

Analysis of Creative Character Needs and Effective Communication for Aceh Vocational School Students

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Article History:

Received date: November 29 2023

Received in revised from: February 6 2024

Accepted date: March 4 2024

Available online: March 27 2024

Citation:

Hamid, A., Suppian, Z., Anwar, Idris, S., Yusmina, E., & Akbari. 2024. Analysis of creative character needs and effective communication for Aceh Vocational School students. *JUPI (Jurnal IPA dan Pembelajaran IPA)*, 8(1):29-38.

Abstract.

Effective communication and creative thinking are soft skills that are very necessary in the 21st century. Character is a set of traits which means personality and morals. This research aims to describe the analysis of needs for designing instruments for assessing effective communication and creative thinking for Aceh vocational school students in carrying out assessments of effective communication and creative thinking. Data was obtained from a questionnaire of 65 Aceh Vocational School students. The sample used was 65 Aceh vocational school students. Data was collected through a questionnaire distributed to the entire sample. Data were analyzed using the social sciences statistical package version 25.0 for frequency, percentage, mean and standard deviation. The research results show the need to study effective communication and creative thinking as a reference in preparing students to enter the world of work and industry. This is done because so far there has been no assessment of effective communication and creative thinking because there are no instruments, so it cannot be concluded whether students who have completed vocational education so far have done well or not in meeting government and industry expectations. The character of effective communication and creative thinking is an important and necessary consideration in the industrial world known as *atitut*. On this basis, it can be concluded that it is necessary to design an instrument to assess the character of effective communication and creative thinking.

Keywords: Creative thinking, Effective communication, vocational.

Introduction

The era of super smart society (Society 5.0) itself was introduced by the Japanese Government in 2019, which was created in anticipation of the disruption caused by the industrial revolution 4.0, which caused complex and ambiguous uncertainty. It is feared that this invasion could erode the human character values that have been maintained so far. Currently, we are facing the fourth industrial revolution known as industrial revolution 4.0. Currently is an era of disruptive innovation, where it is developing very rapidly, so that it can help create new markets. This innovation is also capable of disrupting or destroying existing markets and even more powerfully, it is capable of replacing existing technology.

As a result, developing individual competency in Asian countries is critical to increase employees' opportunities to work abroad with competencies that meet employers' requirements, given that a lack of such competencies is the main barrier for new graduates to enter the work field. Indeed, the gap between graduates' job skills and the skills needed in the workplace must not be overlooked. Ultimately, the possession of 21st century skills is necessary for employability (OECD, 2013), which calls for individual competencies to align with such skills (McGunagle et al., 2020).

The birth of the era of the fourth industrial revolution (fourth industrial revolution) had a major changing impact on the nature of human life in general and the business world and industrial world in particular. Signs of this change can be reflected in cyber-based production processes (digital and mechanical integration) and integration in manufacturing systems in the industrial sector (Herman et al., 2017).

The fourth industrial revolution is increasingly showing a chain of production systems that are never broken (continuous process) and control each other. In the era of the fourth revolution, each work station in industry is no longer separate as in previous industrial processes, but has been integrated into one production process chain with one system controller. Apart from the perceived benefits, concerns actually arise in people's social life. The impact of the fourth revolution is that there will be fewer human workers and many jobs will be lost because they are replaced by robot workers (Yahya, 2018).

The decision note further explains that vocational school principals, teachers, technicians and administrative staff need to strengthen non-technical competencies (soft skills) and technical skills (hard skills) of students in accordance with the needs of the world of work. As well as developing character in accordance with the values of Pancasila. Vocational education is secondary education that prepares students primarily to work in certain fields. formal educational institutions that prepare graduates to work with knowledge, skills and work attitudes in certain fields that suit the needs of the business world and the industrial world, (Decree of the Minister of Education, Culture, Research and Technology of the Republic of Indonesia number 2021).

There are three skills in the 21st century skills framework, namely (1) life and career skills, (2) learning and innovation skills, and (3) information media and technology skills (Partnership for 21st Century Learning, 2018). In the world of education, learning skills and innovation skills are a linear part of development in the field of education and vocational learning. Aspects of learning and innovation skills including critical thinking skills, creativity, communication and collaboration must be developed in students for increasingly complex lives and the 21st century environment.

