



DEVELOPMENT OF THE 6Cs EMERGENCE MEASUREMENT INSTRUMENTS IN ELEMENTARY SCHOOLS

Poppy Anggraeni^{1*}, Dadang Sunendar², Bunyamin Maftuh³, Wahyu Sopandi⁴

^{1,2,3,4}Universitas Pendidikan Indonesia, Bandung, Indonesia

¹Universitas Sebelas April, Sumedang, Indonesia

¹poppysofia04@upi.edu, ²dadangsunendar@upi.edu, ³bunyaminmaftuh@upi.edu,
⁴wsopandi@upi.edu

PENGEMBANGAN INSTRUMEN PENGUKURAN KEMUNCULAN 6C PADA PEMBELAJARAN DI SEKOLAH DASAR

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ABSTRACT

Abstract: The instrument for measuring the emergence of 6Cs in learning at elementary schools is an instrument developed to measure the emergence of character, critical thinking, creativity, citizenship, collaboration, and communication in learning planning and learning implementation at elementary schools. The purpose of the research in this paper is to analyze the instrument validity that has been developed to measure the emergence of 6Cs in learning planning and implementation at elementary schools and to describe the copyrighting of a validated instrument. The research method uses the Research and Development of the ADDIE model, which consists of analyzing, designing, developing, implementing, and evaluating stages. Instrument validation was carried out by four experts. Instruments that have been validated were subsequently revised based on the suggestions for improvement and calculated the validity percentage and validity level. The results indicate that the instrument for measuring the emergence of 6Cs in learning planning at elementary schools had a validity percentage of 97.74% with a very valid validity level. The instrument for measuring the emergence of 6Cs in learning implementation at elementary schools had a validity percentage of 94.41% with a level very valid validity likewise. The results of the validation and this instrument copyright can be a reference to measure the quality of learning planning and implementation so that it can improve the learning quality in elementary schools, especially related to the learning that can facilitate the development of 6Cs.

Keywords: instrument validity and copyright, 6Cs, elementary school

Abstrak: Instrumen pengukuran kemunculan 6C pada pembelajaran di sekolah dasar adalah instrumen yang dikembangkan untuk mengukur kemunculan karakter, berfikir kritis, kreatifitas, kewarganegaraan, kolaborasi, dan komunikasi pada perencanaan pembelajaran dan pelaksanaan pembelajaran di Sekolah Dasar. Tujuan dari penelitian dalam artikel ini adalah untuk menganalisis validitas instrumen yang telah dikembangkan untuk mengukur kemunculan 6C pada perencanaan dan pelaksanaan pembelajaran di sekolah dasar, dan untuk mendeskripsikan pembuatan Hak Cipta instrumen yang telah divalidasi. Metode penelitian menggunakan Penelitian dan Pengembangan model ADDIE yang meliputi tahap menganalisis, membuat, mengembangkan, menerapkan, dan mengevaluasi. Validasi instrumen dilakukan oleh empat orang ahli. Instrumen yang telah divalidasi selanjutnya dilakukan revisi sesuai saran perbaikan dan dihitung persentase validitas dan tingkat validitasnya. Hasil penelitian menunjukkan bahwa instrumen pengukuran kemunculan 6C pada perencanaan pembelajaran di sekolah dasar memiliki persentase validitas sebesar 97,74% dengan tingkat validitas sangat valid. Demikian halnya instrumen pengukuran kemunculan 6C pada pelaksanaan pembelajaran di sekolah dasar memiliki persentase validitas sebesar 94,41% dengan tingkat validitas sangat valid. Hasil validasi dan Hak Cipta instrumen ini dapat menjadi salah satu referensi untuk mengukur kualitas perencanaan dan pelaksanaan pembelajaran sehingga dapat meningkatkan mutu pembelajaran di sekolah dasar, khususnya yang berkaitan dengan pembelajaran yang dapat memfasilitasi pengembangan 6C.

