

# C9\_Kusmiyati

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**Submission date:** 25-Mar-2023 12:59AM (UTC-0500)

**Submission ID:** 2046081960

**File name:** C9\_ANALYSIS OF INDEPENDENCE AND CREATIVE\_Sinta 4.pdf (156.21K)

**Word count:** 3319

**Character count:** 18666

## ANALYSIS OF INDEPENDENCE AND CREATIVE THINKING SKILLS OF STUDENTS THROUGH ASSIGNMENT

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Received: October 17, 2022. Accepted: November 4, 2022. Published: November 30, 2022

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**Abstract:** This study aims to describe students' independence and creative thinking skills through assignments. The subjects of this research are Biology Education students who take the Nutrition Science elective course as many as 20 people. Independence and creative thinking data were collected using an instrument with a Likert scale. The collected data were analyzed qualitatively into five categories. The results of the independence analysis showed as many as 16 students (80%) in the very good category and 4 students (20%) in the good category. The results of the creative thinking analysis showed as many as 13 students (65%) in the very good category and 7 students (35%) in the good category. It can be concluded that most of the students completing lecture assignments have independence and creative thinking skills in the very good category. The achievement of independence on the indicators of not depending on others, self-confidence, self-initiative, and self-control, each student varied from fairly good, good, and very good categories. Meanwhile, the achievement of independence for the indicators of discipline and responsibility varies in the good and very good categories. (c) The achievement of all indicators of students' creative thinking skills varies in the very good and good categories. The very good category was mostly achieved by students on the indicators of flexible and original thinking skills. In contrast, students mostly achieved the good category on the indicators of evaluation thinking skills.

**Keywords:** *Independence, Creative Thinking, Assignment*

### INTRODUCTION

The learning process is an active process carried out by students and lecturers. Learning activities, of course, must be supported by the adequate infrastructure so that learning can take place effectively and efficiently. In the digital era, lecturers must develop their creativity to package learning materials to be interesting and fun. In addition, learning must be made to develop the power of reasoning, creativity, self-potential, high-level thinking, and student independence. Such as the function and purpose of National Education [1], which reads: "National education functions to develop capabilities and shape the character and civilization of a dignified nation in the context of educating the nation's life, aiming at developing the potential of students to become human beings who believe and are pious. To God Almighty, have a noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens."

As an institution producing prospective educators, Mataram University should follow current educational developments. Education is currently in the 21st century, marked by the rapid development of science and technology. According to Sutrisna [2], education in the 21st century aims to encourage students to have skills that support them to be responsive to changes. Saavedra & Opfer [3] mention the skills students must possess in the 21st century: critical thinking, problem-solving, creativity and innovation, decision-

making, and metacognitive. The learning must also reflect the skills students will acquire during learning. The learning process is strived to provide concrete examples of implementing curriculum 13 in schools and even immediately implementing an independent curriculum with a student profile of Pancasila.

The University of Mataram, in the even semester of 2021/2022, to suppress the spread of Covid 19, is still conducting distance lectures online via internet media. This condition requires lecturers to design learning with activities that all students can reach. Assignments are also designed to increase students' independence in developing their potential. The material presented can be developed using social media that is easily accessible to students. Some of the applications used in lectures include WhatsApp, Google class, youtube, zoom, and google meet, which can bring together students and lecturers so that teaching materials can be delivered properly. Online learning provides benefits for lecturers and students. Their interaction can take place anytime and anywhere. Students can also be more active in constructing and developing teaching materials.

Nutrition Science is an elective subject in the Biology Education Study Program University of Mataram. This course discusses nutrition and its relationship to health. Discussions about nutrition are very easy, and many are found on social media or searched on google. You will immediately find what you want. Videos about eating healthy food

are also widely circulated on social media, especially those related to overcoming the problem of covid 19. This situation supports the learning process in the even semester of the 2021/2022 academic year, which is still being done online.

The learning process of Nutrition Science mostly uses the assignment method. One of them is providing videos about information that follows the subject being discussed. Then students must develop the material according to the discussion of nutrition science. Students must develop the material as widely as possible about anything related to the theme in the video. From this activity, it can be seen that students' independence and creative thinking skills in completing their assignments.

