

INNOVATIVE COURSE LECTURE IN CREATIVE ARTS: A PROJECT-BASED LEARNING (PjBL 4.0) ENRICHING 4CS COMPETENCIES

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Abstract

This research is an exploration into the development and impact of innovative teaching materials in the field of Creative Arts, with a particular focus on Project-Based Learning (PBL) as a pedagogical approach that enhances the cultivation of 4Cs competencies: Critical Thinking, Communication, Collaboration, and Creativity among students. This study rigorously adheres to the systematic Research and Development (R&D) model by Borg and Gall, comprising six iterative stages, namely, problem identification, needs assessment, development of materials, and validation by experts, revision, and final product creation. The targeted population for this study consists of 25 students in the 5th semester enrolled in the Creative Arts in ELT course at Universitas Negeri Medan. The research underscores the significance of PjBL as a transformative method to boost student motivation, engagement, and overall academic performance. The comprehensive needs assessment and expert validation demonstrate that the developed materials effectively promote the development of 4Cs competencies. This research goes beyond addressing specific student needs; it also revitalizes the learning journey while nurturing vital 21st-century skills. In essence, it offers a blueprint for effective teaching material development, enriching the educational landscape and meeting the evolving demands of modern education. The results of this study showcase the successful creation of innovative teaching materials that are designed to elevate the students' learning experiences and bolster their 4Cs competencies.

Keywords: Creative Arts in ELT, Project Based Learning, 21st Century Skills

Introduction,

In the current setting of education, the curriculum of Creative Arts in English Language Teaching (ELT) is positioned at a critical intersection. It confronts a noticeable divide between the existing educational materials and the evolving expectations of educators and learners. Traditional educational frameworks,

exemplified by conventional lesson plans and course textbooks, which were once considered reliable pedagogical cornerstones, now seem ill-suited to navigate the rapidly changing educational terrain. This disconnect is further emphasized by the resounding call for adaptability and forward-thinking, particularly from the younger generation, who bear the responsibility of shaping the future. In an era marked by an intensified focus on preparedness, the importance of 21st-century skills cannot be overstated. These competencies serve as the foundation for building a promising future, and the field of English Language Teaching, like many other educational domains, offers a variety of educational models designed to address these contemporary challenges. Among these models, Project-Based Learning emerges as a potent approach that aligns with the 21st-century skills essential in today's dynamic global landscape.

In the contemporary educational environment, researchers face a significant challenge within the context of the Creative Arts in English Language Teaching (ELT) course. A conspicuous disparity is evident between the existing educational materials and the rapidly evolving requirements of both educators and students. Conventional lesson plans and course resources, once deemed as reliable foundations of education, now seem inadequate in light of the swiftly changing educational milieu. This gap is exacerbated by the pressing need for adaptability and readiness for the future, particularly among the younger generation, who bear the responsibility of shaping the world's destiny. In an era where readiness is of paramount significance, the significance of 21st-century skills cannot be overemphasized. These proficiencies serve as the bedrock for constructing a promising future, and English Language Teaching, like various other segments of education, presents diverse educational models designed to address these issues. Among these models, Project-Based Learning emerges as a compelling approach that aligns with the imperative 21st-century skills required in today's dynamic world.

Project-based learning (PjBL) is an educational method in which students actively learn by engaging in real-world projects that carry personal significance. Within the framework of PjBL, students often confront complex, open-ended challenges as part of collaborative teams. They then leverage their acquired knowledge to craft a final product or presentation that serves as a demonstration of their grasp of the subject matters.

PjBL has its roots in the constructivist theory presented by Piaget in 1954, which highlights that students build their comprehension of the world through their experiences and interactions. According to the principles of constructivism, knowledge isn't simply handed over; rather, it is actively formed by the learner. This fundamental concept forms the basis of PjBL, enabling students to actively shape their understanding of a topic by addressing real-world problems and challenges.

Experiential learning theories, as advocated by Kolb (1984), have also left their mark on PjBL. These theories suggest that learning is most effective when rooted in personal experiences and activities. PjBL aligns well with this approach, as it offers students the opportunity to apply their knowledge to real-world problems.

PjBL encompasses projects that integrate various disciplines, such as science, technology, society, history, mathematics, and politics, while also providing productive opportunities for student discussions. This approach encourages student inquiry directed toward real-world issues, instills a passion for learning, and proves to be an effective teaching method (Turgut, 2008:61).

Research has shown that PjBL is a successful method for engaging students and fostering deep learning. It allows them to apply their knowledge and skills to real-world challenges, promoting critical and creative thinking. Many of the 21st-century skills essential for success in the modern world, including collaboration, communication, and problem-solving, are well-aligned with PjBL (Ertmer & Newby, 2013).

According to research on PjBL, it offers several advantages to students, such as improved academic performance (Blumenfeld et al., 1991), increased motivation (Krajcik et al., 1998), and enhanced knowledge retention (Grossman et al., 1989). PjBL can also generate greater interest in the subject matter and foster a positive attitude toward learning (Blumenfeld et al., 1991; Krajcik et al., 1998). Moreover, PjBL has been shown to be particularly effective for disadvantaged students, as it can help mitigate educational disparities and create opportunities for success for all students (Grossman et al., 1989).

The principles of Project-Based Learning involve focusing on key aspects like addressing questions or issues, engaging in constructive exploration or design (Abaunza & Rodríguez-Conde, 2016; Al-Ayyoub, 2018; Alshahrani, 2022), granting students autonomy, and ensuring real-world relevance. The fundamental elements of Project-Based Learning encompass (1) initiating activities based on posing

questions or presenting problems that guide the arrangement and commencement of meaningful projects and (2) culminating in a final result or a series of products derived from activities, individual communication, or diverse task outcomes aimed at addressing the issue (Lisminingsih, 2010, p.113).

In the course of this research initiative, the researchers firmly endorse the notion that education should function as a dynamic and adaptive entity that evolves in tandem with the ever-changing global landscape it prepares students to engage with. By anchoring our educational materials within the framework of Project-Based Learning, their overarching objective is to endow students with competencies that transcend the confines of the classroom. Specifically, the researchers seek to cultivate their capacity for critical thinking, enhance their proficiency in effective communication, foster a seamless collaborative spirit, and stimulate their creative aptitude for innovative problem-solving. As educators, researchers are acutely conscious of the fact that contemporary students confront a future characterized by its inherent unpredictability. Within the realm of this research, the researchers resolute commitment to adopt a proactive stance. The primary aim is to ensure that the Creative Arts in English Language Teaching (ELT) course serves as a wellspring of adaptable, forward-looking, and dynamic education. This approach equips students with the requisite skill set to not only navigate but excel within the intricate and ever-evolving landscape of the 21st century.

Literature Review,

Creative Arts in ELT

This course lecture has been carefully crafted by the English Education Program to align with the demands of 21st-century learning. It is specifically tailored to equip pre-service teachers with contemporary and updated skills infused with digital technology. The aim is to prepare them to excel in the evolving landscape of education in the future.

Creative Arts in English Language Teaching is a specialized course that integrates artistic forms such as visual arts, drama, music, and creative writing into the language learning process. This course encourages educators and students to employ artistic methods to enhance language skills like listening, speaking, reading, and writing. By creating an environment that fosters creativity and free expression, students can engage with the language in a more interactive and enjoyable

manner. Additionally, modern technology and multimedia are often incorporated to further engage students and enrich their language learning experiences.

In the 21st century, Creative Arts in ELT is essential to meet the evolving demands of education. It acknowledges that traditional language instruction methods may not suffice in equipping students with the critical 21st-century skills required for success in today's rapidly changing world. By intertwining creative arts with language teaching, this course offers a student-centric approach that accommodates diverse learning styles and needs. It enhances the language learning process, motivates students to participate actively, and prepares them with creative thinking, problem-solving, and communication skills vital in the modern era.