Kata Kunci: validitas instrumen dan hak cipta, 6C, sekolah dasar

CITATION

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INTRODUCTION

The development of science and technology has had a major impact on the world of education, as well as learning in elementary schools, these changes can be seen in changes to the curriculum (Maulida et al., 2020). The 2013 curriculum is a curriculum that is designed based on competence and character based curriculum, besides that the learning that is carried out leads to constructive learning. Mulyasa (2017) in the 2013 curriculum must involve all components (stakeholders) in the education system and there must be optimal collaboration, such as curriculum, lesson plans, learning processes, assessment mechanisms, learning management, infrastructure, financing, and the work ethic of school residents .

In the Indonesian curriculum, the standard process includes lesson planning, learning implementation and learning assessment. Learning planning contains learning objectives, learning steps and learning assessments. Implementation of learning in this education unit must be organized interactively, inspiring, fun, challenging, motivating students to participate actively, and provide sufficient space for initiative, creativity and independence in accordance with the talents, interests and physical and psychological development of students (Kemendikbudristek, 2022).

The ability of teachers to develop learning tools (syllabus, textbooks, sources and media, models, instruments and assessments, lesson plans) greatly influences the implementation of the 2013 curriculum (Akbar, 2016). However, research by Oktaviani & Wulandari (2019) related to the implementation of the 2013 curriculum,

teachers are still not able to carry out the demands of the learning process as expected, even though Zeeger's research (Jha, 2020) shows that instructional behavior is very important for learning, motivation and achievement of learning outcomes students in developing 21st century skills. In addition, Davies (Chappuis & Stiggins, 2002) assesses the models used in learning, these assessments are learning tools that encourage more practice in learning than activities that are designed only for the purpose of assessing and scoring learning outcomes.

Regarding assessment, Oktaviani & Wulandari's research (2019) also shows that most teachers complain about the complexity of the assessment process and the existence of a number of obstacles that are often faced by teachers, including the assessment instruments which are still very limited, inadequate assessment skills and the many aspects that must be assessed. rated. Whereas according to Mulyasa (2017) assessment of learning outcomes is necessary to monitor the process, learning progress, and continuous improvement of student learning outcomes. Fullan & Scott (2014) school assessments that only focus on performance in the areas of literacy and numeracy basic competencies are not enough for school, college and university graduates, especially when they have to be successful and productive in facing social, cultural, economic, vocational challenges, and the environment in the mid-21st century.

Based on an analysis of a number of previous studies related to assessment in elementary schools, it turns out that (1) it focuses more on assessing learning outcomes (knowledge, skills, attitudes) acquired by

students. The assessment that has been carried out is divided into three approaches, namely assessment of learning, assessment for learning, and assessment as learning. This assessment has an important role in education (Heitink et al., 2016). In addition, based on an analysis of the instrument development carried out, it still focuses on assessing learning outcomes (attitudes, knowledge and skills) (Prasetyo, 2017); motivation and science learning outcomes (Mudanta et al., 2020); student analogy test (Jannah & Rahayu, 2022); HOTS test (Fitriani et al., 2018); relational understanding ability test (Riyani et al., 2017); assessment of social attitudes (Kuntoro & Fajrie, 2023); scientific attitude (Widyastika & Wahyuni, 2022); an attitude of curiosity (Rudiyanto & Haryanto, 2020); character-based assessment of social care (Viranthi & Wulandari, 2022); assessment of critical thinking skills and creative thinking (Utama et al., 2022); and android-based singing ability performance assessment (Rahmawan et al., 2016).

This shows that (2) there are still few who focus on assessing the learning process, for example when teachers apply certain innovative learning models whether the planning and learning steps carried out have facilitated students to develop 21st century skills in accordance with learning objectives or not yet. As for what is meant by the assessment of the learning process in this case is an assessment of the planning and implementation of learning. Other findings in the field that are occurring at this time are (3) through the assessment of student learning outcomes, an overview of student success in learning will be obtained, then based on these learning outcomes the teacher can follow up by evaluating the learning process that has been carried out so that improvements can be made and even better in the future. However, according to the researcher's notes, if what is evaluated first is the learning process, then based on the results of the evaluation, learning

can be designed that can facilitate students to achieve the desired learning goals. In addition, (4) there are many important things that students must learn at this time, but the change process takes a relatively long time, so that they cannot be seen immediately after learning is over. Another factor is (5) it is often difficult to develop measuring instruments, besides that the same measuring instrument can actually give different results when measuring different objects.

