimental and control groups, indicating a positive impact of the PBL paradigm.

The research found a significant improvement in speaking skills before and after using the PBL approach. The mean score for speaking before PBL was 3.12,

increasing to 3.66 after PBL, showing significant improvement as shown in Figures 2 and 3 below. Qualitative results showed an increase in participants' willingness to perform speaking activities, verbal communication improvement, active listening, and vocabulary enrichment. These findings align with previous studies indicating that PBL enhances learners' speaking skills, as demonstrated by previous studies. The findings suggested that e-poster-based PBL can enhance students' speaking abilities (Bakar et al., 2019; Wuryantari Winasih et al., 2019). The study by Vaca Torres and Gómez Rodríguez (2019) found that PBL helped students overcome English speaking anxiety, enhance lexical competence, and boost their interest in learning about their school and community.
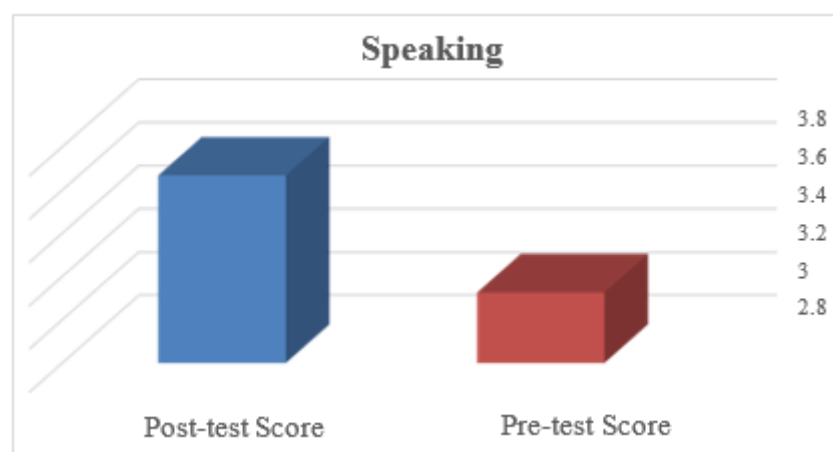

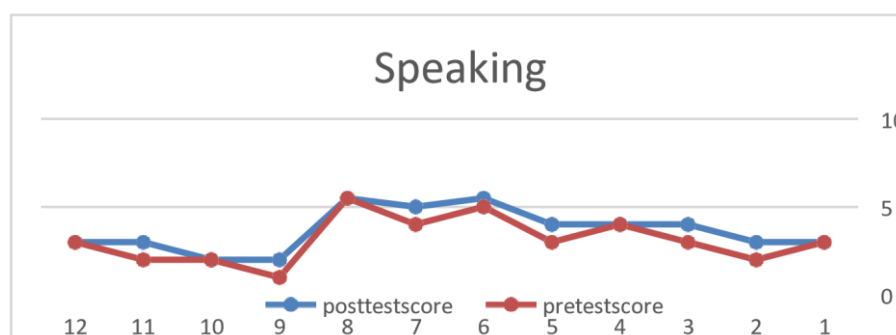**Figure 2: Mean Scores of Speaking Before and After Using PBL**

Figure 3: Series of Students' Scores in Speaking Before and After Using PBL

Moreover, the PBL approach significantly improved students' writing scores from 4.0 to 4.7, indicating an increase in academic achievement, as shown in Figures 4 and 5 below. Students' writing errors in weekly assignments decreased, and they improved their sentence structure, spelling, punctuation, capitalization, paraphrasing, and citation skills. It aligns with Alotaibi's (2020) findings that the explicit PBL approach significantly improved persuasive writing skills. Syarifah and Emiliasari (2018) found that PBL increases students' abilities and creativity in narrative text writing and their perceptions of the PBL application in a writing course. Somjai and Soontornwipast (2020) suggest that EFL students require significant emphasis on vocabulary learning in classroom sessions, and PBL is a crucial approach for developing productive skills in conversation and writing.