Project-Based Learning

Regarding Andanty (2022), there were additional benefits to employing project-based learning when ESP courses were taught and learned, including 1. Project-based learning can inspire students to develop English resources for specialized or individual learners and academic subjects. 2. Project-based learning can encourage students to make choices as they work to complete their projects. 3. Students may practice creating a meaningful project that is still closely related to the course topics by employing project-based learning, and the goods can be used by themselves or others.

21st Century Skills (4Cs Conceptualization)

4 C's represent a set of four essential skills namely Communication, Collaboration, Critical thinking, and Creativity. This set was developed in 2002 by Partnership for 21st Century Skills as a result of an investigation on skills that students need to excel beyond school contexts (Partnership for 21st Century Skills, 2009). Despite their essential role, educational researchers, policy-makers, and practitioners hesitate to integrate them into the curriculum because of the overfocus on exams and also a lack of clear concept of what each of them means and what could be good classroom practices for each of them (Pollard, 2012). Based on this, in this section explains the meaning of each of the 4 C's and highlight pedagogical implications as follows:

1. Communication

Communication entails the ability to access, evaluate and comprehensively share information using both traditional and new media such as print-based text and digital texts (Kolk, 2022; Pardede, 2020; Partnership for 21st Century Skills,

2009; Trilling & Fadel, 2009). Eaton (2010) argues that knowing a language alone is not enough in the 21st century to make someone an effective communicator unless it is accompanied by other skills such as computer and numeracy skills. Such a need could be attributed to the development of technology that is transforming traditional communication channels and communication codes. As a result, communication ability in both traditional and digital media becomes imperative. In addition, fake news and information overload are part of the complexities of communication practices in the 21st century (van Laar et al., 2017). As van Lar et al. (2016) note 'The current workplace requires highly skilled workers faced with increasingly complex and interactive tasks. Such workers are expected to efficiently select knowledge from the amount of available information and effectively apply such knowledge, both in their professional and personal lives.'

Strategies to facilitate communication skills in the classroom include providing a technology-rich learning environment that allows students to achieve certain communication goals (Keane et al., 2016; Kolk, 2022; Pardede, 2020) suggests that such an environment should be rich enough to allow students to communicate using various media according to various purposes and to diverse audiences. Furthermore, tasks should be induced by the interest of students rather than a decision by the teacher. Dana-Picard & Hershkovitz (2020) argue that students' interest is important and could be a source of inspiration.

2. Collaboration

Collaboration means the ability to work as a group to achieve a common goal (Erdoğan, 2019; Kolk, 2022; Pardede, 2020; Partnership for 21st Century Skills, 2009; Trilling & Fadel, 2009). It is premised on the commitment to value and respect others because group tasks involve people with diverse abilities and perspectives (Erdoğan, 2019). Furthermore, Kolk (2022) notes that during collaboration one has to take his/her weakness as a learning opportunity thus being flexible in changing his/her perspective. The potential of collaboration cannot be overemphasized. The world has been witnessing how for instance, the collaboration between researchers, practitioners, and policy-makers is working in transforming the world (Moshtagh et al., 2021). Another recent example that the need for joint efforts is the Covid-19 pandemic whose control depends on every member of the society to take responsibility. Therefore, collaboration is all about

developing a feeling of being part of the community and responsible for serving it.

Creating a classroom learning environment, allowing students to share their ideas and get feedback from others is important for developing collaboration. Studies suggest that when students are used to being listened to by others and listening to others while working on a certain task, they internalize the value of collaboration (Erdoğan, 2019; Kolk, 2022). However, it should be noted that activities that could make students value collaboration are those that connect to their interests and connected to a real-life context (Kolk, 2022; Lai, 2011). Therefore, to develop collaboration skills, teachers should create an environment for learners to work in groups while ensuring that the tasks are connected and interest all learners.

3. Critical thinking

Critical thinking implies the ability of an individual to make informed or reasonable decisions. Critical reflection involves making judgments that are supported by evidence instead of emotions (Erdoğan, 2019; Kolk, 2022; Partnership for 21st Century Skills, 2009; Trilling & Fadel, 2009). Literature suggests various aspects that indicate the use of critical thinking such as analyzing, evaluating, and synthesizing various issues, information, arguments, claims, and beliefs among others (Kolk, 2022; Trilling & Fadel, 2009). Therefore, critical thinking is associated with an individual ability to cope with certain situations through reflection.

The pedagogical implications for critical thinking include creating an environment where students have to make an evaluation, analysis, and synthesis of various real-life aspects of their interest (Erdoğan, 2019; Kolk, 2022). Asking students to engage in tasks that involve classification, prediction, justification, and evaluation of diverse issues is a good example of an effective environment for developing critical thinking among learners (Kolk, 2022; Erdogan, 2019).

4. Creativity

Creativity is the ability to produce something useful, original, or novel, transfer and adaptation of ideas (Kolk, 2022; Partnership for 21st Century Skills, 2009; Sinclair et al., 2006). Initially, creativity was associated with individual talent in the sense that only a few people can be creative. However, studies reveal that creativity is teachable (Smith, 2005). The reason for this is that recently creativity

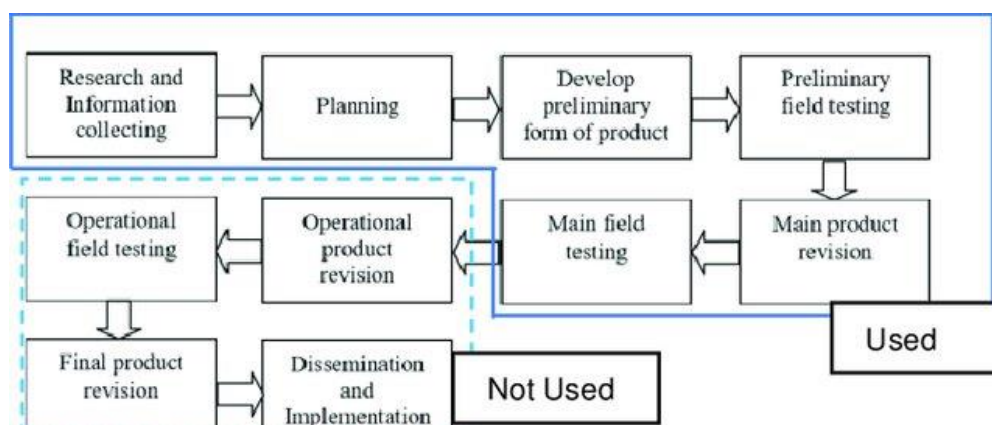
has been more associated with the process of deviating from the norms leading to the production of valuable ideas or artifacts for the society (Pollard, 2012). Therefore, developing creativity implies cultivating the spirit of risk-taking among learners through which they can keep trying new ways of making things better than before.

For teachers to develop creativity in the classroom, they should create a learning environment that requires learners to develop new solutions, useful ideas, and original tangible objects in their respective fields (Erdoğan, 2019; Kolk, 2022; Trilling & Fadel, 2009) notes that sometimes learners might fear engaging in creative task

Research Methodology,

This study was underpinned by the field of educational research and development (R&D). According to Borg and Gall (2003), educational research and development can be likened to an industrial model, wherein the discoveries lead to the creation of new educational products or procedures. These innovations are then methodically put into practice, assessed, and refined to meet predefined standards of effectiveness, dependability, or other relevant criteria. The research took place within the English Education Study Program at the Faculty of Languages and Arts, Universitas Negeri Medan, Indonesia, and it involved a cohort of 50 students as participants. In this investigation, the Borg and Gall (2003) framework, comprising six phases, namely data and information collection, data analysis, English material design, validation by experts, material revision, and the creation of the final product, was applied. To gather comprehensive insights into the research data, three distinct instruments were used: observation, questionnaires, and interviews.

