

Analysis of Teaching Material Development for Islamic Education Teaching Methodology Based on 6Cs

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ABSTRACT

The purpose of this study is to determine the instructional development procedures and the development of the teaching methodology of Islamic Education based on 6Cs. This study uses a qualitative method with a qualitative descriptive approach. The results of this study indicate that first, the results of the analysis of the procedures for developing Islamic Education (PAI) teaching materials have been adjusted to the procedures for developing initial materials starting from needs analysis, design, development, evaluation, and revision. Second, analysis of how the material development is adjusted to each indicator of 6Cs (critical thinking, creative thinking, integration, communication, compassion and computer logic). Before the development of teaching materials, a starting of starch was carried out, by adjusting the curriculum material and making lesson plans. Development of teaching materials containing materials, media and assignments/projects that support the development of 6Cs abilities.

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INTRODUCTION

The essential role of education is to help people develop themselves, especially in the development of the nation and state. This law explains that the function of national education is to foster capabilities and shape the character of civilization into a dignified Nation in the context of educating the nation's life. It aims to establish them to become human beings who believe and fear God Almighty, have a noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens (Undang-Undang Nomor 20 Tahun 2003, 2003).

Students' quality needs to be encouraged and supported through quality standards of institutions in each country. This needs to be managed well to meet global demands and avoid the low quality of human resources, which can lead to the collapse of the economy, education, and development in a country. This improvement is due to the tight competitiveness of the need for a qualified graduate workforce (Handayani, 2015). Lecture

activities with a system must follow the curriculum system in a study program. The quality of alumni can determine the quality of their university and shows that the global competition is very tight. So, students need to improve their thinking abilities to win the competition (Summampouw, n.d.).

Teaching materials are a crucial component that must be presented in lecture activities and must be owned and mastered by lecturers. Good teaching materials will help students hone and improve their abilities under predetermined competencies. The main mistake is that the lecturer only has one source of teaching materials. Even so, there are many teaching materials they can use. Most lecturers provide teaching materials that are too deep or too wide, too broad or too narrow. For this reason, the importance of teaching materials and the order of presentation are necessary to make lecture activities successful (Nisa & Supriyanto, 2016).

The World Bank's 2014 survey of the higher education system shows that: Universities (PT) do not automatically meet the demands of skilled workers in the labor market. This is one of the dominant amputations commonly found in most Asian countries. Universities tend to react to their "clients", students, and prospective students. Universities also tend to respond to university owners and regulatory bodies. Therefore, if student requirements do not match labor market requirements or the regulatory framework prevents the university from responding to "client" requirements, the higher education system will not respond to labor market requirements. This condition certainly has a significant impact on the supply and demand gap in the workforce (Handayani, 2015).

The movement of the pace of industry occurs so rapidly. Now everyone has to do their best to be competitive. It was conferred by the Secretary of the Directorate General of Higher Education, Ministry of Education and Culture of Indonesia Prof. Drh. Aris Junaidi Ph.D, regarding the Kampus Merdeka Policy that it has the 6C concept includes critical thinking, creative thinking, collaboration, communication, compassion and computational logic. As an effort to improve students' quality and university quality .

In line with the research conducted by Melani Albar regarding the perception of prospective educators related to 6Cs, she said that some educators already know and some do not know 6Cs. But many educators do not know and still carry out learning as usual. The 6Cs was promoted by the Minister of Education and Culture because it has not become a focus among educators (Fikri et al., 2020). The form of support and collaboration between students and lecturers to increase the ability of globally competitive graduates, in the form of breakthroughs in the development of teaching materials. With this progress, it is hoped that the collaboration can produce better quality for IAIN Curup.

LITERATURE REVIEW

6C'S Competency

Critical Thinking

Critical thinking is the use of those cognitive skills or strategies that increase the probability of a desired outcome. It is used to describe thinking that is purposeful, and goal directed-the kind of thinking involved in solving problems, formulating inferences, calculating like hoods, and making decisions, when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking task (Halpern, 2014) Critical thinking is deeply processing knowledge to identify connections across disciplines and find potential creative solution to problems (Stobaugh, 2013). Critical thinking is often

interpreted with hostility. Based on critical thinking, it can be done by collaborating with groups to get and unite arguments and prove useful practices (Waller, 2012).

