# 21st Century Competencies (4C) on Improving Students' Social Skills

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## Abstrak

*Tantangan utama pendidikan adalah menuntut siswa untuk memiliki keterampilan sosial. Namun masih banyak siswa yang memiliki keterampilan sosial yang rendah. Siswa yang kurang memiliki keterampilan sosial akan merasa tertantang atau lebih sulit untuk beradaptasi dengan lingkungan sekolah. Berdasarkan hal tersebut, penelitian ini bertujuan untuk menganalisis kompetensi abad 21 (4C) untuk meningkatkan keterampilan sosial siswa. Metode yang digunakan dalam penelitian ini adalah metode penelitian survei dengan pendekatan kuantitatif. Penelitian ini menggunakan Quasi Exsperiment dengan desain One Group PretestPosttest Design. Populasi dari penelitian ini berjumlah 423 siswa kelas. Sampel penelitian ini berjumlah 166 siswa. Metode mengumpulkan data menggunakan angket, observasi, dan wawancara. Instrumen yang digunakan dalam mengumpulkan data yaitu lembar kuesioner. Teknik yang digunakan untuk menganalisis data yaitu statistik inferensial. Hasil penelitian menunjukan terdapat pengaruh positif antara kompetensi abad 21 (4C) terhadap keterampilan sosial siswa. Koefisien regresi menunjukan kompetensi abad 21 (4C) berpengaruh positif terhadap keterampilan sosial siswa. Disimpulkan bahwa kompetensi abad 21 (4C) dapat meningkatkan keterampilan sosial siswa. Keterampilan sosial siswa menjadi semakin penting di era digital, oleh sebab itu dibutuhkan adanya peningkatan keterampilan sosial siswa dengan kompetensi abad 21(4C) dalam proses pembelajaran.*

*Kata Kunci: Keterampilan Sosial, Abad-21, 4C*

## Abstract

The main challenge of education is to require students to have social skills. However, there are still many students who need more social skills. Students who lack social skills will feel challenged or have more difficulty adapting to the school environment. Based on this, this study aims to analyze 21st-century competencies (4C) to improve students' social skills. The method used in this study is a survey research method with a quantitative approach. This study uses a quasi-experiment with a one-group pretest posttest design. The population of this study was 423 class students. The sample of this study was 166 students. The methods of collecting data used were questionnaires, observations, and interviews. The instrument used in collecting data was a questionnaire sheet. The technique used to analyze the data was inferential statistics. The study results positively influenced 21st-century competencies (4C) and students' social skills. The regression coefficient shows that 21st-century competencies (4C) positively affect students' social skills. It is concluded that 21st-century competencies (4C) can improve students' social skills. Students' social skills are becoming increasingly important in the digital era. Therefore, improving students' social skills with 21st-century competencies (4C) in the learning process is necessary.

**Keywords:** Social Skills, 21st Century, 4C

## 1. INTRODUCTION

The world of education in Indonesia is open to the influence of globalization, which can be seen from the rapid development of science and technology. Globalization opens the gates of interaction between countries, giving birth to cultural exchanges that increase the prosperity of world treasures (Marliani & Djadjuli, 2019; Retnasari & Hidayah, 2020). The global market era presents new challenges when teachers from various countries enter

Indonesia. National education policies must adapt by improving the quality of education, both academic and non-academic (Afnan et al., 2022; Marliani & Djadjuli, 2019; Pudjiastuti, 2020; Retnasari & Hidayah, 2020). Education management needs to be improved to be more productive and efficient. Not only that, access to education must be expanded to reach all levels of society. In this era, students face various impacts of globalization that affect their social behavior and mindset (Nafisah & Pramudiani, 2023; Putri & Suparno, 2020; Putri, 2018). The era of globalization requires students to have social skills to survive in the future. 21st-century education faces significant challenges in preparing the younger generation to face the digital era (Mantau & Talango, 2023; Septikasari & Frasandy, 2018). In this context, schools must focus on developing students' abilities so that they can compete in the future. The development of the era demands innovation in education (Mantau & Talango, 2023; Raharjo, 2022; Septikasari & Frasandy, 2018).

Previous research findings state that education's main challenge is requiring students to have social skills (Indriani et al., 2018; Suciono et al., 2021). There are several problems in education in Indonesia, such as too much emphasis on memorization and lack of curriculum relevance. In addition, many problems experienced by students due to their inability to have social skills will hurt various aspects of students' lives (Aghniarrahmah et al., 2022; Suharsiwi et al., 2024). Students who lack social skills will find it challenging or more difficult to adapt to the school environment or groups of friends from different backgrounds. The inability to have social skills has a negative impact because it can hinder students' ability to build positive relationships with peers, teachers, and other adults (Istianti, 2018; Suharmini et al., 2017). Students who do not have social skills and have difficulty in social interaction tend to have less self-confidence (Aghniarrahmah et al., 2022; Suharsiwi et al., 2024). This will hinder students in the process of social interaction needed in a broader social order. The initial observations show that SMA Negeri 1 Jatisari students face several problems related to student skills. Lack of student self-confidence related to lack of communication skills causes social interactions with peers not to be adequately established. Lack of self-appearance causes students to need more confidence in doing tasks related to appearance. Lack of good communication skills causes a lack of ability to collaborate with peers. Therefore, this concern must be the main focus to immediately find a solution in learning activities to improve students' social skills, which are instilled in each student.

