Implementing the School Curriculum in the Framework of the 21st Century Skills in Indonesian Context

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"However, in the 21st century, the true test of rigor is for students to be able to look at material they've never seen before and know what to do with it"

James A. Bellanca

Abstract: - *Teaching in the 21st century might be a challenging activity for teachers who experienced learning and teaching in different era. It is because the students experience and cultivate different learning characters and environment. This paper is trying to elaborate how the Four Cs of the 21st century learning skills, namely critical thinking and problem solving, communication and collaboration, creativity and innovation, and digital literacy skills, can be facilitated in the current Indonesian curriculum, namely the 2013 curriculum. Further, it puts forward a classroom example of the integration of the Four Cs in a teaching plan of an English listening lesson.*

Keywords: - *Indonesian curriculum, the 21st century skills, a classroom example*

A. Introduction

There was a significant period in the history of Indonesian school curriculum. It was in 2004 where the Indonesian school curriculum underwent two changes which were in harmony with the "international best practice" (OECD/Asian Development Bank, 2015: p. 268). Indonesian curriculum shifted its focus from the content-based curricula to competency-based curricula and started to decentralize the curriculum implementation.

Currently, the school curriculum used is the 2013 curriculum. There are three aspects of learning which became the concerns of the curriculum, namely knowledge (the know what aspect), skills (the know how to do aspect), and attitude (the know why aspect). Those three aspects of learning should be incorporated in the learning processes (Kementerian Pendidikan dan Kebudayaan, 2013b).

The learning approach used shifted from EEC (elaboration, exploration, and confirmation) cycle in the previous curriculum to the scientific approach in the 2013 curriculum. The scientific approach has some stages in the learning, namely observing, questioning, associating, experimenting, and communicating and networking.

In every curriculum change, educational practitioners need to pay attention to the efforts of meeting the needs of their students, their school and their communities (Barton, Garvis and Ryan, 2014). The change of curriculum was affected also by the change of the society; the changes of the world economic condition, of the job requirements. Therefore, the education has to prepare the students to that condition. This means that the education should prepare the students to live in the 21st century. Figure 1 describes the 21st century knowledge, characters and skills.
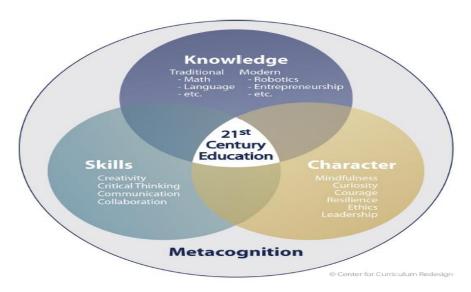
Figure 1 The 21st century education (Bialik, Bogan, Fadel, & Horvathova, 2015, p. ii)

To enable students to participate and contribute to the development of the world, school and university teachers need to pay attention on 21st century skills demands (Suparno, 2015: 4). There are four major components, or categories, to 21st Century Skills (Booke; Theisen, Archer, Smith, Sauer, Small, Abbott, Magner, Saltrick, Wesolowski, 2011). They are "core subjects, learning and innovation skills, information, media and technology skills, and life and career skills", as pictured in Figure 2.
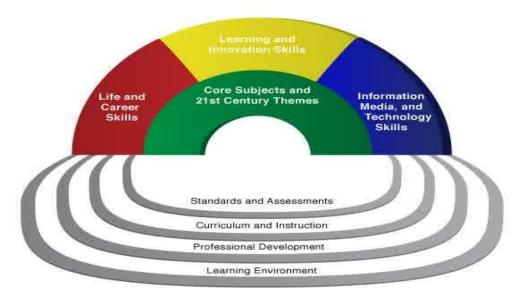

Figure 2 Major Components of the 21st Century Skills framework

(Taken from http://www.21stcenturyskillsmn.org/)

Trilling and Fadel in Suparno (2015: 2-4) mention that there are four skills needed in the 21st century, namely critical thinking and problem solving, communication and collaboration, creativity and innovation, and digital literacy skills.

