

## **Using a Blended Learning Program in Teaching Writing to Enhance Faculty of Education English...**

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### **Using a Blended Learning Program in Teaching Writing to Enhance Faculty of Education English Majors' Use of 21<sup>st</sup> century Skills**

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#### **Abstract**

The purpose of this study was to investigate the effect of a blended learning program in teaching writing to enhance Faculty of Education English Majors' Use of 21<sup>st</sup> Century Skills (critical thinking, creative thinking, communication, and collaboration). The study employed the quasi – experimental design. The participants were 60 English majors Faculty of Education Minia University (30 for each group). Two instruments were prepared by the researcher and used to collect data for the study. These instruments are a 21<sup>st</sup> century skills test, and an observation checklist for 21<sup>st</sup> century skills. The 21<sup>st</sup> century skills test and the observation checklists for 21<sup>st</sup> century skills were pre administered to the study group. Then, the study group was trained through the blended learning program to enhance 21<sup>st</sup> century skills .The measurement instruments of the study were post administered to the study group. Findings of the study revealed that the blended learning program proved to be effective in enhancing the 21<sup>st</sup> century skills for the study group.

**Key words:** Blended learning, 21<sup>st</sup> century skills.

## استخدام برنامج التعلم المدمج في تدريس الكتابة لتحسين مهارات القرن الحادي والعشرين لدى طلاب كلية التربية تخصص اللغة الإنجليزية

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### المستخلص

هدفت هذه الدراسة إلى التحقق من فاعلية برنامج التعلم المدمج في تعليم الكتابة لتحسين استخدام طلاب كلية التربية قسم اللغة الإنجليزية لمهارات القرن الحادي والعشرين (التفكير النقدي، والتفكير الإبداعي، والتواصل، والتعاون). استخدمت الدراسة تصميم البحث شبه التجريبي. تم اختيار ٦٠ طالباً من طلاب كلية التربية قسم اللغة الإنجليزية بجامعة المنيا كمشاركين في الدراسة (٣٠ لكل مجموعة). تضمنت أدوات الدراسة اختبار القرن الحادي والعشرين قبل وبعد البرنامج، وبطاقة ملاحظه لمهارات القرن الحادي والعشرين. تم تطبيق اختبار القرن الحادي والعشرين وبطاقة ملاحظه لمهارات القرن الحادي والعشرين على مجموعة الدراسة. ثم تم تدريب مجموعة الدراسة من خلال برنامج التعلم المدمج لتحسين مهارات القرن الحادي والعشرين. ثم طبقت أدوات الدراسة بعدياً على مجموعة الدراسة. أظهرت نتائج الدراسة أن برنامج التعلم المدمج كان فعالاً في تحسين مهارات القرن الحادي والعشرين لمجموعة الدراسة.

الكلمات المفتاحية: التعلم المدمج - مهارات القرن الحادي والعشرين

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### Introduction

The 21st century is characterized by the information and technology revolution, leading to various sources of information and technological advancements. This revolution has significantly impacted the education system, transforming the way education is delivered compared to previous decades (Sandra, 2020). As a result, education systems must equip students with essential 21st century skills to prepare them for modern global life aspects shaped by these changes (Afandi et al., 2019).

Pardede (2020) has categorized the essential 21st century skills into three groups: Learning and Innovation Skills: This group focuses on skills such as collaboration, communication, creative thinking, and critical thinking. Literacy Skills: Students are required to be proficient in dealing with both information and technology. Life Skills: This group encompasses personal and professional skills necessary for everyday life. Among the learning and innovation skills, four Cs have been identified as critical: critical thinking, creative thinking, collaboration, and communication (Rusdin & Ali, 2019). These skills, known as the four Cs, are considered crucial for students in the 21st century (P21, 2015). It is important for educational institutions to incorporate instructional methods that enhance and develop these critical skills (Osman, 2016).

In recent times, the concept of blended learning has undergone a transformation. It has evolved from a basic combination of traditional classroom training and online e-learning courses to encompass more sophisticated programs that integrate a wide range of synchronous modes like text chat or audio, as well as asynchronous learning modalities such as email, forums, blogs, or wikis. This diverse array of technologies and methods aims to empower teachers in achieving a deeper understanding of various subjects, foster self-sufficiency, and enhance their overall teaching capabilities (Woodall, 2012).

