International Journal of Language Education and Cultural Review (IJLECR) e-Jurnal:http://journal.unj.ac.id/unj/index.php/ijlecr e-ISSN: 2461-131X Volume 6 Issue 1, June 2020, 9-19



DOI: doi.org/10.21009/IJLECR.061.02

Received: 10 May 2020 Revised: 15 June 2020 Accepted: 18 June 2020 Published: 30 June 2020

# LANGUAGE LEARNING WITH HOTS-ORIENTED AND PROJECT-BASED 21ST CENTURY LEARNING

Esra Nelvi Siagian<sup>1,a)</sup>, Ifan Iskandar<sup>2,b)</sup>

Badan Pengembangan dan Pembinaan Bahasa<sup>1)</sup>, Universitas Negeri Jakarta<sup>2)</sup>

esranelvi@yahoo.co.ida), ifaniskandar@unj.ac.idb)

### **Abstract**

Changing times lead to very competitive competition. Therefore, students must be prepared in order to compete in the global world. The purpose of this research is to explain how students are prepared not only to think alone but also to develop critical thinking skills through language improvement so that they are ready to face the world of work—project-based learning stages with a focus on 21st-century competency training. Through Indonesian language learning, students can become students who have learning and innovation skills, career, and digital literacy in 21st-century learning trains communicative, collaborative abilities, and the use of cellular technology. Students are also taught to be able to apply the knowledge gained, be able to do what can be used in their lives, and be able to find solutions not only for academic needs but also useful in their lives. This research concludes that language learning students are prepared to become individuals who know and skills that can be utilized in future life and careers, besides being a person who has the traits that can be used to survive in the industrial era 4.0.

**Keywords**: language learning, higher-order thinking skills (HOTS), project-based, 21st-century learning.

Currently, the topic most hotly discussed in education is about 21st Century learning. There are many seminars, symposia, and workshops on 21st Century Learning associated with HOTS (Higher Order Thinking Skills). However, how HOTS is implemented in learning, especially language, is a question that wants to be answered. This study will provide an overview of what is called the 21st century, technological change, changes in student behavior, explanation of 21st-century skills that students must master, and how to learn 21st-century language called HOTS, and how is applied in language learning.

The 21st century is based on the Gregorian calendar starting from 2001. The development of technology in the last 20 years has developed very rapidly. A striking difference is seen in the development of smartphones, the internet, and various other technologies. High-speed internet connections and technological developments bring changes in various sectors, such as business patterns, health, manufacturing, architecture, information technology, and education.

The world of education in the 21st century also has its challenges. Changes in student behavior that are different from previous generations create different challenges and approaches—first, 21st-century technology and the industrial revolution. Technological developments drastically changed many things so that it was called the era of the Fourth Industrial Revolution (1990s-

present) (CNBC: 2019). Changes in the industrial world 4.0 are seen in technological developments that make devices smaller and more powerful (non-technology), more developed internet networks, and artificial intelligence.

Second, the characteristics of 21st-century students. Students who are currently sitting in school, children born in 1995-2010 are children called Z generation who have been accustomed to the internet, social media, and mobile work systems from an early age. They can easily gather and share information from various sources with others through social media. They consider communicating with *YouTube*, *Instagram*, *Craze*, Tiktok (very popular in Australia), and *Snapchat* as important as face to face. They love to interact and express themselves in online groups and save and share their lives through photos and videos on various social media platforms. They are the generation supported by technology, so it is difficult to concentrate, difficult to remember long-term, tend to like, and pursue a spectacular career in an instant and challenging to build a career through small things. They like to look for experience and get out of routine and think of self-employment as a career because they earn money and are not bound by time (Mckinsey Company, 2019).

The question that often arises from teachers, especially in Indonesia, is how to practice students' critical thinking skills or how to prepare students to acquire 21st-century skills through language learning? How does education keep pace with changing times, preparing students for the 21st century? This paper will provide an example of innovative language learning through the implementation of 21st century learning in the form of projects in language learning. Describe the steps of teaching the Indonesian language that hones high-level learners' thinking ability using the project model.