First, with critical thinking and problem solving skills, students have to be able to explore problems and issues by analyzing, and synthesizing information as well as negotiating meaning across language and culture (Theisen et al, 2011). Second, having a good communication skill means that the students can get involved in "meaningful conversation," comprehend and interpret language in spoken or written ways, and to show information, concepts, and ideas (p. 6). With collaboration skills, students employ "their native and acquired languages to learn from and work cooperatively across cultures with global team members, sharing responsibility and making necessary compromises while working toward a

common goal" (p. 8). Third, creativity and innovation skills are when students give responses to new and variety of perspectives (Theisen et al, 2011). Forth, information, media, and technology literacy skills are related to technology. With the technology as the sources, students have to be able to "access, manage, and effectively use culturally authentic sources in ethical and legal ways" (p. 12). In addition, students have to be able to "evaluate authentic sources to understand how media reflect and influence language and culture" (p. 13). Finally, students need to be able to "use appropriate technologies when interpreting messages, interacting with others, and producing written, oral, and visual messages" (p. 14). Regarding the importance of those skills, it is, therefore, a compulsory need for the university teachers to incorporate the skills in the teaching and learning plan to achieve the objectives of the learning.

Batstone (2002) in Collentine and Freed (2004) mentions that learners have two contexts: communicative and learning context. In communicative context, the focus is the use of the L2 as a communicative instrument. On the other hand, in learning contexts, the focus is the teacher who facilitates the learners to learn. Downes (2004) highlights three major contexts, namely the learner's external environment (classroom, working space, in-person coaches, etc.), internal environment (previous beliefs, thoughts, hopes, etc.) and digital environment.

There are some factors affecting the learning contexts (Westera, 2011:207). They are context induced by human culture, by the knowledge domain, by pedagogy, by virtual spaces, by operational setting, and by the individual. Differences in culture carry different contexts, different behaviours, and different meanings. In relation to context induced by the knowledge domain, "The domain itself cannot avoid contributing to context. Apart from the domain's content it basically conveys the epistemic frame (Williamson Shaffer) that is attached to the domain, including the domain's vocabulary, its methods, its tools, its key actors, its social structure, its challenges, its attainments, it working practice, and

many more." (p. 206). Marton and Ramsden (1988) in Westera (2011: 7)) states that pedagogical context strongly determines the learning strategies of students. "For instance, the way testing and grading is arranged appears to be a most critical situational influence on learners." (p. 7). Recently, learning environments also contain digital communication media (virtual spaces). These media contribute to learning context in two different ways. First, interaction with real world objects, phenomena, ideas, and subjects is replaced with accessing digital representations. Second, digital media "contribute to context themselves because of their distorting and filtering nature and their potential of enhancement and augmentation" (Baudrillard, 1995 in Westera, p. 7).

The next contributing context is the operational setting where the learning takes place (namely the learner's location). In many cases "the operational setting is directly linked with a socio-cultural context, for instance "school", "work", or "home" that have wider significance than the operational level" (Westera, p. 7). In adition, the individual's characteristics give great influence to the process and conditions of learning. These characteristics include "both the physical and mental profile of the learner, for instance age, personal goals and ambitions, prior knowledge, school history, or physiological constraints (colour blindness, weight)" (Allen, 2009 in Westera, p. 7).

The rapid change of technology contributes the complexities to the learning situation. Higgins, Xiao and Katsipataki (2012) emphasize that "The increasing variety of digital technologies and the diversity of contexts and settings in which the research has been conducted, combined with the challenges in synthesising evidence from different methodologies make it difficult to identify clear and specific implications for educational practice in schools" (p. 15). In the learning environment, learning sources are readily available, learning instruments (i.e. gadgets) are various, and learners are now digital natives. Considering the dynamic learning situation, there is a need to pay attention to the context of learning so that the materials can really meet the wants and needs of the students.

Another important context is the context of the students' surrounding world. Theisen, Archer, Smith, Sauer, Small, Abbott, Magner, Saltrick, and Wesolowski (2011) mention that "Language education and cultural understanding are at the heart of developing global awareness for students. In order to understand and address global issues, it is important to understand the perspectives on the world that speakers of other languages bring to the table." The nearest world is the institution the students are in.

The are some different characteristics between the teachers and the learners in the 21st century (Rodgers, Ruyon, Starrett, Von Holzen, 2006). The Table 1 shows how students are different from the teachers.