Figure 1: 6 phases of R&D by Borg and Gall (2003)



Findings and Discussion,

Findings

There were 6 phases in developing teaching materials of Creative Arts in ELT course based on Project-Based learning integrated 4Cs for the 5th semester of English Education Study Program, Universitas Negeri Medan. The phases were: 1) Gathering data and information, 2) Need analysis, and 3) Material design. 4) Validating by experts, 5) Revising, and 6) Final product.

1. Gathering Data and Information

The initial stage in undertaking Research and Development was to collect data and information. The data and information were acquired by observation, questionnaire at English Education Study Program, Universitas Negeri Medan and through an interview with the lecturer. The results suggested the lecturer uses teaching materials that based on Project Based Learning integrated with 4C skills improve students' motivation in learning and achieve better score. Meanwhile, the lecturer used ordinary printed textbooks from variety resources to deliver topics.

2. Need Analysis

A need analysis was carried out to collect data. It took place on August 14, 2023. The data were gathered using a need analysis questionnaire and an interview. The questionnaire was delivered to students of 5th Semester of English Education Study Program, Universitas Negeri Medan. The questionnaire comprised of ten multiple-choice questions. These components were expanded into four answer alternatives. The most widely responses were chosen to represent their needs.

The last instrument was an interview guideline for the lecturer of Creative Arts in ELT. The questions comprised of 6 main questions. The questions were aimed to obtain the lecturer's opinion about the course material in the textbook, the input in teaching and the teaching method. The results of the need analysis are discussed below.

2a. Description of Students' Profile

The total number of students in Creative Arts in ELT class consist of 25 participants. The class has 9 male and 16 female students. They were mostly 20 years old, 4 students were 21 years old, and the rest was 22 years old. Below is the table of the description students' profile.

Table 4.1: Data of the 5th Semester Students

Students (Total)	Sex		Ages
	Male	Female	
25	9	16	20-22 years old

2b. Descriptions of Students' Need Analysis

1) Needs

The questions from number 1, 2 and 6 were aimed at finding the information about the students' opinion and interest of learning activities in the classroom.

a. The teaching and learning process in the classroom especially in the Creative Arts in ELT activities.

The questions 1, 2, and 6 were designed to elicit information on the students' opinions and interests in classroom learning activities.

Most students indicated that the teaching and learning process in the classroom, especially in Creative Arts in ELT class is interesting. While some students said this class is fascinating. The response of question number 1 is shown in the table below.

Table 4.2: Result of the Question Number 1

No.	Question	Items	F	(%)
1.	How is the teaching and learning process in the classroom especially in Creative Arts in ELT activity?	a. Very interested	12	37.5%
		b. Moderately interested	19	59.375%
		c. Slightly interested	1	3.125%
		d. Not interested	0	-

b. The importance of the 4Cs (Critical Thinking, Communication, Collaboration, Creativity) in learning Creative Arts in ELT.

This question tried to determine the significance of 21st Century skill for students. 53.125% students stated that 4Cs is very essential in their education, particularly their skills proficiency in English. The answer for question number 2 is given below.

Table 4.3: Result of the Question Number 2

No.	Question	Items	F	(%)
2.	How important is the 4 Cs in Creative Arts in ELT?	a. Very important	17	53.125%
		b. Quite important	14	43.75%
		c. Less important	1	3.125%
		d. Not important	-	0

c. Project Based Learning (PjBL) activity

The purpose of question number six was to find out about students' opinion related the option of PjBL activities that sounded interesting for them. As shown in the table of results below, most students prefer to collaborate and present the project in the teaching-learning activities. Furthermore, applying critical thinking and collaboration. The table of questionnaire results for number 6 is provided below.

Table 4.4: Result of Question Number 6

No.	Question	Items	F	(%)
6.	What kind of skills that you like represented in PjBL activities?	a. Critical thinking and collaboration	10	31.25%
		b. Communication and creativity	10	31.25%
		c. Collaboration and creativity	9	28.125%
		d. Critical thinking and collaboration	3	9.375%

2) Want

In the question number 4, 5, 7, and 8, the researcher aimed to discover the students' urge in learning reading. The data of the result of the students' urge to boost them to increase their 4Cs skills presented below:

a. The students' expectation of the enhancement of 4Cs skills integrated with PjBL activities in the classroom.

In question of number 4, the researcher attempted to determine the students' interest in learning Creative Arts in ELT. The data were the result of the students' urge to assist them to enhance their 4Cs skills throughout the PjBL integration.

This question was designed to elicit students' expectations in the end of the learning process, namely in terms of 4Cs skills. Most students stated that they urge to be able to comprehend the topics properly during their 4Cs implementation. 12 students chose 'd,' and 9 students

chose 'a,' to indicate that they wanted to expand more topics within new activities that represented 4Cs in the PjBL. It was proven by the table of the result below.

Table 4.5: Result of Question Number 4

No.	Question	Items	F	(%)
4.	What is your expectation of the enhancement of learning activity in the classroom?	a. to be able to comprehend the topics well	9	28.125%
		b. to be able to apply 4Cs at different situation	8	25%
		c. to be able to master 4Cs skills in this subject	3	9.375%
		d. to be able to implement the projects well	12	37.5%

b. Students Preferences for the Topic Materials

The fifth question addressed the students' preferences for the topics in Creative Arts in ELT class that attracted their favourite texts. Based on the table below, most of the students chose 'b' and 'd'. Meanwhile the rest of them chose 'a' with the option about Creative Podcasting. The result for question 5 is given below.

Table 4.6: Result of Question Number 5

No.	Question	Items	F	(%)
5.	What kind of topic materials that you want in learning Creative Arts in ELT?	a. Multimedia Projects and Creative Technology Projects	8	25%
		b. Creative Games and Puzzles and Community Projects	12	37.5%
		c. Creative Journaling and Collaborative Art Projects	12	37.5%
		d. Creative Book Review, Art Exhibition, and Creative Podcasting	0	-

c. Students' Preferences of Creative Arts in ELT Projects

This question was intended to gather data about students' project preferences. Furthermore, it is utilized to demonstrate that students enjoy the inclusion of Creating Educational Games and Puzzles for Community

Engagement and Learning in conducting and preparing the projects. As a result, 40.625% of the students chose Multimedia Storytelling: Exploring the Fusion of Creative Book Review, Art Exhibition, and Creative Podcasting as well as topic about Creating Educational Games and Puzzles for Community Engagement and Learning. The result for question's number 7 is shown in the table below.

Table 4.7: Result of Question Number 7

No.	Question	Items	F	(%)
7.	In your opinion, what kind of topic of reading that you like?	a. The Impact of Augmented Reality (AR) and Virtual Reality (VR) in Multimedia and Creative Technology Projects	2	6.2%
		b. Creating Educational Games and Puzzles for Community Engagement and Learning	13	40.625%
		c. Exploring the Convergence of Personal Creative Journaling and Collaborative Art	4	12.5%
		d. Multimedia Storytelling: Exploring the Fusion of Creative Book Review, Art Exhibition, and Creative Podcasting	13	40.625%

d. Students' Role in PjBL (designing and presenting Project)

The purpose of question number 8 was to discover the students' roles in completing the activity through PjBL integrated with 4Cs. Based on the data in the table, no substantial difference from the four options. 17 students prefer to accomplish the project in small group, 4 students prefer to work individually, 6 students prefer to work in pairs, and the rest of the students prefer to work in large group. The table of results for question number 8 provided below.

Table 4.8: Result of Question Number 8

No.	Question	Items	F	(%)
8.	What kind of activity in PjBL that you like to accomplish the project?	a. Individually	4	12.5%
		b. In pair	6	18.75%
		c. Small group	17	53.125%
		d. Big group	5	15.625%

3) Lack

a. The traction of the material used in the class

This question was designed to elicit students' opinions about whether the current material is fascinating or not. Only three students reported that the Creative Arts in ELT course material they use is less interesting, while 75% thought it is highly interesting. The result for question number 3 is presented below.

