CONSTRUCTIVIST PARADIGM: LEARNING INNOVATION SKILLS IN ELT

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Abstract- *This study aimed to investigate the integration of LIS (4 C's) conducted by lecturers in ELT. A literature review based on the elaborate framework of the 21st century. The method used is a qualitative description with a constructivist approach to paradigm and phenomenology. The researcher arranges the data and classifies the data patterns during the data analysis process in order to determine which data best fits the study's goal. After that, assembling the context using the knowledge extracted from the organized data. Findings reveal that the lecturer implements several learning methods to encourage students' 4 C skills. Integrating 4 C's skills following the 21st-century requirements is the first step in preparing students to be admitted to the workforce and competed in an open global environment.*

Keywords*: constructivist; integration; 4 C's, ELT.*

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INTRODUCTION

The 21st century leads to creating students who master lifelong skills and have more knowledge. It is appropriate for the world of work in the current era. Furthermore, new skills are currently required in the workforce (Trilling & Fadel, 2009, p.8). However, the question is whether education practitioners have prepared their students to accept them as employees with appropriate qualifications, necessary skills, and knowledge. Responds to this issue, research revealed that graduation from high school and university is a deficiency in some of the skills, including "oral and written communication, critical thinking and problem-solving, professionalism and work ethic, teamwork and collaboration, work in teams, the application of technology, and leadership and project

management" (Trilling & Fadel, 2009, p.7). Subsequently, it revealed that the cause of students' lack of communication skills, critical thinking, and problem-solving was sourced from the teacher's lack of competence and understanding to teach these skills (Carlgren, 2013, p.66). Focusing on these skills is crucial in effective teaching to prepare the students to enter the workplace upon graduation (Kivunja, 2014, p.45). Therefore, education providers, mainly higher education, should be able to help students be ready to work and be successful, encouraged by critical thinking, communication, creativity, and digital technology (Kivunja, 2014). Thus, in the teaching-learning process, educators need to train and encourage students to develop these skills, with the purpose of students ready to work and compete in the current global era. Moreover, these skills are contained in the framework of 21st-century skills.

Additionally, three primary skills are in demand in the 21st century: "learning and innovation skills; information, media, and technology skills; and life and career skills" (Trilling & Fadel, 2009). Furthermore, the focus on learning and innovation skills (LIS) includes "critical thinking and problem-solving (expert thinking); communication and collaboration (complex communication); and Creativity and innovation (applying imagination and discovery) (Trilling & Fadel, 2009). These skills are known as the 4 C's Skills. Based on previous exposure, to be accepted into the world of work, students must have new skills, which are included in the 4 C's Skills. Integrating the 4 C's into the educational process is crucial based on these considerations. Hence, it is necessary to apply 4C's skills in learning, schools, and regions to produce graduates and employees that are adequate for the 21st century; these skills will lead students to success in the future, independence, and full curiosity (Erdogan, 2019). Besides, these skills are not only demands of work in the 21st century but also the core to make students independent lifelong learners (Trilling & Fadel, 2009).

Furthermore, the 21st-century framework is developed based on solid fundamentals covering the content of knowledge and skills and professional literacy. Subsequently, students are directed to be critical thinkers, problem solvers, innovators, communicators, independent learners, a user of technology, and engage in a social environment (Asraf et al., 2017). Therefore, there is a need for new and different teaching

practice that prepares the workforce and integrates a problem-based and collaborative learning environment. (Bernhardt, 2015).

Additionally, necessary to design a study that can provide immediate opportunities for students in communication, critical thinking, and problem-solving skills, where convergence and inclusion of skills should continue to take place in the classroom (Carlgren, 2013, p.69). Because no doubt that the 21st century has brought a nice change in the way of life and learning (Fandiño Parra, 2013, p.198). Kivunja (2014), effective teaching in the context of the new paradigm has moved from primary teaching to applied skills, learning actuality, and principles changes to investigations of questions and problems, theory to practical implementation that is relevant to theory, last, from working on a curriculum to working with real-life projects authentic (p.41). Thus, it can be said that there has been a change in culture and paradigm in the learning process, changing from teacher-centered to student-centered. In this case, the role of educators is only as a bridge of knowledge to help develop students' knowledge and skills, and students are directed to become independent learners.