### 1. 21st Century Skills following Framework P21

21st Century learning is learning that prepares learners to adapt and compete in this era. The ability of learners not only to remember and memorize various knowledge or facts, but can facilitate themselves to know, understand, and apply their knowledge in solving questions and problems encountered in everyday life. Students need to be equipped with the skills to achieve academic success, work, and life.

The skills needed by students based on the P21 framework for 21st-century learning are learning and innovation skills, career life skills, and digital literacy skills. These skills are input from education experts and business leaders about the skills and knowledge that must be possessed to succeed in an increasingly complex life and work.

Learning and Innovation Skills

Core Subjects and 21st Century Themes

Lafe and Career Skills

Information. Media, and Technology Skills

Fig. 1. Rainbow of 21st Century Skills-Knowledge Source: Trilling & Fadel (2009)

Learning and innovation skills are skills that students need to master to enter the rapidly changing world, ready to enter the workforce. Machines and robots are slowly replacing manual and routine work. The jobs available in the 21st century require more complex knowledge and skills; creative work that uses skills; and higher-order thinking skills. Therefore, the education system must change; it must prepare students to face the world of work that develops with the times. The world

of work in the future requires workers to continue learning, be able to think critically, be able to solve problems and be able to think creatively and innovatively. When there is a problem, workers must be able to find solutions in creative ways or create new things so that no similar or recurring problems arise. Besides, workers are also required to be able to work in teams with different backgrounds, abilities, characteristics, languages, and experiences. Therefore, workers must be able to communicate well in order to achieve common goals. Thus, the world of education must be able to prepare human resources with skills as demanded by the world of work.

Having a career life skills means having the attitude and ability to be a leader and having a responsible attitude towards all deeds done. Respect and uphold ethical conduct. Have several necessary skills needed by individuals and social beings.

I could adapt to various changes. Able to improve the quality of self from various activities. Have an apparent reason and basis for each step and action taken. Have a sense of responsibility towards the environment and life and the community. Life and career skills include flexibility and adaptability, self-initiative and direction; social interactions and cross-cultural interactions; productivity and accountability; and leadership and responsibility.

Technology, like a snowball, influences various aspects of life, one of which is education. The 21st-century skill aspect that students must possess is technological skills to compete in the world of work. At present, almost all institutions or companies have used technology for administrative processes. Media and technology expertise includes information literacy, media, and Information and Communication Technology literacy, known by the acronym ICT. One of the skills that must be possessed is technology skills, specifically digital literacy skills.

Digital literacy is essential and is needed in order to participate in this modern world. With digital technology, people can interact with friends, family and anyone. Everyone is expected to process various information, understand messages, and communicate effectively for positive goals and avoid negative impacts. Students who do not master digital competence can be excluded from obtaining work and social interaction. Having digital literacy skills means it is not easy to get into provocative issues, hoax information, and digital-based fraud. Being able to think critically in using digital technology means being able to sort out the information obtained and make good use of it. Besides, being able to create, elaborate, communicate, and work according to rules or not violate the law.

What is meant by digital literacy skills is the ability or technical skills to access, compile, understand, and disseminate information (Bawden, 2001). Then Doughlas A.J. Belshaw (2011), said that the elements in developing digital literacy are understanding various contexts of the use of the digital world, thinking power in assessing content, creating something expert and actual, understanding network performance and communication in the digital world, confident self-responsibility, creative - do new things in new ways, be critical in dealing with content and be socially responsible.

