



## 21st Century Student Learning Profile in the Era of Global Challenges

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**ABSTRACT:** This type of research is descriptive quantitative. This research aims to obtain students' 21<sup>st</sup> century learning profile. The subjects of this study consisted of 52 students of class XI of SMAN 14 Makassar. The method used in this research is survey method by using questionnaire instrument. The data obtained were then analysed using quantitative descriptive analysis techniques. The results of this study showed that the profile of 21<sup>st</sup> century learning in students at SMAN 14 Makassar was still relatively good. The results showed that although 21<sup>st</sup> century learning at SMAN 14 Makassar is still quite good, it still needs to be improved further. The active participation of students in the learning process can be a great potential that needs to be developed further to face the increasingly rapid global challenges. Therefore, the optimisation of 21<sup>st</sup> century learning at SMAN 14 Makassar becomes an evaluation material for stakeholders that really needs to be implemented to provide readiness to students in facing life in the future.

**KEYWORDS:** 21<sup>st</sup> Century Skills, Student, Technology

### INTRODUCTION

The 21<sup>st</sup> century has ushered in a transformative era in education, fuelled by rapid advances in science and technology. This shift is characterised by redefined curricula, innovative media and the integration of technology into the learning environment. As a result, educational frameworks are evolving to meet the demands of a dynamic global landscape, which requires a focus on 21<sup>st</sup> century skills such as critical thinking, collaboration and digital literacy. 21<sup>st</sup> century skills are not only content-focused but also character-building, ethical, and ready to face the challenges of the technological era (Boo, 2020; Belluzzo & Rosetto, 2021).

The technological era in this century is synonymous with rapid change. This requires educators to prepare students for the future (Verster et al., 2018). This can be achieved by embracing emerging educational technologies and understanding their implications for learning and curriculum (Chanunan, 2017). Educators to be proactive in developing strategies that encourage critical thinking, reative and problem-solving skills among students (Englehart, 2014; Mayes et al., 2015). 21<sup>st</sup> century learning is very popular due to the changes in the rapid development of science and technology (IPTEK), which has brought a paradigm shift in learning characterised by curriculum changes,

Permendikbud No. 5 of 2022 states that the standard competencies of graduates in learning the independent curriculum are emphasised on 21<sup>st</sup> century competencies. Competencies that include "The 4C Skill" namely Critical Thinking, Communication, Collaboration, and Creativity (Wahyuni et al., 2023). The implementation of these skills provides hope for students to be adaptive to the demands of the 21<sup>st</sup> century which are growing very rapidly. 4C skills can be implemented in schools through character strengthening, meta-learning, and active learning strategies, and fulfil students' social needs. This, in turn, can lead to the strengthening of students' 4C skills (Durlak et al., 20011; González-Pérez et al., 2022).

4C skills are very important in the 21<sup>st</sup> century learning era and can be integrated with the use of technology (Keane et al., 2016). 4C skills are very important in emphasising students to master various skills in the global era (Arnyana, 2019; Rosnaeni, 2021; Sriyanto, 2021). 4C skills with technology are essential to develop competencies that are critical for success in the 21<sup>st</sup> century (Thornhill-Miller, et al., 2023; Boholano et al., 2020). When educators integrate these skills and utilise technological tools, they will prepare students to navigate the complexities of a globalised world. One of the 4C component skills is critical thinking.

Critical thinking skills are the ability to analyse, evaluate, and make rational decisions and individuals must be able to consider various arguments and evidence before reaching a conclusion (Butler, 2012; Yusuf & Widyaningsih, 2017; Suratmi & Sopandi, 2022; Yuliasrin et al., 2023). The benefits of critical thinking skills firstly improve students' analytical abilities, enabling students to evaluate and express correct decisions (Hidayah et al., 2017; Göğüş et al., 2020). In addition, critical thinking also contributes to developing students' creative skills and being able to see the relationship between different concepts (Bustami et al., 2018). In addition to the critical skills contained in the 4Cs, there are also creative skills.



Creative thinking skills are essential for problem solving and innovation. Creative thinking is a metacognitive process that contains activities to plan, monitor, and evaluate individual thinking processes (Yusneni et al., 2020). The development of creative skills can solve problems from various perspectives that can increase their ability to design unique solutions (Auliyak et al., 2022). Creative students can be better prepared to adapt to change and have innovative ede (Das et al., 2023).

