



# Prospective Teachers' Creative Thinking Ability In The Use Of Online Video Learning Media

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**Abstract.** Innovative developments in learning, such as the use of online videos, will positively impact the habit of mind, which is a person's ability to behave intelligently, directed so that one can see one of the indicators of the practice of sense, namely the ability to think creatively. His positive thinking habits can influence an individual's success. These habits have the potential to form new and innovative abilities, one of which is the ability to think creatively. The ability to think creatively or creatively can also be interpreted as a way of thinking that is carried out beyond the limits and can also be said to think extraordinarily. The lesson's purpose is to understand and solve problems with genetic concepts faced by students and to maintain a balance between intellectual abilities, attitudes, and skills. The method used in this research is a descriptive method with a quantitative approach with data collection techniques using the Creative Thinking Questionnaire analysis with several indicators. On the creative thinking indicator, it was found that 75% were able to involve themselves in tasks even though the answers and solutions were not immediately apparent, 78% made an effort to the maximum of their abilities and knowledge, and 79% made use, improved evaluation standards that they made themselves.

**Keywords:** creative thinking, online videos, genetics, prospective teachers

## 1 Introduction

The education system in learning is currently very varied, one of which is the use of learning media through the use of online videos or video sites such as YouTube. The use of online video media can have an impact on the learning environment that provides support for prospective teachers in accessing knowledge that is not limited by time and distance. Online site-oriented learning is a learning that is widely used in the current education system due to the pandemic, as well as this learning has its advantages, including the following [1]: a. Online site-oriented learning is a learning activity that can provide a variety of the latest and complete information quickly b. Online site-oriented learning is learning activities that are updated and can be accessed anytime and anywhere c. Online site-oriented learning is not just to gain knowledge and information but can also train students to analyze, organize and solve problems. D. Online site-oriented learning is broad and unlimited because we can gain knowledge from various experts. e. Learning oriented to online sites can also provide broad topics and knowledge information so that teaching and learning activities will not be hampered by funds. Some of the positive impacts that are directed at online sites in the learning process, especially learning that applies a constructivism approach, while some of the positive effects of these sites that are directed online can be described as follows: 1) sites that are directed have many features that allow students to access various information that supports constructivism learning activities; 2) Oriented online sites will create a more student-centered learning environment so that students can build knowledge independently in the learning process;

3) Oriented online sites can support collaboration between students in the learning process, thus enabling students to be actively involved in their learning community; 4) Oriented online sites will allow students to ask questions, exchange ideas and provide feedback.

The development of industry 4.0 should positively impact the habit of mind, which is a person's ability to learn to behave intelligently, directed so that one can see one of the indicators of the practice of sense, namely the ability to think creatively. The ability to think creatively is another form of student intelligence [2]. This intelligence is the trigger for the formation of a deviant mindset. Therefore, efforts to develop students' creative thinking skills need to be carried out continuously so that they can improve academic achievement in their fields. The lesson's purpose is to understand and solve problems with genetic concepts faced by students and to maintain a balance between intellectual abilities, attitudes, and skills. The purpose of this study was to analyze online video site learning on the ability to think creatively from one of the habits of mind indicators of prospective teachers in genetics courses.

## 2 Research Method

The method used in this research is a descriptive method with a quantitative approach. The ideal way describes how the online video site learning description affects prospective teachers' creative thinking abilities in genetics courses. This study's population was all UHAMKA Biology Education Study Program students who took genetics courses—with a purposive sampling technique.

This research was conducted on Biology Education teacher candidates at a private university in Jakarta. The research time is in the even semester of the 2022/2023 school year from December to May. The data collection technique in this study used a creative thinking search questionnaire with triangulation analysis between data reduction, presentation, and conclusions.

The instrument in this study was a questionnaire adapted from Marzano [3], which consists of 3 items of creative thinking statements.

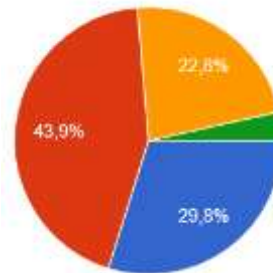
- a) Can involve himself in the task even though the answers and solutions are not immediately apparent
- b) Doing business to the best of his ability and knowledge
- c) Create, use, and improve self-made evaluation standards

## 3 Result and Discussion

### 3.1 Findings

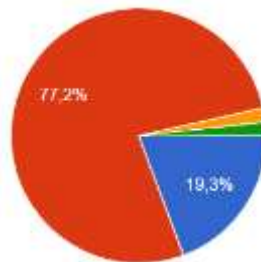
The results of filling out a questionnaire regarding the creative thinking abilities of prospective teachers regarding the use of online video learning media were obtained from a total of 57 respondents. This data was obtained from future teachers who filled out a questionnaire after taking a genetics course. It consists of 3 indicators of creative thinking that have been analyzed, namely Being able to involve oneself in tasks even though the answers and solutions are not immediately visible, Doing business to the best of one's abilities and knowledge, Creating, using, improving self-made evaluation standards,

The results of the data per indicator can be seen in the description below.