Furthermore, quoted from Warschauer (cited in Fandiño Parra, 2013) discussed the role of language teaching in the information technology society. He stated that there was necessary to provide English language teaching with new goals, starting with developing activities by involving students in authentic activities, such as carrying out project activities, collaboration, goal setting, communication, and product development (Parra, 2013). Further, the 21st century requires integrating three main components of skills. Therefore, learning at school, especially language teaching in class, should provide students with a practice that focuses on the acquisition and development of creativity, critical thinking, collaboration, media literacy, initiative, self-direction, and social and cross-cultural skills (Fandiño Parra, 2013, p.23).

Based on these aspects, this study aims to find out how lecturers integrate LIS in ELT. This research is the result of the development of a study by Erdogan (2019) which provides information on the results of an investigation into how each skill from the 4C's scope is integrated into ELT. Besides, this research contributes to more lecturers 'efforts to encourage and develop students' 4C skills and provide new perceptions for lecturers to prepare their learning by integrating the 4 C's, especially in English language teaching.

Consideration the necessity for a lecturer to teach students empirically about how to communicate effectively both orally and in writing as global citizens; collaborate with others and work with teams; creative and innovative to solve problems; and critical thinkers and problem solvers to sort the information found (Erdogan, 2019). These skills are necessary to organize students to enter the workforce after graduation.

METHODS

Research design

Purposive sampling is employed in this study. Purposive sampling is a sampling approach with specific considerations, meaning that samples are chosen based on certain criteria or features that are thought to be expert or capable of accomplishing research aims (Sugiyono, 2014). The study used a qualitative descriptive to answer how the lecturers integrated all components of LIS (4 C's) into the English language teaching. Qualitative research is used to answer questions that commence with what or how. The research used non-directed language such as " explore, describe, illuminate, unearth, generate, build meaning, and seek to understand " (Leavy, 2017). A constructivist paradigm and phenomenology theoretical approach focused on the experienced of lecturers (Leavy, 2017, p.132).

Data Collection

This study's data sources were English lecturers at universities in Pontianak, West Kalimantan. Data was collected through interviews with structured questions based on theoretical indicators and previous studies. Respondents answered questions using their language to answer and respond the questions (Leavy, 2017). The Questions to find out how lecturers integrated the 4 C's skills into their students and classes based on their experiences.

Data analysis

In the process of data analysis, the researcher organizes the data and categorizes the data patterns, to decide which data suits the objective of the research. Afterward, compiling the context from the information gleaned from the arranged data.

FINDINGS AND DISCUSSION

Findings

This study has ten questions, which is the development of the results of the previous study's thoughts. Focus on integrating the 4 C's in English language teaching. The following is an explanation of the produce of data collection.

Critical Thinking and Problem Solving Skills

In these skills, two questions refer to "How can we model critical thinking/problem solving for our students and what kind of learning environment is needed to be set for emphasizing problem-solving skills and encouraging students to be better critical thinkers more intentionally and purposefully in our classroom" (Erdogan, 2019, p.112). The questions raised were regarding the learning model used by lecturers and the learning environment needed to encourage and increase students' critical thinking and problem-solving. For the first question, it was obtained that lecturers generally used several methods involving group activity. The methods that lecturers used are creative thinking skills models, group discussion, case study discussion in Problem-Based Learning, and student-centered learning. Activities are conducted by giving students academic reading texts which involve high-order thinking skills to answer the questions. Students were asked to read, analyze the existing question, and propose their opinion.

Furthermore, the lecturers determined the issue and used it as a topic to solve the problem. Students asked about the problem, to analysis the exposure of the problem, and solved the problem from the specified topic. The results were presented in front of the class to get responses and make the conclusions more profound. Subsequently, for the second question, lecturers created student-centred learning environments to improve student's critical thinking skills and problem-solving. The activities used are discussion and knowledge-centered; problem-based learning and selecting topics and issues are crucial. Then, using technology (internet) as a learning medium, especially for lecturers and students, enriches their knowledge and learning resources. The involvement of students is crucial in this case. Serve opportunities for students to express their thoughts and ideas about the object discussed. Thus, creating an atmosphere of a pleasant learning environment and lecture objectivity are needed in this case.