Table 1 Different Characteristic between Students and Teachers

Students	Teachers
Multitasking	Single or limited tasks
Pictures, sound, video	Text
Random access	Linear, logical, sequential;
Interactive and networked	Independent and individual

The differences between the characteristics of the students and the teachers are very obvious. The nature of the 21st century learners are multitasking. It is because they are born in the technology era where multitasking process is indeed possible. They do not only deal with one three dimensional class. They can have some three dimensional situations at the same time, by the help of gadgets. They are not only dealing with texts; spoken or written text, not like us the teachers. They can encounter pictures, sounds, and video. That is why there should be considered to develop another skill related to helping students process the picture sound and video. So the skills that are previously listening, speaking, reading and writing, now can be expanded into "watching/observing." Further, the existence of communication technology makes it possible for the learners to build network and to have interactive communication in very instant process.

These differences can create problems if teachers do not consider those students character background in teaching. This paper is going to see how the 21st century skills are integrated in the 2013 Indonesian curriculum. Further, it will propose a classroom example of the implementation of the 21st century skill teaching in the 2013 Indonesian curriculum.

To avoid different perception on some key terms used in the paper, the following is a brief definition on the key terms.

1. 2013 curriculum

This term refers to the curriculum in Indonesia, which is based on a competency based curriculum. This curriculum has four core competencies which control the attainment of the learning objectives, as well as the assessments of the learning. This paper will elaborate the 2013 curriculum in general and also in specific scope when discussion about the examples of implementation, the paper will focus on 2013 curriculum for English subject in the high school level.

2. Core competency

Core competency is the operationalization of graduate standard. It is the description of main competency which is grouped in the attitude aspect, knowledge aspect, and skill aspects (covering affective, cognitive, and psycho motoric) to be learned by the pupils in certain level and different subjects (Kementerian Pendidikan dan Kebudayaan: 2013a, p. 5).

3. Scientific approach

Scientific approach is a learning approach covering observing, questioning, associating, experimenting, and communicating and net-working (Kementerian Pendidikan dan Kebudayaan: 2013a).

B. Analyses and Discussions

This section is going to elaborate how the 21st century skills can be facilitated in the

implementation of the 2013 curriculum and to give an example of how the implementation is.

1. Integrating the 21st century skills in 2013 school curriculum

The discussion covers the brief elaboration of the curriculum 2013 and is continued to the integration of the 21st century skills in the curriculum. The 2013 curriculum used in the Indonesian schools are developed from core competencies. Similar to the two previous school curricula, the 2004 and 2006 curriculum, the learning documents and activities are designed in such a way to achieve certain competences set by the government. The concern of the curriculum is "an optimal balance between the development of cognitive skills, particularly those of critical thinking and problem solving, and development of student character and behavior" (OECD/Asian Development Bank, 2015: p. 269). The concern is in line with the 21st century education which covers knowledge, skills and character (Figure 1). In the process of learning, the religious aspects are also part of the competence to achieve. Therefore, in the implementation, the current curriculum has the core competency to base the development of the lesson plan. The Core Competencies covers 4 aspects; core competency number 1 is spiritual attitude, core competency number 2 is social attitude, core competency number 3 is knowledge and core competency number 4 is skills. Those core competences need to be incorporated in the lesson plan.

Lessons are connected to each other by the presence of core competencies. Character education is integrated in the lessons. Character education is meant to "help people understand, care about, and act upon core ethical values" (NCDPI, 2006, p. 3). The curriculum is developing discovery learning and higher order thinking. The learning assessment covers authentic assessment which is conducted with other assessment forms. The assessment includes process and product assessments. The report of the learning elaborates the three domain areas of learning (cognitive, affective, and psycho-motoric). There are rooms for teachers to use many learning resources although the text books are made available by the government. Therefore, the use of technology, one of which is the internet, becomes crucial. The responsibilities of the teacher, thus, are to assist the learners to make use of the technology and to be more knowledgeable also.

Nowadays, the teachers can use technology to deliver the materials, for example computer and LCD projector, smart board, video conferences and even some learning application provided in the mobile phone. It means that teachers should be knowledgeable as well as should have the ability to use the technology efficiently and effectively. Buchanan and Sexton (2000: p. 1) mention that "the more instructors know about technology the more they can incorporate into their instruction."

Figure 3 shows an elementary school teacher in Indonesia teaching using technology in class.