The importance of these four skills was also conveyed by the Director General of Science, Technology and Higher Education Resources at the National Working Meeting of the Ministry of Research and Higher Education in 2018 who stated that in facing the industrial revolution 4.0, the Human Resources skills that Indonesian society must fulfill consist of four skills, namely (1) critical thinking, (2) creativity, (3) communication, and (4) collaboration (Directorate General of Science and Technology Resources and DIKTI, 2018).

Character education is an effort to instill good habits (habituation), so as to be able to think, feel and also behave consciously values that have become the personality of students. Development and improvement character/morality is done through an integrative systematic approach that involves the world education, family, government, and the media of the time, (Arif, 2022). In this article, two characters are studied, namely the effective communication and creative thinking.

Communication is the art of conveying information (messages, ideas, attitudes or ideas) from communicator or delivering news, to change and shape communication

behavior or recipient of the news (pattern, attitude, view and understanding), management and desired understanding together. Communication must be carried out effectively so that the communication can be easily understood by the person communication, effective communication can be carried out if the person communicating understands about the meaning of effective communication, the effective communication process and the elements of effective communication (Nurul, 2023).

One thing that often makes a lot conflicted people are lacking communication skills. Frequent communication considered trivial, even though the fault is deep communication can cause conflict disrupt the relationship. Simply put the concept of communication is a process message delivery from the communicator to communicants. This process can generate feedback from communicators so that communication can take place two way between the communicator and communicant (Nasukah,202).

The decline in the value of students' creative character in recent developments is because students do not understand the need for creative character to prepare soft skills in the 21st century. This development is needed to increase students' creativity for the future. The creative value itself can be found directly if students do assignments about skills, in this activity students' creativity can be measured (Yulma, 2021).

Pancasila students are creative students who are able to modify and produce something original, meaningful, useful and impactful. The key elements of creativity consist of generating original ideas and producing original works and actions. The Pancasila student profile consists of six dimensions, namely: 1) faith, devotion to God Almighty, and noble character, 2) independence, 3) mutual cooperation, 4) global diversity, 5) critical reasoning, and 6) creativity (Salahuddin, 2020).

Creativity is the ability to see things from a new perspective, as well as the ability to see and solve problems in different ways. Creative character can be interpreted as a trait or character that differentiates a person from other people. Creative people have great curiosity and tend to be open to any information. So it is not surprising, they are able to see things from a different perspective and can solve things in unique ways (Rahman et al., 2021).

The explanation above provides an explanation that in the 21st century which is marked by the fourth industrial revolution, vocational education absolutely must develop students' abilities, the development of learning skills and innovation in the concept of 21st century education have theoretically become alternative solutions that can be implemented in the vocational education and learning process. Departing from the theoretical description above, this research aims to explain empirically the influence of 21st century skills consisting of critical thinking skills, creativity, communication and collaboration in developing the abilities of vocational school students in the era of the fourth industrial revolution.

Lickona defines character as an inner character that can be trusted to respond to situations in a way that is good from a moral point of view. Apart from that, Lickona added, character has three interrelated parts: moral knowledge, moral feelings, and moral behavior. The literature review also found the importance of creative and communicative character in vocational schools as capital for students entering the world of business and industry (Lickona, 1991).

Methods

Based on the views above, this article will discuss the need for developing effective creative and communicative character in vocational school students so that they have life and career skills in preparation for facing the increasingly competitive world of business

and industry nationally and internationally. Therefore, it is necessary to create a valid and reliable instrument to develop and assess creative and communicative character, with the aim that students can prepare themselves well and in accordance with the expectations of the business and industrial world as student service users after graduating from vocational schools.

The methodology in this research uses a design development research approach, namely a method for developing and testing products developed in the world of education. There are various types of research models that can be used as references in research and development investigations. This research uses four stages, namely: 1) needs analysis stage, 2) design stage, 3) development stage, and 4) assessment stage, (Amali et al., 2019).

The justification for combining two phases, namely the design and development phases, aims to ensure consistency in the product development process using the same group of experts or research participants. This always happens in the process of building models, modules, guidelines, procedures, frameworks and so on (Ridhuan et al., 2021).