Communication skills

In these skills, four questions refer to "How to emphasize communication skills in general; to enhance oral and written communication skills in particular in our classroom; to encourage students to give oral presentations to varied community audiences and how can the student be encouraged to use technology and new media to communicate innovatively and effectively?" (Erdogan, 2019, p.118). Questions were asked about lecturers' efforts to improve students' communication skills (oral/written) in general and in the learning process. Subsequently, encourage students to make a presentation in front of the class/audience, and encourage students to use technology as a medium to communicate innovatively and effectively. The results obtained:

First, lecturers generally conducted exercises that proposed and created learning that encouraged students to communicate, both written and orally. Outside of the classroom, lecturers provide open access for students to discuss topics related to academics. Explain to the students to use language. Lecturers used various methods and technology-based media as available communication tools. Generally, lecturers provide the topics to be discussed. Subsequently, students were asked to present an issue and reveal their ideas in writing. Latest, the lecturers also encourage the students to write fiction.

Second, to improve students' communication skills, lecturers conduct activities that can stimulate them to speak. Encourage the students to initiate and engage in conversation and allow them to present in front of the class. Furthermore, the lecturer applied open questions, which provided students with an opportunity to debate their assumptions on the topic being debated. Involved the students in an open discussion by giving them questions/problems to be solved and letting them develop their answers based on their understanding and prior knowledge, and applied project-based learning which students should produce two assignments (presenting theories before the midterm test and written tasks before the final tests). Last, lecturers have given a more detailed knowledge background to make the students feel free to talk.

Third, lecturers' efforts to encourage students to make presentations in front of the class/audience by giving assignments to make presentations, which lecturers divide into groups. Next, ask students to determine their topics that adapted to the learning

material or issues understood by students. Lecturers also provide feedback, praise, and motivation to increase students' confidence in speaking in front of the class.

Fourth, to encourage students to use technology as a medium to communicate innovatively and effectively, by engaging the use of technology with students according to social needs, ask students to explore the technology that fits them. The lecturer gives a project to students to make a video related to learning material, and students creatively make videos using applications to show their performance. Lecturers also used technology as a tool for data collection, asking students to reflect on their activities, and seeing how the level of student understanding—further, the use of technology in the learning process- answers and does their tasks.

Collaboration Skills

There are two questions in these skills, focusing on "How can we create a learning environment that emphasizes collaboration skills and provides students opportunities to work in diverse teams"? (Erdogan, 2019, p.119). Questions include how lecturers create a learning environment that emphasizes students' collaboration skills and efforts to develop students' collaboration skills. The results obtained: were to create a learning environment that emphasizes student collaboration skills; generally, lecturers conducted group work, project-based learning, problem-solving, cooperative, and collaborative learning. The lecturers established clear goals, paired them into the group, mixed their academic or similar personalities, constructed trust to promote open communication, and established group interaction. Moreover, lecturers create good interactions in group work by guiding and checking the progress, communicating, and encouraging the process—furthermore, lecturers give students assignments in face-to-face and online classes. Subsequently, to develop students' collaboration skills, lecturers generally created group discussion, gave assignments, and monitored activities. Further, lecturers created a comfortable learning atmosphere by providing flexible rules for students to feel free to work in a group. The lecturers gave students activities and topics that needed collaboration to solve the problem they found. These activities made students can develop their collaboration skills within their group. Last, students have to discuss the topics and conduct presentations.

Creativity and Innovation

Two questions for these skills focus on "How can we incorporate more creativity and innovation into our lesson plans and encourage students to be more creative and innovative" (Erdogan, 2019, p.119). The question is about including creativity and innovation skills in the lesson plan and encouraging students to be more innovative and creative. The results obtained include creativity and innovation skills in the lesson plan, and lecturers made lesson plans that provide several class activities in a variety of methods and strategies like a class discussion which enable the student to come up with their idea in the activities. Besides, lecturers also design creative and innovative learning using technology such as the internet and various learning media. The lecturers also give project-based learning and a final project in which students can freely develop their creativity and innovation skills.