Table 4.9: Result of Question Number 3

No.	Question	Items	F	(%)
3.	Is the book which currently used in learning Creative Arts in ELT course interesting?	a. Very interesting	5	15.625%
		b. Quite interesting	24	75%
		c. Less interesting	3	9.375%
		d. Not interesting	0	-

b. The textbook improves their 4Cs Skills or not

The purpose of this question was to determine whether the book enhanced their 4Cs Skills or not. 50% of students stated that the book did not enhance their 4Cs. On the other side, 9.375% of students stated that the book significantly enhances their 4Cs. The table of results for question number 9 is shown below.

Table 4.10: Result of Question Number 9

No.	Question	Items	F	(%)
9.	Did the book which currently used in Creative Arts in ELT has improved your 4Cs Skills?	a. Very interesting	5	15.625%
		b. Quite interesting	24	75%
		c. Less interesting	3	9.375%
		d. Not interesting	0	-

c. Students' Difficulties in Applying 4Cs in Classroom

The other element shown in question number ten was students' difficulties in applying 4Cs. The highest score was 56.25%, and students stated that they had difficulty with applying the 4Cs aspects (Critical Thinking, Communication, Collaboration, and Creativity). It was concluded that the course materials should include 4Cs skills stages to boost students' knowledge of it. The table of results for number 10 was shown below.

Table 4.11: Result of Question Number 10

No.	Question	Items	F	(%)
10.	Do you have difficulties related to applying 4Cs in learning?	a. Yes, I really do	6	18.75%
		b. Yes, I do	18	56.25%
		c. No, I do not	7	21.875%
		d. No, I do not. I master it.	1	3.125%

2c. The Result of the Interview with the Teacher

The interview guidelines provided to the lecturer of Creative Arts in ELT at English Education Study Program, Universitas Negeri Medan. The six questions aimed at figuring out can be shown below.

Researcher	: What do you think of the course material in the textbook for the Creative Arts in ELT subject ?
Teacher	: I think the reading material is already good.
Researcher	: What material is used in teaching this subject?
Teacher	: I use textbook from various resources related to Arts in Teaching and current methods of teaching in this 21 st century learning.
Researcher	: What are the strengths and weakness of the reading material in the textbook?
Teacher	: I think the books are really attractive, but it didn't provide explanation of specific purposes in learning Creative Arts in ELT. For example, the related topics of Creative Arts in ELT to the current curriculum, projects designed to enhance students' 21 st Century Skills (Critical Thinking, Communication, Collaboration, and Creativity)
Researcher	: What are the activities for students in learning Creative Arts in ELT?
Teacher	: In learning this subject, usually students read the topics and do the assignment accordance with the 6 Tasks given as a standard assessment in the University.
Researcher	: Do you think the students are interested in the reading material in the textbook?
Teacher	: I think most of the students do not attractive and interest in reading various textbook, since it cannot make students practice and apply their 4Cs skills in learning.
Researcher	: Do you develop your own material? And what do you think

Teacher	<p>about the presence of Project Based Learning 4.0 in the Creative Arts in ELT materials to help students in comprehending the text and able to implement it in real life world?</p> <p>: I don't develop material. I think it's good if we use Project Based Learning 4.0 in the teaching because it can improve students' creativity.</p>
	<i>(Interview)</i>

The extract above suggested that students' need reading materials because the various textbook for this Creative Arts in ELT class did not based on Project Based Learning, especially PjBL 4.0 which can improve students' 4C skills. Supplementary textbook materials based on PjBL-4.0 assisted them in fully comprehending the materials.

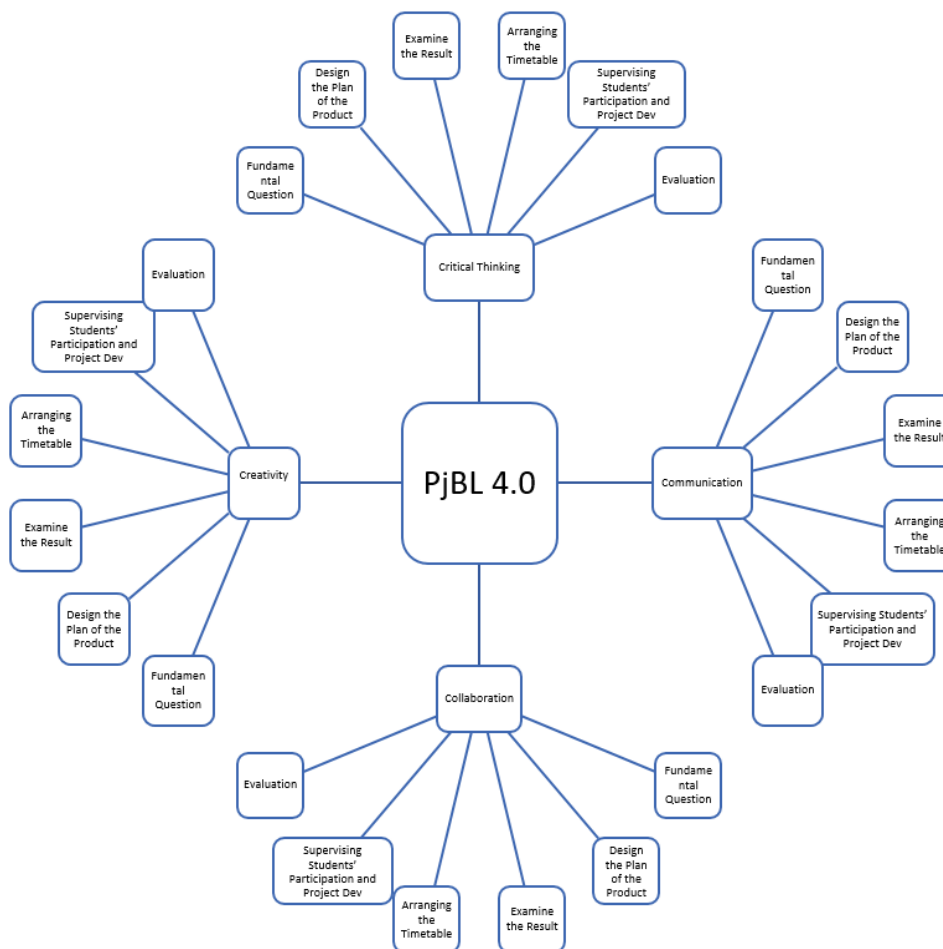
3. Developed Creative Arts in ELT Course Materials based on PjBL 4.0.

The Creative Arts in ELT course materials were developed in responding to the results of the need analysis. It developed in response to students' necessities and interests in learning, particularly applying 4Cs.

The researcher used images, diverse colours, beautiful fonts, and fascinating content to make the teaching and learning process more enjoyable for the students. The major approach of the book was based on PjBL which aided students in interpreting the text.

These materials designed as compulsory materials to gain students' knowledge of the subject, namely the Creative Arts in ELT, and their focus dexterity in applying 4Cs in the activity of Project Based Learning. The guidebook section provided an overview of the entire materials, and the book focused specifically on Creative Arts in ELT. In the context of this text, the procedure and syntax of PjBL integrated with 4Cs (Critical thinking, Communication, Collaboration, and Creativity) are all discussed.