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The importance of instructing teachers in the application of 4 Cs of the 21st-century skills within educational institutions cannot be overstated. It is crucial for teachers to be qualified in providing students with a comprehensive education that prepares them for the challenges they will face in the future. Therefore, the current study focuses on assessing the effectiveness of a blended learning program in enhancing English majors' use of these essential skills.

Blended learning is an effective instructional approach that combines traditional classroom methods with online resources, thereby enhancing the learning process (Hmelo-Silver, 2004). This method has transformed student learning by directing their attention towards real-life challenges and issues, offering them avenues to engage in questioning, critical thinking, collaboration, and self-reflection. Moreover, it enables students to apply acquired knowledge, address problems, and cultivate flexibility and adaptability, ultimately honing the 4 Cs skills: Communication, Collaboration, Critical Thinking, and Creativity (Hmelo-Silver, 2004).

The following section discusses the main variables of the study represented in collaboration, communication and blended learning.

According to P21 (2015), the 4Cs skills encompass critical thinking, creative thinking, communication, and collaboration, and are crucial in preparing students for life and work in the 21st century. These skills should not be confined to a single subject, but integrated across all disciplines (Van Roekel and Association, 2014). Cohen (2019) emphasizes that the 4Cs are fundamental to modern learning and applicable at all educational levels. Larson and Miller (2011) suggest these skills should be interwoven into various subjects, recognizing their increasing importance in addressing contemporary demands for information analysis, decision-making, and innovation.

Furthermore, Erdoğan (2019) highlights recent TEFL research indicating the significance of nurturing critical and creative thinking alongside language proficiency. Fandiño Parra (2013) advocates for

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incorporating complex interpretation, judgment, decision-making, and collaborative skills into EFL education, alongside the traditional four language skills. They suggest that engaging students in activities such as debates, discussions, problem-solving, and creative projects like movies and plays enhances their communication, creativity, critical thinking, and collaboration skills.

### **Critical Thinking**

Critical thinking is a multifaceted mental process that encompasses various cognitive functions, as discussed by different scholars and educators (Halvorsen, 2005). These definitions vary in complexity, ranging from basic to advanced perspectives. Kivunja (2015) defines critical thinking as an individual's capacity to employ cognitive processing skills such as application, analysis, and evaluation. Similarly, the Californian National Council for Excellence characterizes it as a cognitive skill encompassing knowledge, comprehension, application, analysis, synthesis, and evaluation (NCECT, 2014). Sydney (2014) simplifies critical thinking as purposeful thinking. Regardless of these diverse definitions, there is a consensus among educators and scholars that critical thinking is a metacognitive process (Saleh, 2019).

### **Creative Thinking**

Creative thinking is recognized as one of the essential 21st-century skills, alongside critical thinking, collaboration, and communication (Gursoy & Bag, 2018). This skill is crucial for students as it involves the construction of knowledge, problem-solving, and adapting to the constant changes in the global world. Educational discourse among educators, scholars, and researchers has focused on creative thinking for many years, given its significance (Kaufman & Sternberg, 2006).

According to P21 (2015), students must enhance their creative thinking during their high school years to meet the demands of 21st-

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century workplaces. Likewise, Gardner (2008) asserts that creative thinking is as fundamental for learners as reading and writing, enabling them to develop their minds and find solutions to complex problems.

### **Communication**

Communication stands as one of the pivotal Twenty-First Century skills within the 4 Cs framework, encompassing the mutual exchange of meaning in diverse contexts (Rodríguez Cervantes & Roux Rodríguez, 2012). Language serves as a means of communication, enabling the sharing of thoughts and ideas (Pardede, 2020). P21 (2015) defines communication as the proficient expression across various forms—oral, written, and non-verbal—intended to inform, instruct, and persuade, while the ultimate objective of English language teaching is to empower students to effectively convey their thoughts in English.

Assessing communication skills poses challenges, as it is subjective and can result in perceived inequalities (Hussainy et al., 2012). Objective tools like observation checklists or rubrics are recommended for a fairer assessment process.

### **Collaboration**

Collaboration has gained substantial attention from scholars and educators over the past decade (Caine, 2011; Wagner, 2008), emerging as a pivotal Twenty-First Century skill and a fundamental component of the four Cs skills framework (Association, 2012). P21 (2015) defines collaboration as the adeptness to work productively with diverse teams, showcasing adaptability, negotiation, and compromise for shared objectives. It involves shared responsibility, respect for contributions, and active engagement in joint tasks (Webb & Mastergeorge, 2003).