Related to 21st century learning practices, based on previous research it is known that there are seven important components that must be instilled in elementary school students, namely character, critical thinking, creativity, citizenship, collaboration and communication (6Cs) and ICT literacy (Anggraeni et al., 2022). In addition, previous research regarding teacher perceptions in instilling 6Cs in elementary schools on the aspects of knowledge and understanding shows a very high perception, and on the applications aspect shows a high perception (Anggraeni et al., 2023). For example character and citizenship which are the deepest domains of education alongside intellectual domains, as well as the importance of equipping students with knowledge as citizens of the world in today's highly diverse global world order. In addition, Sunendar et al., (2021) in this era of globalization, the educational process must be able to encourage intercultural communication skills, so that students are produced who are more prepared and trained as real citizens of the world.

However, the high perception of teachers regarding the importance of instilling 6Cs in elementary schools must be proven by real conditions in the field, therefore an assessment process instrument is needed to find out how the implementation of learning is happening at this time and its suitability with the demands of 21st century learning, especially those that are oriented towards planting 6Cs students. Bialik et al., (2016)

current system changes aimed at making students and workers successful, require strong support and there must be alignment between the 21st century assessment system with learning goals and standards, curriculum and learning practices, teacher professionalism, training and leadership development, a safe and conducive environment for learning, working, and the use of appropriate learning tools and technology.

In fact, based on the explanation above the assessment carried out in elementary schools is currently more in the form of learning assessment, learning assessment and learning assessment, but there are still few who assess the learning process as a learning assessment. This can lead to a lack of optimality in creating learning that can facilitate students instilling various important things that must be owned, especially those related to 6C in learning in elementary schools. This is what encourages researchers to conduct research on the need for development, validation and copyright instruments in the learning process which can lead to the emergence of 6C in learning in elementary schools as an important part of 21st century learning.

The formulation of the problem in this study is :

1. How to validate the instrument for measuring the appearance of 6Cs in learning in elementary schools?
2. How to make a copyright for the instrument for measuring appearance of 6Cs in learning in elementary schools?

THEORITICAL REVIEWS

6Cs Component

Based on previous research, namely an analysis of the various competencies needed in the 21st century, it is known that there are seven important components that must be instilled in elementary school students, namely character, critical thinking, creativity, citizenship, collaboration, communication (6Cs) and ICT literacy (Anggraeni et al. ., 2022). However, in this study it was limited to the 6Cs component, because ICT literacy is part of multiliteracy which has its own discussion. The following is a complete explanation of the operational definition of each C component based on the results of an analysis of various theoretical definitions of the 6Cs.

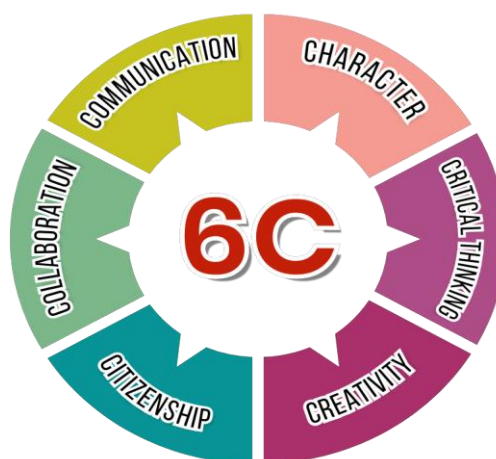


Figure 1. 6Cs Component
(Sertifikat Hak Cipta EC00202322510)

Character

Good character cannot be formed automatically, but must be developed through a learning process, exemplary, and practiced continuously from time to time through character education (Pala, 2011). Character education programs can help elementary school students learn the importance of community in their schools (Lin, 2013).

Anderson (Chowdhury, 2016) defines character as moral superiority and firmness of integrity which refers to strict adherence to a code of moral values. These characters include grit, tenacity, persistence, resilience, reliability, and honesty (Fullan & Scott, 2014). Character in this study is the nature, morals, character that is unique to an individual that distinguishes it from other individuals, including grit, tenacity, persistence, resilience, reliability, and honesty.