**Fig. 1.** Percentage Can involve himself in the task even though the answers and solutions are not immediately apparent

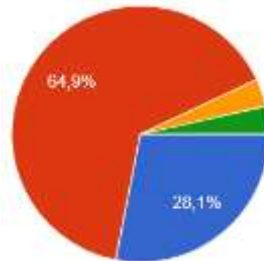
Data obtained from the first creative thinking indicator, namely being able to involve oneself in tasks even though the answers and solutions are not immediately visible, from 43.9% of respondents consisting of prospective teachers not giving up quickly when they try to find answers or solutions. They always try to be on task. As many as 29.8% of respondents said they don't give up easily, no matter how difficult it is to find answers or solutions. They continually evaluate how hard they try and use various techniques to stay on task. Then as much as 22.8% of prospective teachers try to complete the job when the answer or solution is complex, but they give up when they have tried hard. they don't have good techniques to stay on task. The remaining 3.5% of teacher candidates quickly give up challenging assignments. This can be seen in the results of the prospective teacher's notes that look broader, not based on teaching results alone. However, future teachers are looking for solutions from other sources, such as learning videos or other learning resources. This creative prospective teachers in achieving their learning goals [4]



**Fig. 2.** Percentage Doing business to the best of his ability and knowledge

The second percentage of creative thinking indicators aims to maximize abilities and knowledge. 77.2% of prospective teachers try to complete the assigned tasks when unsure they can. They involve themselves with these tasks until they are accomplished and learn everything they can. . As much 19.3% of teacher candidates look for assignments, they are not sure they can tackle and engage themselves until they are accomplished and learn all they can. And 1.8% of each of the respondents answered that they completed the tasks assigned to them when they weren't sure they could do it but gave up before achieving or learning it. Also, 1.8% avoided tasks they weren't sure they could do. One of the things that prospective teachers do is form a group and give each other ideas and solutions to complete tasks in a creative way, such as in making papers and presentation

materials in the form of power points and in discussions[5][5]. Problem-based habits of mind greatly influence the achievement of creative thinking skills, these student habits will increase the exploration of ideas [6]



**Fig. 3.** Percentage Create, use, and improve self-made evaluation standards

The third indicator is knowledge of making, using, and improving self-made evaluation standards, obtained by prospective teachers, answering 64.9% of them made and utilized measures to evaluate their performance. They checked the final product they made according to the standards. 28.1% of respondents answered that they make and use criteria to assess their performance. The standards they set are high enough for what they do to be of the highest quality. They check the result of the product they make according to the middle. as much as 3.5%. They do not make a standard to evaluate their performance. Furthermore, 3.5% of prospective teachers create and use criteria to assess their performance. However, they do not check whether their final product meets the standards.

### 3.2 Discussion

The results obtained were 73% average creative thinking from respondents consisting of prospective biology education teachers. It can be concluded that the habit of thinking from creative thinking abilities is of good value. The creative thinking ability of biology education teacher candidates has a good influence when genetic material is presented through the media of online video sites. Student groups give each other ideas and solutions to complete tasks creatively, such as understanding the material. They always download the learning videos online first, then understand, record, and repeat the learning videos if something is still not understood. Besides that, keep discussing or creatively looking for other learning videos on online video sites with the same material to study, and look for similarities or differences as additional material. According to [7]), to be creative, one must: 1) try at the end of competence, not in the middle; 2) review ideas; 3) do something because of internal encouragement and not external encouragement; 4) divergent/spread mindset and 5) lateral/imaginative mindset. [8] and [9] view creativity as a habit. Learning problem-based mathematical patterns of mind strategies greatly influence the achievement of creative thinking skills. Students' practices of exploring ideas in a series of learning encourage students to think flexibly, which allows students to obtain new and unique solutions or problem-solving strategies.

On the creative thinking indicator, it was found that 75% were able to involve themselves in tasks even though the answers and solutions were not immediately apparent, 78% made an effort to the maximum of their abilities and knowledge, and 79% made use, improved evaluation standards

that they made themselves. The indicator of making, using, and improving self-made evaluation standards is the highest because they always make and use criteria to evaluate their performance. The standards they set and set are high enough for what they do to be of high quality. And they also check the final results of the products they make according to standards, such as seeing the final results and then changing their learning methods and strategies[10]. This also motivates them to get good results.

Meanwhile, the indicator of involving oneself in a task, even though the answers and solutions are not immediately visible, is the lowest among the other hands, although they do not differ much. The reason is that when some prospective teachers understand or find a problematic genetics task, some future teachers give up easily and do not try to find a solution because their technique or strategy is lacking in trying to find a solution. [11]

## 4 Conclusion

Online video media can provide a learning environment that supports prospective teachers in accessing knowledge that is not limited, and creative thinking in thinking habits will also be formed. On the creative thinking indicator, it was found that 75% were able to involve themselves in tasks even though the answers and solutions were not immediately apparent, 78% made an effort to the maximum of their abilities and knowledge, and 79% made use, improved evaluation standards that they made themselves.

This creative thinking habit should also be obtained from various other learning media. Then prospective teachers should be equipped with innovative and fun learning.

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