Figure 2: PjBL Designed with 4Cs



Then, in developing the materials, it followed the steps of Project Based Learning 4.0 (integrated with 4Cs: Critical Thinking, Communication, Collaboration, and Creativity). The stages are shown below:

3a. Fundamental Question

Syntax	Activity of Teacher	Activity of Students
Fundamental question	The teacher introduces the topic and asks how to solve the problem.	Asking key questions about what students should do about the topic / problem solution.
Critical Thinking	Present a complex and open-ended fundamental question to students. Ask them to critically analyze the question, break it down into key components, and propose potential approaches for investigation.	Analyze the fundamental question, identify its components, and develop a preliminary plan for addressing it.
Communication	Initiate a class discussion where students share their interpretations of the fundamental question and their initial thoughts. Encourage them to listen actively to their peers.	Participate in a class discussion, sharing interpretations and initial thoughts on the fundamental question while actively listening to others.
Collaboration	Form small groups and assign roles to encourage students to collaborate in breaking down the fundamental question into manageable parts for analysis.	Collaborate within their assigned groups to break down the fundamental question and discuss potential approaches for analysis.
Creativity	Inspire creativity by allowing students to choose from multiple fundamental questions or develop their own questions related to the project theme.	Select or propose creative and unique fundamental questions that intrigue.

3b. Design the Plan of the Product

Syntax	Activity of Teacher	Activity of Students
Design the plan of the product	Ensures that each student in a group selects and understands the procedure of the project/product to be generated.	Collaborate to create a plan. The division of tasks, preparation of tools, materials, media, and the resources required are all part of a problem-solving project.
Critical Thinking	Challenge students to think critically about the project's scope and goals. Have them outline a research plan with specific milestones and criteria for success.	Create a detailed project plan, identifying research objectives, methodologies, and success criteria.
Communication	Instruct students to collaborate within their project teams to outline the research plan, ensuring clear and effective communication among team members.	Collaborate with team members to create a comprehensive project plan, promoting clear and effective communication.
Collaboration	Emphasize teamwork and division of tasks, ensuring that students collaborate effectively in creating a comprehensive project plan.	Collaborate with team members to create a detailed project plan, assigning responsibilities and working together.
Creativity	Encourage students to think creatively about how they will conduct research and present their findings, allowing for innovative approaches.	Explore creative ways to conduct research and present findings, such as through multimedia, infographics, or interactive displays.

3c. On Schedule

Syntax	Activity of Teacher	Activity of Students
Arrange the timetable	Teacher and students reckon on a timetable for project creation (stages and collection).	Students create a project submission timeline, paying close attention to the deadlines that have been agreed.
Critical Thinking	Encourage students to critically assess the feasibility of their project timeline. Have them consider potential roadblocks and adjust their schedules accordingly.	Review and adjust the project timeline to ensure it is realistic and accounts for potential challenges.
Communication	Facilitate team meetings where students discuss and update the project timeline. Emphasize the importance of effective communication within the team.	Engage in effective communication during team meetings to review and update the project timeline.
Collaboration	Encourage students to work together when adjusting the project timeline, making collective decisions to ensure a realistic and feasible schedule.	Collaborate as a team to review and adjust the project timeline, considering the collective input.
Creativity	Inspire creativity by encouraging students to propose unconventional project timelines that incorporate time for brainstorming and experimentation.	Suggest creative project timelines that allow for brainstorming and experimentation within the schedule.

3d. Supervising

Syntax	Activity of Teacher	Activity of Students
Supervise students' participants and project development	The teacher supervises students' activity while implementing the project, supervises the realization development, and guides students if they encounter difficulties.	Students establish a suitable project timeline, record each phase, and discuss any issues that occur during completion of the project with the teacher.
Critical Thinking	Facilitate group discussions where students evaluate their team's progress, addressing any issues or obstacles to project development.	Collaborate with team members to evaluate project progress, identifying and addressing any challenges.
Communication	Encourage students to hold regular progress meetings, where they communicate their individual contributions, challenges, and project development status.	Actively communicate with team members during progress meetings, sharing individual contributions and addressing project development challenges.
Collaboration	Promote regular team meetings where students work together to monitor progress and address challenges collaboratively.	Collaborate in team meetings to track progress and collectively address any challenges in project development.
Creativity	Challenge students to think creatively when solving project-related challenges, allowing for diverse and innovative solutions.	Embrace creativity when addressing project challenges, proposing unique and innovative solutions as a team.

3e. Examine the Result

Syntax	Activity of Teacher	Activity of Students
Examine the result	Teacher discusses project prototypes, monitor student involvement, measure achievement of standards.	Discuss the feasibility of projects that have been made and make product/work reports to be presented to others.
Critical Thinking	Ask students to critically assess the quality and validity of their project findings. Encourage them to identify any gaps or areas that require further exploration.	Conduct a critical examination of the project's findings, identifying strengths and weaknesses in the results.
Communication	Arrange peer review sessions where students communicate their feedback on each other's project findings and provide constructive criticism.	Participate in peer review sessions, offering constructive feedback on project findings and communicating effectively.
Collaboration	Facilitate group discussions where students collaborate to evaluate the project's findings and collectively identify areas for improvement.	Collaborate with team members to assess project findings and identify collective areas for improvement.
Creativity	Inspire creative thinking during the examination of project findings, allowing students to present results in unique and engaging ways.	Present project findings in creative and engaging ways that highlight their unique perspectives and creativity.

3f. Evaluation

Syntax	Activity of Teacher	Activity of Students
Evaluation	The teacher guides the project presentation process, responds to the results. Then, the teacher and students reflect/conclude the learning outcomes.	Each student presents a report, other students provide feedback, and together with the teacher concludes the results of the project.
Critical Thinking	Challenge students to critically reflect on the overall project experience. Ask them to evaluate the project's success and identify areas for improvement.	Reflect critically on the project experience, considering what went well, what could have been done differently, and what was learned.
Communication	Organize a class presentation session where students communicate their project outcomes and reflect on the project experience. Encourage constructive feedback from peers.	Deliver a clear and effective presentation on project outcomes, communicate reflections, and actively engage with peer feedback.
Collaboration	Encourage students to work together to reflect on the project experience, collaboratively evaluating the overall success and areas for improvement.	Collaborate with team members in reflecting on the project experience, considering collective feedback on what went well and what could be improved.
Creativity	Encourage creative reflection by allowing students to express their project experiences in innovative and artistic formats, such as visual or written expressions.	Reflect on the project experience creatively, expressing their thoughts and experiences through artistic or innovative means, if desired.

4. Validating by Experts

Following design, materials formed the initial draft. Based on the experts' judgment, the materials achieved the qualification of good materials. The experts supplied the judgment by filling in the questionnaire which employed by the five scale of Likert Scale. It was very good (5), good (4), fair (3), poor (2), and very poor (1). Additionally, calculation findings were converted into feasibility criteria suggested by Sugiyono (2012). The product declared viable if the result was more than 60%. The criteria shown as follow:

Table 4.12: The Score of Each Scale

Scale Range	Category
81% - 100%	Very Good
61% - 80%	Good
41% - 60%	Fair
21% - 40%	Poor
≤20%	Very Poor

In the experts' judgment process, four aspects were assessed. It aimed to assess the quality of the developed materials. The appropriateness of the content, the appropriateness of the language, the appropriateness of the presentation, and the appropriateness of the layout were those characteristics. These are the findings of the questionnaire analysis for experts' judgment of course material for Creative Arts in ELT.

4a. The Appropriateness of the Content

The appropriateness of the content of the developed materials was the first aspect to be evaluated. The analysis result of the appropriateness of the content is shown in the table below.

Table 4.13: The Appropriateness of the Content

No.	Item Assessed	Score		(%)	Criteria
		Expert 1	Expert 2		
1.	Do you have difficulties related to applying 4Cs in learning?	5	5	100	Very good
2.	The developed materials involve Incorporation of Critical Thinking	4	5	90	Very good
3.	The developed materials involve Communication Opportunities	5	5	100	Very good
4.	The developed materials involve the Collaborative Activities	5	5	100	Very good
5.	The developed materials involve Creativity Enhancement	4	5	90	Very good
6.	The developed materials involve Assessment of the 4Cs	4	5	90	Very good
7.	The developed materials involve Feedback Mechanisms	4	5	90	Very good
	Total	31	35	660	
	Score	4.4	5	94.2	

The value of the appropriateness of the content of unit 1-7 is 94.2. The value is in the range of 81% - 100%. that categorized as "very good".