Then, the efforts made by lecturers to encourage students to be more creative and innovative by involving technology as learning media, such as the internet, open up the student's insights, especially in how they deliver a presentation and search for some references. Then, apply for group work, forcing students to contribute thought and knowledge to their groups. Additionally, lecturers create rooms that integrate more hands-on learning, encourage discussion, replace hierarchy with collaborative learning spaces, and let them think outside the box to solve every task. The last, the lecturers asked students to do a project by determining their topic and, later, discussed the ideas and concepts on their own.

Discussions

Critical Thinking and Problem Solving Skills

In the 21st century, critical thinking and problem-solving are the basis of new learning and are skills to prepare students for entry into the workforce once they have completed their studies (Trilling & Fadel, 2009; Lai, 2011). In implementing it, the students are asked to use deductive and inductive reasoning to make decisions on an appropriate assessment based on what has been learned, analyze the complex system, and determine which parts of the overall interaction (Erdogan, 2019, p.121). Based on the findings, in general, revealed that the lecturer is doing problem-based learning. Problem-

based learning is a student-centered method that aims to develop problem-solving skills through either independent or team learning (Ali, 2019). The lecturer determines the topics/problems that need to be resolved, and students are asked to analyze the emergence of the problem, analyze problem-solving, and make decisions that reveal the final results of problem-solving. These aspects are part of the lecturers 'efforts to integrate and encourage students' critical thinking and problem-solving skills. It is consistent with Trilling & Fadel (2009) stated that critical thinking and problem-solving skills can be learned through various inquiry and problem-solving activities. These skills can be developed by implementing learning projects by providing project challenges to train and hone skills over time (pp.53-54).

Furthermore, the methods applied by lecturers can also train students' critical thinking skills and cognitive abilities. When students are given a project and the problems to be solved, they solve it not only based on their arguments but also on data from various sources that support their findings and arguments, to be a finding and problem solving are valid. As expressed by Cottrell (2005), a series of activities which include identification, arguments, conclusions of others, evaluate the evidence to consider the evidence and arguments, using the persuasive, reflecting problems in a structure, concluding an idea, giving a presentation standpoint structured and activity critical thinking of a cognitive activity that related to thinking ability (pp 1-2). Thus, it can be concluded that problem-based learning activities can help to encourage critical thinking skills and problem-solving skills because it is related to training cognitive thinking skills. These activities begin with identifying and solving problems based on sound sources, which are then developed into ideas as conclusions and problem-solving. Furthermore, in the 21st Century, Problem-Based learning can be used in various learning situations and scientific disciplines because it produces outputs in the form of increased critical thinking, problem-solving, and communication skills (Ali, 2019).

In foreign language learning, teachers can plan to teach through the rationale of how to model students' critical thinking and problem-solving, then create a learning environment to emphasize and encourage problem-solving skills and critical thinking (Erdogan, 2019). Because the practice and development of critical thinking are suitable for communicative language teaching, then asks students to analyze a theme, discuss and

debate findings with peers, and make conclusions about finding (Halverson, 2018). Based on the findings, lecturers created a student-centered environment and discussions for knowledge development and integrated technology as a tool to find learning reference sources to encourage students' critical thinking and problem-solving skills. Creating a student-centered learning environment is necessary by providing chances for students to express and explore the results of their thoughts. By using resources and digital tools, students can apply critical thinking skills to plan, perform, solve problems, and make decisions in a project that is being carried out (Dede in Bellanca & Brandt, 2010). Further, students can identify and define authentic problems and questions related to the investigation, planning, and management to be able to develop project completion solutions, collect and identify problem-based on information findings, make decisions, and use many perspective processes to explore solutions (Dede in Bellanca & Brandt, 2010).