## 1. 21st Century Language Learning

Language learning with 21st-century competencies is as follows. Firstly, communicative language learning or Communicative Language Teaching (CTL), aims at mastering communicative competencies, so learning is always associated with the context of communication. The characteristics of CTL are student-centered, learning the target language through language to communicate, and authentic and meaningful. The language and vocabulary learned are integrated and related to the communication context. Grammar is learned inductively or concluded independently by students. While the learning process is the process of trying and learning from mistakes to perfection. Fluency and accuracy are aspects of communicative skills learning objectives (Richard & Rodgers, 2014; Brown, 2007). Learners act as supervisors, needs analysts, counselors, and managers. In contrast, learners play an active role in bridging their needs as

language learners with the learning process, and the language learned. CTL strategies that can be used to develop communication skills, such as working in pairs/groups, negotiating meaning in communication, jigsaw, gathering information (surveys, interviews), transferring information (presentations, making graphics, making posters), information gaps, reasoning gaps, opinion sharing, and role-playing.

Secondly, collaborative language learning, Cooperative Language Learning (CLL) or Collaborative learning (CL) (Richard & Rodgers, 2014). CL emphasizes learning in collaborative activities between students through paired activities or in large or small groups. Learning characteristics, for example, provide conditions for natural language acquisition through paired and interactive group activities. Focus learning attention on lexical items, language structure, and communicative functions through interactive tasks. It provides opportunities to develop learning and communication strategies accordingly. Increases motivation and reduces learner's anxiety levels, creating positive situations. Besides, this model develops students' critical thinking skills. In this model, the teacher acts as the designer and instructor of learning and becomes a facilitator in communicative activities. At the same time, students will learn autonomously and are expected to participate actively in the learning process. Learning strategies can be used, such as three-step interview strategies or activities, round tables, think-pair-share or solve-pair-share, numbered heads together, and group investigation.

Thirdly, mobile language learning, utilizing students' interests in mobile technologies. For young people or generation Z, interaction with technology is common, although the technology still plays a small role in education. Mobile technology offers a variety of learning tools that can increase dynamics in learning, but not function as substitutes for teachers yet. Mobile technology can be used as a means and collaborate. Future learning will use technology that they can bring to learning. The use of mobile devices makes students independently and easily access additional material to clarify ideas or knowledge and easily share knowledge with others. For example, they share the subject matter with friends, send assignments to teachers, and work in groups using social media platforms such as *Whatsapp*, *line*, and other community chat groups using mobile media technology.

The use of social media to support, facilitate, improve, and improve learning processes is increasingly being used. Rodecker (2009) shows that the use of social media in learning supports innovation and encourages learning processes based on collaboration, personalization, changing patterns of interaction between students and students and between teacher and students. Mobile technology makes the task of finding, filtering, processing, evaluating, and managing information faster and more efficiently. Inevitably, digital communication technology allows for changing the curriculum.

The following are language learning strategies for teachers to overcome challenges and facilitate 21st-century learning. Teachers need to know the latest educational developments through face-to-face or online programs or discussion groups. Improve thinking through the perspectives of different people by inviting speakers about the latest educational programs. The teacher must understand that the teacher's current function as a knowledge facilitator is no longer the only source of knowledge—testing or assessment of learning outcomes using technology and comprehensive evaluation that is ongoing. The teacher associates the curriculum with skills and emphasizes the values of life for students. Substitute chalk-based learning for technology-based learning, sharing knowledge with other teachers. No word is too old to learn, using social media like *Facebook*, *Twitter*, *tumblers* that allow more extensive interaction. Use mobile applications to evaluate and assess student performance. Create a discussion and feedback room with the school and, if necessary, involve the school or leaders in the school to participate in the chat.

Generation Z students are well versed in using technology and multimedia. They can design and produce websites, radio shows, television, YouTube channels, mini-documentaries, and things

related to technology quickly. They can use technology for social change. Therefore, learners must adjust as early as possible. Integrate technology in learning so students can have life skills and become passionate thinkers and become confident individuals. Learners are required to be more planned and teach across disciplines using advanced technology, software programs and multimedia.

## 2. Higher-Order Thinking Skills (HOTS)

Higher-Order Thinking Skills are the targets that must be achieved as a result of learning. Brookhart (2010) divides HOTS into three categories, firstly, the process of transfer or transfer. Students can transfer knowledge or apply knowledge and skills to new contexts (things they have never thought of before). Students are not only able to remember but understand and use what they have learned. The material studied is meaningful so that it can be practiced and following daily life.

