THE IMPLEMENTATION OF 21st CENTURY LEARNING TO IMPROVE HIGH LEVEL THINKING SKILLS THROUGH VARIOUS MODEL

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Abstract
The development of science, technology and art as a result of globalization requires us to adjust to these developments. One of the competencies that learners have in facing globalization as a hallmark of 21st century learning is critical thinking skills and problem solving. The characteristics of 21st century learning include critical thinking skills, problem solving, communicating, and collaborating. Critical thinking skills and problem solving are considered as fundamental skills in 21st century learning. By critical thinking, learners are trained to construct science, identify, discover, develop, test, analyse, and generate conclusions. Critical thinking, discipline, responsibility, cooperation, caring for the environment are the characters that learners must have in 21st century learning. High-level thinking skills such as analyzing, evaluating, and creating can be applied simultaneously in well-designed learning environments.

Keywords: 21st Century Learning, High Level Thinking, Various Model

1 INTRODUCTION
21st Century Learning is an educational paradigm that developed at the present time. The paradigm is no longer centered on the educator (teacher-centered) but has centered on the learner (student-centered). The development of Curriculum 2013 for secondary education and curriculum for higher education of KKNI emphasis on learners to think critically and independently in facing the demands of the development of science, technology and art, or the changing times. In relation to this, the curriculum of 2013 mandates the existence of an active learning in the classroom and outside the classroom through an approach scientifically as inquiry learning, discovery, problem-based learning, project-based learning, and cooperative learning (Sudarmin, 2016: 1). Ayuningtyas found the nature of Curriculum 2013, learners are encouraged to seek out multiple sources of information and are involved in the learning process through the scientific approach with the so-called 5 M, i.e. mengamati (observe), menanya (ask), mencoba (try), menalar (reason), and mengkomunikasikan (communicate) in an effort to improve the ability to think critically (https://www.academia.edu/31834113/konstekstual_pembelajaran_abad_21_dan_pengaruhnya_pada_kemampuan_belajar_anak).

National Education Standards Agency (BNSP, 2010: 38), which is contained in the paradigm of a National Education in the 21st Century, said the educational paradigm of a democratic, game oriented, full of disclosure, challenged, trained sense of responsibility, will stimulate students to come for happy not because of compulsion (Hanib, 2017: 1). According to the 21st Century Partnership Learning Framework in BNSP (2010: 44) Hanib (2017: 1), there are several competencies that must be owned by the human resources of the 21st century, namely (1) critical thinking and problem
solvenskills; (2) communication and collaboration skills; (3) creativity and innovation skills; (4) information and communication; (5) contextual learning skills; (6) information and literacy media. The learners are expected to have those competencies in following the learning process. Therefore, educators must be able to design and develop a learner-centered learning and to encourage learners have the competence or skills of the 21st Century learning. The role of educator is very important as a facilitator and motivator.

The competency demands that must be possessed of learners in the 21st Century learning still contrast to the real conditions of learning today. In reality, there are still less educators facilitate the learners to think critically optimally in the learning process. Educators have not been using a variety of learning models include: methods varied, varied media, varied approaches, and varied tools, so that learning is not monotonous which make learners bored in attending the learning process. Learning is also centered on educators not yet centered on learners. Such learning is not yet a feature of learning that support 21st Century learning. Snyder (2008: 7) suggests the characteristics of learning that can improve the ability to think critically is a learning that involves active learner. Critical thinking is not easy to do, but the ability to think critically can be trained and developed by educators during the learning process. Therefore, educators need to apply a learning model that involves an active learner and is able to think critically. This is in line with the opinion of Snyder (2008: 8) that critical thinking skills must be developed, trained and continuously integrated into the curriculum to stimulate an active learner in the learning process. Learning model that can be developed in accordance with the principles of the Curriculum 2013, KKNI, research based learning (PBR), 21st Century learning are: problem-based learning, cooperative learning, contextual learning, inquiry learning, discovery learning, and project-based learning. Therefore, this paper will discuss teaching models mentioned above.

2. Discussion
1. 21st Century Learning

In this 21st century learning, the institution needs to consider coverage processing of the graduates, in order not only limited academic ability, but also leads to the abilities and skills that will help graduates to compete in a global world and the digital development today. Partnership for 21st Century Skills (2007) asserts that the 21st century skills is formed from a solid understanding of the content knowledge which is then supported by a range of skills, expertise, and literacy required by an individual to support the success, both personally and professional. Further explanation is that 21st century skills arise from an assumption that the individual is currently alive and live in the technology environment, where there is abundant information, the acceleration of technological progress is very high and the patterns of the new communication and collaboration. Success in the digital world is highly dependent on the skills of the learners in the digital era, including critical thinking skills, problems solving, communicate, and collaborate (Dewi, 2015: 2). These skills need to be owned and required to be able to survive and compete in a global and digital world that has a very rapid changes (Metiri Group, 2003).