In overcoming these problems, one of the solutions offered is for schools to focus on developing students' social skills and creating a quality learning environment. That way, students can be better prepared to face the challenges of the 21st century. Every student must have social skills because socializing in the real world requires good social interaction (Aslamiah et al., 2021; Wilt et al., 2021). Good social skills will help students adapt to new environments, work with others, and recognize and resolve conflicts effectively for themselves (Aslamiah et al., 2021; Nugraha et al., 2018; Wilt et al., 2021). Students with strong social skills will be better prepared to face the world of work and social life challenges. Good social skills involve the ability to understand and regulate one's own and others' emotions (Iqbal et al., 2017; Tetono et al., 2018). Through social interaction, students can learn to recognize their own emotions, understand the feelings of others, and respond to these emotions appropriately. This emotional intelligence is essential for mental health and overall well-being (Adnyana et al., 2017; Astuti et al., 2019; Susanto & Sofyani, 2019). Good social skills allow students to build positive relationships with peers, teachers, and other adults (Aslamiah et al., 2021; Wilt et al., 2021). These positive relationships can give students the social and emotional support they need and increase their motivation and desire to learn.

Students with good social skills are more likely to participate in class actively, collaborate on group assignments, and seek teacher assistance when needed. Active learning

involvement can improve academic achievement (Aslamiah et al., 2021; Nugraha et al., 2018; Wilt et al., 2021). Schools as formal educational institutions must adapt and prepare students' social skills by improving 21st-century skills widely known as 4C, namely creative thinking skills, critical thinking and problem-solving, communication, and collaboration (Maulana et al., 2022; Meilani et al., 2020; Sapitri et al., 2022). Social skills in the 21st century are essential in preparing students to achieve success in an increasingly complex and interconnected life. In the context of the 21st century, social skills involve more than just the ability to interact with others; These skills also include the ability to adapt, collaborate, and communicate effectively in various situations and with multiple groups (Astuti et al., 2019; Tahmidaten, 2021). Global demands on education encourage preparing students with 21st-century skills so that they can overcome complex challenges, both now and in the future (Astuti et al., 2019; Maulana et al., 2022; Meilani et al., 2020; Sapitri et al., 2022; Tahmidaten, 2021).

Previous research findings state that in 21st-century skills, four critical competencies must be mastered, known as the 4Cs, namely critical thinking, creativity, collaboration, and communication (Avianty & Tobing, 2022; Supena et al., 2021). Previous research states that critical thinking helps a person to solve problems more effectively, make better decisions, and avoid mistakes due to incorrect information (Bulut, 2021; Kawuryan et al., 2022). Creativity allows individuals to think outside conventional boundaries, find unique solutions to problems, and adapt to new situations (Darmaji et al., 2020; Tang et al., 2020). In a digitally connected world, cross-communication skills are essential to building healthy relationships and reducing the likelihood of conflict. Social skills are essential in various aspects of life: socializing, collaborating, and problem-solving (Ananda & Fadhilaturrahmi, 2020; Perdina et al., 2019). Based on this, students need 21ˢᵗ-century competencies (4C) because they can improve social skills. However, there has yet to be a study on 21st-century competencies (4C) toward improving students' social skills. Based on this, this study aims to analyze 21ˢᵗ-century competencies (4C) toward improving students' social skills. By implementing appropriate learning methods and providing adequate support, we can help students develop the social skills they need to become successful individuals and contribute to society. This ability benefits a person's personal life and plays a vital role in education and future life.

## 2. METHOD

The method used in this study is a survey research method with a quantitative approach (Sugiyono, 2016). This study uses a Quasi Experiment with a One Group Pretest-Posttest Design. The One Group Pretest-Posttest Design is one of the research designs commonly used in quasi-experimental research. This design involves measuring the dependent variable in one group of participants twice, namely before and after receiving treatment or intervention. The primary purpose of this design is to measure the effectiveness of the treatment by comparing the measurement results before and after the treatment is given. In this experimental study, the experimental class was used as the treatment class and the control class as the class that was not given treatment, where each class group was given a pretest and posttest.

