

A Profile of Senior High Schools in the Twenty-First Century

Panoyo^{a*}, Yatim Riyanto^b, Warih Handayani^c, Lusy Tunik Muharlisiani^{d*},^{a,d}Postgraduate Student, Department of Education Management, Unesa, Surabaya, East Java, ^bProfessor, Department of Education Management, Unesa, Surabaya, Jawa Timur, ^cLecturer, Department of Education Management, Unesa, Surabaya, Jawa Timur, ^dDepartment of English Education, Universitas Wijaya Kusuma, Surabaya, Email: ^{a*}panoyo.17070976017@mhs.unesa.ac.id, ^dlusytm_fbs@uwks.ac.id

One of the prominent features of the twenty-first century is the increasingly connected world of science and technology. The synergy between them is accelerating. Senior high schools are challenged to play an active role in creating a Golden Generation. The school of the twenty-first century is able to create a Golden Generation that has the skills needed to be ready to live and live in this era. The twenty-first century senior high school must be able to create multilateral-based learning, periodically renew curriculum changes, learning based on ICT (Information- Communication Technology), renew teaching human resources, realize Adiwiyata (healthy and clean) schools, and enable 60% of graduates to enter state universities.

Key words: *High School, Golden Generation, Twenty-First Century*

Introduction

“Learning to how, learning to do, learning to be, and learning to live together”. The piece of concept above is the four pillars that have been made by UNESCO in blanketing the twenty-first century, where education in the millennial era focuses on the need for students to have knowledge skills, skills in the field of technology and information media, learning flexibility, innovation, and life skills (Hermawan: 2006).

Schools, especially senior high schools, have an important role as bodies that are obliged to prepare students and alumni to survive in the twenty-first century. Moreover, the readiness of students and others towards Indonesia Creative in 2045 is highly demanded, to polish young generations who have potential, who have decided to work, who are reliable, and who are

intellectually reliable or non-intellectual but reliable. Future individuals will grow according to their time, namely individuals with mindsets, creations, and with the demands of the twenty-first century.

In fact, a lot of senior high schools are still lagging behind. They still carry old school concepts of conventional schools, which focus only on achieving academic standards, while not equipping students or alumni with certain skills needed in the twenty-first century. Therefore, the power of senior high school which must be owned in the twenty-first century is knowledge work, thinking tools, digital lifestyles and learning research (Trilling & Faded, 2009: 23).

Starting from this paradigm, State Senior High School of 1 Krian has transformed into a twenty-first century school. It is no longer capable of being characterised merely at the domestic level, but rather has an important role in the non-domestic context. It has departed from the renewal of literacy-based learning, and moved towards the integration of the twenty-first century needs-based curriculum, with school facilities and infrastructure that are adequate to the needs of the twenty-first century. These include an adequate physics, chemistry, biology, language, IT and library laboratory. It also includes the goals of renewing educational human resources and IT development, forming network schools, and entering 60% of their alumni into state universities.

Research methods

This research is qualitative. Data collection techniques use participant observation, interviews, and documentation. The descriptive method is used to analyse data.