Employers' surveys underscore the rising importance of collaboration, especially team-based cooperation, for graduating

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students entering the job market (Associates, 2015). Assessing collaboration skills poses challenges, with tools ranging from video recordings and coding schemes to rubrics and observation checklists (Bridge, 2019; Chiu & Khoo, 2003).

Collaboration is intrinsically linked with the other 4Cs skills - critical thinking, creative thinking, and communication - operating synergistically (Pardede, 2020). A powerful instructional method for nurturing the 4Cs is project-based learning, particularly when combined with technology (Levin-Goldberg, 2012).

### **Blended learning approach**

Blended Learning serves as a catalyst for empowering students to acquire digital literacy and leverage technology effectively in their learning journeys. By integrating online resources and activities into traditional classroom settings, students gain exposure to a wide range of learning materials, collaborate with peers through virtual platforms, and develop self-directed learning capabilities.

Furthermore, the 4Cs - critical thinking, communication, collaboration, and creativity - are considered fundamental skills for students to thrive in the 21st century. These skills go beyond academic knowledge and empower students to adapt to a rapidly changing world. Critical thinking enables students to analyze information, solve problems, and make informed decisions. Communication skills, both oral and written, facilitate effective expression and understanding of ideas. Collaboration skills foster teamwork, empathy, and the ability to work harmoniously with others. Lastly, creativity encourages students to think innovatively, generate new ideas, and approach challenges from fresh perspectives. By incorporating Blended Learning and emphasizing the development of the 4Cs, educators aim to cultivate well-rounded individuals who possess not only intellectual intelligence but also social and emotional intelligence, enabling them to navigate the complexities of the modern world (Sohaib,2021).

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**According to Greenier (2020), the 10 Cs of blended learning framework consists of ten elements.**

1. **Coaching:** This stage involves receiving guidance and support from a mentor or coach to enhance writing skills. Coaches provide feedback, strategies, and assistance in grammar, structure, and overall writing improvement.
2. **Concept Generation:** The focus is on generating ideas and concepts for writing through techniques like brainstorming or mind mapping. This stage helps writers identify main ideas and establish a solid foundation for their writing.
3. **Confrontation:** Critical analysis and evaluation of ideas, arguments, or perspectives take place. Writers challenge their assumptions and biases to develop a well-informed perspective. Confrontation refines arguments and encourages considering alternative viewpoints.
4. **Comprehension:** This stage involves understanding and interpreting written texts, analyzing information, and extracting key insights. Strong comprehension skills enable writers to engage with literature, understand different perspectives, and incorporate relevant information into their writing.
5. **Creation:** Writers transform their ideas and thoughts into written form during the creation stage. This includes drafting, organizing ideas, structuring sentences and paragraphs, and refining the overall composition. Effective communication, coherence, and clarity are essential in this stage.
6. **Critique:** Writers evaluate their own writing or receive feedback from others during the critique stage. The focus is on identifying strengths and weaknesses, addressing areas that need



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improvement, and refining content, style, and structure. Critique enhances the overall quality of the writing.

7. **Change:** This stage involves revising the initial drafts based on feedback and self-reflection. Writers rethink ideas, reorganize content, clarify arguments, and refine language to enhance the effectiveness of the writing. Change ensures continuous improvement of the final piece.
8. **Culmination:** The final stage of the writing process involves completing the piece and preparing it for submission or publication. It includes proofreading, editing for grammar and style, and finalizing the writing.
9. **Collaborative Reflection:** Collaborative reflection involves engaging in discussions and seeking feedback from peers, mentors, or writing groups to gain insights and different perspectives on one's writing. It allows for the exchange of ideas, constructive criticism, and the opportunity to refine and improve writing through collaborative efforts. Collaborative reflection enhances self-awareness, encourages critical thinking, and promotes a deeper understanding of the writing process.
10. **Collaborative Reflection:** involves engaging in discussions and seeking feedback from peers, mentors, or writing groups to gain insights and different perspectives on one's writing. It allows for the exchange of ideas, constructive criticism, and the opportunity to refine and improve writing through collaborative efforts. Collaborative reflection enhances self-awareness, encourages critical thinking, and promotes a deeper understanding of the writing process.

Numerous studies have examined the effectiveness of using a blended learning in enhancing various aspects of the English language,

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as well as the use of 21st century skills. Many of these studies have been conducted at various levels of students. However, it is noted that these studies are also relevant and appropriate for the participants of this current research, who are at the university level.