The population of this study was 423 high school students in Karawang Regency, grade X at SMAN 1 Jatisari. The sample of this study was four schools that were determined randomly. The selection of research samples was based on the category of schools in the centre of Karawang City, schools close to the industry, and one school located at the northern tip of Karawang, which borders Subang Regency. The total sample of the study was 166 students. The methods of collecting data used were questionnaires, observations, and

interviews. In the study, the questionnaire method contained several questions arranged in a questionnaire given to high school students who were respondents in this study. Students were asked to choose one of the available answer choices. The questionnaire used in this study was a questionnaire in the form of a Likert scale and an SSHA attitude scale. In the observation method, the researcher conducted direct observations in the field to obtain valid evidence for his research. The interview method was used in this study to provide an initial picture of the learning process. The instrument used in collecting data was a questionnaire sheet. The instrument grid is presented in Table 1.

**Table 1.** Research Instrument Grid

| Focus of Research Study | Indicator |
|---|---|
| 1. Factual conditions of the civic education learning process in high schools in Karawang Regency | Indicators in the learning process include five components (M3SE)<br>1. Material or learning materials,<br>2. Methods or teaching and learning activities,<br>3. Learning media or aids,<br>4. Sub 1-2-3 sources,<br>5. Evaluation or assessment of learning outcomes. |
| 2. Factual conditions of social skills of high school students in Karawang Regency | Social skills indicators are students' ability to communicate, interact, cooperate, collaborate, participate, help each other, respect others, be able to praise, be able to ask for help and be able to adapt which includes sympathy, empathy, discipline, and being able to solve problems and have values and ethics within themselves. |

The technique used to analyze the data is inferential statistics. The data was analyzed using partial regression and multiple regression calculations. Partial regression can control the influence of other variables that may affect the relationship between the independent and dependent variables. This will help to understand more clearly the specific relationship between the two variables by eliminating the impact of other confounding variables.

## 3. RESULT AND DISCUSSION

**Result**

21$^{st}$-century education seeks to equip students with 21st-century competencies known as 4C (Critical thinking and problem solving, Creativity and innovation, Communication, and Collaboration), 21$^{st}$-century competencies that students must have and are expected to be able to face the challenges of life in the 21st century independently. The importance of students having 21st-century competencies (4C) in the learning process will be able to form students' social skills such as communication skills, collaboration, helping, and respecting each other. These social skills are essential for students because they create positive relationships with peers, teachers, and others. Based on the questionnaire data at SMAN 1 Jatisari school, 21$^{st}$-century competencies, Critical thinking and problem-solving, Creativity and innovation, Communication, and Collaboration (4C) influence students' social skills during research activities, which can be explained as follows.

Normality test was conducted using Kolmogorov-Smirnov test. The results of the normality test obtained normal data. The results of the homogeneity test also showed homogeneous data. To determine the magnitude of the influence of 21$^{st}$ century competencies (X) on students' social skills (Y) can be seen from the t value in the coefficient table below

with the test criteria if the significance level is less than 0.05. The results of the hypothesis test are shown in Table 2.

**Table 2.** Test Results (t) Variable X Against Y

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 8.295 | 3.850 | | 2.155 | 0.033 |
| | 21ˢᵗ century competencies | 0.493 | 0.024 | 0.850 | 20.684 | 0.000 |

Based on the results of the t test as shown in Table 2, 21ˢᵗ century competencies (X) has a p-value of $0.000 < 0.05$, meaning it has a significant influence or the hypothesis is accepted. This means that learning and innovation skills (X) partially influence students' social skills (Y). Regression equation y = a bx1 From the calculation results it is obtained that $y = 8.295 + 0.493X$. The regression coefficient is 0.493. So it is stated that 21ˢᵗ century competencies have a positive effect on students' social skills. with a correlation value of 0.493 in the category quite strong because it is in the value range of 0.40-0.599. Significance of the impact of variable X on Y is show in Table 3.

**Table 3.** Significance of the Impact of Variable X on Y

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 16807.145 | 1 | 16807.145 | 427.839 | 0.000ᵇ |
| | Residual | 6442.548 | 164 | 39.284 | | |
| | **Total** | **23249.693** | **165** | | | |

Based on Table 3, the results of the ANOVA test or F test show a calculated F of 427.839 and a significance value of $0.000 < 0.05$. So, based on the basis of decision making in the F test, it can be concluded that the hypothesis is accepted, or in other words, 21ˢᵗ century competence has a simultaneous effect on social skills. Furthermore, to find out the magnitude of the influence of 21ˢᵗ century competence on students' social skills, it can be seen from the results of calculating the coefficient of determination shown in Table 4.

**Table 4.** Significance of the Impact of Variable X on Y

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.850 | 0.723 | 0.721 | 6.268 |

From Table 4 it can be seen that the R Square is 0.723. The impact (influence) of the independent variable on the dependent variable is determined by the formula KD = (R2) In this case, 21ˢᵗ century competence is influenced by students' social skills variables, while the remaining 27.7% is influenced by other factors.

