



## Analysis of 4C's Ability in the Implementation of Online Learning in Elementary Schools

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### Abstract

The goal of this study was to describe the 4 C's ability to implement the 2020/2021 odd semester learning at Jitu State Elementary School in Sidoarjo Regency. The research location, which is included in the countryside, is intended to obtain a qualitative picture of the ability of the 4 C's in elementary schools, most of which are rural. Qualitative research with a descriptive narrative research design is applied. The result is that during this pandemic, there is a reality that online learning does not allow the realization of the collaborative abilities of all classes. Critical thinking skills, creative thinking, and communication are planned and implemented in learning. The ability of students who study under the guidance of their parents at home decreases compared to face-to-face learning. The teacher marks the existence of student work that parents do. Individual learning causes a decline in students' critical thinking, creative thinking, and verbal communicative skills, although the three skills (creative thinking, critical thinking, and communication) are still visible in students. The impact of learning with individual assignments on students shows a significant decrease in the 4 C's ability.

**Keywords:** 4 C's, learning, critical thinking, creative thinking, elementary school

## Analisis Kemampuan 4C's dalam Pelaksanaan Pembelajaran Online di Sekolah Dasar

### Abstrak

Tujuan dari penelitian ini adalah mendeskripsikan kemampuan 4 C's dalam pelaksanaan pembelajaran semester ganjil 2020/2021 Sekolah Dasar Negeri Jitu Kabupaten Sidoarjo. Lokasi penelitian yang termasuk pedesaan dimaksudkan agar diperoleh gambaran kualitatif dari kemampuan 4 C's di Sekolah Dasar yang mayoritas ada di daerah pedesaan. Penelitian kualitatif dengan desain penelitian naratif deskriptif diterapkan. Hasilnya pada masa pandemic ini ada realita bahwa pembelajaran dalam jaringan tidak memungkinkan diwujudkan aspek kemampuan kolaboratif semua kelas. Aspek kemampuan berpikir kritis, berpikir kreatif, dan komunikasi terencana dan terlaksana dalam pembelajaran. Kemampuan siswa yang belajar dibimbing orangtua di rumah menurun dibanding saat pembelajaran tatap muka. Guru menandai adanya pekerjaan siswa yang dikerjakan orangtua. Pembelajaran individual menyebabkan menurunnya keterampilan berpikir kritis, keterampilan berpikir kreatif, dan keterampilan komunikatif verbal siswa, walaupun ketiga keterampilan (berpikir kreatif, berpikir kritis, komunikasi) masih terlihat pada diri siswa. Dampak pembelajaran dengan penugasan individual pada diri siswa menampakkan penurunan kemampuan 4 C's signifikan.

**Kata kunci:** 4 C's, learning, critical thinking, creative thinking, sekolah dasar

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## INTRODUCTION

The 21st century is characterized by various things, (Haryanto, 2019) said that the 21st century is characterized as a century of openness or a century of globalization, which means that human life in this century undergoes fundamental changes that are different from the order of life in the previous century. The challenge in the 21st century, especially in the field of education is to prepare young people who are flexible, creative, and proactive. The younger generation needs to be formed to be skilled in solving problems, wise in making decisions, thinking creatively, willing to consult, able to communicate their ideas effectively, and able to work effectively both individually and in groups. In line with Greenstein's opinion (Zubaidah, 2018) that students in the 21st century must master science and metacognitive skills, be able to think critically and creatively, and be able to communicate or collaborate effectively. What do the demands of 21st-century education demand the learning that should take place in the classroom?

The Partnership for the 21st Century Learning (P.21) describes the skills, knowledge, and skills that students must master to succeed in life in the 21st century divided into 3 (three) skills, (1) learning and innovation skills, (2) information skills, media and technology, and (3) life and career skills; It's in the following framework.