Creative Thinking

Creative thinking is a thinking process that produces new methods, new concepts, new understanding, new inventions and new works of art (Rao & Prasad, 2009). Creative thinking aims to gain new insights, approaches, or ways to understand something. Creative thinking states the training of thinking by looking at instincts, triggering fantasies, creating new opportunities, and developing great perspectives (Hidayat, 2017). Creative thinking is a skill in producing or developing something unique, and new. Creative thinking is a way of thinking that produces new concepts, understandings, inventions, or works of art. Components of creative thinking: fluency which generates ideas, answers, solutions, or questions, propose strategies, considers more than one strategy and its results flexibility which includes generating ideas, answers, or questions to understand problems from various points of view, looking for alternatives, changing approach or way of thinking; originality bringing new, unique ideas into consideration in unconventional ways; The elaboration consists of expanding and improving an idea or product, enlarging or determining an object, idea, or situation so that it becomes interesting (Nuraini et al., 2019).

Collaboration

Collaboration is an activity of working together. This collaborative learning forms small groups or at least pairs in achieving the objectives of learning activities together. Collaboration does not focus on individual results but emphasizes performance in a study group (Elizabert et al., 2014). Also, Lai explained, "Collaboration is the mutual engagement of participants in a coordinated effort to solve a problem together. Collaborative interactions are characterized by shared goals, symmetry of structure, and a high degree of negotiation, interaction, and interdependence" (Lai, 2011).

Communication

Communication is a process when a person or several people, groups, organizations, and society create and use information in the form of messages by sources through certain channels to the recipient or "receiver" (Suparno, 2001). Communication skills emphasize an individual's ability to communicate using spoken, written, and non-verbal forms effectively with a diverse population. Says that students must be able to communicate clearly, articulate thoughts and ideas effectively, communicate to achieve goals and communicate effectively in differing environments (Honolulu, 2010).

Compassion

Compassion is our interest in helping or caring for others. Our immediate environment is influential and determines how much our society cares (Kusmaningsih, 2011). According to another opinion, the word compassion itself comes from the Latin word which means compassion, feelings, and condolences. Compassion means feeling the burden of another's suffering, bearing the burden of suffering together, and overcoming that suffering together. Compassion is not just having empathy and feeling the suffering of others, but the emotional capacity of empathy for the suffering of others is seen as part of love itself and is bigger than humanism. The highest basic principle for acting as a whole person (Alam, n.d.).

Computal Logic

Heirdsfield said that “mental computation is defined as arithmetic calculation without the aid of external devices (e.g., Pen and paper, calculator). With numbers greater than 10”. Mental mathematicians do arithmetic for numbers greater than 10 without using a pencil, paper, calculator, etc (Ansori, 2012). Computal logic was introduced by Seymour Pert in 1969 through the development of the turtle robot program. He did a reset with his computer which was the result of the construction of human thought regarding mental activity (Catlin & Woollard, 2014). Then this computal logic was then popularized by Jeannette Wing with a discussion of the theoretical relationship between the practical use of robots (Wing, 2011). computal logic is a set technique for solving complex problems that can be classified into three steps; problem specification, algorithmic expression, and solution implementation and evaluating. The skills involved in each step of the computational thinking approach are above (Sethi, 2020).

Teaching Material

Based on the KBBI (Indonesian Dictionary) the word development is a way, process, or act of developing (Retnoningsih & Ana, 2013). Teaching materials are all materials systematically arranged (both information, tools, and texts) and complete with abilities that are obtained and used by students in the learning process for planning and learning the implementation of learning (Prastowo, 2011).

Teaching materials must be adjusted to the curriculum, and a learning design is made, such as printed teaching materials, audio-hearing teaching materials, listening-view teaching materials, and interactive teaching materials (Nana, 2020). The development of teaching materials has several specific objectives, such as: first, teaching materials must pay attention to the needs of students and be following the demands of the curriculum. Development must also consider the background and environment of the students from which they come. Second, textbooks in the current era may be difficult to access, so alternative teaching materials are a solution to the difficulty of the availability of printed teaching materials (Panggabean & Danis, 2020).