Secondly, think critically. Students can make appropriate assessments or produce reasonable criticism, which can then be used to reflect and make the right decisions. At present, the digital era, the era of the world, is filled with abundant information. Students are required to be able to assess and criticize a reference to know whether the information is trustworthy or not.

Thirdly, problem-solving. Students can recognize and find solutions not only for academic needs but also for life needs. To be able to solve these problems, students need HOTS abilities. Creativity and creation will be needed when new problems are encountered.

Anderson et al. (2001) published the results of Bloom's Taxonomy revision of learning objectives, namely the dimensions of knowledge and cognitive processes. The knowledge dimension contains the main content taught, while the thought process dimension is a description of the actions taken against the content being taught. The knowledge dimension consists of factual, conceptual, procedural, and metacognitive knowledge.

Tabel 1. Revisi Taksonomy Bloom (Anderson, L.W. Krathwohl, D.R.; 2001)

		. , , , , , , , , , , , , , , , , , , ,				
Taksonomi Bloom	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Revision Taxonomy Bloom	Remember	Understand	Apply	Analyze	Evaluate	Create

The strategy most often used to stimulate students to achieve a higher level mindset is asking questions, displaying questions, or referential (Darn, 2010). The teacher asks questions or instructions that stimulate students' thinking ability to be able to answer these questions. Display questions (commonly used in conventional tests) should be avoided or minimized because they do not sharpen students' critical thinking skills. The questions asked should be questions that require a logical process of thinking. Referential questions ask for information, opinions, explanations, or clarification of a statement, such as, What do you think about? If you have ... what ...? Have you guys ...? When and where....? This question requires a follow-up question that allows the teacher also not yet know the answer. To answer this question, students' mindsets explicitly developed the skills of analyzing, evaluating, and creating.

# 4. Project-Based Learning

Project-based learning will provide effective and efficient knowledge because it is experienced directly and practiced in a life context (Ulrich, 2016). Experience is the best way for students to gain knowledge or known as the concept of learning by doing (2014). Some research results show that Dewey, in a project-based learning Rositawati proven to be successful in improving language skills, such as improving vocabulary acquisition, grammatical comprehension, and students' reading and writing skills (Kovalyova et al., 2016) and directing students to reach 21st-

century skills, such as communication skills, collaboration, critical thinking, problem-solving, and creativity and innovation (BIE, 2016).

Project-based learning directs students to experience an inquiry process that enables students to develop the knowledge, skills and attitudes that are the basis of teacher assessment (Thomas, 2000). In the learning process, the teacher provides supervision and guidance to students who work in teams (collaboration). Students can choose in the process of planning and making projects. Projects are designed based on lead questions given by the teacher and carried out by independent inquiry. While the results of the project are answers to questions directed by the teacher. The results of the project are tested and presented and the assessment is done by the teacher based on a specific rubric for the project. The outlines of the project-based learning model outline are planning, implementing, and reporting (Stoller, 2006). However, in practice, project-based learning has more detailed stages that can be followed by language instructors, such as determining topics, communicative activities, preparing referral questions, designing project planning, preparing project implementation schedules, completing projects with facilities and teacher monitoring, testing and monitoring assessing projects, and evaluating project outcomes and learning activities.

### **METHOD**

This qualitative research uses the researcher himself as an instrument. The study subjects were Indonesian language learning in class XI odd semester, 35 students, at SMK (Vocational School) 79 Jakarta. They are learning material about analyzing and developing procedural texts using project-based learning. The researcher tries to explain how HOTS-oriented Indonesian language learning using project models in 21st-century learning is suggested to be implemented. The study was conducted in the following stages. First, do a literature study on what is meant by 21st-century skills, HOTS, and project-based learning. Then, the literature review results were tested on learning Indonesian class XI in the form of a project. The project is titled *Bijak Menggunakan Transportasi Publik* (Wisely Using Public Transportation). The subject matter is Procedure Text, and sub-subject matter Develop Procedure Text. The Basic Competencies (KD) to be achieved are KD 3.1-3.2 and 4.1-4.2 (Permendikbud No. 37, 201). The learning objectives to be achieved are students can produce or develop procedure texts by paying attention to content, linguistic aspects by paying attention to the structure of procedure texts.