4b. The Appropriateness of the Language

The second aspect that evaluated was the appropriateness of the language. The analysis result of the language's appropriateness is shown in the table below.

Table 4.14: The Appropriateness of the Language

No.	Item Assessed	Score		(%)	Criteria
		Expert 1	Expert 2		
8.	The language used in the developed creative arts in ELT materials is applied step by step 4Cs correctly	5	5	100	Very good
9.	The language of the instructions and explanation in the developed materials is in accordance with the needs of students	4	5	90	Very good
10.	The language used in the developed materials can be easily understood by the students	5	5	90	Very good
11.	The language used in the developed materials involve the activity both teacher and students	5	5	100	Very good
12.	The developed materials consistently used one variations of English	5	5	100	Very good

13. The developed materials are presented systematically	5	5	100	Very good
Total	29	29	580	
Score	4.4	5	94.2	Very good

The value of the appropriateness of the language of unit 8-13 is 96.6.

The value is in the range of 81% - 100% that categorized as "very good".

4c. The Appropriateness of the Presentation

The following table presented the analysis result of appropriateness of the presentation of unit 14-19.

Table 4.15: The Appropriateness of the Presentation

No.	Item Assessed	Score		(%)	Criteria
		Expert 1	Expert 2		
14.	The created materials adhere to the sequential process outlined in the step-by-step approach	4	5	90	Very good
15.	The materials created maintain an equal balance in their presentation of text, activities, and pictures.	4	5	90	Very good
16.	The created materials include assignments that promote students' abilities in both verbal and written communication.	4	5	90	Very good
17.	Each unit's developed materials include clearly defined learning objectives.	5	5	100	Very good
18.	Each text and image in the created materials is required to specify its sources or references.	5	5	100	Very good
19.	The developed materials are printed on paper of standardized ISO sizes, such as A4, A5, and B5.	5	5	100	Very good
	Total	27	30	570	
	Score	4.5	5	95	Very good

The value of the appropriateness of the presentation of unit 14-19 is 95. The value is in the range of 81% - 100% that categorized as "very good".

4d. The Appropriateness of the Layout

The following table showed the analysis result of the appropriateness of the layout of unit 20-23.

Table 4.16: The Appropriateness of the Layout

No.	Item Assessed	Score		(%)	Criteria
		Expert 1	Expert 2		
20.	The created materials adhere to the sequential process outlined in the step-by-step approach	4	5	90	Very good

21. The materials created maintain an equal balance in their presentation of text, activities, and pictures.	5	5	100	Very good
22. The created materials include assignments that promote students' abilities in both verbal and written communication.	5	5	100	Very good
23. Each unit's developed materials include clearly defined learning objectives.	4	5	90	Very good
Total	18	20	380	
Score	4.5	5	95	Very good

The value of the appropriateness of the layout of unit 20-23 is 95. The value is in the range of 81% - 100% that categorized as "very good".

Table 4.17: Total Score of Validation

No.	Aspects	Expert		(%)	Criteria
		I	II		
1.	Content	4.4	5	94.2	Very good
2.	Language	4.8	4.8	96.6	Very good
3.	Presentation	4.5	5	95	Very good
4.	Layout	4.5	5	95	Very good
	Total Score	18.2	19.8	380.8	
	Score	4.55	4.95	95.2	Very good

The average score from the experts was 95.2%, and it was categorized as "Very Good". Thus, the developed Creative Arts in ELT course materials on Project Based Learning 4.0 is valid and appropriate to be used as the teaching material for students in this class.

5. Revising the Materials

The experts gave many ideas and recommendations on revising specific components of reading materials to enhance the quality of the Creative Arts in ELT course materials. Generally, the experts stated that the materials are less in accordance with the steps of PjBL, less related to each other, less encourage the students to communicate in oral/written, and advised to pay attention in the consistency of the colour in the reference. The following was a complete revision.

The first expert stated that the materials are less in accordance with the steps of PjBL, particularly PjBL 4.0 less related to each other, less encourage the students to communicate in oral/written. She stated that the explanation of


each topic must put in the syntax of PjBL, not separated like the initial draft. Moreover, she suggested to add the vocabulary task based on HOTS, not just match the words. While the second expert suggested to pay attention on the colour of the font in the references of the text.

6. Final Product

The final product of the developed reading materials of Creative Arts in ELT was created based on Project Based Learning. The developed reading materials has been designed to satisfy the demands of the students and was suitable to use as teaching materials. The final product was produced to respond the experts' ideas and comments on the first edition of the materials. The product represents the culmination of this iterative process. It is thoughtfully designed to cater to the students' unique needs, enrich their learning experience, support the development of their 4Cs, and align seamlessly with the principles of Project-Based Learning. This development process reflects a meticulous and data-driven approach, ultimately aimed at creating teaching materials that not only fulfill students' specific requirements but also invigorate their learning journey while nurturing crucial 21st-century skills.

Figure 3: Product of PjBL 4.0

CHAPTER 1
MULTIMEDIA PROJECT



Time Allocation: 2 meetings
Learning Outcome: The students are able to apply multimedia and design it in teaching instruments
Sub Learning Outcome:

1. The students are able to identify elements of multimedia and media Apps
2. The students are able to design multimedia in teaching instruments as media

1. Guiding Questions
Have you ever known and apply some application in designing media in order to create better teaching instrument? Which element and application do you apply? Below are elements and application in media design. Read the following explanation to increase your knowledge of it!

2. Designing the Plan of Project
In this step, the lecturer divides the students into groups. Then, the students prepare their pen and a piece of paper. After that, the students are going to make a plan for their project. The project is to list apps reviews. The students must write the apps in multimedia. Below is the example of the project.

Date	Summary	Comments

3. Scheduling the Activity
In this step, the lecturer discusses the time of collecting the project with all students. Moreover, the students must complete all activities of the materials.

Meeting 1

- The students learn the explanation of elements in multimedia and apps
- The students watch the presented link to get more information about reading strategies
- The students answers the drill 1, and drill 2 to build up their knowledge
- The students do their project in groups

Meeting 2

- The students present their project/product in front of the classroom
- The teacher assesses the students' presentation
- The teacher and the students conclude/reflect the learning outcomes

4. Supervising the Process of Completing the Project
In this step, the lecturer asks the students about their project/product. The lecturer takes a note and students revise their product if she/he found a mistake of the students' product. Moreover, the lecturer can help the students if they find difficulties during the process of making the project.

5. Examining the Project
In this step, the lecturer discusses project prototypes, monitor students' involvement, and measure achievement of standards. Meanwhile, the students discuss the feasibility of projects that have been made and make product/work reports to be presented to others.

6. Evaluating the Project
In this step, the lecturer guides the project presentation process, responds to the results. Meanwhile, the students present a report/project and other students provide feedback. After that, the lecturer and students reflect/conclude the learning outcomes.

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Discussion

This research aimed to develop Creative Arts in ELT course materials based on PjBL 4.0 or 4Cs-integrated based on the needs of students of 5th semester of English Education Study Program. This research was conducted by Research and Development (R&D) using the six stages outlined by Borg and Gall (2003): 1) gathering information and data, 2) analysing the data, 3) designing the product, 4) validating the product, 5) revising the product, and 6) Final Product.

