

Extent of Teachers' Boosting Creative and Critical Thinking Skills of Junior High School Students

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Abstract

In public secondary schools, science teaching is no joke since large number of students in the Philippines are said to be studying in Public or Government schools. Due to fast tracking time, the present quickly reached its saturation point, and there were lots of changes occurred in the realm especially in the educational system. The country, feasibly, is going along with the transformations of the world. Teaching science in public secondary schools is one of those greatly affected areas in education. Subsequently there were studies saying that science secondary education in the Philippines lags behind other countries in the world. It turns out that teachers together with the education sector of the country must strive harder to escalate the state's science education, particularly in public schools. The focus of this study was to determine the extent of teachers' boosting the junior high school creative and critical thinking skills in the Division of Batangas City. The descriptive method of research was applied in the study, with the questionnaire as the main data gathering instrument responded to by 71 science teachers and 369 students along the public secondary schools in Batangas City. The composite mean, 3.31, imply that educators enhance the students thinking skills with a moderate extent. This is a signal that the mentioned ways of students' thinking skills enhancement have been utilized by the science teachers averagely. This only means that the boosting if the learners' thinking skills haven't reached its peak yet. From the individual results, it can be seen in the first three items that these substances reaped the highest weighted mean. It only display that teachers focus in having their students do research works, identifying the similarities and differences of variables in a situation through activities and having them experience a contextualized learning which led them to easily express their thoughts and ideas. From the lowest part of the table, the last three (3) items that bring in the lowest weighted mean, it can be observe that the teachers expose students to think-pair-share strategies, engage students to reading relevant articles, and empower students' ability in making unusual solutions, but not as intense as the first three items that got the highest weighted mean.

Keywords: Creative thinking, critical thinking skills, science, junior high school students

1. Introduction

“Science is a magic without lies.” It’s not just a systematized body of knowledge and a fruit of curiosity, it is something that can unleash what lies on the past and can be a prophecy of future. It is more than magical in a way that it can be used to surmount nature’s force and give man a super power to manipulate his surroundings. Science is the root of our existence for it explains our origin and is able to trace the footprints of the past. It gives meaning to our structural being, from anatomy and physiology up to genetic mutation and man’s evolution. It also clarifies the existence of blue eyes and answers the question “why the sky is blue”, even the chemical explanation in a situation when a person’s in blue. Science is something that is very essential to human being since, they are by-product of science, and it is a must in people’s everyday survival. In short, it is more than the existing galaxies, because Science is beyond everything.

A world without science will be a world of unending questions with unsupplied answers. Its existence is also the birth of discovery, understanding and knowledge. The magic of it deals with the different realistic laws, theories and inventions that are permanently changing. It can answer the “WH” questions in our daily life. It can also be the root of many more questions once an answer popped out, for science never solves a problem without creating ten more. The good thing about science, unlike magic tricks, is that it’s true whether or not you believe in it.

Creativity is a skill that can be learned, it gives power to people by exerting force to their natural abilities that may result to great teamwork, productivity, and profits. It is beyond thinking outside the box. The essentiality of this thinking skill, once enhanced, is that it can support the learners in thinking differently whenever they met problems that require creativeness and it can qualify students to see what everybody else has seen but think in a way that nobody else has thought.

With creative thinking skills, there also comes critical thinking skills where students are expected to be taught thinking by themselves, evaluating evidences, making decisions and later, making contradiction on something that has been already proven. It is helping the learners to come up with a way to fix mistakes that somehow direct them into thinking creatively and critically. It is somehow encouraging the students to invest in knowledge and seek for more answers and create new questions afterwards.

These two thinking skills are just a dot in the picture but it can greatly affect science education in the country to level up and go along with the other successful countries when it comes to science. Creative and critical thinking skills are needed very often in learning and science together with the fact that it has so many topics that greatly deal with the need to use and utilize creative and critical thinking skills. Science, itself, is such a very complex subject that come along with so many confusions and controversies, lots of problems to solve and things to innovate and it only takes a creative and critical thinker to contradict such wrong beliefs and innovate new ways of understanding science. That’s why it is in the teachers’ hand on how they are going to enhance these two special thinking skills of the students.

2. Materials and Methods

The respondents of the study are the 376 junior high school students of different grade levels and 71 science teachers in the selected schools in Batangas City. The researchers selected the school

through random sampling. The sampling strategy used was based on the availability of technology-based instructional materials to schools understudy.