Simpson (2010) conducted a classroom-based research study in a medium-sized primary school located in Sydney, Australia, specifically Inner West Public (IWP). The study aimed to compare the incorporation of information and communication technology (ICT) in teaching. Forty students participated in the 6-week study, which focused on monitoring students' email communication and incorporating critical thinking questions related to a book they had read. During the study, it became necessary to modify the blended learning environment to ensure continued student participation. The teachers expressed interest in utilizing book raps available on the Department of Education website. Data were collected throughout the 6-week period and categorized using the terms comprehension, application, synthesis, and extended abstract. The findings of the study indicated an improvement in students' critical thinking skills. However, it was noted that the students did not acquire any specific technology skills during the study. One of the conclusions drawn from the research was that the program could have been utilized to encourage response to texts through collaboration, both in-person and via internet-based communication.

Asterhan and Schwarz (2010) conducted a study focusing on online synchronous group discussions and the importance of effective moderation using communication tools that facilitated text and diagram-based communication. The study involved 9th-grade students and graduate students as participants. The findings of the study revealed that participants from both groups expected a good moderator to actively facilitate the discussions and keep them focused, helping participants stay on topic. However, participants did not necessarily desire the moderator to provide their expert opinion on the topic

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during the discussions. The study further indicated that the type of dialogue provided by the instructor and the level of engagement of students in synchronous collaborative discussions significantly influenced student learning outcomes for both the 9th-grade students and graduate students. The researchers concluded that the nature of discussions in synchronous online environments was qualitatively effective.

### **Context of the Problem**

The problem addressed in this research arises from two factors. Firstly, third-year English majors lack knowledge in 4Cs skills of the 21<sup>st</sup> century skills (Critical thinking, creative thinking, collaboration, and communication). Secondly, they also lack proficiency in applying these skills. Previous studies have shown that blended learning has the potential to improve students' use of 4Cs skills (e.g., Harb, 2013; Al-Neguly, 2013; Al Noursi, 2020). As a result, it was hypothesized that the current study would offer evidence supporting the effectiveness of employing a blended learning program in enhancing 4Cs skills among English majors in the Faculty of Education Minia University. In order to investigate the problem more, the researcher conducted a pilot study.

The pilot study has been delivered in the form of an observation checklist that included 36 items based on 4Cs skills to check to what extent English majors use and target these skills along with the four language skills. The data revealed the following: 90% of the students do not use creative thinking skills, 80% of the students do not use critical thinking skills, 75% of the targeted students do not focus on collaboration and 60% of the targeted students do not engage in communicative activities in the classrooms. The results varied from one skill to another as presented, but in general it can be concluded that the 4Cs skills are not targeted or given the appropriate attention by most students. They later reported that they focus more on the skills that are assessed in the final assessment.

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## Hypotheses

1. There would be a statistically significant difference between the mean scores of the experimental group and that of the control group on the post administration of the overall 21<sup>st</sup> century skills test and on each skill separately in favor the experimental group.
2. There would be a statistically significant difference between the mean scores of the experimental group and that of the control group on the pre and post administration of the overall 21<sup>st</sup> century skills test and on each skill separately in favor the post administration.
3. There would be a statistically significant difference between the mean scores of the experimental group and that of the control group on the post administration of the overall 21<sup>st</sup> century skills observation checklist and on each skill separately in favor the experimental group.
4. There would be a statistically significant difference between the mean scores of the experimental group and that of the control group on the pre and post administration of the overall 21<sup>st</sup> century skills observation checklist and on each skill separately in favor the post administration.

## Design

The study used a quasi-experimental design with two groups: an experimental group and a control group. The experimental group followed the blended learning program introduced by the study, while the control group used the regular teaching method.

## Participants

The participants of the current study were third year English majors Faculty of Education Minia University students. 60 students were selected. The participants were divided into two groups:

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experimental (n = 30) and control (n = 30). During the academic year 2022/2023.