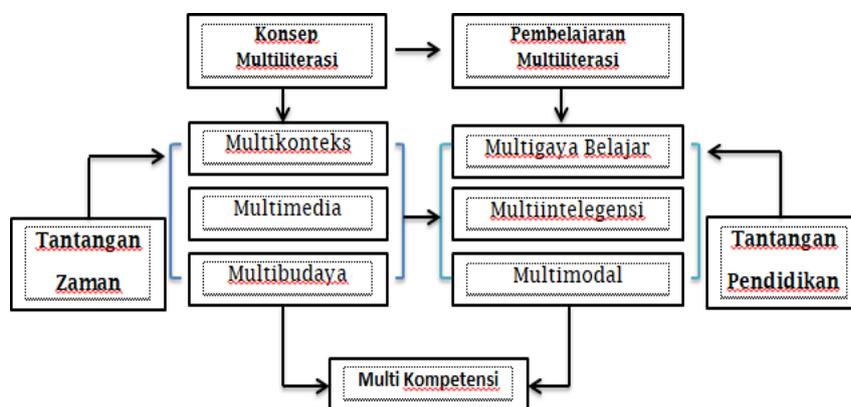
Multiliteration-based Education

Multiliteration starts from the concept of literacy. Literacy itself can be interpreted as the ability to read and write. Multiliteration is a language ability that relates to context, culture and media (Yunus Abidin, 2015: 8). If visualized through images, the concept of multiliteration-based learning is as below, in Figure 1: Twenty-First Century Competence

The above figure reveals the multiliteration skills that must be mastered, to support and develop the four twenty-first century competencies (knowledge work, thinking tools, digital lifestyles, and learning research), which include reading skills, writing skills, speaking skills and listening skills (Marococo, et al., 2008:9).

Correspondingly, the Ministry of Education and Culture of the Republic of Indonesia developed curricula for Elementary Schools, Junior High Schools, Senior High Schools, and Vocational High Schools. The three concepts are twenty-first century skills (Trilling and Fadel, 2009), a scientific approach (Dyer, et al., 2009) and authentic learning and authentic assessment (Wiggins and McTighe, 2011). It is hoped that students in the twenty-first century are able to obtain information from various sources, formulate problems, think analytically and collaborate and collaborate in solving problems.

The importance of the skills emphasized in the twenty-first century is also expressed by Concannon-Gibney and McCarthy (2012) who stated “... All students be provided with



the problem solving, communication and thinking skills that they will need to be effective workers and citizens in the twenty-first century”.

The picture above tries to imply the concept of multiliteration and its implications for multiliteration learning. Multiliteration conception and multiliteration learning both lead to multi-competence ownership. Through multiliteration learning, students do not have only one competency but a variety of competencies; both scientific, and thinking, attitude and character competency. Multiliteration and learning are a real bridge in developing students to be able to live in the twenty-first century (Yunus Abidin, 2015: 59-61).

From the above it can be concluded how multiliteration learning is mandatory for implementation in senior high schools in the new millennium. This is because multiliteration learning aims to create students who are ready to work and live in the twenty-first century. Therefore, learning multiliteration must be mastered by students during education if they want progress in the twenty-first century.

Result and Discussion

The State Senior High School of 1 Krian was named a 2015 integrated school. It has begun to run the skills needed in the twenty-first century, such as writing and speaking skills as implemented in every non-learning and learning activity. Students are required to be active, creative and innovative in expressing each idea or perspective, both in writing and verbally. When speaking to the content of science and technology that is increasingly transparent, it is proven that students gradually dare to express ideas not only in class but on every occasion when discussing or studying with their friends.

1 Krian also expresses the need for students to have reading skills, as well as listening to the culture of literacy that takes place every 15 minutes before the Teaching and Learning Activities (Interview with State Senior High School of 1 Krian, August 2018). This certainly will have a very positive impact on students' cognitive progress. Students will become more knowledgeable, and have a deep understanding of new things and the ability to think critically.

Curriculum Update

Indonesia has been looking backward. It has renewed the elementary school curriculum. The junior high school curriculum also reaches senior high school. The high school curriculum is drawn the curriculums of 1975, 1947, 1952, 1964, 1968, 1975, 1984 (CBSA), 1994, the 2004 curriculum (KBK), and from the 2006 curriculum (KTSP) which later shifted to the 2013 curriculum (Yunus Abidin, 2015: 10).

John Dewey stated that “if we teach our children as we yesterday, we rob them of the future” (Gateway, 2008: 6). Judging from the above it is only natural that every five years an evaluation and refinement of the curriculum will be held until the curriculum name changes. This change is due to constantly changing science, increasingly advanced technology, a growing civilization, and the necessities of life as it adjusts.