Communication skills are effective abilities that include verbal and non-verbal components, which can build interpersonal connections (Puscas et al., 2021; Asdar et al., 2020). Collaborative skills are skills containing peer interactions that support social interactions. Students who are active in collaborative activities not only develop communication skills but also critical thinking and problem-solving skills (Skinner et al., 2016). Collaboration skills involve the ability to work effectively in teams, utilising diverse perspectives to achieve a common goal (Balakrishnan, 2023). The use of teaching materials can train students' collaboration skills at school (Adnan et al., 2019; Aldi et al., 2022; Aldi, & Ismail, 2023).

The benefits of developing communication and collaboration skills go beyond individual and team performance. Effective communication contributes to a positive organisational culture, where students feel valued and understood, thus improving overall morale and productivity (Smith et al., 2018). Communication skills are optimised through the use of teaching materials (Adnan, 2015; Adnan et al., 2017; Aldi et al., 2022; Elisya et al., 2023; Sutamrin & Sahid, 2024). Students equipped with strong communication and collaboration skills will be better prepared for the demands of the modern world of work, which increasingly values teamwork and interpersonal interactions (Menggo, 2023).

Based on this description, the researcher conducted this study because it was very important to do. The purpose of this study is to describe 21<sup>st</sup> Century skills and student learning profiles to face global challenges of students at SMAN 14 Makassar. The presence of this research can provide information that has benefits for teachers and *stakeholders*.

**METHOD**

This type of research is descriptive quantitative using survey method. The research location was SMAN 14 Makassar by using a research sample of 52 students. The data collection technique is using an instrument in the form of a closed questionnaire that has a Likert scale consisting of 23 statements. Data collection was done online through the google form platform. The data obtained was then analysed descriptively using percentage categories. The following category table is a reference for student responses to 21<sup>st</sup> century skills in table 1. Below which is sourced (Riduwan, 2018).

**Table 1. Student response categories**

| Percentage (%)  | Criteria    |
|-----------------|-------------|
| 81% ≤ %R ≤ 100% | Very Good   |
| 61% ≤ %R < 80%  | Good        |
| 41% ≤ R < 60%   | Good enough |
| 21% ≤ R < 40%   | Good enough |
| % R < 20%       | Not good    |

**RESULT AND DISCUSSION**

**Table 1. Students' critical thinking skills**

| Criteria   | Very good |       | Good |       | Good enough |       | Good enough |      | Not good |      |
|--|-----------|-------|------|-------|-------------|-------|-------------|------|----------|------|
|  | Σ         | %     | Σ    | %     | Σ           | %     | Σ           | %    | Σ        | %    |
| Students ask questions and find out more information   | 8         | 15.38 | 18   | 34.62 | 26          | 50.00 | 0           | 0.00 | 0        | 0.00 |
| Able to identify weaknesses and strengths of arguments | 4         | 7.69  | 20   | 38.46 | 25          | 48.08 | 0           | 0.00 | 0        | 0.00 |



|  |   |       |    |       |    |       |   |      |   |      |
|--|---|-------|----|-------|----|-------|---|------|---|------|
| Students are trained by the teacher to teach critical thinking skills                          | 8 | 7.69  | 22 | 42.31 | 26 | 50.00 | 0 | 0.00 | 0 | 0.00 |
| Students are given tasks by the teacher that are challenging in honing problem-solving skills. | 8 | 15.38 | 11 | 21.15 | 28 | 53.85 | 5 | 9.62 | 0 | 0.00 |
| Total %  |   | 11.54 |    | 34.14 |    | 50.49 |   | 2.41 |   | 0.00 |

Table 1 shows that students' responses were more dominant in the moderately good category on critical thinking skills. This indicates that teachers and stakeholders in this school need to improve students' critical thinking skills. Critical skills are beneficial for students to improve learning and achievement (Susanti, 2020; et al., 2022). Critical thinking skills are also important in helping students to solve independent problems and make decisions (Ahmady & Shahbazi, 2020). Critical thinking skills can explore information in depth and provide logical arguments. This skill is very useful for students as a provision for the future.