Critical Thinking

The curriculum, in combination with other instructional components, determines the development of critical thinking skills (Nkhoma et al., 2018). Alberta Education (2016) critical thinking involves using reasoning and criteria to conceptualize, evaluate or synthesize ideas.

Critical thinking in this study is the ability to process information from various sources through effective reasoning and systematic thinking including activities of analyzing, evaluating, synthesizing, interpreting and drawing conclusions, making meaningful judgments and decisions, applying them in real life and reflecting critically on experiences and learning processes.

Creativity

Creativity is one of the most important and well-known skills for success in the 21st century (Henriksen et al., 2016). Collard & Looney (2014) creativity is important for innovation and socio-economic development and individual well-being. Cachia & Ferrari

(2010) creativity is a process or product that shows a balance in terms of originality and value.

Creativity in this study is the ability to generate new ideas that are original and useful, use imagination to develop new and original ideas, synthesize, analyze and evaluate new ideas to enhance creative efforts, communicate new ideas to others, see failures, obstacles and difficulties as learning material, be open and responsive to new and diverse perspectives, input, ideas, demonstrate leadership to put those ideas into practice, and value every process of producing original work and demonstrating ideas.

Citizenship

Students must not only be prepared for work and a sustainable economy, but must also be equipped with skills and values, strong personal development, and develop responsible citizenship in living life in the 21st century (Bell, 2016). According to OXFAM (2015) the responsibilities of a global citizen include three things, namely knowledge and understanding, skills, and values and attitudes.

Citizenship in this study is the ability of individuals to understand their own roles and responsibilities as a society/citizen including understanding differences in rights and obligations, respecting democratic values, respecting equality and diversity, recognizing diversity as a strength, being actively involved in solving problems, acting critically towards information provided accepted, shows solidarity, interacts effectively based on the values/attitudes, ethics that apply both locally, regionally, nationally and internationally.

Collaboration

Collaboration is included as one of the 21st century skills because the importance of cooperative interpersonal skills is higher and the skills involved are even higher than in the previous industrial era (Ontario, 2016). Collaboration is cooperation between

individuals by involving association activities which include partnerships and teamwork, leadership and assistance, as well as alliances that provide benefits to all individuals involved (Miller, 2015).

Collaboration in this study is the ability to build effective and positive interactions/relationships with other people/teams, work productively with other people/teams to manage projects (priorities, plans), demonstrate teamwork and leadership, provide assistance and guidance, participate, exchange ideas and sharing roles and responsibilities, making substantive decisions together, respecting differences of opinion and views, and valuing individual contributions to achieving common goals.

Communication

Berger and Starbird (Carlgren, 2013) ideally that educational goals should develop critical thinking and communication skills as well as other mind strengthening abilities. Alberta Education (2016) communication involves sharing ideas through spoken, written or non-verbal media.

Communication in this study is the ability to convey thoughts/ideas clearly and concisely both orally, in writing or present them with media/technology, including activities of speaking, reading, writing, listening, asking questions, giving or receiving arguments/feedback actively and showing respect, empathy and responsibility when communicating with others.

METHOD

The research method used is R&D (Research and Development) with a research design that is the ADDIE model which includes the Analyze, Design, Develop, Implement, and Evaluate phases (Branch, 2009). In the Analyze phase, a literature/theory analysis is carried out on character, critical thinking, creativity, citizenship, collaboration and communication (6Cs) in order to obtain a theoretical definition for each C component, then develop operational definitions and determine indicators for each C component. This can be seen more clearly in table 1.

Table 1. Component 6Cs and Total Indicators

Component 6Cs	Number of Indicator	Number of Questions
Character	6	6
Critical Thinking	9	9
Creativity	8	8
Citizenship	8	8
Collaboration	8	8
Communication	8	8
Total	47	47

In the Design phase, the 6Cs component indicators are selected to be used in the preparation of the instrument to measure the appearance of 6Cs and determine the type of instrument to be prepared in the learning plan in the form of document analysis of learning planning documents regarding the appearance of 6Cs and in the implementation of learning in the form of observation sheets of the learning process regarding the occurrence

of 6Cs. a questionnaire sheet for teachers regarding the occurrence of 6Cs and a questionnaire sheet for students regarding the occurrence of 6Cs in elementary schools.