3. Results and Discussions

The discovered result in this table reflects the extent on how the teachers boost their students' creative and critical thinking skills. The composite mean, 3.31, imply that educators enhance the students thinking skills with a moderate extent. This is a signal that the mentioned ways of students' thinking skills enhancement have been utilized by the science teachers averagely. This only means that the boosting if the learners' thinking skills haven't reached its peak yet.

Items	TEACHERS	
	Weighted Mean	Interpretation
As a science teacher, I boost my student's creative and critical thinking skill by:		
1. Allowing them to search for evidences, facts and knowledge by identifying relevant sources and gathering objective, subjective, historical and current data from those sources.	3.39	Moderate Extent
2. Providing activities that allow students distinguish carefully the differences and similarities of variables in a situation.	3.39	Moderate Extent
3. Contextualizing learning activities in which students easily express their thoughts and ideas.	3.38	Moderate Extent
4. Enabling them judge and reason out on certain phenomenon observed.	3.37	Moderate Extent
5. Dealing on extensive" Question & Answer" regarding a particular topic from them.	3.37	Moderate Extent
6. Facilitating relatable topics and activities for an in- depth intellectual conversion among members of the class.	3.35	Moderate Extent
7. enhancing their intellectual inventiveness that can be used to generate, discover or restructure ideas and imagining alternatives	3.31	Moderate Extent
8. Exposing student in activities like "think- pair- share" that make them part of an intellectual conversion.	3.25	Moderate Extent
9. Engaging student in reading relevant articles or journal and let them analyze it.	3.18	Moderate Extent

10. Empowering their ability to unfold novel or unusual solutions that do not depend wholly on past or current solutions.	3.14	Moderate Extent
Composite Mean	3.31	Moderate Extent

From the individual results, it can be seen in the first three items that these substances reaped the highest weighted mean. It only display that teachers focus in having their students do research works, identifying the similarities and differences of variables in a situation through activities and having them experience a contextualized learning which led them to easily express their thoughts and ideas.

From the lowest part of the table, the last three (3) items that bring in the lowest weighted mean, it can be observe that the teachers expose students to think-pair-share strategies, engage students to reading relevant articles, and empower students' ability in making unusual solutions, but not as intense as the first three items that got the highest weighted mean.

As to generalize it up, science teachers boost their students' creative and critical thinking skills through investing students into research with a contextualized learning experience that truly allow the students to enhance their thinking skills with a moderate extent. They also use paired students strategies, reading and they even challenge students to make a different solutions from problems, wherein their thinking skills can be boosted also with a moderate extent but not as intensify as that of the first three (3) items. This is a clear implication that the science teachers of today enrich students thinking skills in a more realistic and application-friendly way.

4. Conclusions & Recommendations

The composite mean, 3.31, imply that educators enhance the students thinking skills with a moderate extent. This is a signal that the mentioned ways of students' thinking skills enhancement have been utilized by the science teachers averagely. This only means that the boosting if the learners' thinking skills haven't reached its peak yet. From the individual results, it can be seen in the first three items that these substances reaped the highest weighted mean. It only display that teachers focus in having their students do research works, identifying the similarities and differences of variables in a situation through activities and having them experience a contextualized learning which led them to easily express their thoughts and ideas.

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References

Cain, Susan. (2012). *Quiet: the power of introverts in a world that can't stop Talking*. The Crown Publishing Group.

Corpus, Brenda B., et al. (2006). *Principle of teaching 2*. Quezon City, Philippines: Covimar Publishing Inc.

Michalko, Michael. (2011). Creative thinking: putting your imagination to work. New World Library.

Newbill, P. et. al. (2012). Design creativity, learning and leading with technology. ISTE-International Society for Technology in Education.

Salandanan, Gloria G. (2000). Teaching approaches and strategies. Quezon City, Philippines: Katha Publishing Co. Inc

Sawyer, R. Keith. (2006). Explaining creativity: the science of human innovation. Oxford University Press.

Settlage, John & Southerland, Sherry. (2012). Teaching science to every child: using culture as a starting point. New York.

Slavin, R. E. (2012). Educational psychology: theory and practice (10th ed.). Boston, MA: Pearson Staver,

John R. (2008). Teaching science, volume 17 of educational practices series. APH Publishing.

Thornburg, David D. (2009). Five challenges in science education. Creative Commons. Thornburg Center for Space Exploration.

Tweed, Anne. (2009). Designing effective science education. Arlington, Virginia: NSTA Press Vanderwolf,

C.H. et al. (2012). Teaching science in the 21st century. Society for Quality Education. Toronto, Canada 85