### RESULTS AND DISCUSSION

Practicing students' critical thinking skills is done by the instructor with the questioning method. It can be seen at first until the Third stage, providing stimulus, pro-communicative activities, and referral questions. In addition, the questions are a problem that exists in the real daily life of students. They must answer these questions in the form of projects. Students are asked to criticize and provide solutions that can be implemented in their real lives. They must be able to recognize, assess, and criticize the problems given. Questions at the level of analysis, synthesis, and evaluation are strategies to stimulate students' thinking at the highest level.

The following are the stages of the project-based learning model undertaken aimed at honing students' critical thinking skills. The first step, determine the topic. The instructor used the topic following the KD to be achieved in this study mentioned above. Teachers provide stimulus in the form of images, videos, or stories. Topics are related to students' lives. In determining the topic, the instructor engages students by throwing HOTS questions. Have you ever seen anyone hit by a ticket or have you been hit by a ticket? What did you do wrong to get a ticket? What do you guys do if you get a ticket? At this stage, formal interactions occur, but are relaxed because the questions asked are questions that students can answer based on their experiences. Students will get used to asking questions when learning activities like this are often done.

The second step, communicative activities. Early learning activities, the instructor introduces new vocabulary, linguistic focus, and things that students need to know to be equipped in working on projects. Pre-communicative activities can also be done by repeating vocabulary, asking students to read texts, discussing new vocabulary and linguistic focus. The teacher directs HOTS achievement with questions, like, What do you guys do if you get a ticket? Does anyone want to add? What to do next? The text contains stages, meaning the text is text, what? To whom is the text addressed? At this stage, the questions are more in-depth or more detailed than the questions and answers in the first stage.

In the pre-communicative stage, the instructor ensures that students understand the contents and functions of the procedure text and understand the structure and linguistic elements of the procedure text. The teacher prepares forms or can use worksheets in student books that show students understand the structure and linguistic elements in the procedure text. If the teacher assumes students have mastered, the instructor can enter the next stage.

The stage of preparing referral questions. The teacher provides core questions that students must complete and answer through the project. The teacher has prepared questions before the learning process. Questions focus on the project to be carried out, the type, and the planned investigation. At this stage, the teacher stimulates students with exciting pictures, videos, or problems surrounding students' lives. Asking questions that lead students to think critically, like Have you ever seen the attitude of users of transportation that is not orderly, which makes other users annoyed, upset, or disappointed? From the question, followed by follow-up questions adapted to students' answers, such as, Yes, that is not very good and detrimental to others. There are more? What should it be? The teacher shows another video and asks, What do you think about the video? What is his disorderly behavior like? What are the leading causes of the violation?

The teacher gives lead questions, so students determine the type of project chosen. In your opinion, what is an interesting and useful way so that people have the awareness to be orderly and obey the rules that apply in public transportation? Think about it, what products can we use as a medium to introduce rules and regulations for the use of public transportation to the younger generation and the wider community? At this stage, students will provide a variety of interesting ideas. The instructor becomes the mediator in determining the project to be agreed on whether in the form of videos, comics, or posters about the procedure of riding public transportation. The instructor also conveyed the project's objectives, for example, *making a poster of procedures about community services*. The poster's purpose is so that *more and more young people and the public can behave in an orderly manner when using public transportation*.

At this stage, the core questions or questions that must be answered by the project are problems that must be solved. Problem-solving is carried out in the following stages.

The stages of designing a project contain the selection of the type of project based on the questions asked and the determination of activities in the process of completing the investigation. The teacher functions as a facilitator so that the project is logical and rational to do. This activity aims to practice critical thinking skills through project determination, problem-solving and planning activity investigative skills.