METHOD

Research is a series of activities or processes for disclosing something unknown by using a systematic, directed, and accountable way of working or methods (Hakim, 2009). This research was field research with a qualitative descriptive approach. Qualitative research is a study that produces descriptive data in the form of written or spoken words from people and observed behavior, in other words, this research will report in the form of exposure. This research was conducted in the direct context of reality on the field. This study used qualitative methods through observation, interviews, and document review. The informants in the study were lecturers of the Islamic Education Study Program who were purposely selected from several professions within the academic community of the Curup State Islamic Institute. The data sources in this study were lecturers of Islamic religious education in the Teaching Methodology course.

Data collection used the direct observation method. The researchers collected the data and wrote the analysis of the data collected. Second, the interview method used was in-depth interviews with experts as part of product validation (both concept and function) requiring instruments developed by the designer and development according to the characteristics of the process and product being developed. Third, documents are non-living materials or objects related to certain events or activities. They can be archives or documents such as

database archives, communications, photographic records, and event traces. For this reason, the documents required were lesson plan, syllabus, and teaching materials.

The qualitative data analysis technique used Miles and Huberman with data reduction, data presentation, and validation. The credibility of data was checked by source triangulation and technique triangulation.

FINDINGS

Analysis of the 6Cs-Based Teaching Material Development Procedure by a Lecturer in the Islamic Education Study Program IAIN Curup

Based on the results of the documentation and interviews with the lecturer of the PAI Teaching Methodology course, Islamic Religious Education Study Program, Mrs. Dr. Eka Yanuarti, M. Pd. I and Mr. Dr. Sutarto, M. Pd. regarding lectures in the PAI Teaching Methodology course. It is known that the lecturer in this course has tried to develop teaching materials based on 6Cs by selecting several media or educational technologies as supporting materials for the application of 6Cs abilities. The media in question are canva, QR code, flip pdf, main master, and Kahoot. However, there are no teaching materials that clearly show the ability of compassion and computer logic. Curup has developed teaching materials based on 6Cs (Critical Thinking, Creative Thinking, Collaboration, Communication, Computational Thinking, and Compassion). The development of teaching materials is carried out in the PAI teaching methodology course in the fifth semester of the Islamic religious education program, namely in several stages as follows:

- 1) Needs Analysis Stage
- 2) Design stage
- 3) Development stage
- 4) Evaluation Stage
- 5) Revision Stage

These stages are carried out to obtain teaching materials according to student needs.

The Methods in the Development of 6 Cs-Based Teaching Materials by Lecturers of the Islamic Education Study Program IAIN Curup.

The teaching materials in this research methodology course use the starting for a scratch method to arrange their teaching materials starting from the initial and instructional activities. The following are essential points from starting from scratch:

- 1) Analysis of the material in the curriculum
The development of teaching materials in the book emphasizes project-based learning soft skills and character development of students. Then focus on the material, so there is sufficient time for in-depth study.
- 2) Learning plan or program
The Learning Process Plan (RPS) is a lecturer's reference to provide teaching to their students.
- 3) Compile Syllabus
The components include core competencies, basic competencies, learning materials, learning activities, assessments, time allocation, and learning resources.

Based on the explanation, the development of teaching materials that are carried out is under the indicators of teaching materials based on 6Cs (Critical Thinking, Creative Thinking, Collaboration, Communication, Computational Thinking, and Compassion).

Critical Thinking

The results of field observations carried out in the research process obtained data explaining that lecturers had carried out lecture activities by emphasizing critical thinking abilities, it can be seen in the book of Islamic education teaching methodology as follows:

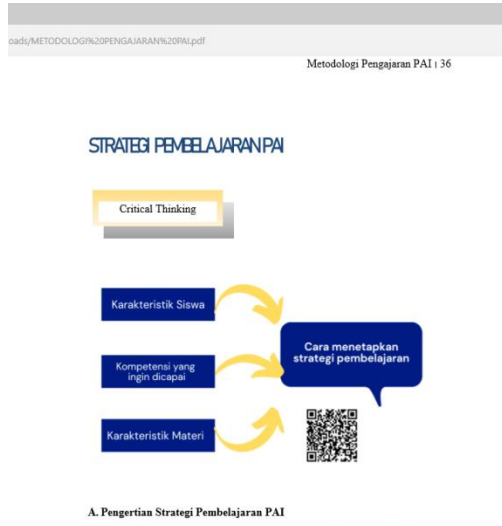


Figure 1. Critical thinking in the book of Islamic Education Teaching Method

Based on the results of interviews with lecturers and students, it is concluded that there are several ways, namely interpretation, analysis, inference, evaluation and self-regulation.