**Table 2. Students' creative thinking skills**

| Criteria   | Very good |     | Good |      | Good enough |      | Less good |     | Not good |      |
|--|-----------|-----|------|------|-------------|------|-----------|-----|----------|------|
|  | Σ         | %   | Σ    | %    | Σ           | %    | Σ         | %   | Σ        | %    |
| Students generate new and innovative ideas in learning           | 4         | 7.6 | 2    | 42.3 | 2           | 46.1 | 2         | 3.8 | 0        | 0.00 |
| Students like to try new and different things in learning        | 1         | 25. | 1    | 19.2 | 2           | 51.9 | 2         | 3.8 | 0        | 0.00 |
| Students are able to solve problems in creative ways in learning | 3         | 5.7 | 2    | 40.3 | 2           | 51.9 | 1         | 1.9 | 0        | 0.00 |
| Students engage in activities that require creativity            | 5         | 9.6 | 1    | 30.7 | 2           | 44.2 | 7         | 13. | 1        | 1.92 |
| Total %  |           | 12. |      | 33.1 |             | 48.5 |           | 5.7 |          | 0.48 |
|  |           | 02  |      | 7    |             | 6    |           | 7   |          |      |

Table 2 shows that students' responses were more dominant in the moderately good category on creative thinking skills. This indicates that teachers and stakeholders in this school need to improve students' creative thinking skills. Creative skills are beneficial for students to improve learning achievement (Kulbohyeva, 2023; Shi et al., 2023). Creative thinking skills can provide assistance to students to practice expressing innovative and solutive ideas. Therefore, students can find it easier to deal with rapid changes.

**Table 3. Students' communication thinking skills**

| Criteria  | Very good |       | Good |       | Good enough |       | Less good |      | Not good |      |
|---|-----------|-------|------|-------|-------------|-------|-----------|------|----------|------|
|   | Σ         | %     | Σ    | %     | Σ           | %     | Σ         | %    | Σ        | %    |
| Students feel confident when speaking in public                   | 13        | 25.00 | 32   | 61.54 | 6           | 11.54 | 1         | 1.92 | 0        | 0.00 |
| Students are able to express ideas and opinions clearly           | 12        | 23.08 | 20   | 38.46 | 20          | 38.46 | 0         | 0.00 | 0        | 0.00 |
| Students listen to others well before responding                  | 14        | 26.92 | 16   | 30.77 | 21          | 40.38 | 1         | 1.92 | 0        | 0.00 |
| Students are trained by teachers in teaching communication skills | 11        | 21.15 | 14   | 26.92 | 24          | 46.15 | 3         | 5.77 | 0        | 0.00 |
| Total %   |           | 16.35 |      | 34.32 |             | 42.33 |           | 7.69 |          | 0.00 |



Table 3 shows that students' responses are more dominant in the moderately good category on communication skills. This suggests that teachers and stakeholders in this school need to improve students' communication skills. Communication skills can improve student learning achievement (Khan et al., 2017; Wahyuni, 2018). Communication skills can provide students in expressing the results of clear and effective thinking. This can be done verbally or in writing. Therefore, communication skills can provide students in collaborating with others and actively participating in discussions.

**Table 4. Students' collaborative thinking skills**

| Criteria  | Very good |       | Good |       | Good enough |       | Less good |      | Not good |      |
|---|-----------|-------|------|-------|-------------|-------|-----------|------|----------|------|
|   | Σ         | %     | Σ    | %     | Σ           | %     | Σ         | %    | Σ        | %    |
| Students like to work in groups                               | 13        | 25.00 | 32   | 61.54 | 6           | 11.54 | 1         | 1.92 | 0        | 0.00 |
| Students respect team members' opinions when working together | 12        | 23.08 | 20   | 38.46 | 20          | 38.46 | 0         | 0.00 | 0        | 0.00 |
| Students actively contribute to group discussions             | 14        | 26.92 | 16   | 30.77 | 21          | 40.38 | 1         | 1.92 | 0        | 0.00 |
| Students often give ideas in group work                       | 11        | 21.15 | 14   | 26.92 | 24          | 46.15 | 3         | 5.77 | 0        | 0.00 |
| Total %   |           | 16.35 |      | 34.32 |             | 42.33 |           | 7.69 |          | 0.00 |

Stakeholders in this school need to improve students' collaboration skills. Collaboration skills are very beneficial for students in improving learning achievement (Ronfeldt, 2015; Liebeck-lien & Sjolie, 2021). Collaboration skills can help students to share knowledge in problem-solving activities, as well as provide mutual support in learning activities. Collaboration can provide a variety of bright ideas from diverse perspectives. Cooperation between students can achieve the formation of a productive learning community and can provide strength in planting social spirits.