In the Develop phase, in addition to producing products in the form of instruments for measuring the appearance of 6Cs in learning planning in elementary schools and instruments for measuring the occurrence of 6Cs in implementing learning in elementary

schools. Instruments are also made to test the validity of the product to be used by experts (expert judgement). Validation by experts aims to review and examine the instruments that have been produced, where a good expert validator will optimally review and study the instruments and provide input for improvements (Akbar, 2016).

In the Implement phase, validation is carried out on the instruments that have been made by four experts who are competent in the field of basic education and 6Cs. The first validator is a Professor who has expertise on 6Cs especially on character and citizenship, the

second validator is a Doctor who has expertise in Basic Education, the third validator is a Doctor who has expertise in Basic Education who is also a School Facilitator, and the fourth validator is a Teacher of Elementary School with a Masters in Basic Education degree.

In the Evaluate phase, an evaluation of the results of expert validation is carried out by performing data analysis techniques using simple statistical techniques by calculating the percentage of validity and determining the level of validity with reference to Akbar (2016) as in the following formula and table 2.

$$\text{Percentage of Validity (\%)} = \frac{\text{Total Score of Validators}}{\text{Total Maximum Score}} \times 100\%$$

Information :

Percentage of Validity : Percentage obtained from validation results

Total Validation Score : The total score of the validation results by the validator

Maximum Total Score : Total maximum expected score

Table 2. Instrument Validation Criteria

Percentage of Validity	Level of Validity
85,01 – 100,00	Very Valid
70,01 – 85,00	Sufficiently Valid
50,01 – 70,00	Less Valid
0,01 – 50,00	Not Valid

Instruments that have been validated are then revised, including accommodating input or suggestions for improvement provided by the validator, so that a better set of instruments is obtained (Akbar, 2016). The next step is to proceed with making a copyright and preparing a number of necessary conditions and uploading it on the website <https://e-hakcipta.dgip.go.id/>.

RESULTS AND DISCUSSION

Based on the results of the validation carried out by four experts on all validated instruments, the results can be seen in the following explanation.

1. Validation of Instrument for Measuring the Appearance of 6Cs in Learning Planning in Elementary Schools

The instrument for measuring the appearance of 6Cs in learning planning in elementary schools aims to analyze lesson plans documents made by teachers regarding the appearance of activities that are in accordance with the appearance of the character, critical thinking, creativity, citizenship, collaboration and communication indicators. This instrument is in the form of a learning planning document analysis sheet regarding the appearance of 6Cs in learning in elementary schools.

In accordance with Permendikbudristek Number 16 of 2022 that learning plans are prepared in the form of planning documents that are flexible, clear and simple by containing learning objectives,

learning steps and learning assessments (Kemendikbudristek, 2022). The following is an explanation of the validity of the instrument for each 6C component, which can be seen in table 3.

Table 3. Validation of Learning Planning Document Analysis Sheet Regarding the Appearance of 6Cs in Elementary Schools

No.	Component 6Cs	Validator Score				Total	Percentage of Validity	Level of Validity
		V1	V2	V3	V4			
1.	Character	24	22	18	21	85	88,54	Very Valid
		V1	V2	V3	V4			Validity
2.	Critical Thinking	36	33	36	36	141	86,81	Very Valid
3.	Creativity	32	29	32	32	125	85,16	Very Valid
4.	Citizenship	32	32	32	32	128	87,50	Very Valid
5.	Collaboration	32	32	32	32	128	100,00	Very Valid
6.	Communication	32	32	32	32	128	100,00	Very Valid
Validation Results		188	180	182	185	735	97,74%	Very Valid

Based on table 3, it can be seen that the learning planning document analysis sheet instrument regarding the appearance of 6Cs in elementary schools has a very valid level of validity (97.74%), with the lowest percentage of validity, namely creativity (85.16%) with a level of validity very valid, critical thinking (86.81%) with a very valid validity level, citizenship (87.50%) with a very valid validity

level, character (88.54%) with a very valid validity level, and the highest is collaboration (100%)) with very valid validity level and communication (100%) with very valid validity level. Revisions were made with reference to suggestions for improvement from the validator. Examples of revised questions on the creativity component can be seen in table 4.