21st Century Student Outcomes and Support Systems

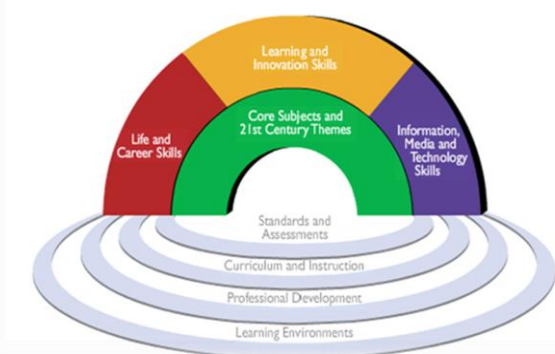


Figure1: 21st Century Learning Framework

Learning and innovation skills include the following skills, (1) creativity and innovation skills, (2) critical thinking and problem-solving skills, (3) communication skills, and (4) collaboration skills often called the 4 C's (creativity skills, critical thinking skills, communication skills, collaborative skills) (NEA, 2019). This demand must be realized in 21st-century learning by teachers. All formal schools are required to implement 4C's in carrying out learning (Priyadi, 2018). Learning can be done well if the teacher designs the process of his

activities through innovations. The professional side of teachers is seen through the idea of teachers as designers of learning and innovation at the practice level to solve everyday challenges in an ever-changing context (Paniagua & Istance, 2018). The consequences of these demands on teachers should make one of the benchmarks for the implementation of teacher professional education, including the Primary School Teacher Education study program. The teacher before learning the 4 C's ability to the student, must first have the 4 C's ability that can be shown to the student as an example. Learning that can optimize the competence of 21st-century skills in students must be carried out by teachers who have mastered it.

21st-century skills competencies include (1) Critical Thinking and Problem-Solving Skills (Critical Thinking and Problem Solving), (2) Communication Skills (Communicating), (3) Creativity and Innovation (Creativity and Innovation), (4) Collaboration (Collaboration) (Sutanto, 2017). Learning that integrates critical thinking and problem solving according to the NEA (2010) can follow the following 5 guidelines: (1) create a critical thinking/problem-solving model for students, (2) create a learning environment that makes it easier for students to use problem-solving skills, (3) make critical thinking and problem solving more intentional and become a full goal, (4) encourage students to become critical thinkers and better problem solvers, and (5) together with colleagues work collectively prioritize educating high-level thinking in all classes. With this guide, learning can be expected to realize critical thinking and problem-solving skills in students. This guide is also an indicator for critical thinking learning and problem-solving.

The (NEA, 2019) also guides effective learning shaping communication skills, namely: (1) create a model of communication skills for students, (2) encourage communication skills in general and oral communication skills in particular, (3) encourage students to give oral presentations to a varied community of audiences, (4) encourage students to become better communicators, and (5) encourage the use of new technologies and media to communicate innovatively and effectively. This indicator must be done by the teacher to form communication skills.

Collaborative learning guides include: (1) creating effective collaborative skills models, (2) creating learning environments that encourage the emergence of collaborative skills, (3) providing substantive opportunities for students to work in different teams, (4) encouraging students to

become better collaborators, and (5) exchange opinions to improve practices that enhance collaborative activities (NEA, 2019). These indicators of collaborative learning must appear to determine the realization of student collaboration skills.

The learning guide to realizing creative skills and innovation consists of: (1) being a model of creative and innovative skills for students, (2) encouraging creativity and innovation in the classroom, (3) more combine creativity and innovation in learning planning, (4) encourage students to be more creative and innovative, and (5) work with colleagues to improve education that includes creativity and innovation (NEA, 2019). Learning that realizes creativity and innovation will be realized with these indicators. Departing from the guide for educators for 4 C's, learning in elementary school can combine read, write, arithmetic, or 3 R's functions with 4 C's. Everything is realized through learning made by teachers, the implementation of learning, and learning assessment.

The purpose of this study is to describe the ability of 4 C's in the implementation of the odd semester learning 2020/2021 Jitu State Elementary School (SES) Sidoarjo Regency. There are at least three characteristics among the 7 characteristics of effective professional teacher development (Hammond et al., 2017) included in the study, namely: content-focused, collaboration, models, and modeling instruction. 4 C's is the content of learning, which can be learned collaboratively, which can also be used by various models of collaborative learning as models.

## METHODS

The approach used in this study is qualitative research in the form of words or statements to find meaning behind various symptoms/events that appear. The main target of qualitative research is humans because of humans as the source of problems as well as problem solvers.

The type of research used is descriptive research methods. Descriptive research is intended to describe or describe existing phenomena, either natural phenomena or human engineering. In addition to describing or describing existing phenomena, both natural phenomena and human engineering. Data collection techniques are used by interview methods before learning as an in-depth excavation of the Learning Implementation Plan (LIP), observation methods during the implementation of online learning, and interview methods after online learning.