At this stage, the team or group is required to answer questions and design projects. Students are trained to be creative and innovative by practicing their abilities in developing, implementing, and conveying new ideas. Students are also expected to be open and responsive to new and different perspectives. At this stage, students put forward creative ideas conceptually and practically. Students are required to use their knowledge with concepts and situations following the questions. In the end, students are needed to adapt to situations and conditions and make a positive contribution.

Activities carried out, such as group division, determine the type of project to be carried out,

write down the planned activities to be carried out during the investigation process, and discuss so that an agreement is reached. Teachers can create tables that can be filled by students with specific activities and project steps planned by students.

Teachers and students make project phase agreements, such as determining topics; gathering materials; compiling the procedure text framework; developing procedures; making posters; cross-reading and peer criticism; perfect poster, presenting posters, and upload to social media. Besides, there is agreement on project provisions, such as shape, size, technique, and no less critical is project evaluation criteria. Students are invited to agree on proper poster criteria, so students know what is the target of assessment, for example, the completeness of the elements of procedure text (temporal conjunctions, persuasive sentences, and imperative verbs); clarity, detail of delivery; mastery of visualization techniques, and effectiveness of sentences, spelling, and punctuation.

Develop a project implementation schedule to train students to have time management skills, self-management, and work together. Students create a project timeline, a schedule containing activities, a deadline for completion, and the person in charge. Teachers conduct supervision or monitor and mentoring based on schedules that have been arranged by students.

Project completion with facilities and teacher monitoring is at the core of project implementation. Teachers conduct supervision and guidance from the beginning of the project process, from the investigation to the project completion. At this stage, students will have the skills to process data and information, solve problems, be independent, work together, and communicate with the community and with fellow friends in the project group.

Students will carry out activities based on the planned timeline, process the data obtained from the investigation, and compile content for the type of project that has been determined. Students consult with instructors about the progress of the project being carried out and make revisions if needed.

Test and assess the project so that all group members can be held accountable for their work. At this stage, students are asked to present the project work process and project results. In foreign language learning, students can use the target language. Other group members can give questions to the presentation team. If the project results take the form of drama, team members display the results of the drama that has been produced. Teachers conduct assessments based on rubrics and agreements that have been determined at the beginning of learning.

Evaluate project results and learning activities. This final stage is a reflection of teachers and students. The instructor provides suggestions for project results and team presentations, also reflecting on overall learning activities. Students reflect on the learning process, conveying their experiences, such as difficulties encountered during the project making process and the opportunity to revise the project results based on input from other teams and teachers.

From the project entitled *Bijak Menggunakan Transportasi Publik*, students are expected to have critical thinking skills and problem-solving. Proficient in using various types of thought, reasoning, or reason, proficient in understanding the interconnection between one concept and another. Students can make judgments and make decisions effectively in processing data and using arguments. Able to test results and build connections between information and arguments and process and interpret information through initial conclusions and test through the best analysis. Able to make solutions to various non-routine problems, compile and express, analyze, and solve existing problems. Students who are trained to think critically and are trained in solving problems will be able to think effectively, judge, make decisions, and solve problems.

Through the project, students become creative and innovative. Able to develop, implement, and convey new ideas, be open and responsive to new and different perspectives. Also, students can come up with conceptual and practical creative ideas, use their concepts and knowledge in different situations and, and use failure as a vehicle for learning. Students are also expected to have the ability

to create novelty based on their fundamental knowledge and be able to adapt to new situations and make a positive contribution to the environment. It is supported by the research results, which states that there is a significant influence on project-based learning models on creativity and learning outcomes (Wayan, Nyoman, & Nyoman, 2017). It is advised that educators to use project-based learning to improve creativity and learning outcomes. Providing students with authentic learning opportunities, though the collaborative learning projects only a short-term program, this study has shown that students can enhance and act on their motivation (Kato, 2016). The results of the study prove that problems in the context of interdisciplinary learning are fundamental and interdisciplinary research in the form of project-based learning has proven successful (MacLeod & van der Veen, 2020). Students from various disciplines (from Mathematics, Civil Engineering, and Industrial Management & Engineering) jointly design solutions for traffic. Working in teams to solve problems wrapped in project-based learning provides opportunities for more effective learning. Students feel welcome in their program and will be empowered to work with others.