Creative Thinking

The use of media in creative thinking such as QR code, Canva, main master, and using project-based learning and problem based learning models. The following is a picture of a book with traditional learning method materials.



Figure 2. Creative thinking in the book of Islamic Education Teaching Method

Based on the results of interviews with Mrs. Dr. Eka Yanuarti, M.Pd.I. and Mr. Dr. Sutarto, M.Pd. the following creative thinking skills were obtained:

- 1) Smoothness
- 2) Students are given assignments in the form of projects to foster student creative ideas.
- 3) Authenticity
- 4) The ideas submitted by students were checked for the originality the ideas
- 5) Flexibility
- 6) Students are required to be creative without being limited by the supporting lecturer but according to the theme given for the suitability of the material.
- 7) Elaboration
- 8) Before making media, students are expected to be able to detail each sub and theme that will be used.

Collaboration

The results of field observations show that students collaborate or collaborate in completing projects from lecturers. Cooperation can be done by dividing into groups consisting of several people with different abilities. The following is one of the sub-materials that can provide examples of learning activities to hone students' collaboration skills.



Figure 3. Collaboration in the book of Islamic Education Teaching Method

One example of the application of collaboration in the PAI teaching methodology is found in the material "Learning Method of Al-Qur'an Hadith An-Nahlawi". From several existing methods, groups were formed for each sub-material such as Hiwar/conversation, Stories of the Qur'ani & Nabawi, Proverbs/parables, Exemplary/Uswah Hasanah, Habituation, Ibrah & Mau'izah, and Targhib & Tarhib. From the existing sub-materials, a group of 3-4 people is formed which is then determined which one of the sub-materials will be studied. The following are the collaboration skills obtained from the interviews:

- 1) Feedback
- 2) share tasks
- 3) recognize the skills, experience, creativity, and contributions of others
- 4) listen to other people's concerns, opinions and ideas
- 5) listening to others in conflict situations
- 6) respect group decisions

Communication

Communication is an important point in exchanging information in lecture activities; there will be no lecture or learning activities if there is no communication. With communication, there is an exchange of information both from lecturers to students or students with students and students to lecturers. The following is a picture of communication.



Figure 4. Communication in the book of Islamic Education Teaching Method

One example of communication can be found in the PAI learning model material in various subtypes, the PAI learning model. In this material there are several groupings of models such as; information processing model, personal model, social interaction model, behavior modification model. Other forms of communication that can be used to hone students' communication skills in the multicultural-based PAI teaching methodology book are as follows:

- 1) Placing the classroom as a laboratory. The classroom is a place for interaction between educators and students in an educative and democratic manner.
- 2) Requires a dynamic classroom setting and layout so that the communication process between lecturers and students can take place easily.
- 3) Enables lecturers and students to formulate together the objectives and learning materials.
- 4) Placing students as subjects in learning.
- 5) Lecturer's leadership style is democratic, open and flexible.

Computational Logic

This is certainly pioneered by the creativity of lecturers in directing and supporting students to advance in positive things, one of which is the use of media or educational technology.

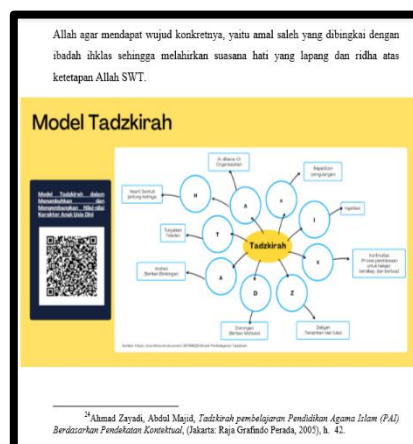


Figure 5. Computational Logic in the book of Islamic Education Teaching Method

After reviewing the methodology book for the pursuit of Islamic education, it was found that in each discussion using the media used in learning. Likewise, in learning activities, lecturer's direct students in completing assignments using several educational technologies such as flip pdf, Kahoot and other media. Based on interviews that have been conducted, Computal Logic are: Methods, Machines, Computing Education, Software Engineering, Design, Computational Thinking (Denning & Matti, 2019).