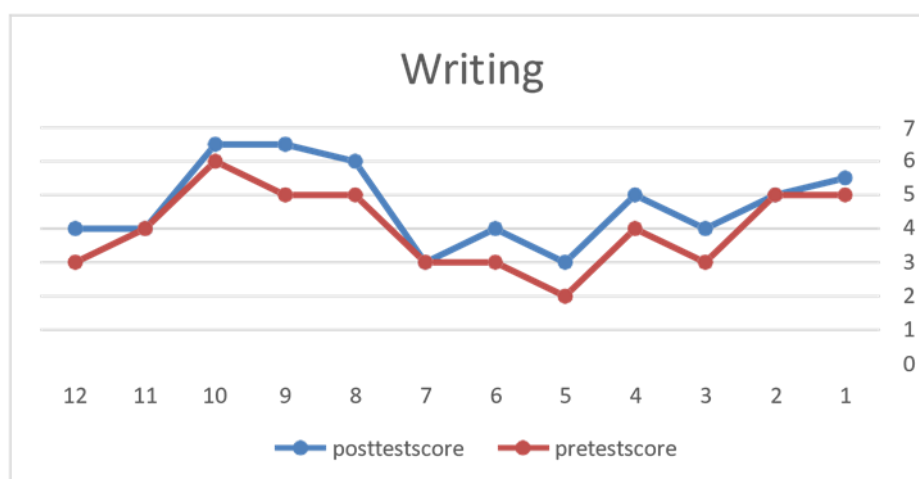**Figure 4: Mean Scores of Writing Before and After Using PBL**

Figure 5: Series of Students' Scores in Writing Before and After Using PBL

With the multiple benefits of PBL on productive skills development in the English language, a few challenges were also faced in facilitating students' learning during PBL method implementation in this research. It includes confusion about project work, information sources, and design. Some students were unfamiliar with project work, while others, particularly high achievers, wanted to direct the project according to their interests. These challenges may be due to limited exposure and training in collaboration skills. Thereby, to address this, the researcher, in his role as an instructor, helped students develop a foundation for group working skills by assigning tasks based on their skills. Notwithstanding, another issue was that some students worked quickly, prioritizing project completion over knowledge acquisition, possibly due to the belief that students were exam-oriented and focused on gaining high marks. As a mentor, the instructor clarified the procedural framework, advantages, and responsibilities of learners pertaining to PBL methods.

- *Learning Skills*

The current research analyzed that the PBL approach can enhance students' learning skills, including research skills and autonomy. Participants who cooperated in conducting a research paper reported improved control of their learning, both independently and in collaboration. PBL also enhances autonomous learning by requiring participants to make decisions about learning objectives, strategies, and reflection. It supports previous studies linking PBL with enhancing autonomous learning. In Vietnam, Van Loi's (2017) research found that students gained a higher degree of learner autonomy after participating in PBL. Previous studies have also shown that PBL increases learners' autonomy, particularly in terms of self-instruction, self-direction, self-access learning, and individualized instruction (Yuliani & Lengkanawati, 2017). Mohamadi (2018) found that PBL significantly enhances the vocabulary, reading, and learning abilities of EFL learners, boosting motivation, participation, and academic skills. It also helps develop self-learning habits and cooperation in writing skills. Also, PBL is effective in improving the language skills of learners to promote their attitudes toward learning with a commitment to content and language learning (Aghayani & Hajmohammadi, 2019).

- *Personal Development Skills*

The current research found that participants' personality traits improved, along with their language proficiency and learning skills, due to the implementation of PBL approaches. Observations and interviews revealed enthusiasm and motivation for applying projects and learning English through the process. Participants felt enthusiastic because they chose topics that interested them, reflecting their attitude toward learning. The freedom to immerse themselves in projects can lead to motivated and independent learners. The literature has reported a positive correlation between the utilization of PBL methods and motivation. A previous study by Shin (2018) showed a significant level of student interest and motivation in using English for communicative purposes and a desire to deviate from conventional learning methods. The duties associated with the project also significantly influenced students' motivation to acquire proficiency in the English language.

Furthermore, this study also analyzed that PBL significantly enhances students' learning processes by promoting creativity. Students are assigned projects that encourage higher-order thinking skills, such as creating presentations and videos using images, color matching, filming, and painting. Putri et al. (2017) found that PBL improves students' learning quality in terms of creativity, as students are aware of the need for quality projects. This approach promotes self-reliance and self-control and allows learners to explore their aptitudes and interests. It encourages students to take charge of their education, creating a fun and useful learning environment that incorporates their knowledge, attitudes, and abilities (Praba et al., 2018).

5.2. Qualitative Results from Interviews and Observations

1) Selection of the Project Type and Topic

The research involved conducting interviews with respondents to determine their project type and topic. Six respondents chose writing projects, and six chose speaking projects based on their lowest pre-test scores. The interview questions were: (1) What is your preference: to choose your project topic or have it chosen for you? and why? (2) Do you find it difficult to choose your project topic? If yes, what is (3) Why did you choose this topic?