Table 4. Suggestions for Improvement of Expert Validation Results Learning Planning Document Analysis Sheet Regarding the Appearance of 6Cs in Elementary Schools

Creativity Indicators	Questions	Suggestions for Improvement	Revision Results
Synthesize, analyze and evaluate new ideas to enhance creative endeavors	Does the written description of the activities in the lesson plan facilitate students to synthesize, analyze and evaluate new ideas to enhance creative endeavors?	Sentences should be more effective, crossed out words removed.	Does the written description of the activities in the lesson plan facilitate students to synthesize, analyze and evaluate new ideas to enhance creative efforts?

Based on the results of the expert validation data analysis above, it can be seen that the instrument for measuring the appearance of 6Cs in learning planning in elementary schools is very valid and feasible to use. The validity of an instrument shows the

suitability, accuracy, and correctness of the measuring device with the measured results (Mansyur et al., 2015).

2. Validation of Instrument for Measuring the Appearance of 6Cs in Learning Planning in Elementary Schools

The instrument for measuring the appearance of 6Cs in the implementation of learning in elementary schools is divided into three forms of instruments as part of data

triangulation. For more details, the explanation of the three instruments can be seen in the following table 5.

Table 5. Validation of 6Cs Appearance Measurement Instruments on Implementation of Learning in Elementary Schools

No.	Type of Instrument	Validator Score				Total	Percentage of Validity	Level of Validity
		V1	V2	V3	V4			
1.	Learning Process Observation Sheet Concerning the Appearance of 6Cs	188	172	182	187	729	96,94%	Very Valid
2.	Questionnaire Sheet for Teachers Regarding the Appearance of 6Cs	188	145	182	187	702	93,35%	Very Valid
3.	Questionnaire Sheet for Students Regarding the Appearance of 6Cs	188	141	182	188	699	92,95%	Very Valid
Validation Results		564	458	546	562	2130	94,41%	Very Valid

The following is an explanation of the three instruments for measuring the appearance of 6Cs in the implementation of learning in elementary schools. The first instrument in the form of an observation sheet on the learning process regarding the appearance of 6Cs aims

to find out whether learning instills 6Cs which is adjusted to the appearance of character, critical thinking, creativity, citizenship, collaboration and communication indicators in the learning process in elementary schools, which can be seen in table 6.

Table 6. Validation of the Learning Process Observation Sheet Regarding the Appearance of 6Cs on Implementation of Learning in Elementary Schools

No.	Component 6Cs	Validator Score				Total	Percentage of Validity	Level of Validity
		V1	V2	V3	V4			
1.	Character	24	22	18	23	87	90,63	Very Valid
2.	Critical Thinking	36	33	36	36	141	97,92	Very Valid
3.	Creativity	32	29	32	32	125	97,66	Very Valid
4.	Citizenship	32	24	32	32	120	93,75	Very Valid
5.	Collaboration	32	32	32	32	128	100	Very Valid
6.	Communication	32	32	32	32	128	100	Very Valid
Validation Results		188	172	182	187	729	96,94%	Very Valid

Based on table 6 it can be seen that the instrument of the learning process observation sheet concerning the appearance of 6Cs in the implementation of learning in elementary schools which is compiled has a very valid validity level (96.94%), with the lowest percentage validity, namely character (90.63%) with very valid validity level, citizenship (93.75%) with a very valid validity level, creativity (97.66%) with a very valid

validity level, critical thinking (97.92%) with a very valid validity level, and the highest collaboration (100%) with a very valid validity level and communication (100%) with a very valid validity level. revisions were made with reference to suggestions for improvement from the validator. Examples of revised questions on the character component can be seen in table 7.

Table 7. Suggestions for Improvement of Expert Validation Results Learning Process Observation Sheet Concerning the Appearance of 6Cs on Implementation of Learning in Elementary Schools

Character Indicators	Questions	Suggestions for Improvement	Revision Results
Have perseverance, namely diligent, hard-hearted, and earnest in learning	Does learning instill persistence/ diligent, hard-hearted and earnest in learning to students?	Sentences should be more effective, crossed out words removed.	Does learning instill persistence / diligent and serious in learning to students?