It can be said that the integration of critical thinking and problem-solving skills are carried out by applying problem-based learning methods, and opening discussion forums that become a forum for students to find, analyze, solve problems, and make final decisions. As described by Bittersweet (2019), Critical thinking refers to skills that include communication and information literacy, analysis, interpretation, and evaluation. Furthermore, problem-solving always involves teamwork and cooperation and requires using technology effectively and creatively. The involvement of technology is required in learning as a tool for finding and gathering information. Hence, technology helps students express their understanding by developing a reliable explanation to support the learning process (Lee, 2014). Broadly, integrating critical thinking and problem-solving skills in language learning can be conducted by creating a student-centered, discussion, and problem-based learning environment. Various learning methods can be applied to encourage and develop students' critical thinking and problem-solving skills, such as problem-based learning, group discussions, and creative thinking. Training students to think critically and solve problems can also help them develop creative thinking, cognitive, and comprehensive abilities. Moreover, by creating a learning environment that encourages students to improve their critical thinking and problem-solving skills, it

can hone students' intellectual abilities and readiness to face and solve further problems. Students can analyze and make decisions based on theoretical and social concepts.

Communication skills

In language learning, especially foreign languages, the ability to communicate is one of the essential skills to master. How to properly communicate information can be conveyed and well-received by other people/message recipients. It can be said that "communication is the fundamental feature in education and teaching" (Eğilmez et al., 2019). Professionally, one of the skills requirements associated with the 21st century is to communicate effectively and handle information; where teachers organize and develop communication skills in foreign language classes in writing and oral, encourage students to make presentations and use technology and new media to communicate effectively and innovatively (Erdogan, 2019). In this case, students' communication skills are not only in the form of oral communication but also in writing. The ability to communicate is considered necessary for the future of students. The results of research conducted by Mercer-Mapstone & Matthews (2017) showed that students assume the importance of communication skills in scientific writing and oral communication.

Furthermore, in terms of a partnership framework for 21st-century skills of communication skills, students are expected to have the communication skills of oral, written, and nonverbal in various contexts to pour your thoughts and ideas effectively; listen to the meaning, knowledge, values, and attitudes and intentions effectively; communicate for a variety of purposes; using technology and knowing its impact; can communicate using multi-languages (Trilling & Fadel, 2009, p.55). The results revealed that lecturers provide open access for students to communicate using several methods: discussions, presentations, problem-solving, and projects. The lecturer provides the broadest possible access for students to express their thoughts orally and in writing. These findings corroborate previous studies that found problem-solving methods, discussions, and presentations are student-centered learning activities that provide opportunities for students to increase their communication skills, increase self-confidence, and sense of courage, foster a sense of student responsibility and provide opportunities for lecturers to correct pronunciation of the students (Sugito et al., 2017; Tahir & Hanapi, 2017).

Furthermore, several methods can improve communication and collaboration skills, such as pair and group work, peer reviews, and project-based learning in classroom learning (Halverson, 2018). Students openly express their opinions and exchange ideas to find the same conclusion regarding the discussed topic.

Lecturers have an essential role in the learning process and act as a mediator to encourage and enhance students' communication skills. Based on the findings, the lecturer provides motivation and feedback to increase students' confidence in speaking in front of the class. In this case, the lecturer can create a conducive and relaxed learning atmosphere, providing opportunities for students to present their perspectives and ideas on various study topics, fostering comfort and confidence, and helping students plan their goals. (Ahmetović et al., 2020). Therefore, it is necessary to foster student motivation, a sense of interest and enthusiasm for students in learning to take part in learning because it can help students achieve learning goals, while feedback is the response given by the lecturer to questions or ideas presented by the students about the topic being discussed, whether it is reinforcement or improvement. Providing feedback allows students to study harder, improving motivation, development of thinking, and achievement (Kögce et al., 2012). On the other hand, providing feedback will encourage a conducive and interactive discussion atmosphere and create two-way communication between lecturers and students and among peer students. As described by Ishchenko & Verkhovtsova (2019), interactive learning was created in the form of student-lecturer interaction and interaction between all the students, which occurs in the learning activity. Then, there is the perspective of consideration to providing feedback in language learning, such as helping students improve their knowledge and skills and encouraging improvements to maximize their abilities' potential.