The ten respondents expressed an affirmative response to the preference for their project. One respondent stated:

> *"I felt excited about the topic and confident that I chose it myself, in contrast to my previous experiences with projects in which the teacher selected the topic, and I was required to complete it regardless of my preference."*

The majority of respondents indicated that it was simple for them to choose their topic. One of the respondents stated:

> *"I have montage skills and am interested in bringing attention to medical issues such as obesity and diabetes. Due to the fact that my future major will be medicine, I decided to produce and post videos about medical issues on social media."*

Based on the responses above, it can be said that the respondents thought choosing their topic was effortless and would help with their future academic work. Furthermore, a significant proportion of respondents said that their interests drove their decision to pursue a certain project, while a smaller group selected their topic based on the simplicity of gathering information and carrying out the project.

2) Designing the Project Activities

The second interview was conducted during the second stage, which was about designing the project activities. The main questions at this stage were: (1) What is your plan for conducting and implementing your project? (2) What are your expectations for your final project?

For the first question, the answers for the speaking projects were:

> *"Designing slides, practicing presentation skills, researching resources, producing audio-visual materials, reading, acting, and performing."*

However, for the writing projects, the answers were:

> *"Research, reading, practicing writing, blogging, scribbling, drafting, and crafting skills."*

The respondents expressed optimistic views relevant to their final projects by providing affirmative responses to the second question. Project outcomes were notably positive because of the respondents' dedication and enthusiasm in choosing and organizing each of their projects.

3) Performing the Project Activities
The third interview was conducted following the completion of the third stage, which included performing the project activities. The main questions at this stage were: (1) Does your English improve after the implementation of your project? (2) What additional skills do you think you have acquired due to completing your project?

For the first question, the ten respondents answered *'yes'*, suggesting that they improved their linguistic proficiency by learning new vocabulary and grammar, expressing ideas in L2, persuasiveness, proper usage of words, and improving pronunciation and fluency. For the second question, the respondents confirmed improvement in their:
> *"Personal skills, presentation skills, confidence, autonomy, and problem-solving skills."*

One of the respondents described her experience in implementing her speaking project as:
> *"Excited to learn because there was so much creativity involved in designing my presentation slides."*

Another six respondents shared similar views and said that they felt enjoyment while working on topics that interested them. Consequently, they were enthusiastic and motivated about their final project's presentation, performance, and publication.

4) Final Project Presentation
The final interview was conducted after respondents presented their final products, including presentations, performances, and publications, in front of the class and on social media. This stage involved assessing respondents, completing projects, and discussing the achievement of initial aims. The primary questions were: (1) Can you tell me about your experience during the implementation of your project? (2) Did you face difficulties during your experience? If yes, what are they? Moreover, how did you overcome them?

The majority of respondents replied to the first question by saying that they enriched their vocabulary and exposure to the language in real-life situations. One of the respondents said:
> *"My vocabulary was enriched after I researched ocean plastic pollution, and I also learned the structure of a problem-solution essay."*

In addition to enhancing their linguistic proficiency, the respondents report that they enhance their creative skills through projects such as:
> *"Slide design, diary coloring, filming, and video editing"*. Furthermore, the respondents reported *"experiencing a sense of confidence and an increase in their self-esteem upon delivering their projects in front of other students. Autonomy and cultural awareness were also mentioned in the responses of the respondents."*

A respondent presented an oral presentation about sports in front of the class. She said;

"I experienced public speaking for the first time, felt confident about myself, and had an effective overcoming of my anxiety towards talking and communicating with an audience."

For the second question, some respondents reported that they face difficulties in implementing their projects. One of the respondents reported:

"I faced difficulty locating reliable sources for her research paper. I overcame this problem by asking my teacher to get directions to the appropriate search platform." Another respondent reported, *"I faced difficulty correcting my essay's grammatical errors as I was composing it. I utilized the application Grammarly to check out my writing."*

The final interview stage proved from respondents' insights that PBL is effective in enhancing their productive skills.

Table 4 below shows the coding themes of interviews conducted for observation research.