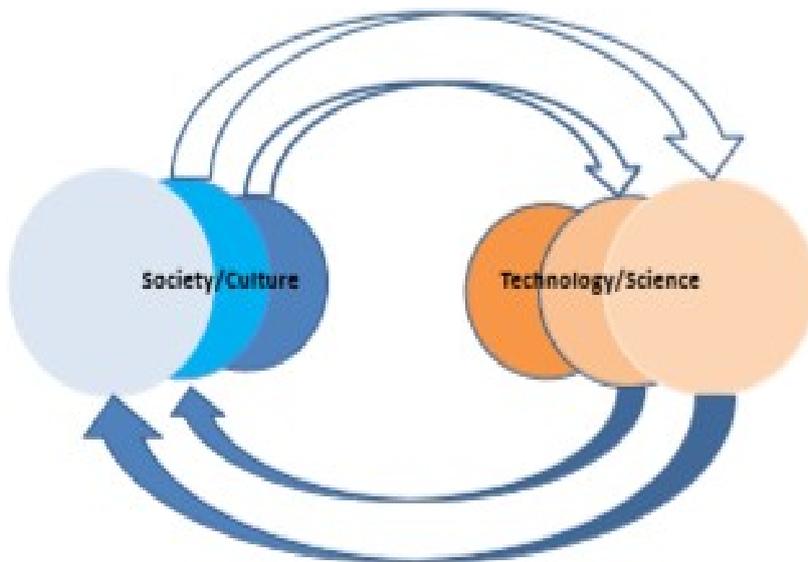
Nor is it forgotten that senior high school is required to continue to update and upgrade any changes, especially changes in curriculum. The latest curriculum is also a curriculum design that is developed based on international agreements on the direction and policies of twenty-first century education. The latest curriculum is prepared to produce an easy generation of people who are able to live into the twenty-first century. If learning involves multiliteration learning as stated above, then it is imperative that the school integrate the curriculum with multiliteration learning, because one of the spearheads to keep moving forward is to keep abreast of the times.

Use of IT – Based Learning

Science and technology are the key to success in the twenty-first century. In relation to the academic world, science and technology have opened up new insights about the realities of nature, humans (their abilities and limitations) and the meaning of their social and cultural life.

Mills (2010) said that the world has experienced a wider shift in the history of printed text culture, to the point where the visual mode stands out for the help of new technology. Furthermore, Bosman (2012) notes that the Encyclopaedia Britannica, which has been known in print for 244 years, has now turned into an online version dictionary assisted with multimedia components (Yunus Abidin, 2015: 50).

Figure Tekno – Sains (Journal BSNP, 2010)



In the advancement and speed of economic growth, computers that take, replace, or supplement much work done by humans in various fields, such as processing information and task-based rules, increase demand for high-level skills (Levy and Murnane, 2004). In addition, a person's career selection is more determined by their abilities, expertise and interests, not solely by a diploma.

On that basis, one of the important roles of education is to help graduates make decisions to choose their careers, from the time that they are in school (Suryadi, 2002: 300).

Looking at the ideas above, it is already implied how important the mastery of modern technology is. The twenty-first century senior high school must always follow the development of the curriculum, because this impacts on the development of science,

technological development and life needs. If education indeed allows students to follow the times, the education system is also, of course, not spared from changes. Given the large variety of media at present, and the rapid spread of information contained therein, the mastery of technology and communication skills is the ability that students must acquire. In this area the school is the first place where this idea is implemented.

In the 1 Krian State Senior High School, all operational activities have taken advantage of technological sophistication. Since 2017 the school has used the CBT (Computer Based Test) system every time, doing **PTS** or **PAS** activities. Also the school provides a computer laboratory that can be used by students who do not use laptops or smartphones when implementing CBT. Obviously they are helped by guidance and direction from educators who have previously studied CBT. In addition to the implementation of CBT-based exams there are daily repetition activities (UH), semester weekend assessments, and a database of thousands of questions. Students can even access learning material from CBT. Each educator has a log-in account to manage CBT accounts, according to their subjects. Slowly educators as well as students from the PBT (Paper Based Test) system changed to CBT (Computer Based Test) system (Interview with State Senior High School of 1 Krian, August 2018).