The approach to carrying out research is dynamic and continues to change from time to time. Starting with qualitative and quantitative approaches, the research shifted to mixed methods and is now starting to change to a new approach called design development research. The development of this in the fields of engineering, information and information technology. Then it expanded to other fields, including education. This approach is suitable for use in investigations that are characterized by the final results of the study such as models, modules, frameworks, taxonomies and other investigations that will produce something innovative (Saedah, 2021).

In general, this design and development research approach aims to create knowledge based on systematic data obtained from practical processes. According to experts, this research method is also called multi-method. A brief description of the assessment methodology can be seen in Table 1.

Table 1. Studies Based on the design development research approach

Requirements Analysis Phase	Method
Phase1: Requirements Analysis	Interview, research questions (looking at the mean score and percentage), using spss
Phase2: Design and Development	Literature review, fuzzy delphi method (FDM)
Fasa 3 : Evaluation	The <i>nominal group</i> technique (<i>modified</i> NGT)

Results and Discussion

A total of 65 students second level of Aceh Vocational School. All students provide answers to closed questions only. Therefore, a discussion of the findings is as follows. Table 2 shows a summary of Part A in questionnaire form, namely the demographics of the respondents.

Table 2. Demographic Analysis of the respondents

	Aspect	Amount	Percent
Gender	Male	49	87.5
	Female	16	12.5
Field of study	Elektrical Avionic	23	35.4
	Airframe	15	23.1
	Powerplant		
	Aircraft Machining	27	41.5

Based on Table 2, the number of male students (N=49) exceeds the number of female students (N=16). So, the number of respondents involved in the analysis stage of this research was 65 respondents. Respondents had three types of study program fields.

The next step is to look for findings that answer the three research questions. The first research question is 'i): Do effective communication and creative thinking need to be implemented and familiarized in the school environment?: ii): Has an assessment been carried out on effective communication and creative thinking?: iii) Is it necessary to study the development of effective communication and creative thinking?

Table 3. Agreement on the need for effective communication and creative thinking

Aspect	Consent	Percent
Do effective communication and creative thinking need to be applied and accustomed to in the school environment?	Yes	100.0
	No	0.0
Has an assessment been carried out regarding effective communication and creative thinking?	Yes	0.0
	No	100.0
Is it necessary to assess the development of effective communication and creative thinking?	Yes	100.0
	No	0.0

Based on the research findings in Table 3 it can be seen that all students with a percentage of 100.0% (N=65) believe that effective communication and creative thinking are needed to be implemented and familiarized in the school environment. All students with a percentage of 100.0%, (N=65) also stated that so far no assessment had been carried out on effective communication and creative thinking. All students with a percentage of 100.0%, (N=65) stated that it was necessary to assess the character development of effective communication and creative thinking. Furthermore, to answer the fourth research question, a 5-point Likert scale was used to see its suitability for all elements of the effective communication and creative thinking that the respondent needed.

Table 4. Creative thinking Characters

Item	Mean Score	Std dev	Score req.
I am passionate about conveying many ideas	3.35	0.571	Necessary
I'm excited to be able to provide many answers	5.00	0.000	Necessary
I am passionate about being able to solve many problems	5.00	0.000	Necessary
I am enthusiastic about asking lots of questions fluently.	4.97	0.174	Necessary
I am passionate about providing ideas, answers or questions in different ways	4.85	0.364	Necessary
I like looking at problems from different points of view	4.97	0.174	Necessary
I enjoy looking for answers to questions from different perspectives	4.94	0.242	Necessary
I am able to change my approach or way of thinking	4.12	0.331	Necessary
I can enrich and develop ideas	1.25	0.560	Necessary
I like to improve or detail objects, ideas or situations to make them more interesting	2.26	1.241	Necessary
I am able to generate new and unique ideas.	1.97	1.436	Necessary
I thought of an unconventional way	2.25	1.212	Necessary
I can create amazing combinations of parts.	2.00	1.358	Necessary
Average Agreement Score	3.61	0.589	Necessary

Table 4 shows that the average score of approval for the creative character required by respondents is 3.61 (S.D=0.589). in general they strongly agree that they really need the recommended character of creative.

To be able to form a creative and productive character in children, then learning needs to practice finding problems. In the process of discovering children's problems can explore facts, identify patterns or relationships between situations which are not clearly related, and can use creative, conceptual or inductive considerations. Next, children should be trained to find creative solutions and realizing it in a productive work. So learning makes children practice being producer (Sri, et al., 2017).