Figure 3 A teachers teaches using technology

In addition to today's situation, the students can be even more resourceful than the teachers. The

learning materials can be easily accessed from any gadget they have. The responsibility of the teachers

is then to facilitate learning that leads the students to have access on the technology. In addition, it also becomes part of the teacher's job to educate the students the right way of using the technology; in other words, to teach technology literacy. With the unlimited bunch of information, students need to be equipped with the ability to have correct access to valid and reliable source of information (Buchanan and Sexton: 2000). This is in line with what Jolls underlines that the students will need new process skills when dealing with reading the electronic information (in Trotter, 2009).

Trotter (2009: pp. 20-22) mentions that "teaching literacy—reading and writing—is a core mission for schools. He adds that growing choruses of experts say schools should add these forms of communication to their literacy mission as "technology literacy." Blake (2008, p. 133) suggests that teachers use technology for facilitating the curriculum, for example choosing the specific readings and preparing discussion for the class. He continues that "Using new technology will not make up for lack of planning or foresight but rather will tend to intensify existing classroom methodological deficiencies" (p. 133). Therefore, teachers have to utilize the technology and the supportive task to "empower students to take control of their own learning process and, consequently, stimulate a more student-centered classroom" (p. 133). Also, when teachers are able to use technology, their administrative duties will be completed faster and they can reduce the paper work and can concentrate more on the students' needs (Buchanan and Sexton: 2000).

The 21st century skill set for the education has four components which are called the four Cs. The four Cs are covering critical thinking and problem solving, communication and collaboration, creativity and innovation, and digital literacy skills (NEA, 2015; Trilling and Fadel in Suparno, 2015).

The First 21st Century Skill: Critical thinking and Problem Solving

Critical thinking helps students to be able to develop other skills for example "a higher level of concentration, deeper analytical ability, and improved thought processing" (NEA, 2015, p. 8). Critical thinking means having ability to reason effectively, to use systems thinking, to make judgement and decision (pp. 7-8). With problem solving ability, students are supposed to find solutions using conventional and innovative ways to solve unfamiliar problems (p. 9). There are six steps of problem solving process. They are to identify and select the problem (step 1), analyze the problem (step 2), generate potential solutions (step 3), select and plan the solution (step 4), implement the solution (step 5), and evaluate the solution (step 6) (www.cls.utk.edu/pdf/ls/Week3_Lesson21.pdf, pp. 197-206). Trilling and Fadel (in Suparno, 2015) underline the ability to analyze, synthesize and negotiate meaning across language and culture.

In relation to the 2013 curriculum, especially in the English curriculum for high school level, the critical thinking and problem solving skills can be developed easily in all aspects of language skills, namely listening, speaking, reading, and writing. In the receptive form language for listening and reading, based on certain text genres, the students can be stimulated with listening or reading skill, for example to predict what will happen next. With the productive form language, namely speaking and writing, the students can be given a similar case to the case they just listened to or the case they just read. An example of integrating critical thinking in the class is asking the students to work in small groups after learning the analytical exposition text. This is part of a basic competency for high school students in grade 11th. The related basic competencies are no 3.10 and 4.14. It is related to analyzing the social function, rhetorical steps, and the language elements of the analytical exposition text, about certain topics and to getting the meaning of the analytical exposition text, about certain topics. They might be asked to plan for the students' involvement in class decision in the class to deal with the issue of global warming. They can do some survey work to the classmates on possible actions to minimize the effects of global warming in their class environment, decide some real actions and analyze the possibility of the actions, do the action and evaluate the actions.

To assist the learners to develop higher order thinking and problem solving, the use of scientific approach can give the students place. When the students are observing and experimenting, and analyzing, they develop their problem solving skills.

The Second 21st Century Skill: Communication and Collaboration

In this global society especially in the service economy, "linguistically and culturally effective listening, empathy and effective communication skills" are very crucial (NEA, 2015, p. 13). This skill requires the students to communicate clearly by using oral, written, and non-verbal ways to express their thought, by being able to listen to meaning, express the thought for different purposes, use media properly, communicate in a diverse communities and cultures (p. 14). An example of this skill being facilitated in the implementation of curriculum is asking the students to have interview to some people in their society about certain issue. After that they need to report it in a form of paragraphs where they can express and communicate the ideas after the interview (p. 15). Another example is asking the students to report the actions they did in relation to the assignment on minimizing the global warming effects in discussed in the previous section, namely critical thinking and problem solving skills.