The second instrument in the form of a questionnaire sheet for teachers regarding the appearance of 6Cs aims to obtain teacher answer data in instilling 6Cs which is adjusted to the appearance of character, critical

thinking, creativity, citizenship, collaboration and communication indicators in the learning process in elementary schools, which can be seen in table 8.

Table 8. Validation of Questionnaire Sheets for Teachers Regarding the Appearance of 6Cs on Implementation of Learning in Elementary Schools

No.	Component 6Cs	Validator Score				Total	Percentage of Validity	Level of Validity
		V1	V2	V3	V4			
1.	Character	24	21	18	23	86	89,58	Very Valid
2.	Critical Thinking	36	28	36	36	136	94,44	Very Valid
3.	Creativity	32	24	32	32	120	93,75	Very Valid
4.	Citizenship	32	24	32	32	120	93,75	Very Valid
5.	Collaboration	32	24	32	32	120	93,75	Very Valid
6.	Communication	32	24	32	32	120	93,75	Very Valid
Validation Results		188	145	182	187	702	93,35%	Very Valid

Based on table 8, it can be seen that the questionnaire sheet for teachers regarding the appearance of 6Cs in the implementation of learning in elementary schools has a very valid level of validity (93.35%), with the lowest percentage validity, namely character (89.58%) with very valid validity level, creativity (93.75%) with a very valid validity level, citizenship (93.75%) with a very valid

validity level, collaboration (93.75%) with a very valid validity level, communication (93.75 %) with a very valid validity level and the highest is critical thinking (94.44%) with a very valid validity level. Revisions were made with reference to suggestions for improvement from the validator. Examples of revised questions on the character component can be seen in table 9.

Table 9. Suggestions for Improvement of Expert Validation Results Questionnaire sheet for teachers regarding the Appearance of 6Cs on Implementation of Learning in Elementary Schools

Character Indicators	Questions	Suggestions for Improvement	Revision Results
Have enthusiasm, namely a strong will to strive in learning	Do you instill enthusiasm/ a strong will to strive in learning to your students?	Sentences should be more effective, crossed out words removed.	Do you instill enthusiasm/ a strong will in learning in your students?

The third instrument in the form of a questionnaire sheet for students regarding the appearance of 6Cs aims to obtain data on student answers about the teacher's father/mother in instilling 6Cs which is

adjusted to the appearance of the character, critical thinking, creativity, citizenship, collaboration and communication indicators in the learning process in elementary schools which can be seen in table 10.

Table 10. Validation of Questionnaire Sheets for Students Concerning the Occurrence of 6Cs on Implementation of Learning in Elementary Schools

No.	Component 6Cs	Validator Score				Total	Percentage of Validity	Level of Validity
		V1	V2	V3	V4			
1.	Character	24	18	18	24	84	87,5	Very Valid
2.	Critical Thinking	36	27	36	36	135	93,75	Very Valid
3.	Creativity	32	24	32	32	120	93,75	Very Valid
4.	Citizenship	32	24	32	32	120	93,75	Very Valid
5.	Collaboration	32	24	32	32	120	93,75	Very Valid
6.	Communication	32	24	32	32	120	93,75	Very Valid
Validation Results		188	141	182	188	699	92,95%	Very Valid

Based on table 10, it can be seen that the questionnaire sheet for students concerning the appearance of 6Cs in the implementation of learning in elementary schools has a very valid level of validity (92.95%), with the lowest percentage validity, namely character (87.50%) with very valid validity level, critical thinking (93.75%) with a very valid validity level, creativity (93.75%) with a very valid

validity level, citizenship (93.75%) with a very valid validity level, collaboration (93.75 %) with a very valid validity level, and communication (93.75%) with a very valid and the highest validity level. Revisions were made with reference to suggestions for improvement from the validator. Examples of revised questions on the critical thinking component can be seen in table 11.