### **Instruments**

The present research employed the following instruments that were designed by the researcher:

1. A 21<sup>st</sup> century skills test for 21<sup>st</sup> century skills
2. An observation checklist

### ***The 21<sup>st</sup> century skills test***

The researcher prepared the 21<sup>st</sup> century test with the purpose of evaluating participants' understanding and utilization of 4Cs skills, which encompass collaboration, communication, critical thinking, and creative thinking (See Appendix 1). This assessment consists of four sections, each focusing on one of these skills, and comprises a total of 40 multiple-choice questions. Each question provides four answer choices, and participants are required to select the most appropriate option that demonstrates their knowledge of applying 21<sup>st</sup> century skills. Participants' scores are calculated by tallying the number of correct answers, with one point awarded for each correct choice. The test's validity and reliability were rigorously examined. To validate its content, a panel of experts evaluated factors such as the clarity of language used in the questions, whether the questions accurately measured the intended learning objectives, the suitability of the questions for the participants, and whether the number of questions adequately covered the skills being assessed, along with the appropriateness of the model answers. The panel of experts confirmed the test's appropriateness and applicability following suggested adjustments.

After incorporating the modifications recommended by the experts, the final version of the test was administered to the participants. To assess its reliability, the Alpha Cronbach's method was employed, yielding a reliability coefficient of 0.897.

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### ***The observation checklist for 21<sup>st</sup> century skills***

The observation checklist was created to evaluate the pre-post 21<sup>st</sup> century skills assessment developed by the researcher (See Appendix 2). It was also used throughout the program to assess students' collaboration, critical thinking, creative thinking, and communication skills. The checklist was based on a thorough review of literature and studies related to the four Cs skills of the 21st century. Initially, the checklist included the four Cs skills and several performance indicators; each rated on a 5-point scale ranging from "all students" to "not applicable." This allowed students' performance to be scored from 0 (lowest) to 5 (highest). The checklist was then presented to a panel of experts in curriculum, instruction, and EFL teaching. They assessed the suitability of the skills and performance indicators for third-year English majors. Based on their feedback, four skills and several performance indicators were chosen and received high ratings.

To ensure validity of 21<sup>st</sup> century observation checklist, it was submitted to a panel of jury .By using Alpha Cronbach, the reliability coefficient of the 21<sup>st</sup> century observation checklist was 0.747

### **Results**

**Hypothesis (1)** The first hypothesis stated “There would be a statistically significant difference between the mean scores of the experimental group and that of the control group on the post administration of the overall 21<sup>st</sup> century skills test and on each skill separately in favor the experimental group”. To verify this hypothesis, the t- test was used to compare the mean score of the two groups. Results are presented in Table 1.

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**Table 1**

*Comparing the Performance of the Control and Experimental Groups on the Post-Administration of the 21<sup>st</sup> century skills Test*

Skills	The group	N.of cases	Means	S.D	D.F	t.Value	Sig.
<i>Collaboration</i>	Control	30	3.83	1.315	58	<b>-11.160</b>	<b>0.01 Sig.</b>
	Experimental	30	7.53	1.252			
<i>Critical thinking</i>	Control	30	4.27	1.461		<b>-10.091</b>	<b>0.01 Sig.</b>
	Experimental	30	7.80	1.243			
<i>Creative thinking</i>	Control	30	4.10	1.348		<b>-12.428</b>	<b>0.01 Sig.</b>
	Experimental	30	7.70	0.837			
<i>Communication</i>	Control	30	4.60	1.476		<b>-7.444</b>	<b>0.01 Sig.</b>
	Experimental	30	7.37	1.402			
<i>Total degree of Test</i>	Control	30	16.80	2.759		<b>-19.574</b>	<b>0.01 Sig.</b>
	Experimental	30	30.40	2.621			

Table (1) reports that the t- values were (11.160, 10, 12.42, 7.444, respectively) and that all of them were statistically significant at the 0.01 level. This means that there were significant differences between the experimental and the control groups in the post-administration of the 21<sup>st</sup> century skills test. These differences could be ascribed to the implementation of the BL program. Therefore, the First hypothesis of the research was verified and accepted. The results of the first hypothesis were in line with those of Aránguiz et al., (2020), Alawi & Soh, (2019), Eldiva & Azizah, (2019). All these studies concluded that the use of blended learning programs improved students' use of 21<sup>st</sup> century skills at different school levels and varied participants.

**Hypothesis (2)** The second hypothesis stated “There would be a statistically significant difference between the mean scores of the experimental group on the pre and post administration of the overall 4Cs skills test and on each skill separately in favor the post administration”. The t-test for dependent samples was used to compare the difference between the mean score of the experimental group students in the 21<sup>st</sup> century skills test before and after implementing the BL program. Results are as shown in Table 2.