In 2013 curriculum, this skill can be integrated directly in the process of learning, especially in the communicating and networking process, where they can communicate the result of their learning in the bigger groups.

The collaboration skill is believed as an effective way to achieve the meaningful and effective outcome (NEA, 2015, p, 20). The collaboration skill focuses on the ability of the students to work with others, to help others to achieve the goal, and to have shared responsibility with others in the group (p. 20). An example of this can be a collaboration of a student with a person in the society to write and make a video about a life of a certain person (p. 21).

The 2013 curriculum aims at helping students to continuously develop low order thinking levels to higher order thinking levels. To have higher thinking activities, collaborative and group activities (Jolliffe, 2007; Johnson & Johnson, 2008 in Borich p. 223). When carefully planned, collabora¬tive and group activities help build the skills learn¬ers will need to think critically, reason, and solve problems in an adult world, and help them acquire the social skills that can make their reasoning and problem solving effective (Borich, pp. 223-224).

Collaboration is found in the pair work or group work (Figure 4). What the teacher has to consider is the types of group work to choose so that the students can share the responsibilities of learning in the group.

Figure 4 Group work with different seating arrangements, above: group seating arrangement, below: whole class seating arrangement

The Third 21st Century Skill: Creativity and Innovation

Without creativity and innovation skills, students may not be ready for the challenges in working field (NEA, 2015, p. 24). The creativity skill refers to creativity in thinking and working. Think creatively means that the students have the ability to "use a wide range of idea creation techniques, create new and worthwhile ideas, and elaborate, refine, analyze, and evaluate original ideas to improve and maximize creative efforts" (p. 25). Whereas, working creatively means that the students are able to communicate their ideas to others, be ready to accept diverse perspective, and to accept that failure is an opportunity to learn (p. 25). Innovation is the ability to act on creative ideas (p. 25). For example, the students can work in groups to find and discuss articles from magazines or newspapers on social or environment issues. After that, they can be asked to make a good poem to express their ideas.

The Fourth 21st Century Skill: Digital Literacy Skills

This skill is related to the use of technology when interpreting messages, interacting with others, and producing written, oral, and visual messages (Theisen et al, 2011). To make the students get used to the skills, it is suggested that the teachers use the technology in the process of learning. They can use it as a tool to assess the students understanding about certain topic by for example using Kahoot platform to give quizzes and using Edmodo platform to communicate, give assignment and to upload assignment. There are still many more platforms that the teachers can use. The idea is using it in the classroom to familiarize the students to use it properly and then to maximize the use of the platform on the students' part. The example of Kahoot used in the classroom is available in Figure 5. The topic of the lesson is instruction for students on junior high school level. The teacher uses the platform to give a quiz.
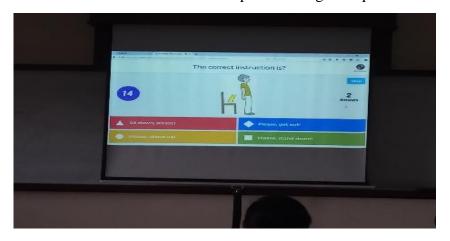

Figure 5 the use of Kahoot in giving the quiz on instruction

2. A Classroom Example Plan Incorporating the 21st Century Skills

The following example is a plan of teaching English. The plan is for the 10th grade of high school. The focus of teaching is related to getting the meaning of self-introduction. This particular subject is for core competency number 4, namely skills aspect. There are some activities stages covering the scientific approach, i.e. observing, questioning, associating, experimenting, and communicating and networking.

Observing

In this activity the teacher can prepare and play audio visual material containing short self-introduction from a person. The students are put in a group. The following is the script of the audio visual.

Script 1

Hello! My name is Susan and I live in Hudson,Wisconsin,USA. Hudson is much smaller than Moscow, but it is a nice town to live in. I go to the Hudson Middle School. I am twelve years old and will be thirteen in July, 8-Th. My favourite subjects are English, History and German. I love to roller-skate, ski, and talk to my friends about school. I don't have any hobby, but I like to watch TV as much as possible. At school we learn Maths, Science, History, Spanish, German, English, Computers, Woodwork and Home Economics.