Creative students are related to students who think critically. Creativity is not a skill brought from birth; creativity can be trained and developed through repeated practice (Trilling & Fadel, 2009). Creativity with new ideas can be developed from mistakes, failures, and previous experiences. It is expected that creative students, in the future, will have the ability to work creatively and innovatively.

Working in a team will practice communication and collaboration skills. Students can socialize and negotiate. The ability to collaborate refers to the ability to work in teams and be responsible. Communication skills refer to a person's ability to communicate in his head, heart, and mind, both verbally and in writing. If done, empowerment through collaboration will increase life opportunities for adults (Pacific Policy Research Center, 2010). Communication skills are needed in the world of work and life in the 21st century. Collaborative learning-based online has advantages in improving the ability to think, collaborate, and use technology, including submitting ideas, questions, and comments in oral and written form.

Aspects of communication skills are understanding, managing and creating effective and multimedia communication (ICT Literacy); use the ability to express ideas; use spoken language following the content and context of the conversation; has the attitude to listen, and respect the opinions of others; use logical thinking, structured by applicable rules; and has multilingual abilities (cross-cultural) The aspects of collaboration can work together in groups; adapt to various roles and responsibilities, work productively with others; have empathy and respect for different perspectives; and able to compromise with other members in the group for the achievement of the goals set. Students have information literacy skills meaning students can access information effectively and efficiently. Students can evaluate information that will be used critically and competently. Besides, students can manage information accurately and effectively to be used to solve problems encountered. Higher-level thinking skills are needed in considering information, media and technology in the student environment.

Students can gain 21st Century skills through project-based learning that is done in teams. Working in a team requires leadership skills, can be as a leader, and be led. In addition, gathering materials for project needs also train their ability to use technology, such as expertise in gathering information, media and technology. The next process is a discussion to determine the project agreement to be worked on and start planning. It trains life skills such as critical thinking, talking, asking, discussing, and deciding on something. While at the stage of designing projects that are usually in the form of products, students are required to be innovative. They experience a beneficial learning process that can be applied when they enter the workforce.

The world of education likes it or not, and it must follow the changes of the times. Education is needed to face challenges both locally, nationally and globally. Improving the quality of education

is believed to prepare a competitive society in a more developed global world. If you look for reference material in the past, you should go to the library, now you just surf in cyberspace or just type in google. The development of models, strategies, and learning methods is also increasing. If in the past, the teacher center, now turned into a student center.

The task of preparing students for the 21st century is expected to be achieved by practicing the 21st-century skills, previously mentioned. In addition, students are trained to think critically through learning; one of them is project-based learning. By practicing these stages continuously, students have been prepared for the 21st century.

#### **CONCLUSION**

Language learning has focused on improving the language competency of students to turn into language learning that prepares students to enter the workforce by providing 21st-century skills. Learning and innovation skills, career life skills, and digital literacy skills. Through language learning, students gain 21st-century competence, namely mastery of communicative, collaborative, and mobile technology competencies. At the end of learning, students are expected to not only gain knowledge about language. However, they can utilize that knowledge or apply it in their lives. In the learning process, students learn to assess, criticize, and reflect on what is learned. At the end of learning, students can solve problems in the context of the project above is an academic problem, but the problem can also be related to problems that exist in the environment around students. To be able to solve the problems given by the instructor, students carry out the process of thinking at the level of analysis, evaluation, and creating, in this case, creating a poster about *Bijak Menggunakan Transportasi Publik*.

The use of project-based and HOTS-oriented for language learning, students, learn critically with the questioning method. This learning makes students accustomed to working in teams, overcoming problems, becoming leaders, discussing, speaking, presenting, creative and innovative people, and utilizing technology well. All that is received above is the 21st century used in the world of work they need.