Renewal of Teaching Human Resources

UNESCO is preparing for twenty-first century education, in the World Education Forum. Education should change the teaching paradigm to learning, so that education becomes a "process of how to learn together between teachers and students" (BSNP Journal, 2010).

It must be recognized that the spearhead of the curriculum running in schools is the teacher. Teachers have an important role in preparing the Golden Generation of the twenty-first century. According to established research (Darling-Hammond. et.al., 1999; Nicholas, G., 2002 and Lang da Evans, 2006 in Yunus Abidin, 2015; 352), at least five capabilities must be owned by twenty-first century teachers. The first is the content of knowledge that is taught. The teacher must master the latest, contextual knowledge. The second is the capability of conceptualization. This relates to the teacher's ability to identify areas of self-development that relate to the teacher's ability to apply creative ideas.

The third is the teacher's ability to carry out the learning process. The fourth is the ability in interpersonal communication (the ability to establish communication with students including communication skills with all elements of the school and parents). The fifth is the ego capability; this relates to self-effort and the responsibility of the environment (Fang, Zakaria & Shokory 2016).

Efforts to realize harmonious, quality and dignified teachers must involve all components of education. For the prospective teacher the relevant component is the availability of quality education programs. For teachers who already have a term of office, teacher training is an important factor for realizing twenty-first century schools; however, teachers also need career certainty, welfare, and professional awards (Yunus Aidin, 2015: 353). This is simply to appreciate teachers, to encourage them to be more enthusiastic about improving their competency to meet twenty-first century demands.

Every quarter there is an evaluation at 1 Krian. Also, teacher self-development programs are carried out, such as seminars, workshops, training, as well as coaching. Therefore educators are always reflecting on scientific content that is growing faster, and running their learning effectively and efficiently in accordance (Interview with the students of State Senior High School of 1 Krian). Such teachers will have a good character that will lead students to always be knowledgeable, behave and act with a similar character. Teachers will also have a high sense of responsibility towards themselves and their professional duties. At the same time they will have a high sense of belonging to realize millennial century schools.

Conclusion

School is a period where children learn physical skills, and build a healthy physique. At this level the child is able to adjust to the environment and identify personal hygiene needs, and behave cleanly for themselves and the environment. As stated in the origin of clause 28 H of the 1945 Constitution, a good and healthy environment is a basic right of every citizen of Indonesia. Protecting the environment to remain good and healthy is an obligation, because it is part of every human's rights in Indonesia.

The Indonesian Government has made a policy that is applied to education. It is contained in Article 65 of the fourth Article of Law Number 32 of 2009, concerning Environmental Protection and Management: "Everyone has the right and role in environmental management". Every school member is intended to participate in carrying out environmental management through the design of adiwiyata schools.

Adiwiyata schools are an effort to build a program. They are a good place to get not only knowledge, but various norms and ethics for humans' attitudes towards the creation of life prosperity, for the ideal of sustainable development. Adiwiyata is the name of an environmental education program. Upper (senior high school) education or even every level of education can realize the Adiwiyata school. This has been noted in Ministerial Regulation Number 5 of 2013, concerning the Implementation Guidelines for the Adiwiyata Program (2013: 25). It is to increase school capacity to realize adiwiyata schools or schools, to care for the environment and improve institutional capacity and human resources.



One of the Senior High Schools that has realized the Adiwiyata program is State Senior High School of 1 Krian. Since the beginning of 2017 it has worked on several activities involving students. These efforts by the school have been carried out through various environmental actions, such as: An agenda of cleaning every two weeks, as well as for 15 minutes of the beginning of teaching and learning every Wednesday; sorting waste by dividing it into dry, wet and organic waste; environmental seminars or workshops, and following environmental actions outside and inside the school.