Compassion

Efforts to build an attitude of mutual understanding in the study of compassion can be carried out by giving tasks such as observing and analyzing learning videos through QR codes, canning links that have been given by the lecturer, then students are allowed to submit suggestions and responses about the Islamic Education learning method which is discussed in the video that has been watched.

- 1) Focused awareness
- 2) Focus can be trained by provoking issues related to an incident at the beginning of learning. But it can also warm up in the form of games or ice-breaking and also pre-test.
- 3) Open-field awareness
- 4) By providing an issue related to an incident, it is hoped that students will gain broad insight from the various opinions that have been presented.
- 5) Loving-kindness
- 6) By forming a team paper, the sense of empathy between one another will grow over time.

To find out the truth of the existing data, interviews with Khoriatun were carried out as follows;

- 1) Focused awareness
Focus is formed from problem-solving or ice-breaking activities.
- 2) Open-field awareness
By thinking early, we have to open up the broadest horizons.
- 3) Loving-kindness
The formation of groups in making assignments, makes us mutually motivate each other between friends and care about the needs and problems that friends experience.

DISCUSSION

Based on the analysis of teaching material development for Islamic Education Teaching Methodology based on 6Cs, it can be concluded as follows: the analysis of the development of teaching materials based on 6Cs, trying to identify the learner, with his initial behaviors and characteristics. Early behavior on the scientific or social skills that learners already have. Meanwhile, early characteristics provide characteristics of learners. If information about learners is already known, then ideas of the plan of the material can be determined and the material can be immediately developed. Good introduction of both initial behaviors and early characteristics of learners is needed to determine the needs of learners and then to devise useful teaching materials for learners (Nana, 2020). The need analysis is addressed to identify students with initial behaviors and characteristics that are needed. In analysis efforts, professors discovered students' need for the importance of increased

thinking ability. This makes the student want to complete the college activities with challenges, creating a high motivation for carrying out the learning activity.

There are some things that need to be done and noticed in the planning stage; Learning goal formulations, matero topics. It is thus hoped that education can make individuals independent, by meeting the prevailing codes. The result of 6Cs initial design design for development of the taught materials 6Cs student education program was compiled based on need analysis, so the professor developed and prepared 6Cs based teaching material to enhance students' level of thought and social capability.

In the development stage, mature preparation and design are essential for good development of the teaching material. Some Suggestions that may form to begin the development of the teaching material. The development of the teach materials in improving the capability of 6Cs student semester V such as: first, prepared design, the origin of teaching materials has been done by paying attention to syntax from 6Cs critical thinking (critical thinking, creative thinking, integration, communication, computal thinking, and compassion). Professor of Islamic Education teaching methodology also consults with several experts, does a survey and interview on 6Cs based learning, reviews some; literature, analyzes the semester's learning plan, and studies the techniques done in the development of teaching materials. Second, conduct learning achievement analysis, lesson Plan production and depreciation have been consistent with the competence of students and the attainment of learning. Third, evaluation and revision, which consist of study by a material expert, one-on-one trials, small group trials, and field trials.

During the evaluation and revision stage, professors received various Suggestions given from several specialists who were correct in the development of the teaching materials in their respective areas with minimum Ph.D. degrees. Evaluations and revisions are made to make improvements and enrich the teaching material.

The 6Cs for development of lead materials cover analyze the materials on the curriculum and a plan or learning program. First, analyze the materials on the curriculum, chastisement materials are knowledge (facts, concepts, principles, theories and definitions, skills, processes (reading, writing, critical thinking, communicating and so forth, value. The study material consists of knowledge from specific disciplines or knowledge learned by students and can be demonstrated by students. In the development, the 6Cs capabilities synchronize with the curriculum materials, both in critical thinking, creative thinking, cycling, communication, compulsive thinking and compassion. Analysis of the curriculum materials is careful and is linked to an indicator of every ability.

