

# Cultivating Student Creativity- A Qualitative Study of Outstanding Students of Yogyakarta State University

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**Abstract** This study provides an in-depth understanding of creative students' personal traits and factors which foster their achievement in the university setting. This is a qualitative study with eight of the most outstanding students of Yogyakarta State University as the samples. Data were collected using interviews and document analysis. The study shows that (1) the motivation of creative students arises from the clear view of their future life and as a result of inspiration by others, (2) creative students like to act as active, imaginative, problem solvers, and risk takers. They also appreciate the time required to maintain the struggle of their activities. (3) Creative students love contextual learning, which allows them to relate the material to community problems. This study suggests developing an integral curriculum and instructional teaching to provide further effort in cultivating students' creativity in educational settings.

**Keywords** Students' Creativity, Motivation, Problem Solver, Risk Taker, Contextual Learning

## 1. Introduction

It is estimated that by 2050 Indonesia will have a demographic bonus that is characterized by the number of productive citizens being higher than the number of people who are under 15 years and above 65 years (UNPF, 2013). The demographic bonus will have either a positive impact such as driving economic performance (Adioetomo, 2016) or a negative impact such as social problems for the youngsters, like unemployment (Hayes & Setyonaluri, 2015).

Indonesia must properly prepare so that the positive impact is higher than the negative effect on its people (Hayes & Setyonaluri, 2015). One of the actions undertaken to prepare these young generations is training the students to provide them with the resources required to meet future needs and challenges. Based on the survey conducted by the American Management Association, the important competencies in the future will be creativity, communication, problem-solving, and collaboration (National Education Association, 2016).

The Indonesian government wants to drive creativity through Presidential Regulation No. 28, 2008 of the National Industrial Policy. The regulation states that the creative industry as a priority industry is constantly being developed. The contribution of the creative industry in Indonesia is shown by the number of employees, as many as 8.6 million

or 7.9% of the total workforce, and the total export sales amounting to US \$ 984 million (Pangestu, 2016). This study aims to explore more about strategies to foster creativity, especially among the young generation in educational settings.

### *Creativity*

Creativity is the mental ability to think divergently and find original solutions to problems (Harris, 2014; Saccardi, 2014; Wang, Peck, & Chern, 2010). Moreover, creative people have the ability to produce an original and valuable product (Hsiao, et al, 2014; Hu & Adey, 2002). Synthetically, it can be concluded that creativity is an activity and thinking style which characteristically generates innovative ideas, procedures, and/or products that are novel, in order to solve problems and/or give benefit to oneself or the community.

Additionally, Kaufman and Beghetto (2009) proposed the "Four Cs" model of creativity to differentiate and accommodate the unacknowledged types of creativity so that they might be used to solve daily problem challenges versus the creative endeavors which might produce prodigious and marvelous results. Mini-c or transformative learning, encompasses the creative thinking inherent in learning. Little-c is a daily problem solving and creative expression. Pro-C is exhibited by a professional in their field but not eminent. Big-C is reserved for an individual who creates something great and significant.

### *Creativity process*

Three major theories addressing the creative thinking processes have been declared: (1) preparation, exploration, incubation, and verification (Corraza & Agnoli, 2016; Lau,

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2011; Wang, Peck, & Chern, 2010); (2) problem definition, idea conceptualization, and architecture/building phase (Harris, 2014); and (3) challenging orthodoxies, harnessing trends, leveraging resources, and understanding needs (Gibson, 2015). Synthetically, it can be concluded that the creativity process consists of: preparation, imagining trends/defining problems, generating and selecting an idea, and demonstrating/testing ideas.

Preparation is the process of gathering information about the problem through library research, searching the web, talking to people, or collecting data from other sources (Lau, 2011). The next process is defining problem, the process to define the problem clearly so it might follow by selecting possible ideas for problem solving (Harris, 2014). On this phase, creative person also can produces innovative idea based on envisioning future trends (Gibson, 2015). Furthermore, all new innovative ideas might be select to get the best one and follow by an implementation.

#### ***Factor influencing students' creativity***

Creativity is influenced by various factors, including attitude, skills, and intelligence (Chao & Huang, 2016); knowledge, thinking styles, personality, motivation, and the environment (Beghetto, Kaufman, & Baer, 2014). Furthermore, all of these factors interact with each other in various ways with unique consequences so that they have various effects on creativity (Cropley, 2015; Wu & Marsono, 2016).

## **2. Research Methods**

This study follows a qualitative approach, whereby semi-structured interviews were conducted and then analyzed. The participants were eight students representing the most outstanding students of each College of Yogyakarta State University 2016. Hence, these students were recruited based on a specific purpose rather than randomly representing academic and non-academic achievements that were higher than other students (Teddlie & Tashakkori, 2009).

A guideline of specific topics and questions to address was developed from a theoretical review and evaluated by psychological supervisors (Whittemore, Chase, & Mandle, 2001). The final interview guideline was composed of five major topics about factors that influence creative students' motivation, behavior, learning style, and the process of creativity in an educational setting.

## **3. Research Finding**

The data presented here represent significant results due to their importance to the research regarding an in-depth understanding of factors that characterize creative students.

#### ***Motivation***

In general, creative students' motivation to achieve a wide

range of achievements was divided into internal motivation and external motivation. Internal motivation consisted of the vision of their future and the need for achievement. External factors include positive support from parents and friends within student organizations, and the potential rewards that can be gained as an outstanding student.