**Table 2**

*Comparing the Performance of the Experimental Group on the Pre-Post Administration of the 21<sup>st</sup> century skill Test*

Skills	Application	N.of cases	Means	S.D	D.F	t.Value	Sig.
<i>Collaboration</i>	pre – test	30	3.80	0.961	29	-13.568	0.01 Sig.
	post – test	30	7.53	1.252			
<i>Critical thinking</i>	pre – test	30	3.67	2.090		-8.632	0.01 Sig.
	post – test	30	7.80	1.243			
<i>Creative thinking</i>	pre – test	30	3.80	2.007		-10.836	0.01 Sig.
	post – test	30	7.70	0.837			
<i>Communication</i>	pre – test	30	4.73	1.258		-7.888	0.01 Sig.
	post – test	30	7.37	1.402			
<i>Total degree of Test</i>	pre – test	30	16.00	4.034		-16.274	0.01 Sig.
	post – test	30	30.40	2.621			

Results in Table (2) reveal that the mean in the post-administration of the 21<sup>st</sup> century skills test was greater than that of the pre-administration in all 4Cs skills. The t-test value was significant at the 0.01 level for all the skills (Collaboration, Critical thinking, Creative thinking, and Communication) and the total score of all 4Cs skills were (13.56, 8.63, 10.83, 7.88, and 16.27 respectively). In



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in addition, all differences were in favor of the post-administration of the 21<sup>st</sup> century skills test.

### Hypothesis(3)

The third hypothesis stated “There would be a statistically significant difference between the mean scores of the experimental group and that of the control group on the post administration of the overall 21<sup>st</sup> century skills observation checklist and on each skill separately in favor the experimental group”. To test this hypothesis, the t- test was used to compare the difference between the mean score of the experimental group students in the 21<sup>st</sup> century skills observation checklist before and after implementing the BL program. The results are as shown in Table 3.

**Table3**  
*Comparing the Performance of the Control and Experimental Groups on the Post-Administration of the 21<sup>st</sup> century Skills observation checklist*

Skills	Sub Skills	The group	N.of cases	Means	S.D	D.F	t.Value	Sig.
<i>Collaboration</i>	<i>Open-mindedness</i>	Control	30	5.27	1.202	58	-13.130	0.01 Sig.
		Experimental	30	9.37	1.217			
	<i>Organization</i>	Control	30	5.77	1.165		-13.770	0.01 Sig.
		Experimental	30	9.40	0.855			
	<i>Responsibility</i>	Control	30	5.83	0.913		-13.546	0.01 Sig.
		Experimental	30	9.13	0.973			
<i>Total Score of Collaboration</i>	Control	30	16.87	2.013	-20.494	0.01 Sig.		
	Experimental	30	27.90	2.155				
<i>al th in</i>	<i>Decision</i>	Control	30	5.83	1.464	-8.412	0.01	

	<i>making</i>	Experimental	30	8.53	0.973			Sig.
	<i>Problem solving</i>	Control	30	5.70	1.535	-7.571	0.01	Sig.
		Experimental	30	8.30	1.088			
	<i>Inference</i>	Control	30	5.27	1.818	-7.128	0.01	Sig.
		Experimental	30	7.97	0.999			
	<i>Total Score of Critical thinking</i>	Control	30	16.80	2.987	-12.805	0.01	Sig.
Experimental		30	24.80	1.669				
<i>Creative thinking</i>	<i>Originality</i>	Control	30	5.37	1.033	-11.551	0.01	Sig.
		Experimental	30	8.27	0.907			
	<i>Fluency</i>	Control	30	5.53	1.167	-7.932	0.01	Sig.
		Experimental	30	8.03	1.273			
	<i>Flexibility</i>	Control	30	5.57	1.223	-8.197	0.01	Sig.
		Experimental	30	8.17	1.234			
<i>Total Score of Creative thinking</i>	Control	30	16.47	2.403	-12.632	0.01	Sig.	
	Experimental	30	24.47	2.501				
<i>Communication</i>	<i>Using appropriate language and register for context</i>	Control	30	5.93	1.285	-10.251	0.01	Sig.
		Experimental	30	9.00	1.017			
	<i>Managing conversations</i>	Control	30	6.17	0.791	-14.103	0.01	Sig.
		Experimental	30	9.27	0.907			
	<i>Participating with appropriate confidence and clarity</i>	Control	30	6.23	0.817	-15.072	0.01	Sig.
		Experimental	30	9.50	0.861			
<i>Total Score of</i>	Control	30	18.33	2.454	-16.010	0.01		