In this study, researchers acted as the main instrument so that the presence of researchers at the research site was highly prioritized. Researchers function as data collectors, analyze, perform final instruments, and research whistleblowers.

The research was conducted at the elementary school, Jitu State Elementary School, with the address Jl. Sukun Rt.02 Rw.02 Jitu, Sidoarjo Regency. The data source in this study is in the form of a real situation (without engineering) where the data is evidenced in the form of field records in the form of 4C indicators made by researchers and adapted to the implementation of the 2020/2021 odd semester learning Jitu SES, Sidoarjo Regency. Interviews with classroom teachers and students from grades I to class VI regarding the implementation of odd semester 2020/2021 learning. The data taken in this study is data related to the application of 4C's aspects in the learning examination carried out in Jitu SES, Sidoarjo Regency.

Data collection in qualitative research conducted by researchers is observation, interview, and documentation. Researchers use data analysis techniques with Miles and Huberman models including (a) Data Reduction (b) Data Display (presentation of data) (c) Conclusion drawing /verification (conclusion draw) (Sugiyono, 2015). The final step in qualitative data analysis according to Miles and Huberman is to make a conclusion draw or verification. Checking the validity of data conducted by researchers is triangulation because what is sought is words, no wrong words can be incompatible between what is spoken and the truth (Satori & Komariah, 2014). Triangulation performed by researchers is source triangulation, technical triangulation, and time triangulation.

Research on the 4 C's was conducted with a quasi-experimental research design to compare guided inquiry learning with conventional learning, and its effect on the mastery of 4 C's (Chiruguru & Chiruguru, 2020). The design of qualitative research review literature was also carried out to examine the topic of the essence of 4 C's skills in the classroom (Chiruguru & Chiruguru, 2020). Research review literature on 4 C's skills was conducted to define, need and deliver them in specific contexts (Joynes et al., 2019). The difference between the design of descriptive narrative qualitative research and the three studies lies in the data collection techniques and data analysis. This descriptive narrative research allows for more in-depth data acquisition.

## FINDINGS AND DISCUSSION

### Overview of Jitu SES, Sidoarjo Regency

Jitu State Elementary School (SES), Sidoarjo Regency, is the only SES in Jitu Village that has 6 study groups consisting of grades 1 to grade 6. The head of Jitu SES and the class teachers already have a classification of undergraduate education by the laws and regulations. The Covid-19 pandemic period, caused learning to be carried out by health protocols set by the government, especially the Ministry of Education and Culture and the government of Sidoarjo Regency. Learning activities are carried out through the network with the Whatsapp platform. Learners who do not have a smartphone, are assisted by teachers by providing offline teaching materials. Parents come to school or teachers deliver teaching materials to the home of learners.

### Analysis 4 C's On Learning Implementation Plans

Plan of teachers at Jitu State Elementary School, Sidoarjo Regency, in the academic year 2020/2021 this odd semester designed learning in LIP 4 components by the laws and regulations. In the LIP can be identified indicators from 4 C's, the results of the analysis can be presented below.

Table 1. Aspect 4 C's in LIP

Grade	C1	C2	C3	C4
1	Y	Y	Y	Y
2	Y	Y	Y	Y
3	N	Y	Y	Y
4	Y	Y	Y	Y
5	N	Y	Y	Y
6	Y	Y	Y	Y

Footnotes:

C1= Collaboration

C2= Critical

C3= Creativity

C4= Communication

Y = Yes

N= Nothing

From table 1 it can be seen that the collaboration aspect is not done in grades 3 and grade 5. Teachers reasoned not to carry out student collaboration with students, or teachers with students because they were constrained by a ban on off-network learning. Teachers also stated that they are constrained by the limitations of learning in synchronic networks, so collaboration is not implemented. While the indicator of collaboration in grades 1, 2, 4, and 6 identified the following: (1) grade 1 teachers and students talk about the symbol of numbers and the incomplete

word, (2) class 2 students and teachers ask about Pancasila precept symbols and phrases, (3) 4th grade in the form of parental guidance to students, and (4) 6th grade is shown reflection activities with teachers and students. The researcher's findings support Kivunja's opinion (Kivunja, 2015) which is (1) the responsibility to work with others to achieve certain goals, (2) respect and respect the opinions of others, (3) able to work effectively and flexibly in diverse teams, and (4) able to compromise with other members of the team. Student collaboration with teachers and with parents.