Questioning Stage

While the students are watching the audio visual materials, the teacher can stimulate the students to focus on what information a person might mention in a self-introduction. The teacher can also ask other questions related to comprehension questions. They need to discuss it in the group. In this stage, the students are to exercise their ability to think critically and to solve problem.

Associating Stage

The teacher can play longer audio visual materials. These materials are not a complete self-introduction.

Script 2

Good morning everyone. Let me introduce myself in a short time. I am Ratna dwi junarti and you can call me Rara. I was born in Bone, THE FIRST OF JUNE 1994. It means that I'm eighteen years old right now. I moved from Jakarta to this great city because my father has some jobs that must be done. Here, I live at Jl. Untung Suropati, Jasaraya. My house actually is not far from this school and you are only to ride for about 100 m to the east.

I have a nice hobby and that is writing and blogging. I get money from internet especially through blogging. I have a nice blog that provide information of Technology, newest gadget, and many more. You can visit the Namaku.me to see my articles.

In my house, I live with my parents named Mr. and Mrs. Wibawa. Both of them work as entrepreneur. My father manages his futsal shoes business while my mother is managing her Batik dress business. I love them very much and I'm actually five brothers. I have two elder sisters and two younger brothers. My first sister is 22 years old named Andina Rizki and now she has been a student of Indonesian University especially for English Literature. Next to my second sister who has been 20 years old named Andien Aulia and she is studying at Gajah Mada University especially for Psychology. I think, I will not tell more about my brothers because it consumes time too much.

That's all and I would say thank to your attention. Good morning everyone, nice to see you.

This particular example can be considered as not a complete introduction. The teacher can trigger the students to think critically by asking their opinion on why it is not a complete version. S/he can ask the students to predict what information might appear if they have complete version of self-introduction, they need to discuss the possible expressions and why those expressions might appear in the self-introduction. They should discuss and write the answer in their group. When discussion in groups, the students collaborate with their classmates.

Experimenting Stage

The further activities for the students can be that they are asked to create similar self-introduction on their own and make the video of it to show to the class in the following meeting. They students are encouraged to see some other examples from the internet and in groups try to make their own example. In doing so, the students develop their creativity and innovation skills because they creatively make a new similar audio visual self-introduction.

Communicating and Networking Stage

In the next meeting, the students will show the result of their self-introduction video and explain to the class the situation and the expression they show in the video. Even, they can upload the video in Edmodo platform for their class. Figure 6 shows an example of the use of Edmodo in class for different topic, future intention for the high school students in the tenth grade.
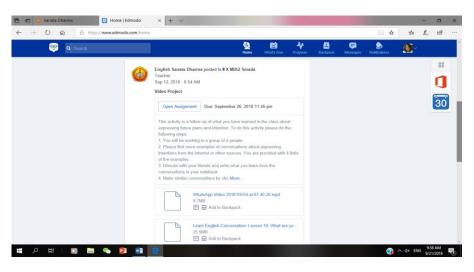

Figure 6 The Edmodo platform used to present the students' work

In short, when the students are doing group work and make their own video, they are exercising collaboration, critical thinking, problem solving, creativity and innovation. Communication skills are being practiced when they discuss their activities in groups. In addition, when they are presenting their work results, the students exercise their communication skills.

C. Conclusions

Curriculum changes always bring challenges to all related education parties, especially the teachers. With the obvious different learning characteristics between the students and the teacher due to different experiencing era, there are some challenges occurring in the learning process. This paper is highlighting the integration of the 21st century skill in the 2013 curriculum in Indonesia education. There are four Cs skills of the 21st century which are integrated to the implementation of 2013 curriculum. The four Cs are critical thinking and problem solving, communication and

collaboration, and creativity and innovation, and digital literacy skills. This paper also recommends a classroom example to include those four Cs.

References

1. _____. (n.d.). Problem solving process in Learning Skills (pp. 197-206). www.cls.utk.edu/pdf/Is/Week3_Lesson21.pdf

2. Barton, M.G., Garvis, S., Ryan, M.E. (2014). "Curriculum to the Classroom: Investigating the Spatial Practices of Curriculum Implementation in Queensland Schools and its Implications for Teacher Education" Australian Journal of Teacher Educatotion. Vol. 39, Issue 3, Article 9., http://dx.doi.org/10.14221/ajte.2014v39n3.9.