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	<i>Communication</i>	Experimental	30	27.77	2.096			Sig.
<i>Total degree of observation checklist</i>		Control	30	68.47	3.665		-42.808	0.01 Sig.
		Experimental	30	104.93	2.888			

Based on the results in Table3 it is evident that there are statistically significant differences between the mean scores of the experimental and control groups in all the skills of the observation checklist and the overall score of the checklist in the post application in favor of the experimental group (higher average). All (t) values were statistically significant at a significance level of (0.01) with degrees of freedom = 58. These results align with or confirm the third hypothesis. The researcher attributes these differences to the program used. Therefore the third hypothesis is accepted .

### Hypothesis4

The fourth hypothesis stated “There would be a statistically significant difference between the mean scores of the experimental group on the pre and post administration of the overall 4Cs skills observation checklist and on each skill separately in favor the post administration”. The t-test was used to compare the difference between the mean score of the experimental group students in the 21<sup>st</sup> century skills observation checklist before and after implementing the BL program. Results are as shown in Table 4.

**Table 4**

*Comparing the Performance of the Experimental Group on the Pre-Post Administration of the 21<sup>st</sup> century Skills observation checklist*

Skills	Sub Skills	Application	N.of cases	Means	S.D	D.F	t.Value	Sig.
<i>Collaboration</i>	<i>Openmind-ness</i>	pre – test	30	3.43	0.774	29	-24.783	0.01 Sig.
		post – test	30	9.37	1.217			
	<i>Organization</i>	pre – test	30	3.30	0.702		-30.544	0.01 Sig.
		post – test	30	9.40	0.855			
	<i>Responsibility</i>	pre – test	30	3.17	0.648		-25.680	0.01 Sig.
		post – test	30	9.13	0.973			
<i>Total Score of Collaboration</i>	pre – test	30	9.90	1.539	-39.140	0.01 Sig.		
	post – test	30	27.90	2.155				
<i>Critical thinking</i>	<i>Decision making</i>	pre – test	30	3.13	0.507	29	-26.846	0.01 Sig.
		post – test	30	8.53	0.973			
	<i>Problem solving</i>	pre – test	30	3.00	0.455		-24.036	0.01 Sig.
		post – test	30	8.30	1.088			
	<i>Inference</i>	pre – test	30	2.83	0.913		-19.973	0.01 Sig.
		post – test	30	7.97	0.999			
<i>Total Score of Critical thinking</i>	pre – test	30	8.97	1.351	-41.578	0.01 Sig.		
	post – test	30	24.80	1.669				
<i>Creative thinking</i>	<i>Originality</i>	pre – test	30	2.80	1.031	-22.926	0.01 Sig.	
		post – test	30	8.27	0.907			
	<i>Fluency</i>	pre – test	30	3.37	0.809	-17.117	0.01 Sig.	
		post – test	30	8.03	1.273			
	<i>Flexibility</i>	pre – test	30	2.93	0.980	-18.807	0.01	

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		post – test	30	8.17	1.234			Sig.
	<i>Total Score of Creative thinking</i>	pre – test	30	9.10	1.936		-27.434	0.01 Sig.
		post – test	30	24.47	2.501			
<i>Communication</i>	<i>Using appropriate language and register for context</i>	pre – test	30	2.97	0.669		-24.003	0.01 Sig.
		post – test	30	9.00	1.017			
	<i>Managing conversations</i>	pre – test	30	3.23	0.774		-29.269	0.01 Sig.
		post – test	30	9.27	0.907			
	<i>Participating with appropriate confidence and clarity</i>	pre – test	30	3.37	0.556		-29.555	0.01 Sig.
		post – test	30	9.50	0.861			
	<i>Total Score of Communication</i>	pre – test	30	9.57	1.478		-33.115	0.01 Sig.
		post – test	30	27.77	2.096			
	<i>Total degree of observation checklist</i>	pre – test	30	37.53	2.609		-	0.01 Sig.
		post – test	30	104.93	2.888			

Results in Table 4 reveal that the mean in the post-administration of the 21<sup>st</sup> century skills observation checklist was greater than that of the pre-administration in all 4Cs skills. The t-test value was significant at the 0.01 level for all the skills (Collaboration, Critical thinking, Creative thinking, and Communication) and the total score of all 4Cs skills were (39.14, 41.57, 27.43, 33.11, and 101.822 respectively). In addition, all differences were in favor of the post-administration of the 21<sup>st</sup> century skills observation checklist.