In future:

- a. The implementation of multiliteration-based learning that has been running in an orderly manner, should always be monitored by educators, so that the program runs continuously and consistently according to its initial commitments;
- b. The renewal of the learning curriculum should also include multiliteration-based learning programs; and
- c. The renewal of teaching human resources, which through a continuous learning paradigm should include the school always updating educators who are still less competent, through programmed or non-programmed training.

REFERENCES

- [1] Abidin, Yunus 2015. Pembelajaran Multiliterasi: Sebuah Jawaban atas Tantangan Pendidikan Abad Ke-21 dalam Konteks Keindonesiaan. Bandung: Refika Aditama.
- [2] AnggaSwasditaFridantara. 2015. *Implementasi Program Adiwiyata Di Sma Negeri 2 Klaten.*

Universitas Negeri Yogyakarta

- [3] BSNP 2010. *Paradigma pendidikan Nasional Abad XXI*: Badan Satndart Nasional Pendidikan.
- [4] DedySugianto.2017.*Implementasi Perilaku Hidup Bersih Sehat Di Sekolah Dasar Se-Kecamatan Jetis Yogyakarta.* Universitas Negeri Yogyakarta
- [5] Etistika Yuni Wijaya,^aDwi Agus Sudjimat,^bAmat Nyoto,^c. 2016. *Transformasi Pendidikan Abad 21 Sebagai Tuntutan Pengembangan Sumber Daya Manusia Di Era Global.* Universitas Negeri Malang.
- [6] Fang, J. T. Y., Zakaria, T., & Shokory, S. M. (2016). The Relationship between the Best Practices of Transformational Leadership and Quality of Good Teachers. *International Journal of Economics, Business and Management Studies*, 2(3), 98-104.
- [7] Heni Sukrisno, Lusy Tunik M (2018). Development of lecturer capacity in higher education: solution reduces burn out by design E-Tri-Angle. *IOP Conference Series: Materials Science and Engineering* 434 (1), 012161
- [8] L Istiqomah, LT Muharlisiani, R Safriyani, dkk (2018). Project-based learning in subtitling field: a description of a learning experience. *Journal of Physics: Conference Series* 1114 (1), 012036
- [9] LT Muharlisiani, (2017). Arrangement of Archives of Cloud Computing Based and Utilization of Microsoft Access. Available online at: prosiding.relawanjournal.id/index.php/comdev Proceeding of Community Development. Volume 1 (2017): 198-204; DOI: <https://doi.org/10.30874/comdev.2017.26>
- [10] LT Muharlisiani, (2018). Designing an Augmented Reality Strategy: ELearning/ Extensive Reading. *International Journal of Engineering and Technology (UAE)*. URL: <http://www.scopus.com/inward/record.url?eid=2-s2.0-85051055059&partnerID=MN8TOARS>



- [11] LT Muharlisiani, (2018). *Softskill Learning: Character Building On Ethical Values and Performance*. ISBN: 978-602-5614-24-8. Semarang, 14th July 2018 1st International Seminar On Education and Development of Asia (INseIDEA)
- [12] Mukminan. 2014. *Tantangan Pendidikan Abad 21*. Universitas Negeri Surabaya
- [13] Nur Laily Karimah. 2013. *Implementasi Program Adiwiyata Di Sma Negeri 1 Cerme Gresik*. Universitas Negeri Surabaya
- [14] Nur Ridho. 2011. *Peran Guru Abad 21*. Universitas Negeri Malang
- [15] RA Ritawati. 2016. *Perencanaan Dan Pengembangan Guru/Dosen Sebagai Sumber Daya Manusia (SDM) Di Lembaga Pendidikan Formal*. Wawancara dengan Pihak SMA Negeri 1 Krian pada Agustus 2018.