### RESEARCH METHOD

This study aims to describe students' independence and creative thinking ability through assignments. The subjects of this research are Biology Education students who take the Nutrition Science elective course in the even semester of the 2021/2022 academic year, with a total of 20 people. Data collection was carried out in March-April 2022 through Google Classroom. The task given is a video about material related to the discussion of nutritional elements. Then students describe or tell the content of the video and develop the material that is searched on the internet. Independence data were collected using observation guidelines that were compiled based on independence indicators [4], while data on creative thinking skills from creative thinking indicators [5] and [6], with a choice of answers on a Likert scale 1-5 [7].

The independence score was obtained from the calculation of the independence instrument, which amounted to 15 items with a score range of 15-75. The scores obtained are then categorized into 5 categories (table 1).

Table 1. The Achievement Of Independence Categories

No	Score	Category
1	15-26	Very not good
2	27-38	Not good
3	39-50	Fairly good
4	51-62	Good
5	63-75	Very good

The number of scores obtained for each indicator is calculated to see the achievement of independence in each indicator. The average is sought and included in the independence category: 1. Very not good, 2. Not good, 3. Fairly good, 4. Good, and 5. Very good [8].

The data for the creative thinking of each student is obtained from the average of all indicators. In contrast, the data for each indicator is

obtained from the average of each indicator achieved by all students. The average results were then analyzed qualitatively with 5 categories: 1. Very not good, 2. Not good, 3. Fairly good, 4. Good, and 5. Very good [8]

### RESULTS AND DISCUSSION

The results of the self-reliance analysis showed that 16 (80%) students (Table 1) attended the lectures, with a very good category. This data shows that students' independence in completing lecture assignments and participating in the lecture process is very good, and adequate media support certainly an important role. As many as 80% of students have completed assignments according to the independence indicators very well. Independence means that students are responsible for making decisions related to their learning process and have the ability to carry out the decisions they make [8]. Indicators of independence include being independent of others, having self-confidence, behaving in a disciplined manner, having a sense of responsibility, behaving based on their own initiative, and exercising self-control [9].

In today's era, students easily access the internet anywhere and anytime, making it easier for them to complete lecture assignments. With the internet, students can browse, and searching for anything becomes easy. In addition, learning at the beginning of the even semester of 2021-2022 is still carried out online, so students must use the internet in lectures. Like the opinion of Firman and Rahma [10], online learning is an alternative form of learning that uses internet facilities with accessibility, connectivity, flexibility, and the ability to bring up various types of learning interactions. The use of digital technology allows educators to design more interesting learning opportunities in learning, where the learning design can be combined face-to-face or completely online [11]. The internet could be analogized to a large library that contains a variety of information needed by the community [12]. It is further explained that everyone can access all information in writing, images, or other multimedia formats. The internet can be a means to obtain information of educational value because a lot of research, books, or the like are shared on the internet.

Table 2. Number and Percentage of Student Independence

No	Category	Total	%
1	Very not good	0	0
2	Not good	0	0
3	Fairly good	0	0
4	Good	4	20
5	Very good	16	80

When viewed from each indicator (Table 2), the order of the number of students in the very good category is self-confidence and responsibility of each 14 people (70%), self-initiative 13 people (65%), disciplined 10 people (50%), self-control 9 people (45%) and not depending on others 8 people (40%). Judging from the highest percentage on self-confidence and responsibility, most students already have a sense of responsibility and confidence in completing college assignments. Students can prepare themselves for the material, evaluate and even maintain their motivation with full responsibility and confidence. Online learning can foster student learning independence. Online learning can practice responsibility in learning independently at home [14]. Learning responsibilities would benefit: a). stimulate individual or group learning activities, b). Can develop student independence outside of teacher supervision, c). foster student discipline, d). develop student creativity [15].

The independence of students in the fairly good category (Table 2) was found in indicators of not depending on others and their initiative in as

many as three people (15%), exercising self-control in as many as 4 people (20%), and self-confidence indicators as many as 1 person (5%). It is understandable because the diversity of students must also show diversity in addressing a problem. The given task opens students' horizons to develop themselves in finding and utilizing information, but sometimes students still have to ask friends' opinions before making a decision. Students still depend on friends to study or complete assignments. There is even one student who responds to the self-confidence indicator quite well and also responds quite well to the self-initiative behavior indicator. These varied responses indicate that students have different learning or learning styles. A person's learning style is a combination of how he absorbs, organizes, and processes information [16]. Students the opportunity to look for many reading sources and think about their usefulness will improve their abilities, skills, and insights about the information they choose [17]. Furthermore, it is said that the ability to find and utilize this information is a provision for self-development in learning and working activities.