Furthermore, the lecturer involves technology adapted to the social needs of students. In this case, they are utilizing technology in learning to provide pedagogical knowledge, reasoning, and solutions in an authentic social and cultural context. Lecturers also use technology as a learning medium. Inevitably, that involvement is indispensable as both a medium and a communication tool to convey information, as described by Trilling & Fadel (2009, p.55), which uses a variety of media and technology required for the modern communication process. Then, using technology, students can effectively

convey information or ideas to the audience (Dede in Bellanca & Brandt, 2010). In addition, students can use technology and the internet to find theoretical sources to complete their projects and utilize technology to present their results to the audience (Pearlman in Bellanca & Brandt, 2010). Therefore, it is necessary to increase the ability to use technology for lecturers and students. Technology is used as a medium to explore and cultivate knowledge and science or new information. Revealed that the lecturers involved in the learning technology reflect students' activities and recognize the level of student understanding. Technology is also used as a tool for collecting data.

In the 21st century, educators are expected to be able to guide students carefully by presenting technology as an effort to provide complex and diverse learning opportunities and to improve their ability to research, organize, evaluate and convey information using technology (Larson & Miller, 2011). The ability to communicate is essential and influences all aspects, not only in the educational process but also in the workforce. Because the workforce not only needs someone who is an expert in their field but also can communicate and work in teams (Halverson, 2018). Therefore, in addition to being able to communicate, exchange, criticize, and present information and ideas, students are also expected to have competence and interest in using technology (Erdogan, 2019). Summarily, many methods can be implemented in learning to encourage students' communication skills. Lecturers must be able to build an interactive atmosphere that can encourage students to speak, express opinions, exchange ideas, and provide input according to the topic being discussed.

Collaboration skills

Collaboration is interpreted as the ability to work cooperatively with others. Another definition, collaboration is the ability to work with others as a team to achieve common goals (Kivunja, 2014). In the 21st century, students must be taught how to have the capability to work effectively and have respect in diverse teams; have the flexibility and willingness to help the team to achieve common goals; can assume a collective responsibility to work collaboratively and provide an assessment of the contribution of each member of the team (Larson & Miller, 2011). Thus, collaboration skills are oriented to working in groups effectively to create a relationship of mutual respect for differences,

a sense of responsibility for the success of shared goals, and to contribute, as well as the contributions of thought given by others. In addition, to measure the achievement of student collaboration, indicators can be used in the form of learning skills, citizenship, and peer interaction (Huang et al., 2010).

Training students to work collaboratively can help students how to solve problems, find solutions, and make decisions (Erdogan, 2019). Because of the collaboration, students can also learn to understand the different thoughts/ideas they encounter in the team. In line with Huang et al. (2010), collaboration skills can be defined as an ability to adapt to group dynamics, have productive capabilities, adjust group ethics, face and overcome pressure, and resolve disputes within groups. Therefore, in the learning process, lecturers are expected to be able to make lesson planning to improve student collaboration skills based on the learning process to create a learning environment that emphasizes collaboration skills and provides opportunities for students to be able to work in teams with existing diversity (Erdogan, 2019).

"Collaboration is situational and varied based on the created environment, educators, and sources" (Vintan & Gallagher, 2019). Lecturers apply group work, project-based learning, problem-solving, cooperative, and collaborative learning to develop student collaboration skills. According to Trilling & Fadel (2009), the application of learning projects where implicit and intense communication during learning is one way to develop collaboration skills (p.56). Furthermore, lecturers create interactions in group work by providing flexible rules and topics that require team collaboration in problem-solving. Moreover, the creation of team collaboration can improve communication skills, cooperation, and student motivation so that they can complete projects given by lecturers in a shorter time if done individually (Sturner et al., 2017). Then, collaboration is integrated through a cooperative approach, where each individual has responsibility according to the division of labor to solve problems (Lai, 2011a). As a facilitator in the learning process, the lecturer must monitor the course and require that all team members are actively involved in expressing their ideas to solve problems. As stated by McClellan (2016), the actual implementation of collaboration is that all team members have the same responsibility and voice to complete the final product. Therefore, a learning environment is needed that has the potential to encourage student collaboration skills. Hence, a learning

environment that is fun and inspires students in collaborative project activities that can simulate real-world "epistemic" contexts, encouraging students to find and improve their understanding of the given topic (Chu et al., 2017).