The following figure describes the essential elements that need to be raised in the learning process to improve the skills of the 21st century. These elements are the life and career skills, learning and innovation skills, and information media and technology skills. To face the challenges of work and life of the 21st century, these three elements must be interconnected with each other. It is because knowledge, skills, and competency are needed to be mastered by learners. Therefore, educational institutions should not only focus on the mastery of knowledge of the core subject but also need to pay attention
to academic knowledge which is higher by integrating 21st Century skills into learning activities (Partnership 21st 2009: 21 in Dewi, 2015: 3).

21st century skills are organized into 4 categories as follows:
1. How to think: creativity and innovation, critical thinking, problem solving, making decisions, and learning to learn.
2. How to work: to communicate and work together.
3. Tools for work: general knowledge and skills of information and communication technology.
4. The way to life: career, personal responsibility and social including cultural awareness and competence (AT21CS, 2012 in Dewi, 2015: 3).

Definitions of this 21st century skills related to the various types of disciplines and many aspects of life. This 21st century education not only involves aspects of skills and understanding, but also emphasis on the aspect of creativity, collaboration and speaking ability. Technology, behaviour and moral values are involved, but it also emphasizes the critical thinking and communication skills which are more challenges in the learning process rather than memorization and rote learning. (P21, 2006, in Dewi, 2015: 3). The following will be explained the skills that need to be owned by the learner in the 21st century learning include:

a. Critical Thinking and Problems Solving

Critical thinking skills and problem solving skills considered as fundamental in the 21st Century learning. Each individual and at every level of education, learning and instruction need to integrate knowledge of learning content, by using critical thinking and problem solving skills activities (Trilling and Fadel: 2009). This is in accordance with the revision of Bloom's Taxonomy which is using the term remember, understand, apply, analyze, Evaluate and create (Anderson and Krathwohl, 2001).

Some research results show that the merging of some skills in top can improve learning outcomes. The skills of remembering, understanding, applying, analyzing, evaluating and creating can be applied simultaneously in well-designed learning environments and loaded with different types of project-based activities. (Trilling and Fadel: 2009).

b. Communicate and Collaborate

The education system needs to pay attention to good communication skills, both orally and in writing. 21st Century learning also requires a comprehensive portfolio of individuals to communicate and collaborate to improve the ability to learn and working together (Trilling and Fadel: 2009). Furthermore, Trilling and Fadel (2009) explains that these skills can be acquired through a variety of methods, but the most effective way is through social communication, to communicate and collaborate directly either by face to face or through virtual media.

c. Creativity and Innovation

The need for creativity and innovation are high to be part of the main skills of the 21st Century learning. This is related to the demands of the 21st Century which requires new products that are more innovative and require a higher level of creativity. Nowadays, knowledge is not enough to offset the acceleration of innovations that greatly appreciate the ability to solve problems in new ways, find and adapt new technologies, or even find a new branch of science, and completely newest industry (Trilling and Fadel: 2009). It also inspires changes in the stem of education such as in Finland and Singapore which began include the aspect of innovation and creativity as the main priority of the indicators of success of learners.
d. Digital Literacy

Individual skills in digital literacy and information needs to be improved very well in the workplace, at school, at home or in the community. Such improvements are necessary in relation to the following aspects:
- Accessing information effectively and efficiently;
- Evaluate information critically;

In this case, the learner must be able to ensure that the information obtained is reliable, accurate and reliable. They should be able to choose the priority information based on their sense of urgency and attractiveness and can also organize and display the information attractively. The good thing of accessing, evaluating, applying, and organizing information, using resources appropriately and effectively is only part of the skills under the digital literacy. Understanding how different types of media can be used to communicate messages, how to choose the right media from a number of options currently available and how to effectively convey messages using those media are important skills to have in the 21st Century (Trilling &Fadel, 2009).

2. High-Level Thinking

Liputo (1997) in Slameto (2016: 219) explains that the process of thinking is a conscious mental activity and seeks to develop and acquire knowledge, make decisions, plan, solve problems, and to assess the action. In the process of thinking, contained inside the dubious / ensure, to design, calculate, measure, evaluate, compare, sort out or differentiate, connect, interpret, see the possibilities that exist, analyzing, synthesizing, draw conclusions from the premise that there is, considering, and deciding (Sobur 2003 in Slameto, 2016: 219).