### Discussion

The statistical analysis of 21<sup>st</sup> century skills hypotheses showed that the experimental group performed significantly better than the control group in all 4Cs skills, with highly significant t-values at the

0.01 level. Additionally, the experimental group's posttest results significantly improved compared to their pretest results, showing a high effect size. This suggests that blended learning was highly effective in enhancing participants' use of 4Cs skills.

The t-test results of the posttest showed that "collaboration" was the most improved skill among students who participated in the BL (Blended Learning) program. This improvement was attributed to various factors, including group work, class discussions, and interactions on platforms like what's App Group and Google Classroom. The program also helped students develop essential teamwork skills such as leadership, cooperation, and conflict resolution. Collaborating with peers from diverse backgrounds exposed students to a wider range of ideas and perspectives, preparing them for future professional success.

Furthermore, the research findings align with previous studies by Hadiyanto et al. (2021), Martinez (2022), Tarvyd (2019), Canez (2018), Badr (2021), Sarhan (2020), and Wilks (2016), which also emphasized the enhancement of 21st-century skills through blended learning ,project- blended learning and various educational approaches.

This research is groundbreaking in the field of EFL because it investigates the impact of a Blended Learning (BL) program on enhancing students' use of the 4Cs of 21st-century skills. Additionally, previous studies have shown that BL is effective in enhancing various aspects of students' learning experiences, including motivation, enthusiasm, self-confidence, commitment, responsibility, creativity, attitude toward English, and the reduction of anxiety. These findings are supported by research conducted by Erdem (2012), Masrom and Yusof (2013), Chaudhry (2014), Nassir (2014), and Elsadek (2018).

Furthermore, the publication of students' work on the Google Classroom platform, accompanied by their photos, instilled a sense of pride and accomplishment in them, as they felt they had created

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something meaningful. The establishment of an encouraging and supportive learning environment played a significant role in fostering enthusiasm among the students for completing their tasks. This environment was facilitated by the researcher's use of various teaching aids, such as PowerPoint presentations and visual materials.

Additionally, students were given the freedom to actively participate in classroom discussions and make choices related to their learning. A crucial element contributing to these positive outcomes was the adoption of "group discussion" as a central technique. Each group had dedicated time to discuss their works, conducting research, and openly expressing their ideas and opinions while reflecting on their peers' work. An important skill that students developed during this process was efficient internet research, enabling them to find relevant information effectively. They learned to utilize the internet and social networking sites for educational purposes, alongside their recreational use.

Based on the quantitative and qualitative analyses of the research results, it could be concluded that using the Blended Learning Program in Teaching Writing had a positive effect on Enhancing English Majors use of the 21<sup>st</sup> century Skills Faculty of Education Minia University.

### **Recommendations**

Based on the results and conclusion of the study, the following recommendations are suggested:

#### **For Teachers**

- Teachers should empower their students to become self-directed learners by employing various teaching techniques and strategies. They also should motivate and engage students in their learning tasks and materials.
- Preparing EFL teachers to play different roles inside the classroom, other than being just a lecturer.

- EFL teachers should encourage students to make use of the internet and social networking sites in learning useful skills. Incorporating the blended learning in teaching EFL skills.

### **For Course Providers and Course Designers**

- Curriculum designers are advised to integrate modern methods with modern technology in the teaching and learning process. New techniques and strategies should be explored for developing the twenty-first century skills, as they are a very important aspect of teacher education and an excellent way to enhance teaching skills.
- Policymakers should organize conferences for teachers to discuss and share experiences regarding utilizing blended learning in EFL classroom.
- The faculties of Education should provide pre-service teachers with training to help them learn how to employ the twenty-first century skills in the teaching process.

### **Suggestions**

At the time, the main focus of the present study was to investigate the effect of a blended learning program on enhancing the use of 4Cs skills further research is required to address other 21st century skills.

- Investigating the effect of a blended learning program on developing the 4Cs skills in other educational stages is suggested.
  - Research in the field of training pre and in service teachers on integrating blended learning in their teaching practices is suggested.
  - Using the blended learning in teaching other EFL skills; listening and reading.
  - Using the blended learning at different school levels and on larger samples.
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