Indicators of critical thinking aspects that appear include (1) Talking to teachers about the incomplete word section, (2) Q&A about Pancasila precepts, (3) learning for themselves from videos about human growth and breeding, (4) Q&A or discussing the many facets and diversity of Indonesia, (6) Discussing the scale of classes discussing individual tasks given by teachers through WhatsApp groups, (7) Q&A discusses individual assignments given by the teacher.

The researcher's findings received theoretical support from (1) HOTS thinking in the form of identifying, (2) Q&A by the discussion, (3) Discussion on a class scale, (4) Discussion with my compatriots, and (5) Giving scaffolding. The design of learning activities that have been applied by teachers can help students in developing their thinking. The NEA (2019) states that learning critical thinking leads students to develop other skills, such as increasing higher concentration, deeper analytical skills, and better thought processing.

In addition to critical thinking, it also appears in the formulation of learning goals. Indicators that appear to be the use of HOTS capacity such as writing in grade 1, pairing in class 2, writing down differences in grade 3, identifying diversity in grade 4, determining the main ideas in grade 5, and reporting breeding in grade 6. It appears that critical thinking is degraded according to the characteristics of learners' thinking abilities. Indicators of the aspect of creativity that arises from grade 1 to grade 6 are to find new ideas to create products designed for learning activities. This indicator is important, because as stated that creative thinking is related to the ability to create (Sloane, 2017). Creativity has four indicators namely fluency, flexibility, originality, and elaboration (Azhari & Somakim, 2014).

Indicators of communication aspects that appear include (1) oral and written Q&A, (2) the use of WhatsApp groups, and (3) parental assistance to students. This aspect indicates the



existence of oral and written communication, as well as direct and indirect communication. Many experts have suggested that indirect communication through social media is needed by students to face the life of the 21st century.

**Analysis 4 C's On Implementation Of Learning**

The condition of the Covid-19 pandemic caused the constraints of classroom observation, therefore replaced with observation while studying at home. The school allows grade 3 and grade 5 whose students live around the school. This decides that class 3 represents the lower class and class 5 represents the high class. Observations made while studying at home in this pandemic condition, are expected to describe when studying in the classroom although it is not as possible as it is. The results of observations of the implementation of learning related to 4 C's such as the following table.

Table 2. Aspect 4 C's in Observation of Learning Implementation

4 C's Aspect Observation	Lower Class	Higher Class
<b>1. Collaboration Skills</b>		
a. Responsibilities as chairman and group member	No	No
b. Appreciate different opinions	No	No
c. Involvement in group duties	No	No
d. Compromise with other members	No	No
<b>2. Critical Thinking Skills</b>		
a. HOTS Thoughts	Yes	Yes
b. Q&A	Yes	Yes
c. Scaffolding	Yes	Yes
d. Discussion	Yes	Yes
<b>3. Creativity Thinking Skills</b>		
a. Conceptually bringing up	Yes	Yes
b. Creative ideas practically	Yes	Yes
c. Have curiosity	Yes	Yes
d. Many rebuttals to others	Yes	Yes
<b>4. Communication Skills</b>		
a. Communicate orally (via chat in a What's App group)	Yes	Yes
b. Listening (Listening via chat in WA groups)	Yes	Yes
c. Media suitability used	Yes	Yes
d. Ability to use media used	Yes	Yes
e. Communicate in	Yes	Yes

writing

Table 2 is the result of observation of the implementation of learning in the low class and in the high class that does not show collaboration skills. This shows that what is in LIP is not necessarily realized in the implementation of learning. While the other 3 skills appear when observation of the implementation of learning in the low and high classes. The opinion of (Arends, 2015) states that the implementation of effective learning facilities has many determining factors. It cannot be expected that every LIP will be carried out everything, environmental conditions and student conditions have a large contribution to its implementation (Arends, 2015).

**Analysis of Aspect 4 C's Interview Results of Teachers and Students**

The results of interviews conducted with teachers and students in grades 1 through 6 after the implementation of LIP learning are analyzed. The results of interviews with teachers and grade 1 students on July 22-24, 2020 can be concluded the reason teachers hold individual assignments is so as not to be complicated because online learning and students better understand the content of learning. Students feel happy to learn there because they can be helped by a brother or parent.