Subsequently, lecturers also involve technology in this development process, such as lecturers giving assignments that are completed not only offline but also online. The conclusion is that learning can continue continuously and indefinitely, where students can exchange sending documents to complete shared tasks even though they did not meet face to face (Binkley et al., 2012). Students can use digital media to work collaboratively and interact with peers or others (Dede in Bellanca & Brandt, 2010). Furthermore, integrating technology into learning can develop, reflect and modify learning content that can enrich students' experiences and skills, which occurs outside the classroom (Naylor & Gibbs, 2018). Then, technology provides broader access to finding various information needed. Based on several methods implemented by the lecturer, there appears to be a relationship between communication skills and the ability to work collaboratively among students. The relationship between communication and collaboration skills can be done through the application of team-working, concurrence to achieve goals, and commitment to complete joint work and responsibilities (Erdogan, 2019).

Creativity and Innovation Skills

When talking about creativity and innovation, creating a perception of thinking about something and the ability to generate new thinking that starts from a great curiosity, the results can make a valuable contribution to the mainstream. Through creativity, creativity will create sophisticated ideas, fantasize, look at the problem from different perspectives, define problems, and find the right solution to the problem (Ülger, 2016). Furthermore, brainstorming new ideas, describing, enhancing, reviewing, and evaluating the idea is an effort to improve and develop creative efforts, where such coverage is an essential part of Creativity (Soule & Warrick, 2015). Creativity and innovation in 21st-century skills can be developed through three things: thinking creatively, working creatively with others, and implementing innovation (Piirto, 2011). The finding revealed that the lecturer had done these three aspects: giving assignments that give students the freedom to develop their creativity and innovation, exploring new knowledge, demanding

that students contribute knowledge to groups, and applying the results of project development from a model. Furthermore, creative thinking includes how to use techniques and ideas that are new and unlimited; create new ideas that are useful both in basic concepts and development; develop, distill, investigate, and assess the results of thoughts/ideas obtained to improve and maximize creative endeavors. In the 21st century, creativity and innovation are the most demanding skills to have, including the skills to innovate in new services continuously, processes, and improvements for the world economy, as well as the creative knowledge needed in the world of work (Trilling & Fadel, 2009).

Subsequently, things that include creative work, namely, efforts to develop, apply and communicate new thoughts to the public effectively; have openness and reactive to new and diverse perspectives; using input and feedback into work; show the novelty and originality of creative work in an understandable way to grab new ideas; as well as seeing failure as an opportunity to learn, understanding that creativity and innovation are long-term success cycles for achieving success from frequent mistakes. Running innovation involves acting on creative ideas that provide helpful and tangible contributions (Piirto, 2011). Furthermore, lecturers encourage students to use technology as a forum to access new scientific discoveries that can help them to develop their creativity and innovation in thinking. Using technology, students can demonstrate creative thinking, establish understanding, develop products, and process innovation (Dede in Bellanca & Brandt, 2010). Hence, practically all higher education institutions in this digital era accommodate new ways of learning by using digital technology to meet aspirations, needs, and expectations (Salmon, 2015). Thus, the involvement of learning using digital technology also needs to be done to explore creativity and encourage the creation of innovation.

One way to create a learning environment to practice creativity and innovation skills is to challenge students to imagine to generate creative ideas and thoughts with strategies such as brainstorming, mind mapping, visual Creativity, SWOT analysis, and feedback (Kivunja, 2014). Furthermore, creating a learning environment by encouraging and training students from time to time by asking questions, with patience, openness to new ideas, and learning from failures is also one way of implementing creativity and

innovation (Trilling & Fadel, 2009). It means that teachers must create an active, quality learning environment with diverse strategies that can train, encourage and develop student creativity and innovation.