Internal motivation in the form of a vision of their future life shows that creative students have a very clear view of the future that they want to achieve. Another factor that fosters the internal motivation of creative students was experience of being insulted by other people. This experience motivates them to achieve more than others, especially the ones who have degraded them. Additionally, internal motivation was also ignited after seeing the achievements of other people which inspire them to achieve the same feat.

"I will continue studying at the National Technology Institute of Surabaya, and work in the oil and gas companies. I would like to marry a doctor. In the next 15 years, I will be participating in political activities so it is likely that I will be a political leader. After 20 years, I will have my own business and send my boy to an engineering school and my daughter to a medicine school".

The external motivations of creative students were the positive support of friends in the student organizations, and the potential rewards that can be gained as outstanding students. Students who frequently participate in various competitions encourage other students to participate, while simultaneously providing some information about the competitions. Furthermore, students are motivated to work harder for such rewards as the campus policy to give students a funding support to presents their paper in an international conference abroad. Traveling abroad is rarely done by Indonesian students, it is only a dream for most.

#### ***Creative students' behavior***

The habits of a creative student can be identified as: appreciate the importance of time, do not give up easily, active, imaginative, problem solver, and love to take on an adventure. Appreciating time manifests itself as a habit of taking notes of daily activities.



**Figure 1.** Creative students behaviors

Not easily giving up was indicated by the interviewees in determining whether something new is either successful or also unsuccessful, but failure is always a risk.

"When I try to do something that I have never done before, it's fifty-fifty, 50% successfully and 50% unsuccessfully. So, I try new things in full knowledge of the risks, but also deeming it worth those risks."

The dynamic nature of creative students was shown by their participation in the student organizations, team competitions, and social activities in the community.

"I joined the English club debate, almost every day I used two to three hours of my time practicing my debating techniques. I also voluntarily joined several social community education projects in Yogyakarta. I also worked as a part-time teacher and tutor in the elementary school."

The imaginative and problem solver attitude of creative students generally surfaced in similar situations. For example, when one of these students saw that their friend had a problem, creative students tried to find a solution. The process of finding a solution generally involves using the imagination to construct the existing problems as well as generating possible alternative solutions. These creative students love to take on challenges, and this is marked by their behavior to try new things. These activities might be related to their academic activities or not related at all.

#### ***The way the creative student learns in the classroom***

Creative students love to learn by linking the material directly with issues or realities which are happening in the community (contextual learning). The relevant learning models were: discussion, problem-based learning, discovery inquiry, and demonstration. Another factor that is dominant in their learning activities is a high need for Internet access. Creative students optimize the function of the internet to learn, to discuss, to get information, and to access funny stories to refresh their mind.

#### ***Creativity process***

The process adopted to realize a creative idea into a paper or a product consisted of problem identification or harnessing future trends, idea conceptualization, testing, and completion. Creative ideas mostly emerged within various times and situations. Furthermore, the students' activities often become a trigger to inspire a creative idea related to the work being undertaken. Creative ideas that emerged were immediately followed up with a note or discussed with a friend, so as not to forget them.

The next stage is trying to look at the idea's possibility of realization. This process is characterized by the search for literature reviews related to the idea or by discussion with others. Discussions were conducted with friends and professors, as well as with friends from other campuses. If the idea had the potential to be realized, the next step was to realize it.

## **4. Discussion**

Motivation which paved the way for the creative student consisted of internal and external motivation. External motivation sometimes has a long-term effect which can be incorrect; therefore it is necessary to foster internal motivation of the students. In this research it is driven by a clear vision of their future and a need for achievement, which arises when the students see other people make great accomplishments, and also because of the bad experiences of others. These could potentially encourage the growth of either positive motivation or a negative situation that might even foster a worse situation. Therefore, it is better to pursue motivation by inspiring the students with the accomplishments of others. Fostering a clear vision of the future and providing inspiration for the students might be done by presenting peers and successful alumni from various levels of graduation to give testimony. This is consistent with Vigotsky's (2004) theory which states that a person's imagination can be nurtured through direct experience, listening to the stories of others, or by combining some of the experiences and stories.

Creative students are always appreciative of time and do not give up easily; they are active, imaginative, problem solvers, and love to go on adventures. They can be stimulated by providing a wide range of student activities to accommodate a wide variety of interests and talents. Student participation in various activities will indirectly provide a challenge to find new experiences, solve problems, and appreciate the time they have.

Furthermore, the process to realize creative ideas with a learning process can be harmonized. Creativity training in Yogyakarta State University is still limited to activities provided to students, especially in the second and third semesters. Previous studies show that efforts to develop students' creativity have greater results if they are integrated into the curriculum and the learning process in the classroom. The learning process is set in accordance with the character of creative students, so that they learn with the possibility that they might connect the material with the real conditions in the community (contextual learning). These learning process models were delivered in the form of discussion, problem-solving, problem inquiry, and demonstrations. Therefore, learning models that facilitate the growth of the creativity of students need to be implemented in the learning process.

## **5. Conclusions**

Students' motivation can be enhanced in order to achieve more by presenting successful alumni and peers to provide a clear and factual picture of successful students and professionals, and the methods used to achieve that success. Students should also be encouraged to be active in various student organizations that match their interests and talents.

Moreover, contextual learning models can be implemented in an effort to foster students' creativity. This study suggests the need of curriculum and instructional teaching development that integrate school courses with creativity.

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