Table 4: Coding Themes for Observations

Linguistic Proficiency	• Used new vocabulary • Correct use of grammar • Fluency and coherence • Pronunciation • Academic Writing
Learning Skills	• Time management • Autonomous learning • Research skills • Problem-solving • Asking the right questions • Presentations • Critical-thinking • Schedule planning • Active listening • Technological competency • Text interpretation • Creative writing
Self-Development	• Teamwork Development • Adaptability • Confidence • Motivation to Learn • Creativity • Leadership • Expressing Ideas

The research lasted ten weeks, with eight hours of observation per week. Initially, participants showed reduced use of L2, with L1 being their primary mode of communication. Their weekly writing assignments contained 45 percent mistakes in grammar, spelling, punctuation, and capitalization, as well as instances of plagiarism and copied words. They also resisted class activities, indicating a lack

of enthusiasm for language production. After the third stage of implementing PBL methods, participants showed progress in linguistic proficiency and learning skills. Their writing skills improved due to completing and revising assignments, and their communication skills improved, with a preference for L2. They became more engaged in class discussions and developed autonomy by becoming independent researchers of information. Personal skills increased by allowing students to express ideas, present stories, and speak in front of the class. Collaboration was observed through peer review and support on social media.

The current research findings highlighted that research participants gained linguistic proficiency, learning skills and self-development with PBL approach in EFL course. This finding is supported by past studies as they showed that speaking skills of EFL learners improved significantly with PBL for those enrolled in Drama course improving their communication skills with linguistic proficiency (Sirisrimangkorn, 2018). PBL is essential for EFL classes as they tend to improve their problem-based learning identifying topics, basic indicators of readability and practicability and basic English competencies like grammar, vocabulary, etc. Personal development skills of enthusiasm, motivation and excitement also improved with PBL assessment procedures (Artini et al., 2018). Furthermore, as analyzed by Mohammed (2021), writing and speaking skills are most impacted by PBL since it is based on complex tasks, challenging answers and questions engaging students in decision-making or investigative activities. Additionally, PBL approaches are used to develop skills in problem-solving, teamwork, communication, soul management, continuous learning, crisis handling, leadership, critical thinking, creative thinking and managing information (Handrianto & Rahman, 2019).

6. Conclusion

This research examined the effect of PBL on English language students' productive skills during their freshman year at Majmmaah University. The problem lies in the use of traditional teaching methods, and this research aims to help EFL teachers and students use effective methods, particularly productive skills. PBL is a teaching approach that focuses on developing productive skills in EFL students, rather than just passive vocabulary knowledge. It significantly improves students' confidence, self-directed learning, creativity, enthusiasm, and collaborative learning skills, boosting motivation and satisfaction in teaching. PBL also develops critical thinking, problem-solving, and self-directed skills. It helps learners improve their language proficiency, communicative competence, confidence, cooperation, and inventiveness by focusing on language as a practical tool relevant to their daily lives. PBL encourages students to take charge of their education, creating a fun and useful learning environment that incorporates their knowledge, attitudes, and abilities. Data collected from pre- and post-tests on speaking and writing and a student questionnaire showed a significant improvement in learners' overall oral communication skills. Quantitative data shows an increase in speaking and writing scores, with a strong correlation between these skills. Qualitative analysis reveals student autonomy in selecting project topics, leading to increased enthusiasm and investment. The findings

support the overall efficacy of PBL in transforming students' language learning experiences and outcomes.

The study's limitations include its sample being exclusively from a single, large, public Saudi university, limiting its generalizability to students from different demographics or studying in other academic institutions. However, the identified limitation can be catered in the future by conducting comparative research of two universities of Saudi Arabia offering EFL learning using PBL to identify the differences and similarities. The current research will benefit future researchers, educators and students in identifying the significance of PBL in learning English language speaking and writing skills.

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Appendices
Appendix A
The British Council's standardized IELTS test

(Speaking) https://takeielts.britishcouncil.org/take-ielts/prepare/free-ielts-english-practice-tests/speaking

IELTS practice Speaking test - part 1

In part 1 of the speaking test the examiner will introduce him or herself and ask general questions on familiar topics.

The examiner will ask you to confirm your identity. She will then ask general questions on familiar topics such as home, family, work, studies and interests. Part 1 of the test will last 4-5 minutes.

Speaking test part 1: questions

Let's talk about your home town or village:

1. what kind of place is it?

2. what's the most interesting part of your town/village?

3. what kind of jobs do the people in your town/village do?

4. would you say it's a good place to live? (why?) Let's move on to talk about accommodation:

    i.tell me about the kind of accommodation you live in?

    ii.how long have you lived there?

    iii.what do you like about living there?

    iv.what sort of accommodation would you most like to live in?

Speaking test part 2: candidate task card

Describe something you own which is very important to you. You should say:

- where you got it from
- how long you have had it
- what you use it for; and
- explain why it is important to you.