Apply in the context of learning that can be enjoyed and explored, especially in learning English, leads to questions about how to plan for learning that is more creative and innovative and encourages students to be more creative and innovative (Erdoğan, 2019). In this case, it is necessary to consider the differences in the learning styles of each student, which are used as the basis for carrying out various learning activities within. Therefore, teachers must be flexible in giving freedom to the students to develop their creativity naturally with the activities of a complex problem and ask them to think and solve problems in a new way. Similarly, Halverson (2018) expressed that to develop student creativity, lecturers need to be aware of differences in learning styles and carry out various types of activities in the classroom, allowing students to be creative by providing choices to students whenever possible. Then, the teacher provides adequate and structured learning space and understands creativity's fundamental processes and principles (Maley & Bolitho, 2015).

In this case, the lecturer implements group work to encourage student creativity and innovation. As described by Erdogan (2019), implementing group work is also conducted in this regard. Innovation is not only obtained from thoughts and work alone but through teamwork by utilizing existing knowledge to produce new knowledge or discoveries. Specifically, the character and abilities of students are things that must be considered and considered in this aspect. As Halverson (2018) “To develop creativity in students, teachers need to be aware of these differences and conduct a range of activity types in the classroom.” Therefore, lecturers must create learning conditions that can increase high self-confidence and willingness to learn and explore their potential. As well as creating a learning environment that can encourage questions, patience, openness to new ideas, a high level of confidence, and learning from mistakes can stimulate creativity and innovation. Continuous training can develop these components (Trilling & Fadel, 2009). Lecturers should be flexible to provide freedom and opportunities for students to develop their creative work by providing problem-solving activities to find solutions to problems uncovered in new and creative ways (Halverson, 2018). Inline expressed by

Kivunja (2014) that creating a quality learning environment and providing an opportunity for students to analyze and solve problems in the real world is the essential findings that teach creativity and innovation.

In addition, to meet the achievements of innovation in the learning process, several strategies must be implemented to support successful outputs. There are several approaches and multiple strategies to achieve innovation in the teaching and learning process, including 1) systematic innovation, which emphasizes the importance of audiences and stakeholders with a strong base; 2) pedagogical innovation, emphasis on practice learning conception, which makes students fully engaged in learning with technology-based learning and openly; 3) redesign concept for learners and evidence-based transformation with research, development, and the revised practice (Salmon, 2015). Furthermore, in planning learning and before implementing the methods or learning strategies, lecturers also need to consider the model of creativity possessed by the students. Student creativity is categorized into six categories, expressed through student self-reflection, independent decisions, curiosity, self-motivation, generating something, multiperspective, and developing new ideas (Jahnke et al., 2017).

CONCLUSION

Based on the findings and studies on the integration of Learning and innovation (4 C's) skills carried out by lecturers, are 1) application of various project-based learning challenges. Students are directed to explore all of their abilities, helping students to develop their knowledge and skills; 2) lecturers as facilitators have an essential role. Observed the course of learning, providing equal opportunities to all students, especially in effectively conveying and communicating their opinions and ideas. Students are encouraged to communicate their ideas either verbally or non-verbally effectively so that the messages sent can be well received and understood by the audience; 3) Problem-based learning and presentations can also be applied to integrate/develop students' 4 Cs. In the 21st century, problem-based learning is used by all teachers and other professionals in various disciplines because it is considered that PBL can improve critical thinking, problem-solving abilities, and communication skills.; 4) technological involvement is required in integrating the 4 C's for students and learning. Technology is a container

collection of science, making it a medium to explore, develop, and deliver new knowledge. Students are directed to use the technology according to their needs. Assisted by technology, students can find new things that can help develop their creative abilities, motivate them to innovate, and make technology a means of communication in disseminating ideas.

SUGGESTION

Based on the exposure above, by integrating the 4 C's as part of the implementation of learning, a teacher must prepare students to be competitive in the world of work, which has high knowledge and other skills. As known, the increasingly rapid development era requires a person to have the ability and skills to be complete. Further, the integration in learning, it is also necessary for lecturers to have a measurable assessment instrument to determine students' increased abilities and skills and the level of achievement of objectives, particularly in the scope of learning and innovation skills.

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