Second, a plan or a learning program, the semester's learning plan consists of several components, which are 1. lesson plan identity, the identities of the semester's learning plan at least contain: the name of the study program, the name of dank ode subjects, the SKS, the teacher's name. 2. Accomplishing learning, the attainment of learning is "an ability acquired through internalization of knowledge, attitude, skill, competence and the accumulation of occupational experience" or also referred to by the attainment of graduate learning imposed on a subject. 3. Timing, the indicator was a special teacher marked by measurable changes in student behavior. 4. Learning methods, a method of learning is a technical awak used by teachers in carrying out the learning activities. 5. Time, opportunities provided by lecturers make students learn to achieve abilities at each stage of learning. 6. learning experiences, the description of activities or duties a student must perform through a teacher's guidance for one semester (16 sesei, including midterm and midterm). 7. Criteria and ballast weights, learning achievement criteria for each attitude, knowledge, and grading skills: 20% task +

35% midterm + 45% final exam. 8. References, the source of literature was books or the source of research materials used within every topic/subtopic (Nurdin, 2017).

The professor has made a habit of starting college studies at the first meeting and distributing them directly to the students. This has a positive effect on students as they know the topic to which they want to be taught, the references/reading resources used and the purpose of learning from the ongoing lecture. But when making RPS, professors do not involve students for discussions so that students are not trained in critical and creative thinking, and students are not used to giving questions to teachers.

CONCLUSION

The analysis of the development of 6C-based teaching materials (critical thinking, creative thinking, collaboration, communication, computational thinking and compassion) is carried out by lecturers in accordance with the stages or procedures for developing teaching materials such as: the need analysis, on the need analysis is done gathering the student needs information and characteristics. Planning, planning may start from arranging the lesson plan and proceed with preparing materials adapted to the Lesson Plan. Development, at this stage, begins developing early products that include preparation of materials, procedures, handbooks and evaluation instruments. Evaluation, at this stage, giving expert input so the correct products can enhance 6Cs capability. Revision, at this stage, is doing revision on the advice of experts. Analysis of how this development is carried out by the professor using an indicator in each ability. Critical thinking, the teaching material is based on material adjustments to the ability that will be achieved in a class of Islamic Education (PAI) teaching methodologies with a combination of media such as QR code and based learning problems. Creative thinking, the teaching material is based on material adaptation with the ability to be attained in a course of Islamic Education (PAI) teaching methods with QR code media, Canva, Mind Master, and using project-based learning and problem-based learning models. Collaboration, teaching materials are arranged based on the adjustment of the material with the abilities to be achieved in the PAI teaching methodology course with project based learning and problem solving methods. Communication, teaching materials are arranged based on the adjustment of the material with the abilities to be achieved in the PAI teaching methodology course with the discussion method. Computational logic teaching materials are arranged based on the adjustment of the material with the abilities to be achieved in the PAI teaching methodology course with flip pdf Professional, and kahoot!. Compassion, the teaching materials are arranged based on the adjustment of the material to the abilities to be achieved in the PAI teaching methodology course with the discussion method.

REFERENCES

- Alam, S. D. (n.d.). Implementasi pedagogi reflektif untuk menumbuhkan competence, conscience, compassion mahasiswa pendidikan ekonomi melalui pembelajaran ekonomi lingkungan.
- Ansori, Y. (2012). Profil mental computation siswa SMP dalam menyelesaikan masalah kontekstual ditinjau dari kemampuan matematika. Unesa.
- Catlin, D., & Woollard, J. (2014). Educational robots And computational thinking. In Proceedings of 4th International Workshop Teaching Robotics, Teaching with Robotics & 5th International Conference Robotics in Education.
- Denning, J. P. & Matti. P. (2019). Computational thinking. Cambridge
- Dirjen Pendidikan Tinggi. (2020). Buku panduan merdeka belajar-kampus merdeka.