You will have to talk about the topic for 1 to 2 minutes. You have one minute to think about what you're going to say. You can make some notes to help you if you wish.

Rounding off questions Tell me is it valuable in terms of money?

would it be easy to replace?

Speaking test - part 3

In part 3 of the Speaking test the examiner will ask further questions which are connected to the topics discussed in part 2.

This part of the test is designed to give you the opportunity to talk about more abstract issues and ideas. It is a two-way discussion with the examiner, and will last 4-5 minutes.

Appendix B
The British Council's standardized IELTS test

(Writing) https://takeielts.britishcouncil.org/take-ielts/prepare/free-ielts-english-practice-tests/writing/general-training

This is the first section of the IELTS General Training Writing test. You should spend about 20 minutes on it.

Write about the following topic:

Task 1

A friend has agreed to look after your house and pet while you are on holiday. Write a letter to your friend.

In your letter give contact details for when you are away give instructions about how to care for your pet describe other household duties

Write at least 150 words. You do NOT need to write any addresses.

Begin your letter as follows:

Dear........................,

You have completed the first section of your Writing test. Now move on to Writing task 2.

This is the second section of your IELTS General Training Writing test.

You should spend about 40 minutes on it.

Write about the following topic:

Task 2

Some people believe that teaching children at home is best for a child's development while others think that it is important for children to go to school.

Discuss the advantages of both methods and give your own opinion. Give reasons for your answer and include any relevant examples from your own knowledge or experience.

Write at least 250 words.

Writing – Model Answers

WRITING TASK 1 – Model Answer

Dear Carolyn,

Thank you for agreeing to house-sit for me. If you need to contact me during my holiday, I'll be staying at the Imperial Hotel in Bundaberg. If it's urgent, however, please ring my mobile phone, which I'll keep with me at all times. I've written the numbers on a sticky note which I've left on the fridge.

My cat needs to be fed twice daily so each morning and evening put a handful of cat biscuits in his dish. You will find these in the kitchen pantry. Also, please check throughout the day to make sure he has fresh water. You can give him a small bowl of milk in the evening.

I would like you to water my plants, too. The indoor ones in the lounge only need water once every few days but the plants on the balcony need to be watered daily unless there has been heavy rain. Finally, for security, please clear my mailbox every day and keep the outside lights on at night.

I look forward to seeing you on my return.

Yours,

Katie

WRITING TASK 2 – Model Answer

The argument over whether learning at home or at school is better for children has not been settled yet. Whereas home education offers better protection with individual learning and opportunities for families to bond, schools have a superior range of material and human resources. Ultimately, I think the school experience is best for children. There are several advantages for children who learn at home. Firstly, they can spend more time with their parents and siblings. Many social problems are associated with families not spending enough quality time together. Teaching children at home also provides them with an individualised learning environment. Instruction is custom designed and moves at the child's own pace and in accordance with his or her individual

learning style. Finally, home schooling protects children from bullies and

others who might be a bad influence.

On the other hand, the school environment also offers advantages for children. Schools encourage children to socialise with their peers and learn how to cope with gossip, bullying and peer pressure. In addition, children will receive better tuition across a range of disciplines, as schools have teachers who are trained in special subjects. What is more, schools provide better access to physical resources such as sports equipment, musical instruments and library books.

I believe that children are better off in a school environment. Although family time and individual learning are important, the range of expertise and resources that schools offer cannot be matched in the home. School environments may present difficult social situations, but so too does the real world and children must learn to navigate these on their own.

Appendix C
Interviews Questions

Interview 1:

What is your preference: to choose your project topic or have it chosen for you? and why?

Do you find it difficult to choose your project topic? if yes what is?

Why did you choose this topic?

Interview 2:

What is your plan for conducting and implementing your project?

What are your expectations for your final project?

Interview 3:

Does your English improve after the implementation of your project?

What additional skills do you think you've acquired due to completing your project?

Interview 4:

Can you tell me about your experience during the implementation of your project?

Did you face difficulties during your experience? If yes, what are they?

and how did you overcome them?

Appendix D
Coding Themes for Observations

Linguistic Proficiency	• Used new vocabulary • Correct use of grammar • Fluency and coherence • Pronunciation • Academic Writing
Learning Skills	• Time management • Autonomous learning • Research skills • Problem-solving • Asking the right questions • Presentations • Critical-thinking • Schedule planning • Active listening • Technological competency • Text interpretation • Creative writing
Self-Development	• Teamwork Development • Adaptability • Confidence • Motivation to Learn • Creativity • Leadership • Expressing Ideas