Bloom's Taxonomy uses the same term thinking skills with cognitive or intellectual abilities. Cognitive ability or intellectual ability or thinking ability include the regions of remember, understand, apply, analyze, evaluate and create (Anderson and Krathwohl, 2001), which is illustrated in the following pyramid chart.

Knowledge, can be interpreted with knowledge. This sub-region is concerned with aspects of memory, more precisely interpreted given to the materials that have been studied. Comprehension, can be defined by the ability to capture an understanding of something. In this sub-region, one can translate something. Application, can be defined by the ability to apply what you've learned into a realistic situation. Analysis, can be defined by the ability to specify, connect, outlining the details and interconnected between one part with the other part. Synthesis, can be defined by the ability to bring together separated things into a unified reality. Evaluation can be defined by the ability to determine good and bad, worth or worthless. (Haryati, 2017).

Liliasari (2008) distinguishes the ability to think into two parts, namely the ability to think basic and high-order thinking that is a combination of some basic thinking skills. High-level thinking skills is the ability to problem solving, decision making, creative thinking, and critical thinking. All high-level thinking skills described above can be developed through learner-centered learning (Bakry, 2013).

3. Learning Models

The learning model is part of the learning structure which has a broad scope in which approaches, strategies, methods and learning techniques are occurred. One important aspect of a learning model is the syntax which is a standard step that must be taken in the implementation of the model. The syntax should be reflected in the specific
learning steps detailed in the core learning activities. In developing the Lesson Planning (RPP) or SAP (Unit Class Events) applying a particular model of learning, educators should reflect the chosen model of learning syntax activities, as well as a learning activity should reflect how the behaviour and models of interaction required. Educators as lesson planning developers should have an adequate understanding of learning models so that its implementation in appropriate learning and the learning objectives can be achieved effectively. (Sarwanti, 2016: 1).

There are several 21st century learning model which is a research-based learning method that is also an application of active learning methods in higher education, namely:

1. **Problem Based Learning (Problem Based Learning / PBL)**

Problem-based learning (PBL) is a learning model that presents a contextual problem that stimulate students to learn actively. In classes that implement PBL, all-students work in teams to solve real-world problems. PBL model is an effective model for teaching higher-level thinking processes (analysis, synthesis, evaluation, creativity). This learning helps students to process information in their brain and prepare their own knowledge about the social world and its surroundings. PBL learning suited to develop the core knowledge or complex (Sudarmin, 2016: 7). PBL is a learning model based on the problem. By using learning that begins with problems, students learn a concept and a principle as well as solve problems. PBL better in improving critical thinking skills, self-learning training, and problem-solving in real life situations. Chen (2008: 15) explains that effective learning is learning that relates to how students think to solve a problem.

Hung et al (2008: 488-489), Kolmos et al (2007: 6), explains that the problem based learning has the characteristics as follows: (1) problem focused, as students learn based on problems, (2) student centered, i.e. the learning process centered on the student, (3) self-directed learning, the students control their learning process itself, although still within the corridor learning objectives that have been determined, (4) self-reflective, such as students create a reflection in the learning process and results.

Ward (2013: 47), suggests some steps to implement problem based learning, among others: (1) lecturer create discussion groups and determine the learning objectives to be achieved, (2) lecturer giving a problem to students to be used as learning materials, (3) identifies student learning based on problems and issues tailored to the learning goals, (4) students carry out self-directed learning to look for information to solve the problem, and (5) evaluate student outcomes and their processes in the activities of the learning process (Haryati, 2017: 5).

2. **Cooperative Learning**

Cooperative learning model was developed to reach at least three important learning objectives, namely academic learning outcomes, acceptance of diversity, and the development of social skills. Slavin (1997) in Sudarmin (2017) states cooperative learning is a learning model with active students work in groups that have heterogeneous capabilities. Cooperative learning refers to the learner's models that encourage students to work together in small groups and help each other in learning. A cooperative learning as a set of teaching strategies used by teachers in order the students help each other in learning. There are four kinds of cooperative learning model proposed by Arends (2001) in Sudarmin (2017), namely; (1) Student Teams Achievement Division (STAD), (2) Group Investigation, (3) Jigsaw, and (4) Structural Approach consisting of Think-Pair-Share (TPS), and Numbered-Head-Together(NHT).