Table 11. Suggestions for Improvement of Expert Validation Results Questionnaire Sheet for Students Concerning the Appearance of 6Cs on Implementation of Learning in Elementary Schools

Critical Thinking Indicators	Questions	Suggestions for Improvement	Revision Results
Synthesize the information obtained	Do the teachers provide opportunities for students to collect information from various other learning sources and relate it to the material being studied in the lesson?	Sentences should be more effective, crossed out words removed.	Do the teachers provide opportunities for students to collect information from various other learning sources and relate it to the material being studied in learning?

Based on the findings above, it can be seen that the instrument for measuring the appearance of 6Cs in the implementation of learning is very valid and feasible to use. The three validated instruments can be used as part of data triangulation, this is because according to Appling (Berk, 2013) the use of one data

source can be inaccurate and unreliable, so as to reduce weaknesses in making decisions regarding the results of the assessment two or three can be used. data sources by leveraging the strengths of each of these data sources. Assessment and teaching cannot be separated from each other, because both are integrated in

one system, besides that the quality of teaching can be seen from the quality of the assessment (Akib & Muhsin, 2019).

Given the difficulty of directly measuring the implementation of learning in the classroom environment, it is logical that the use of multiple sources can provide a more accurate, reliable and comprehensive picture of the effectiveness of learning than using only one source (Berk, 2013). The measurement instrument in the form of an observation sheet for the learning process can not only be carried out directly through observation in class, but can also be carried out through an analysis of the video of the learning process. For example through Videorecorded Observed Teaching Exercise (VOTE) educators can provide a 360° assessment (Jones et al., 2019).

The questionnaire sheet instrument for teachers places more emphasis on self-assessment, where teachers can reflect on all teaching and learning activities and make notes so that the next meeting can be even better (Goodyear, 2015). The student questionnaire instrument provides opportunities for students to reflect on the implementation of learning facilitated by the teacher. This is because according to Permendikbudristek Number 16 of 2022 the implementation of learning carried out by educators must provide exemplary, mentoring and facilitation (Kemendikbudristek, 2022). However, the qualifications of students in providing assessments are also limited, because there are a number of behaviors and skills that are important to determine which cannot be assessed by students (Berk, 2018).

3. Copyright of the Instrument for Measuring the Appearance of 6Cs in the Learning Planning and The Implementation of Learning in Elementary Schools.

After the validation results of the instrument are revised, then the instrument is submitted for making a copyright with the

name of the Instrument for Measuring the Appearance of 6Cs in Learning Planning in Elementary Schools and the Instrument for Measuring the Appearance of 6Cs in the Implementation of Learning in Elementary Schools.

The first step in applying for a copyright is to register at <https://e-hakcipta.dgip.go.id/> and register a copyright account, so that a verification email is obtained to activate the account. The second step is to log in and in the copyright section select a new application, then fill out the required data form completely, fill in the creator and rights holder data section, upload the scanned copy of the copyright statement, NPWP, KTP, and examples of product. The third step is to click submit and agree. The fourth step, after receiving an email in the form of a billing code, you can pay the copyright application fee directly at an ATM or bank. The final step is to download the *Surat Pencatatan Ciptaan* which has been approved, which have code certificate_EC00202322510 and certificate_EC00202322512.

The results of this study are expected to provide an alternative as an assessment of teaching that places more emphasis on assessing the learning process as a means to improve the quality and quality of learning that will be carried out, as well as to facilitate students in instilling various skills, competencies and other components both in planning and implementing learning in elementary school. The limitation of the validation of this instrument is that it is only carried out by experts because the instrument compiled is a non-test instrument where all the indicators that appear in each component C are very important to be instilled in elementary school students, especially in the 21st century, however, expert validation is has been carried out involving four validators from various educational backgrounds and expertise so that they are very competent in the field of basic education.

CONCLUSIONS AND RECOMMENDATIONS

Based on the research, it can be concluded that the instrument for measuring the occurrence of 6Cs in learning planning in elementary schools is very valid and feasible to use and has a copyright, as is the case for the instrument for measuring the appearance of 6Cs in the implementation of learning in elementary schools which is also very valid and suitable for use and own the copyright. Further research can be carried out using this instrument to obtain a comprehensive description of the appearance of 6Cs in learning in elementary schools.

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