3. Bialik, M., Bogan, M., Fadel, C., Horvathova, M. (2015). Character Education for the 21st Century: What should students learn?, Boston: Center for Curriculum Redesign. www.curriculumredesign.org

4. Blake, R.J., (2008). Brave New Digital Classroom: Technology and Foreign Language Learning. Washington, D.C.: Georgetown University Press.

5. Booke, M. What 21st Century Skills Are. Thomas Ave., Marshall, MN. http://www.21stcenturyskillsmn.org/What_They_Are.html

6. Borich., G.D. (2014). Observation Skills for Effective Teaching: Research-based practice. 7th edition. London: Paradigm Publishers.

7. Buchanan, J., Sexton, N., (2000) Technology Literacy Course Curriculum for Teachers and Trainers. http://ww2.odu.edu/~jritz/oted885/jbnspsp99.pdf

8. Collentine, J., Freed, B.F. (2004). Learning Context and Its Effects on Second Language Acquisition: Introduction. Studies in Second Language Acquisition, 26, pp 153-171. doi:10.1017/S0272263104262015.

9. Downes, S. (2004). What is a Learning Context? http://www.downes.ca/post/18

10. Ellis, R. (1997). "The Empirical Evaluation of Language Teaching Materials" in ELT Journal Vol 51 No. 1, January 1997. Oxford University Press

11. Higgins, S., ZhiMin, X., Katsipataki, M. (2012). The Impact of Digital Technology on Learning: A Summary for the Education Endowment Foundation, Durham: Education Endowment Foundation https://v1.educationendowmentfoundation.org.uk/uploads/pdf/The_Impact_of_Digital_Technologies_on_Learning_FULL_REPORT_(2012).pdf

12. Kementerian Pendidikan dan Kebudayaan. (2013a). Kompetensi Dasar: Sekolah Menengah Pertama (SMP)/Madrasah Tsanawiyah (MTs). Jakarta: Kementerian Pendidikan dan Kebudayaan.

13. Kementerian Pendidikan dan Kebudayaan. (2013b). Konsep Pendekatan Scientific (Power Point Presentation Slide). PPT-2.2-1.

14. National Education Association/NEA. (2015). Preparing 21st Century Students for a Global Society: An educator's guide to the "Four Cs" www.nea.org

15. NCDPI. 2006. Character Education: Informational handbook & guide II for support and implementation of the student citizen act of 2001 (character and civic education). Raleigh: Public School of North Caroline. www.ncpublicschools.org

16. OECD/Asian Development Bank (2015). Education in Indonesia: Raising to the Challenge, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264230750-en

17. Rodgers, M., Ruyon, D., Starrett, D., Von Holzen, R. (2006). The 22nd Annual Conference on Distance Teaching and Learning. Teaching the 21st Century Learner. The Board of Regents of the University of Wisconsin System.

18. Shindler, J., (2010). Transformative Classroom Management: Positive Strategies to Engage All Students and Promote a Psychology of Success. San Fransisco: Jossey-Bass

19. Suparno, P. (2015). Pembelajaran di Perguruan Tinggi Bergaya Paradigma Pedagogi Reflektif (PPR). Yogyakarta, Indonesia: Penerbit Universitas Sanata Dharma.

20. Theisen, T., Fulton-Archer, L., Smith, M.J., Sauer, T., Small, H., Abbott, M., Magner, T.J., Saltrick, S., Wesolowski, K. (2011). 21st Century Skills Map: Designed in Cooperation with the Nation's World Language Educators. Washington, DC https://www.actfl.org/sites/default/files/pdfs/21stCenturySkillsMap/p21_worldlanguagesmap.pdf

21. Trotter, A. (2009). Tech Literacy Confusion: What Should You Measure? Education Week: Digital Directions, 02(03), 20-22. http://www.edweek.org/dd/articles/2009/01/21/03techlit.h02.html

22. Westera, W. (2011). On the Changing Nature of Learning Context: Anticipating the Virtual Extensions of the World. Educational Technology & Society, 14(2), 201-212, http://www.ifets.info/journals/14_2/17.pdf.

23. Photos sources: private collections