As for steps to STAD are: (1) Lecturer explaining / presenting a lesson, (2) Students learn the team: students work in their team, guided by the activity sheets, learners have to complete course materials, (3) Lecturer gives the test by giving quizzes or other individual tasks, (4) Lecturer provide rewards. The team
score is calculated based on the increase of the team, and a certificate, periodic report or notice board grade used to reward the team that scored the highest score.

Group investigation steps, namely: (1) students select the particular subtopic within a common problem that usually stated by the lecturer, (2) students and lecturers are planning learning procedure and specific objectives that are consistent with subtopics have been, (3) students carry out the plan they have set on the second stage. Lecturer closely follow the progress of each groups and provides grants when needed, (4) students analyze and evaluate the information obtained in the third stage and plan how the information is being summarized and presented in class, (5) some or all of the groups present the investigating results, with the aim that all students know about the topic. This presentation is coordinated by lecturer, (6) evaluation may be in individual or group.

The implementation of Jigsaw steps is as follows: (1) The lecturer divides a class into groups, with each group consisting of 4-6 students, (2) after students discussed in the expert group and the original group, hereafter, a presentation of each group, (3) lecturers give students quiz for individual students, (4) the lecturer gives awards to the group through a score of awards. The material should naturally be divided into several pieces of learning materials.

TPS steps are: (1) thinking: lecturers provide questions or issues related to the material to be studied and ask students to think about the question or the issue independently for some time, (2) pairing: lecturer asks students to work in pair with other students to discuss what they think at this stage of thinking. Interaction at this stage is expected to share the answers if you’ve asked the question or share the idea if a problem has been identified. Usually lecturers give time 4-5 minutes for pairs, (3) share: the lecturer asks couples to share classically about what they have discussed. This effectively done with the pair ran in turning way for the sake of a couple, up to about a quarter of couples have the opportunity to report.

The steps for NHT are: (1) numbering: lecturers divide the students into groups of 3-5 persons membered and each member is given a number from 1 to 5, (2) presenting question: lecturer asks questions to the students. This question can be in the form of interrogative sentence or guidance, (3) thinking together: students unite its opinion on the answers to these questions and convince members of his team know the answer, (4) answering: lecturer call students with a certain number, then he answers the questions given for the whole class (Haryati, 2017: 5-6).

3. Contextual Teaching and Learning (CTL)

Contextual Teaching and Learning (CTL) is a learning based on a constructivism approach. Constructivism approach assumes that students learn best when in an environment that is not guided (guided in the minimum limit). The implication is that the knowledge gained students through the discovery or construction of a variety of information that they find themselves (Kirschner, 2006: 75). Psychologically, knowledge constructed by the students will be able to interpret all the events that happen in the real world (Jonasen, 2011: 218)

Contextual learning is a conception of learning that helps faculty connect lecture materials with real world situations. CTL also help motivate students to make connections between knowledge and its application to their lives as family members, citizens, and workers. The learning process CTL focuses on three concepts: (1) emphasize the involvement of students actively, (2) encourage students to be able to find a connection between the material learned to real life situations that exist, (3) encourage students to apply the skills they have in everyday life (Ward, 2013: 49).

There are seven principles in the CTL which are the CTL application in classes: (1) constructivism, which consider that
knowledge is no longer a set of facts, concepts, and rules which are ready for students, but must be constructed / built by students and lecturer facilitation. Students learn by experiencing themselves, construct knowledge, and then give meaning to that knowledge. Students must know the meaning of learning and realize it, so the knowledge and skills acquired can be used for the provision of his life; (2) inquiry, learning based on activities students do a search with the ultimate goal of students able to find something that is expected of the learning process to achieve the desired competence; (3) ask, lecturers should be able to arouse inquisitive students with activities asking and answering questions, because it required the activity of students in the learning process; (4) learning societies, means that in the learning process it is necessary to create group work, a cooperative learning society; (5) modelling, the learning process by presenting the model as an example of learning, or the learning process by demonstrating something as an example that can be imitated by students; (6) reflection, precipitation learned experiences done by reordering the experience he had endured in learning; and (7) the assessment of authentic / real, the process undertaken lecturers to collect a variety of information about the development of the learning takes students through a variety of sources and means (Haryati, 2017: 6-7).