The first stage of this research was gathering information and data. The data were collected by observing the curriculum and existing materials, distributing questionnaires to the students, and interviewing the lecturer. The questionnaire was conceptualized by Hutchinson and Waters (1987) and Nunan (2004). The needs analysis conducted by distributing students' questionnaires covering both Target and Learning requirements. The development of teaching materials for the Creative Arts in the English Language Teaching (ELT) course, incorporating Project-Based Learning (PBL) integrated with the 4Cs (Critical Thinking, Communication, Collaboration, Creativity), followed a rigorous six-phase process. The data was systematically collected through observations, questionnaires, and interviews with both students and the course lecturer. These efforts uncovered that adopting teaching materials rooted in PBL and the 4Cs not only positively impacted student's motivation but also improved their overall academic performance. In contrast, the lecturer had been utilizing conventional printed textbooks from various sources that failed to align with the dynamic preferences and needs of the students.

According to Hutchinson and Waters (1987), the target needs are the tasks the learner must perform in the target situation. The target need has three components: necessities, wants and lacks. Students are required to have the ability to use appropriate structure, organization, and word choice when creating the project. The students desired to improve their skills using the available resources. Amongst other difficulties, the students struggled with grammar usage and expressing their opinions.

The second step involved data analysis. The data analysed was the result of observation, a questionnaire on the need analysis of students, and an interview with an English teacher. This phase aimed to modify information regarding students' identities, needs, problems, and learning interests, especially their skills that's required in 21st century. The analysis results served as a guide for the researcher as researcher

developed materials based on the interests and requirements of the students. This phase delved deeper into student preferences and needs. This thorough analysis included administering questionnaire and conducting interviews with the 5th-semester students. The findings highlighted the students' genuine interest in the Creative Arts in ELT class, deeming it not only interesting but also fascinating. Furthermore, the students expressed a strong inclination towards developing the 4Cs, acknowledging their significance for their education and English language proficiency. The students also revealed their preference for engaging in collaborative and creative PjBL activities. They recognized that PjBL offered a valuable platform for enhancing their critical thinking, communication, collaboration, and creative skills.

The following stages were designing the materials for teaching-learning. Researcher used the syllabus, lesson plan, and existing material in designing materials. Materials developed based on students' needs based on the essential competencies. The teaching materials were thoughtfully crafted in direct response to the students' needs and feedback from the need analysis. The materials were meticulously designed to be in alignment with the students' specific requirements, with a particular focus on bolstering their 4Cs competencies. Visual elements, including images, colors, and fonts, were strategically employed to create a stimulating and enjoyable learning environment for the students. The primary pedagogical approach embedded in these materials was PjB, recognized for its efficacy in helping students effectively comprehend and apply the subject matter.

Experts validated is the next stage. Experts reviewed the materials by filling the questionnaires. The questionnaires covered four aspects of material evaluation: evaluate the appropriateness of the content, language, presentation, and layout. The final score of four aspects of developed materials were 95.2%. The score indicates that the developed materials entitled "*Developing Creative Arts in ELT course materials based on Project Based Learning 4.0* was considered as "Very Good". Overall the experts advised closer alignment with the steps of PjBL, ensuring better continuity among topics and fostering improved oral and written communication among students. Additionally, experts recommended the inclusion of higher-order thinking skills (HOTS) vocabulary tasks, enhancing the materials' overall quality.

The findings of this study can help teachers and researchers develop ideas about reverse classroom practice in education. A ubiquitous project-based English learning system according to Ning (2017), PjBL enhanced students' learning processes by encouraging their creativity in the classroom. The students were tasked with working on a project that would help them develop higher-order thinking skills. For example, in the assignment of creating a family profile, students were urged to be as creative as possible while not losing sight of the basic value of a profile itself. Lubis & Asnarni (2020) found that Project-based Learning integrated with digital media; YouTube and Telegram significantly affect EFL students' critical thinking based on three indicators namely; analyzing, synthesis, and application. The project-based method in EFL, according to Artini & Made (2018), was found to promote active learning by enhancing student interest, motivation, participation, and excitement for learning. The strategy positively promoted collaboration and social contact. It promoted competent language use, higher-order thinking skills—particularly creative thinking—development, and collaborative learning. These results are in line with the objectives of Indonesia's new EFL school curriculum, which places a strong emphasis on student engagement. Other discoveries put forward by Andriyani & Anam (2022) adduced that more than 70% of learners perceived project-based learning in EFL classrooms. The results indicated that using

Conclusion and Suggestion

Project-based learning (PjBL) is a learning model that makes students the subject or center of learning, emphasizing the learning process. Project-based learning has proven to be very helpful for teachers and students in learning activities as described in the discussion above. The data reveals that in 2022, there was a sharp increase in the number of articles about project-based English learning for young learners after experiencing ups and downs. And one of the factors contributing to the rise in studies may be the perceived advantages associated with utilizing this approach. Besides the advantages of using Project-based learning as a learning tool, it still has some disadvantages which need to be concerned. Project-based learning has challenges in implementation because there are several things such as; students struggling in managing the time to do the project, some members not cooperative in doing the project, and the teacher struggling in grading the students' participation fairly and making students bored. The result of this study based on the

articles reviewed, critical thinking, writing skills, and communication skill are most commonly discussed. The lowest language skill is grammar. However, studies on these language skills are still fairly rare in the literature. Future studies may provide greater insight into the effective use of project-based learning methods for learners by reporting improvements in language proficiency.

PjBL positively impacts EFL learners, improving learners' motivation, communication, collaboration, and problem-solving skills. Based on the statistical result of this research, it concluded that there is a strong correlation between PjBL and collaborative skills for EFL learners at university. According to Ngadiso & Sarosa (2021), the student's achievement, particularly in reasoning and creativity, improved after PjBL was implemented. It came about as a result of using such talents in PjBL implementation. There, the students worked on projects, shared them with their groups, and exchanged ideas. Through project creation and design, they exercised their creativity. In explaining their projects, the students also got a chance to develop their deductive reasoning. Each group presented their respective initiatives, to which the other groups provided questions in response. These outcomes demonstrate how effectively PjBL was used in EFL lessons. It was established that PjBL improved classroom settings and strengthened students' skills in ways that traditional teaching methods could not. In correlation with specific language skills, several things were found regarding the implementation of project-based learning. As stated by Sari & Yuyun (2001), students at the tertiary level of English as a Foreign Language (EFL) are expected to be able to write effectively for many academic purposes, such as creating an essay, article, or even writing a research report. As such, they must be independent enough to practice to improve their writing skill. Writing is a skill that can only be developed through practice. Peer editing can also turn into a way for students to help one another write better before they ask their professors for advice. They are free to employ any method, including PjBL or any other method they believe will improve their writing. Furthermore, Artini & Made (2018) argued that the implementation of project-based learning activities improved students' communication skills in English as a foreign language, particularly in productive skills of speaking (i.e., in monologue and dialogue), and also in writing. Therefore, PjBL does not only affect students' learning positively but also affects teachers' teaching quality. There seems a strong cause-and-effect relationship between PjBL and

student learning: active and participative students affect teachers' motivation and satisfaction, and vice versa. (Artini & Made: 2018)

Suggestions for future researchers might research to find solutions regarding the challenges of implementing Project-based English Learning 4.0.