Table 3. Number of Students in Each Indicator of Independence

Rating	Not dependent	Self-confident	Discipline	Responsibility	Self Initiative	Self-control
Very not good	0	0	0	0	0	0
Not good	0	0	0	0	0	0
Fairly good	3	1	0	0	3	4
Good	9	5	10	6	4	7
Very good	8	14	10	14	13	9

The results of calculating students' creative thinking skills in developing coursework material show that 13 (65%) students are in the very good category, and 7 (35%) students are in a good category (Table 3). Students with very good categories can develop material in assignments according to indicators of creative thinking skills according to Munandar [5] and Munandar [18], which state that the characteristics of creative thinking skills related to cognition can be seen from skills; (1). think fluently, (2). flexible thinking, (3). original thinking, (4). elaboration, and (5). assess/evaluate.

Further explained, the characteristics of fluency indicators include sparking many ideas and giving many answers. Flexibility indicators include presenting different concepts and producing variations in answers. Indicators of originality, among others, provide relatively new ideas. Characteristics of detailing/elaboration include developing or enriching ideas and adding, arranging, or detailing an idea to improve the idea. The characteristics of assessing/evaluating include

finding the truth of a question or the truth of a problem-solving plan and having justifiable reasons for reaching a decision.

Table 4. Students' Creative Thinking Ability

No	Rating	Total	%
1	Very poor	0	0
2	Not good	0	0
3	Fairly Good	0	0
4	Good	7	35
5	Very good	13	65

As many as 65% of students (Table 3) can think creatively in developing the material in the assignment very well. Students use the media well, develop concepts correctly, and write with good grammar and systematic. In completing assignments, students use the internet as a medium. It can be seen from the references used. This condition is the most suitable for learning conditions in the first two months of the even



semester of the 2021/2022 academic year. Students still have to study online, using the internet as a medium for learning [5]. Media is a tool in the form of anything and can be used as a channel for messages to achieve learning goals. Media is a form of all intermediaries used by humans to convey or spread ideas, ideas or opinions so that these ideas can be conveyed to the intended

recipient [10]. Social media is an online media where users participate and socialize using the internet [11]. It was further explained, through digital learning, information in various fields available or developments occurring in all corners of the world can be accessed quickly by many people, including information related to the field of education or learning.

Table 5. Students' Creative Thinking Ability on Each Indicator

No	Category	Fluency	Original	Flexibility	Elaboration	Evaluation
1	Very not good	0	0	0	0	0
2	Not good	0	0	0	0	0
3	Fairly good	0	0	0	0	0
4	Good	10	7	7	12	16
5	Very good	10	13	13	8	4

When viewed on each indicator, students' creative thinking skills were ranked very well and varied, but no students were in the category of good enough to very poor (Table 4). Students with a very good category, the highest percentage of flexibility and originality indicators are 13 people (65%). In comparison, creative thinking skills with a good category on evaluation indicators are 16 people (80%) and elaboration 12 people (60%). It is understandable because, during the pandemic, many educational videos related to maintaining and increasing body immunity through balanced nutrition consumption are circulating on social media. Students can find various variations of material that can be developed to solve problems in assignments. Students compare several materials from various sources and summarize them into a problem solving as requested in the assignment. This kind of learning process should be developed in every lesson. The task educators who must develop learning must provide the widest possible opportunity for students to develop their potential. Students can continue to improve brain function through creative thinking. A person's network of brain connections will increase and strengthen when growing in an environment rich in stimulation [19]. The performance capacity of the brain can be maintained and optimized as long as it is used to learn and think continuously. Science process skills include basic and integrated skills, including formulating problems, collecting data, and proposing problem-solving solutions [20]. Learning encourages students to become active subjects who produce knowledge and not just passive objects which become knowledge consumers [21]. It was further explained that effective teachers do not focus on presenting facts and content but lead on developing students' learning skills. As emphasized by Jufri [22], someone with good scientific literacy skills can describe, explain, and predict natural phenomena

and social phenomena around them with a scientific mindset.

**CONCLUSION**

Most students completing lecture assignments have independence and creative thinking skills in the very good category. Achievement of independence on indicators of not depending on others, self-confidence, self-initiative, and self-control, each student varies from good, good, and very good categories. Meanwhile, the achievement of independence for the indicators of discipline and responsibility varies in the good and very good categories. The achievement of all indicators of students' creative thinking skills varies in the very good and good categories. The very good category was mostly achieved by students on the indicators of flexible and original thinking skills. In contrast, students mostly achieved the good category on the indicators of evaluation thinking skills.

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