4. Inquiry Learning

Inquiry Learning is based on the cognitive theory of Piaget. According to Piaget, there are three stages in learning, namely assimilation, accommodation, and equilibration. Assimilation is a process of adjustment / unification / integration of new knowledge / new information with existing cognitive structures in the minds of students. Accommodation is the process of adapting of the student cognitive structure with new knowledge. Equilibration is the balancing process / mental adjustment after the process of assimilation or accommodation. Equilibration can be said well, if people are able to organize information in good order, clear, logical, and equilibration can be said weak, when regular store less information, people tend to think complicatedly, illogical and convoluted (Haryati, 2017: 22).

Bruner’s cognitive theory assumed a learning process in which students will go well and creatively if educators give students the opportunity to find a rule (concepts, theories, definitions) through examples that illustrate the rule becomes the source (Irawan, 1994: 11). The success of the learning process is influenced by the optimization of the students in the use of cognition in connecting prior knowledge with the experience during the learning takes place. Prior knowledge plays an important role in the method of teaching inquiry.

Inquiry learning process helps students to develop the skills of inquiry, is a very important skill in the 21st century. Inquiry learning approach is an approach to learning that puts questions, ideas, and observations of the student at the center of the learning experience. Inquiry learning refers to the constructivist ideas in which students construct new ideas or concepts based on the students’ earlier experience and knowledge. These lessons also focus on encouraging students to take advantage of prior knowledge and experience in exploring their questions (Firmadani, 2017: 3).

Sudarmin (2016: 6) found that for applying inquiry model, a lecturer must actively thinking and behaving that facilitate the students to be able to make the identification of what will be learned. Lecturers help students to be active in making inquiries, determine strategies to gather information and process information. This approach requires lecturer that is
creative in developing learning and working with a good plan. When students learn, they already have a clear target. The learning approach ran actively which gives a pretty good challenge for lecturers or students. Lecturer and students finally active and are in the same perspective with the learners. Even in certain situations lecturers and students will learn about the same thing. Inquiry learning model will be more aware of all students about the process of investigation and to learn about the procedure and scientific work directly. Approach to learning by inquiry model consists of five stages, namely: (1) Presentation stage or exposing the most curious problem students want to know; (2) the collection and verification of data, (3) experiment stage, (4) organize data and formulate an explanation stage, (5) an analysis of the proceedings stage.

Ali in Firmadani (2017: 3) explained that there are three kinds of methods of inquiry: (1) guided inquiry, the students are given tasks that are relevant to be completed either through group discussions and through individual work objective that students are able to solve the problem and draw conclusions independently; (2) free inquiry, in this study the student must be able to identify and formulate a range of issues which are going to be investigated. During the learning process, the lecture guidance cannot be given. Advantages of free inquiry is that students can find ways of solving the problem more than one way, find new solutions to problems that other people have not been found; (3) modified free inquiry. This model is a collaboration between the approach of free inquiry and guided inquiry approach. Hanib (2017: 2), suggests that the development of a model of guided inquiry known as process-oriented guided inquiry learning (POGIL). POGIL is a learning model that combines guided inquiry and cooperative approach. The excess of POGIL supported by some of the results of previous studies. Eberlien, et al (2008) compared the PBL (Problem Based Learning), PLTL (Peer-led Team Learning) and POGIL prove that POGIL can improve performance, value, students and teachers found the classroom environment more pleasant. Rohmah (2013: 1) also expressed POGIL learning model to train the students' critical thinking skills.

Ward (2013: 37) explains that there are several steps in the implementation of inquiry learning, namely: (1) exploration, ie activities by digging a wide range of information related to the concepts that will be studied, (2) the identification of the problem, namely on identifying the problem based on the information obtained by students, (3) the filling of a hypothesis, that the students formulate hypotheses. The hypothesis is a temporary answer of a problem that has been formulated student, (4) the collection and analysis of data, such as students initiate action to collect data and information from various sources in order to test / answer hypothesis, (5) reflection, the students carry out activities to reflect back on the process learning (Haryati, 2017: 7-8).

5. Discovery Learning
Bruner Ward is an expert on discovery learning. Ward (2013: 40), states that meaningful learning are the lessons learned from the process of discovery, discussion and solving problems. The learning process is not solely due to the students modelled with a certain concept, but students tend to build concepts based on what was found in the discovery process. The concept of development is the focus of the learning theory of Bruner and Piaget's theory of constructivism.