References

- Abaunza, G., & Rodríguez-Conde, M. J. (2016). Bibliographic Review on web applications used to learn a foreign language. Dalam Garcia-Penalvo F.J. (Ed.), *ACM Int. Conf. Proc. Ser.* (Vol. 02-04-November-2016, hlm. 229–234). Association for Computing Machinery; Scopus. <https://doi.org/10.1145/3012430.3012522>
- Al-Ayyoub, M. (2018). Using deep learning for automatically determining correct application of basic quranic recitation rules. *International Arab Journal of Information Technology*, 15(3), 620–625.
- Alshahrani, A. F. M. (2022). Psychological and educational learning strategies and models during the COVID-19 pandemic: A comparative bibliometric analysis. *Frontiers in Psychology*, 13, 1029812. <https://doi.org/10.3389/fpsyg.2022.1029812>
- Alvionita, K. V., Widyaningrum, L., & Prayogo, A. (2022). EFL Learners' Reflection on Digitally Mediated Multimodal Project-Based Learning: Multimodal Enactment in a Listening- Speaking Class. *Language Circle: Journal of Language and Literature*, 17(1), 87-97. <https://doi.org/10.15294/lc.v17i1.36466>
- Andriyani, S., & Anam, S. (2022). Exploring the Relationship between Project-Based Learning and Collaborative Skills: EFL Learners' Voices. *Al-Lisan: Jurnal Bahasa (e-Journal)*, 7(1), 51-63. <https://doi.org/10.30603/al.v7i1.2413>
- Artini, L. P., Ratminingsih, N. M., & Padmadewi, N. N. (2018). Project-based learning in EFL classes: Material development and impact of implementation. *Dutch Journal of Applied Linguistics*, 7(1), 26-44. <https://doi.org/10.1075/dujal.17014.art>
- Atikah, D., Syukri, S., Marhalisa, M., Halim, A., & Abidin, A. (2022). Perceptions of the Use of Project Based-Learning in the EFL Context. *KnE Social Sciences*, 180-189. <https://doi.org/10.18502/kss.v7i8.10736>
- Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist*, 26(3-4), 369-398. <https://doi.org/10.1080/00461520.1991.9653139>
- Borg, W. R., Gall, M. D. & Gall, J. P. 2003. *Educational Research: An Introduction* (7nd ed.). New York: Allyn and Bacon.
- Buck Institute for Education. (n.d.). What is project-based learning? Retrieved from https://www.bie.org/about/what_pbl.
- Chai, C. S., & Wong, L. H. (2010). Project-based learning in an English as a foreign language context: A case study of a primary school in Singapore. *Educational Research for Policy and Practice*, 9(2), 121-133.

- Dana-Picard, T., & Hershkovitz, S. (2020). STEAM Education: Technological Skills, Students' Cultural Background and Covid-19 Crisis. *Open Education Studies*, 2(1), 171–179
- Eaton, S. E. (2010). *Global Trends in Language Learning in the 21st Century*. Onate Press
- Erdoğan, V. (2019). *Integrating 4 C Skills of 21st Century into 4 Language Skills in EFL Classes*. 7(11), 12
- Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance improvement quarterly*, 26(2), 43-71. <https://doi.org/10.1002/piq.21143>
- Ferra Dian, A. (2020). The Implementation of Project-based Learning Method in Teaching ESP (English for Specific Purposes): Case Study. *Scope of English Language Teaching, Linguistics, and Literature*, 5(1), 77-84.
- Firdausah, A., & Sari, D. M. M. (2020). Project based learning on EFL student's in essay writing. *Jurnal Ilmiah Wahana Pendidikan*, 6(4), 841-848. <https://doi.org/10.5281/zenodo.4305483>
- Gao, X., & Zhao, Y. (2013). A review of project-based learning in foreign language education. *Theory and Practice in Language Studies*, 3(3), 522-529.
- Grossman, P. L., Wilson, S. M., & Shulman, L. S. (2005). Teachers of Substance: Subject Matter Knowledge for Teaching. *Profesorado, Revista de Currículum y Formación del Profesorado*, 9(2), 1–25. <https://revistaseug.ugr.es/index.php/profesorado/article/view/19746>
- Gülbahar, Y., & Tinmaz, H. (2006). Implementing Project-Based Learning And E-Portfolio Assessment In an Undergraduate Course. *Journal of Research on Technology in Education*, 38(3), 309-327. <https://doi.org/10.1080/15391523.2006.10782462>
- Haniah, A. U., Ngadiso, N., & Setyaningsih, E. (2021). Students' Perception on the Implementation of Online Project-Based Learning in Teaching 4Cs. *IJELTAL (Indonesian Journal of English Language Teaching and Applied Linguistics)*, 6(1), 123-140. <http://dx.doi.org/10.21093/ijeltal.v6i1.895>
- Keane, T., Keane, W. F., & Blicblau, A. S. (2016). Beyond traditional literacy: Learning and transformative practices using ICT. *Education and Information Technologies*, 21(4), 769–781. <https://doi.org/10.1007/s10639-014-9353-5>
- Kolk, M. (2022). *Create a 21st Century Classroom: Combining the 3 R's and the 4 C's*. Tech4Learning, Inc. <https://creativeeducator.tech4learning.com/2016/articles/create-a-21st-century-classroom>
- Krajcik, J., Blumenfeld, P. C., Marx, R. W., Bass, K. M., Fredricks, J., & Soloway, E. (1998). Inquiry in Project-Based Science Classrooms: Initial Attempts by Middle School Students. *Journal of the Learning Sciences*, 7(3-4), 313-350. <https://doi.org/10.1080/10508406.1998.9672057>
- Lisminingsih. (2010). Pembelajaran Berbasis Proyek: Alternatif Model Pendidikan Lingkungan Hidup untuk Meningkatkan Kecakapan Hidup. *Jurnal*

Paradigma Tahun XV, Nomor 30, Juli – Desember 2010. IKIP Budi Utomo Malang.

- Moshtagh, M., Mirlashari, J., & Amiri, R. (2021). Global collaboration and social practices to mitigate impacts of COVID-19 in the world: A lived experience of infecting. *Qualitative Social Work*, 20(1– 2), 366–374. <https://doi.org/10.1177/1473325020981088>
- Ngadiso, N., Sarosa, T., Asrori, M., Drajadi, N. A., & Handayani, A. (2021). Project-based Learning (PBL) in EFL learning: Lesson from Indonesia. *AL-ISHLAH: Jurnal Pendidikan*, 13(2), 1114-1122. <https://doi.org/10.35445/alishlah.v13i2.558>
- Pardede, P. (2020). Integrating the 4Cs into EFL Integrated Skills Learning. *Journal of English Teaching*, 6(1), 71–85
- Pollard, V. (2012). Creativity and Education: Teaching the Unfamiliar. *Australian Association for Research in Education (NJ1)*
- Puspitasari, E. (2020). Project-based Learning Implementation to Cultivate Preservice English Teachers' 21st Century Skills. *Indonesian Journal of English Language Teaching and Applied Linguistics*, 5(1), 191. <http://dx.doi.org/10.21093/ijeltal.v5i1.638>
- Putri, N. L. P. N. S., Artini, L. P., & Nitiasih, P. K. (2017). Project-based learning activities and EFL students' productive skills in English. *Journal of Language Teaching and Research*, 8(6), 1147-1155. <http://dx.doi.org/10.17507/jltr.0806.16>
- Sari, F., Hendrety, Y., & Tridinanti, G. (2021). UTILIZING PROJECT BASED LEARNING TO IMPROVE WRITING SKILL AND READING COMPREHENSION ACHIEVEMENT OF THEEFL STUDENTS. *EnglishCommunity Journal*, 5(2),7382.<https://doi.org/10.32502/ecj.v5i2.3478>
- Smith, G. J. (2005). How should creativity be defined? *Creativity Research Journal*, 17(2–3), 293–29.
- Thomas, J. W. (2000). A review of research on project-based learning. San Rafael, CA: Autodesk Foundation. Construction of A Creative Instructional Design Model Using Blended, Project-Based Learning for College Students. *Creative Education*, Vol.3 No.7, November 28, 2012
- Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. John Wiley & Sons
- Turgut, H. (2008). Prospective Science Teachers' Conceptualizations about Project Based Learning. *Online Submission*, 1(1), 61-79.
- van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in Human Behavior*, 72, 577–588. <https://doi.org/10.1016/j.chb.2017.03.010>
- Wuryantari Winasih, W., Cahyono, B., & Ananto Prayogo, J. (2019). Effect of project-based learning using E-poster on Indonesian EFL students' speaking ability across personality types. *Arab World English Journal (AWEJ) Volume*, 10. <https://dx.doi.org/10.24093/awej/vol10no1.7>