The results of interviews with teachers and grade 2 students on July 20, 22, and 23, 2020 about individual assignments. Grade 2 teachers have 2 (two) reasons, namely the current conditions that do not allow group learning, and so that students can be more independent and better understand the lesson. While grade 2 students answer that self-assignment causes them: to (1) be very happy, (2) can repeat watching learning videos, (3) can ask teachers and not be ashamed of friends, and (4) can learn with parents.

The results of interviews with teachers and students of class 3 on July 29, July 30, 2020, and August 3, 2020, on individual assignments. Class 3 teachers have 2 (two) reasons, namely the current conditions that do not allow group learning so that students can learn according to their abilities and so as not to roam outside the house. While class III students answer that self-assignment causes them: to (1) be very happy, (2) can repeat watching learning videos, (3) can ask teachers and not be ashamed of friends, (4) can do assignments online so that they are not cheated by friends.

The results of interviews with teachers and students of grade 4 on July 27, 28, and 29, 2020 about individual assignments. Grade 4 teachers

have 2 (two) reasons, namely the current conditions that require students to learn on their own, and so that students can be more independent and better understand the lesson. While grade 4 students answer that self-assignment causes them: to (1) be very happy, (2) can learn while looking at television, (3) can ask their brother or google if anyone does not know, and (4) can learn with parents.

The results of interviews with teachers and students of class 5 on July 30, 2020, and August 5-6, 2020 about individual assignments. Class V teachers have 2 (two) reasons, namely the current conditions that do not make it easier for students to learn, and so that students can be more independent. While class 5 students answered that self-assignment caused them: (1) 6 people are happy / like and 4 people are not happy / disliked, (2) can repeat watching learning videos, (3) can ask teachers and not be ashamed of friends, (4) can learn with parents, (5) not cheated friends, (6) cannot show friends, (7) less got teacher explanation.

The results of interviews with teachers and students of class 6 on July 20, 22, and 23, 2020 about individual assignments. Class VI teachers have 2 (two) reasons, namely the current conditions that do not allow group learning, and so that students can

The results of interviews with teachers and students from grade 1 to grade 6 of SES Jitu of Sidoarjo Regency can be concluded the reason for the teacher doing individual assignments there are two (1) conditions that do not allow students to study groups, and (2) bathe students more in learning. All students of grades I through grade IV feel happy with individual assignments, while a small percentage of grades 5 and 6 there are unhappy. By what (Suhartono et al., 2017) that learning is an individual and group activity, depending on the person who learns. In general, people prefer to learn alone, of course, not always the maximum results, be more independent and better understand the lesson (Suhartono et al., 2017). While class 6 students answer that self-assignment causes them: (1) 5 happy and 3 unhappy, (2) funny learning videos explain it, (3) not exemplified friends, (4) can not ask smart friends, (5) can not show the work of smart friends.

Pandemic conditions that require Jitu SES, District Of Tulangan Sidoarjo Regency, with the policy of learning in the network indeed missed the opportunity to develop collaboration skills. The impact of accompaniment from online learning is more than just losing collaboration, namely increasing a certain amount of literacy in students.

Language literacy, digital literacy, and other literacy are growing along with learning in this network

## CONCLUSION

Learning in the network required during the COVID-19 pandemic held in the nasal semester of 2020/2021 in Jitu SES, Tulangan District, Sidoarjo Regency was found and concluded the results of research on the ability of aspect 4 C's. The qualitative narrative research that has been carried out can be concluded as follows.

a. In the Learning Implementation Plan (LIP) in general teachers are still optimistic to do learning that leads to the formation of 4 C's ability aspects in students. For teachers in grades 3 and 5 who do not show the formation of collaborative skills aspects in LIP, other aspects of ability exist. The other teacher planned the establishment of all aspects of 4 C's ability on his LIP.

b. In the implementation of learning, data shows that there are 3 aspects of 4 C's abilities that appear, namely: communication skills, critical thinking skills, and creative thinking skills. Collaborative skills are not seen at all in the high class or the low class.

c. Teachers and students state that aspects of 4 C's ability that were taught during the Covid-19 pandemic were not optimal. The main obstacle that they raise is the limitations of communication tools or ICT either laptops or smartphones

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