**Table 5. Use of technology in learning**

| Criteria   | Very good |       | Good |       | Good enough |       | Less good |      | Not good |      |
|--|-----------|-------|------|-------|-------------|-------|-----------|------|----------|------|
|  | Σ         | %     | Σ    | %     | Σ           | %     | Σ         | %    | Σ        | %    |
| Students use technological devices in everyday life                  | 37        | 71.15 | 11   | 21.15 | 1           | 1.92  | 3         | 5.77 | 0        | 0.00 |
| Students use technology tools for self-learning                      | 26        | 50.00 | 24   | 46.15 | 0           | 0.00  | 2         | 3.85 | 0        | 0.00 |
| Students are guided by teachers at school using technology           | 4         | 7.69  | 17   | 32.69 | 31          | 59.62 | 0         | 0.00 | 0        | 0.00 |
| Technology is useful to facilitate understanding of learning content | 19        | 36.54 | 30   | 57.69 | 3           | 5.77  | 0         | 0.00 | 0        | 0.00 |
| Total %  |           | 24.04 |      | 39.42 |             | 34.13 |           | 2.40 |          | 0,00 |

Table 5 shows that student responses are more dominant in the good category on the use of technology in learning. Technology can be a medium that makes it easier for students to understand concepts (Riegel & Branker, 2019). The use of technology can be useful for increasing student activity in learning activities. This is due to the formation of an interactive and interesting environment. Students can also learn independently and widely access very diverse learning resources.



**Table 6. Technology devices you use in learning**

| Device Type | Total | Percentage |
|-------------|-------|------------|
| Smartphone  | 47    | 90.39      |
| Laptop      | 4     | 7.69       |
| Computers   | 1     | 1.92       |
| Tablet      | 0     | 0          |
| Total       | 52    | 100        |

Table 6 shows that technological devices used in learning are dominated by smartphones. Smartphones can be a tool that makes it easier for students to learn (So, 2016). Smartphones can provide access to students in order to find learning resources, educational platforms, and learning materials that can be accessed anywhere and anytime. Not only that, other technological devices can increase collaboration activities between students.

**Table 7. Students' preferred media**

| Media                  | Total | Percentage |
|------------------------|-------|------------|
| Podcast                | 5     | 9.62       |
| Interactive Multimedia | 6     | 11.54      |
| Learning Video         | 21    | 40.38      |
| E-learning             | 20    | 38.46      |
| Total                  | 52    | 100        |

Table 7 shows that students liked the media. Learning videos can make it easier for students to understand concepts (Phelps & Liu, 2013). The use of learning videos can make students interested in learning because of the visualisation effect of interesting concepts. It can clarify the concepts they want to learn. In addition, e-learning media, podcasts, interactive multimedia have good benefits that support learning.

**Table 8. Students' preferred innovative learning models at school**

| Learning Model         | Total | Percentage |
|------------------------|-------|------------|
| Project based learning | 9     | 17.31      |
| Problem based learning | 11    | 21.15      |
| Discovery learning     | 10    | 19.23      |
| Inquiry learning       | 4     | 7.69       |
| Cooprative learning    | 18    | 34.62      |
| Total                  | 52    | 100        |

Table 8 shows that there were mixed responses regarding the innovative learning models favoured by the students in the school. This shows that students indicated that they are more active and motivated in the application of innovative learning models in the classroom. Innovative learning models can make students active and interactive (Yangari & Inga, 2018). Innovative learning models can make students in building a meaningful challenging and fun.

## CONCLUSION

Based on the results of the study, it is concluded that the 21<sup>st</sup> century skills of students at SMA 14 Makassar are in the good enough category and excellent users of technology, and a wide variety of implementation of learning models that they like. This indicates that teachers need to improve 21<sup>st</sup> century skills towards excellent and they are ready to adapt and use technology and students show that they are more involved and motivated in the implementation of innovative learning models in the classroom. Excellent 21<sup>st</sup> century skills in students will produce students who are able to face the challenges of a rapidly evolving global era. Teachers and stakeholders in the school need to take the results of this study into consideration to improve students' 21<sup>st</sup> century skills towards excellent.



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