**Discussion**

The data analysis shows that 21ˢᵗ-century competencies (4C) influence students' social skills. This is due to the following factors. First, 21ˢᵗ Century competencies (4C) can improve students' social skills. Social skills can be interpreted as communicating and interacting with others (Septikasari & Frasandy, 2018; Suharmini et al., 2017). Social skills are the ability to

create harmonious social relationships between various parties by adapting to the social environment and skills in solving social problems (Ayu, 2019; Septikasari & Frasandy, 2018; Suharmini et al., 2017). Social skills include self-control, adaptation, tolerance, communication, and participation in community life (Aini & Wahyuni, 2023; Septikasari & Frasandy, 2018; Suharmini et al., 2017). 21st-century learning emphasizes adaptive learning using iterative cycles, where learning begins by asking questions, providing learning materials to reinforce learning, and giving students confidence in what they know. The learning process can emphasize 21st-century competencies to improve students' social skills (Andrian & Rusman, 2019; Salmia & Yusri, 2021; Septikasari & Frasandy, 2018; Suharmini et al., 2017). Social skills are behaviours that need to be learned and instilled because these skills allow individuals to interact and obtain positive and negative responses. Therefore, social skills are essential for everyone, including students, to maintain social life relationships.

Second, 21st Century Competencies (4C) can help improve the ability to adapt to changing times. Adaptability allows one to easily keep up with developments in the era (Astuti et al., 2019; Septikasari & Frasandy, 2018). The ability to adapt to changing times in students involves various skills and attitudes that help them face and navigate the dynamics of an ever-changing world. Adaptability includes being flexible and open to change (Hidayatullah et al., 2021; Septikasari & Frasandy, 2018). Students who adapt well can accept change positively, are not tied to old ways, and are ready to try new methods. Critical thinking allows students to analyze and evaluate information objectively so they can make better decisions and face challenges in an informed manner (Zul Hidayatullah et al., 2021; Mustikarini & Puspasari, 2021). Practical communication skills are essential for conveying ideas and collaborating with others in person and through digital platforms. By developing these skills, students cannot only cope with and adapt to rapid change but also actively contribute to creating and directing that change.

Third, 21st Century competencies (4C) can help students improve critical thinking skills that can help solve a problem. Students with 21st-century competencies as individuals will be able to live a better life and succeed in various aspects of life (Fitria et al., 2018; Santos-meneses et al., 2023). This aligns with the Partnership for 21st Century Skills (P21), an organization based in the United States that emphasizes the importance of critical thinking skills, creativity, communication, and collaboration for human resources in the 21st century. Critical thinking skills help students solve problems and make wise decisions (Rahmawati et al., 2019; Ridlo, 2020). This ability is needed to face various challenges in real life. More than just solving problems, critical thinking skills also equip us to distinguish between truth and summary, fact and opinion, fiction and nonfiction (Muhibbin et al., 2021; Rahmawati et al., 2019; Ridlo, 2020).

Education in the 21st-century era does not only include aspects of skills and understanding but also involves several other aspects, namely aspects of creativity, collaboration, speaking skills, technology, behaviour, and moral values, as well as critical and communicative thinking skills (Peña-Ayala, 2021; Sudrajat et al., 2018). The main objective of 21st-century learning is to build individual learning abilities and support their development into active, independent, and lifelong learners (Andrian & Rusman, 2019; Rahmawati & Atmojo, 2021). The 21st-century competency indicators used in this study include critical thinking, creative, communication, and collaboration competencies. This requires a change in the role of teachers from traditional classroom teachers to creative and innovative teachers in the learning process. This role requires teachers to guide and support students in developing social skills and achieving their learning goals. The limitation of this study is that it only analyzes the effect of 21st-century competencies (4c) on improving students' social skills. Other studies are expected to examine the influence of 21st-century competencies (4c) on

other variables. This study implies that 21ˢᵗ-century competencies (4c) students possess can help improve elementary school students' social skills. This is very much needed in society. Thus, 21ˢᵗ century competencies (4C) affect improving students' social skills. Social skills are an integral part of 21ˢᵗ-century competencies. By combining social skills with 21ˢᵗ-century competencies in the learning process, students will be better prepared to face future challenges and become successful individuals who are helpful to society. This is an essential provision for them to achieve success in the digital era and face various challenges of globalization in the future.

## 4. CONCLUSION

Based on the description above, there is a positive influence between 21ˢᵗ-century competencies (4C) and students' social skills. It is concluded that 21ˢᵗ-century competencies (4C) positively influence students' social skills. Therefore, reform in the quality of learning is essential. Effective learning should help students develop participation, increase engagement, and motivate them to learn. Learning activities must be designed to be relevant to the real world so that they can apply their knowledge directly. Based on the findings and data analysis, students show potential in social skills.

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