The value of students' creative character, development is needed increasing students' creativity to prepare for the previous period. A creative character will give birth to collaboration with various ideas (Yulma, 2021).

The findings state that creative thinking skills are very necessary. This means that these findings have confirmed the importance of developing aspects of creative thinking student personality, especially in developing persistence in learning. The purpose of education is not only that to focus on academic goals, but developing personality aspects is another aspect that must be done developed in educational practice in higher education (Aziz et al., 2022)

Creative thinking is essentially a complex mentality activity that produces a particular product, it is the mental capacity of the human individual to achieve the new objects, in various forms: theoretical, scientific, technical, social, etc., to reveal unknown facts about reality, to develop original approaches and solutions to solve problems and express them in a unique personality (Marilena, 2022). When working in a team, a person is expected to have a creative way of thinking which can be understood as a skill developed in a work group, which emerges from inner interaction (Jacqueline, 2021).

Table 5. Effective Communication Character

Item	Mean Score	Std dev	Score req.
I am able to communicate clearly and in a structured manner so that it is easy for the recipient to understand.	4.77	0.580	Necessary
I always avoid using vague language so that words may cause confusion.	4.97	0.174	Necessary
I always make myself an active listener by paying full attention when speaking	4.97	0.174	Necessary
I listen patiently when speaking and pay attention to understand what is being said.	4.80	0.403	Necessary
I enjoy sharing my understanding of other people's perspectives, feelings and needs when speaking	4.34	0.735	Necessary
I like to put other people's needs first in communication	4.26	0.796	Necessary
I am willing to accept input, opinions and new ideas.	4.92	0.269	Necessary
I always avoid being defensive in accepting different points of view	3.75	0.685	Necessary
I am always open to conversation and collaboration that enriches understanding and resolution of various issues	2.34	0.906	Necessary
I pay attention to my hand movements and body posture when communicating	3.46	1.562	Necessary
I always avoid using the phone when talking to people	4.05	1.217	Necessary
I maintain clarity when sending messages	4.12	0.331	Necessary
I always maintain politeness when conveying messages in a clear, easy and respectful manner. Avoid using incorrect language	2.95	0.943	Necessary
Average Agreement Score	4.130	0.675	Necessary

Table 5 shows the average agreement score for the effective communication character required by respondents with an average agreement score of 4.130 (S.D=0.675).

Problems that usually arise in communication activities are called miscommunication (errors in communicating), so that the communication process does not go as desired.

Errors in communication are often the cause of communication that is difficult to understand and then implement in organizational programs. Another problem is one-way (top-down) communication which tends to be stiff, which can cause the atmosphere to become less dynamic in dealing with various problems. Sometimes this needs to be addressed immediately (Bakri, 2018).

Humans' ability to speak is what differentiates them from social creatures others, are the result of the enlargement and development of the human brain. One of The view states that people living in various parts of the world feel the need to be able to organize solutions to solve the problems they face. In this case, they created various ways of life and with that, language became one of the ways to meet their needs. The most basic function of language is to name or nickname people, objects or events. Everyone has a name for social identification. People can also name anything, for example different objects, including feelings certain things they experience or feel (Okarisma , 2022).

Effective communication is a skill that must be effectively practiced at workplace for better work output and results. Several studies identify that effective communication is imperative at the workplace for increasing employee productivity and organizational performance. It is a fundamental need to all administrative functions (Shrivastava et al., 2019).

Conclusion

This research aims to describe the analysis of the need for designing instruments to develop and assess the character of creative thinking and effective communication of Aceh Vocational School students. The research results show the need to study effective communication and creative thinking as a reference in preparing students to enter the world of work and industry. This is done because so far there has been no assessment of creative thinking and effective communication.

Acknowledgement

The author would like to thank the Aceh government, namely through the human resources empowerment agency, which has provided funding to the author to be able to carry out this research. Thank you to Dr Nor Hasnida Che Md Ghazali as head of the Education and Measurement Department, Faculty of Human Development, Sultan Idris Education University (UPSI) Malaysia, who always provided guidance and motivation so that the author could complete this article.

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