- Elizabeth E., Barkley, K., Cross, P., & Major, C. H. (2014). Collaborative learning techniques (3rd ed.). Jossey-Bass.
- Fikri, A., Rahmawati, A., & Hidayati, N. (2020). Persepsi calon guru PAI terhadap kompetensi 6C dalam menghadapi era 4.0. *Ta`dib: Jurnal Ilmiah Prodi Pendidikan Agama Islam*, 89-96. <https://doi.org/10.47498/tadib.v12i01.331>
- Handayani, T. (2015). Relevansi lulusan perguruan tinggi di Indonesia dengan kebutuhan tenaga kerja di era global. *Jurnal Kependudukan Indonesia*, 10(1), 53-64. <https://doi.org/10.14203/jki.v10i1.57>
- Halpern, D. F (2014). *Thought and knowledge: An introduction to critical thinking* (4th ed.). Taylor & Francis.
- Hidayat, W. (2017). Adversity quotient dan penalaran kreatif matematis siswa SMA dalam pembelajaran argument driven inquiry pada materi turunan fungsi. *Kalamatika Jurnal Pendidikan Matematika*, 2(1), 15–28.
- Honolulu. (2010). Pacific policy research center 21st century skills for students and teachers. Kamehameha Schools, Research & Evaluation Division.
- Hakim, I. N. (2009). Pengantar metodologi penelitian. LP2 STAIN Curup.
- Kusmaningsih, A. V. (2011). Penerapan paradigma pedagogi reflektif dalam pembelajaran tematik untuk meningkatkan competence, conscience, dan compassion (3c) peserta. *USD*, 10, 23-30.
- Lai, E. R. (2011). *Collaborations: A literature review*. Pearson.
- Nana. (2020). Pengembangan bahan ajar (2nd ed.). Lakeisha.
- Nisa, H. U., & Supriyanto, T. (2016). Pengembangan bahan ajar membaca sastra legenda bermuatan kearifan lokal berbahasa Jawa. *Seloka: Jurnal Pendidikan Bahasa Dan Sastra*, 5(2), 192-200.
- Nuraini, D. R., Kusmayadi, T. A., & Fitriana, L. (2019). Pemecahan masalah Matematika berdasarkan kemampuan siswa menengah atas. *Jurnal Fisika: Seri Konferensi*, 1, 13-18. <https://doi.org/10.1088/1742-6596/1318/1/012093>
- Nurdin, S. (2017). Pengembangan kurikulum dan rencana pembelajaran semester (RPS) berbasis KKN di perguruan tinggi. *Jurnal Al-Fikrah*, 5(1), 22-30.
- Panggabean, N. H., & Danis, A. (2020). Desain pengembangan bahan ajar berbasis Sains. *Yayasan Kita Menulis*.
- Prastowo, A. (2011). *Sumber belajar dan pusat sumber belajar*. Kencana.
- Rao, D. B., & Prasad, S. S. (2009). *Creative thinking of school students*. Discovery Publishing House PVT. LTD.
- Retnoningsih, S., & Ana. (2013). *Kamus besar bahasa Indonesia*. Widya Karya.
- Sethi, R. J. (2020). *Essential computational thinking (Computer Science from Scratch)* (M. Piehl & C. Berk (Eds.)). Cognella, Academic Publishing.
- Summampouw, H. M. (n.d.). Pengembangan E-modul berorientasi pemecahan masalah untuk meningkatkan keterampilan berpikir kritis mahasiswa. 2(1), 3.
- Stobaugh, R. (2013). *Assessing critical thinking in elementary schools (Meeting the common core)*. Routledge.
- Setyosari, P. (2010). *Metode penelitian pendidikan dan pengembangan* (1st ed.). Kencana.
- Suparno, S. (2001). *Membangun kompetensi belajar*. Direktorat Jenderal Pendidikan Tinggi. Departemen Pendidikan Nasional.
- Undang-Undang Republik Indonesia Nomor 20 (2003). *Undang-undang tentang sistem pendidikan nasional*. Presiden Republik Indonesia.
- Waller, B. N. (2012). *Critical thinking considers the verdict* (6th ed.). Youngstown State University, Library of Congress Cataloging in Publication Data.

- Widodo, S., Chomsin, & Jasmadi. (2008). Panduan menyusun bahan ajar berbasis kompetensi. Gramedia.
- Wing, J. (2011). Research notebook: Computational thinking—what and why. Link Magazine.