Discovery learning methodis learning theory which is defined as a learning process
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that occurs when the most students are not presented with a lesson in its final form, but is expected students actively in organizing themselves. Discovery learning have the same principle with the inquiry and problem solving. There is no difference of principle on this three terms, the discovery learning more emphasis on the discovery of concepts or principles that were previously unknown. The difference with the discovery is that the discovery problem that faced by student are problem which is created by lecturers. In applying the discovery learning method, lecturers act as mentors to provide the opportunity for all students to learn actively, as the opinion of the lecturer should be able to guide and direct the learning activities for students according to the purpose. Conditions such as these want to change the teaching and learning activities are teacher-oriented be student oriented. In active learning, lecturer should provide an opportunity for students actively to become a problem solver, a scientist, historian, or mathematicians. The teaching material is not presented in its final form, but most students are required to undertake various activities to gather information, comparing, categorizing, clicking analyses, integrating, reorganizing the materials and making conclusion (Haryati, 2017: 8-9).

6. Project-Based Learning

Project-based learning (PBL) is an innovative learning approach that implement various strategies that lead to an increase in the 21st century skills. PBL is a learning approach that is controlled by the learner through the help of teachers. In this case, the learners gain understanding through questions that can be answered their curiosity (Bell 2010). Further, Bell (2010) explains that the students determine their research questions themselves then guided by the lecturers to do research, then the results of this project were presented to an audience that is predetermined. Bucks Institute of Education (BIE) Team in the book “Handbook of Project Based Learning ” (2008) in the Dewi (2015: 5) outlines five principles of project-based learning as can be seen in the chart below.

![Figure 2. The principles of project-based learning](image)

From the figure above, it can be seen that a project-based learning should begin with a real purpose of a product that will be produced at the end of the project. Furthermore, teachers must determine the driving question of the project before submitting the project to the students. In addition, this type of assessment and research groove need to be determined from the beginning to ensure the direction of the project will be implemented by the students. The last principle to note is how the teacher will manage the implementation of the project to run smoothly in accordance with the stated goals (BIE, 2008). PBL has a variety of purposes including the development of a positive attitude of students, critical thinking skills, working together, and self-learning ability (Pestrosino, 2007). In this case, students are encouraged to use critical thinking skills that will assist them in building a community of learners to master content collaborative learning. With the implementation of PBL, students are provided with the ability life skill that will be useful for life in the future. In line with the opinion of Pestrosino (2007), Edutopia also explained that through the PBL students learn to work together and develop skills that directly relate to their personal needs, in which they are required to solve the real problems that are contextually very important to them.

In practice, PBL emphasis on student-centered learning and puts the teacher as a facilitator, while the students work actively...
in small groups to teach each other and help her friends and formed his own knowledge (Eng, 2000). To that end, the PBL students conduct meaningful interactions and work equally rooted in the real world outside the classroom so as to enhance student motivation to continue to collaborate in solving problems and finish their projects (JeonEllis, Debski & Wigglesworth, 2005). Bucks Institute of Education (BIE) (2008) states that the project-based learning, students pass through a long process that requires them to respond to complex questions, problems or challenges. Students are given the freedom to choose and submit their views in determining the flow of the project. A project needs to be planned, managed and measured carefully to help students learn the core competencies of the implementation of the project, while practicing their 21st century skills, namely, collaboration, communication, creativity and critical thinking. From project-based learning is expected to create a quality product (high-quality) and authentic of the students.

Sudarmin (2016: 6) suggests PBL is a learning method that uses a project / activity as a medium. Learner exploration, assessment, interpretation, synthesis, and information to produce various forms of learning outcomes. PBL is a learning method that uses the issue as a first step in collecting and integrating new knowledge based on experience in the activity significantly.

C. Conclusions and suggestions

Nowadays, there are many units of secondary level education who has implement Curriculum in 2013 (kurtilas). At the level of higher education also have conducted a curriculum is based on KKNI. Both kurtilas and KKNI curriculum in the learning process, refer to active learning in accordance with the paradigm of student-centered learning which refers to the 21st century learning, research based learning, and a scientific approach. Implementation of learning 21st century which should be applied in the process of learning that can be through a variety of models including through problem-based learning model, cooperative learning, contextual learning, inquiry learning, discovery learning, and project-based learning. 21st Century learning will provide supplies donations to the lecturers and students to be able to have the ability and skills of higher level thinking critical and indispensable in dealing with the implementation of curriculum-based KKNI in a global world and the digital which are changed very quickly.

Suggestions is proposed to lecturers in order to utilize learning models in the teaching of the 21st century in order to improve the quality of the lecture and student results. Suggestion for students is getting scientific learning experience which increased understanding of pedagogy as well as high-level thinking skills.
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