### REFERENCES

- Anderson, L.W., dkk. (Ed.). (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. New York: Longman.
- Bawden, D., (2001), Information and Digital Literacies; a Review of Concepts, Journal of Documentation, vol. 57(2), pp. 218-259.
- Belshaw, D.A.J., (2011), What id "Digital Literacy"?, Durham University, United Kingdom.
- Brookhart, S.M. (2010). How to assess higher order thinking skills in your classroom. Alexandria: ASCD
- CNBC Indonesia. (2019). The Main Issue in Davos, What is the Industrial Revolution 4.0?. accessed on 26 April 2020, from https://www.cnbcindonesia.com/news/20190120194411-4-51502/jadi-isu-utama-di-davos-apa-itu-revolusi-industri-40
- Darn, S. (2010). Asking questions. (https://www.teachingenglish.org.uk/article/asking-questions, accessed on 26 April 2020.
- Kato, F. (2016). Enhancing integrative motivation: The japanese-American Collaborative learning project. Cogent Education, 3(1). https://doi.org/10.1080/2331186X.2016.1142361
- Kovalyova, Y. Y., dkk. (2016). Project based learning in teaching communication skills in English as a foreign language to engineers students. International Journal of Emerging Technologies in Learning, 7 (4), 153-156.
- MacLeod, M., & van der Veen, J. T. (2020). Scaffolding interdisciplinary project-based learning: a case study. European Journal of Engineering Education, 45(3), 363–377.

- https://doi.org/10.1080/03043797.2019.1646210
- Mckinsey Company. (2019). The future of work in America (https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Future%20of%20Organi zations/The%20future%20of%20work%20in%20America%20People%20and%20places%20tod ay%20and%20tomorrow/MGI-The-Future-of-Work-in-America-Report-July-2019.ashx,
  - accessed on 25 April 2020.
- Pacific Policy Research Center. (2010). 21st century skills for students and teachers. Honolulu: Kamehameha Scholls, Research & Evaluation Devision.
- Permendikbud (2018). Minister of Education and Culture Regulation Number 37 of 2018 Concerning Core Competencies and Basic Competencies of Learning in the 2013 Curriculum on Basic Education and Secondary Education.
- Richards, Jack C. Theodore S. Rodgers. (2014). Approaches and Methods in Language Teaching Third Edition. UK. Cambridge University Press.
- Richards, Jack C. Theodore S. Rodgers. (2014). Approaches and Methods in Language Teaching Third Edition. UK. Cambridge University Press.
- Rostitawati, T. (2014). *64/5000* John Dewey's Educational Concepts. Journal of Islamic Education Management, 2 (2).
- Schwab, K. (2016). The Fourth Industrial Revolution. (https://luminariaz.files.wordpress.com/2017/11/the-fourth-industrial-revolution-2016-21.pdf, accessed on 24 April 2020.
- Stoller, F. (2006). Establishing a theoretical foundation for Project-Based Learning in second and foreign language contexts. In Beckett, G., H. & P. C. Miller (Eds.), Project-Based Second and Foreign Language education: past, present, and 77 Volume 3, Number 1, June 2019 ISSN 2580-3344 future (pp. 19-40). Greenwich, Connecticut: Information Age Publishing.
- Thomas, J. W. (2000). A review of research on project-based learning. (https://tecfa.unige.ch/proj/eteach-net/Thomas\_researchreview\_PBL.pdf accessed on 24 April 2020.
- Trilling, B., and Fadel, C. (2009). 21st Century Skills: Learning for Life in Our Times, John Wiley & Sons, 978-0-47-055362-6.
- Ulrich, C. (2016). John Dewey and the project-based learning: landmarks for nowadays Romanian education. Journal of Educational Sciences & Psychology, 6 (78), 54-60.
- Wayan, R. N., Nyoman, K., and Nyoman, R. (2017). Project-based learning model, creativity, and student learning outcomes. Indonesian Education Journal, 06(01), 60–71.