A study of relationships between creative thinking and learning styles of the bachelor’s degree student at Institute of Physical Education Udonthani

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Abstract

The research aims were 1) study levels of creative thinking 2) study learning styles and 3) study relationships between creative thinking and learning styles of bachelor’s degree students in the Faculty of Education and Faculty of Sport Science, Institute of Physical Education Udonthani. They were studying in the second and the third year in the academic year 2010. The sampling group was 215 students from the Faculty of Education and Faculty of Sport Science selected by the Stratified random sampling. The Instruments used for data collection were Test for Creative Thinking Drawing Production (TCT-DP) by Jellen and Urban as well as learning styles evaluation of David Kolb. Data was analyzed by percentage, mean, standard deviation, Chi-square testing, Pearson’s Product Movement Correlation Coefficient, and analysis by multiple regressions.

Result were shown.

1) The students with different genders, fields of study and curriculums had no differences in the levels of creative thinking with statistical significance of 0.05. Most of them had a moderate level of creative thinking.

2) The students with different genders and curriculum had no differences in the learning styles. However, the students with different fields of study had some difference in the learning styles with statistical significance of 0.05. Most of them had the learning styles as Accommodator, which refers to the learning style that integrates real experiment and practice.

3) The relationships between creative thinking and the learning styles had the statistical significance of 0.05. A study of Correlation Coefficient between creative thinking and the learning styles as Converger was at 0.168. That was to say the students with the high creative thinking would have the learning style as Converger, referring to the learning style which integrates abstract thinking, and experiments and practices.

Keywords:

Creative Thinking/ Learning Styles/ Relationships

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Introduction

Creative thinking is one of essential human capacities. People who are creative can come up with innovative ideas. Leading to an appropriate development of a country in the fast ever changing world.

According to the Thai Educational, education will be based on the principle that all learners can learn and develop themselves, and are considered as being most important. The teaching-learning process should aim at helping the learners to develop themselves at their own pace and to the best of their potentiality. Also, in Chapter 4 Section 24, in organizing the learning process, educational institutions and agencies concerned will provide knowledge and arrange activities in line with the learners’ interests and aptitudes, keeping in mind individual differences. Thus, learning institutes should provide facilities, academic contents, and activities, according to individual learner’s interests, and potentials. Universities, in particular, of which duty is to educate learners with advance knowledge, need to provide proper elements of their teaching and learning system, including the learners, the lecturers, study programs, classroom environment etc. To teach effectively, the lecturers should keep in mind the learners’ differences, and then they can decide on what teaching strategies or techniques to be used. This idea is in accordance with David Kolb’s idea (1992), saying each student has his/her own way of learning. The students should use their own learning styles.

Thus, the researcher aims to study the level of creative thinking and learning styles of students at the Faculty of Education and Faculty of Sport Science, Institute of Physical Education Udonthani, by using the theory and creativity measuring instrument (TCT-DP), which was invented by Jellen and Urban (1986) and learning styles evaluation of David Kolb idea (1992). The researcher believes that learning at the Faculty, the students need to use their own potentials in accumulating experience and constructing knowledge as well as sense of working. These research instruments are accepted to be used with university students.

Purpose

1. To find out the level of creative thinking of the second and third year students at the Faculty of Education and Faculty of Sport Science, Institute of Physical Education Udonthani.
2. To study the learning styles of the second and third year students at the Faculty of Education and Faculty of Sport Science, Institute of Physical Education Udonthani.
3. To find out the relationship between the students’ creative thinking and their learning styles

Research Hypothesis

1. The students with different genders, and programs have the same level of creative thinking
2. The students with different genders, and programs have the same learning styles.
3. The students’ creative thinking and the learning styles are related.

Research Findings

The research findings will be used in improving teaching styles that are suitable for the students’ learning styles and their level of creative thinking.

Materials and Methods

There are 2 research instruments in this research.

1. The Test for Creative Thinking Drawing Production (TCT-DP) of Jellen and Urban (1986). The Test for Creative Thinking Drawing Production (TCT-DP) was created by Jellen and Urban (1984). Creative thinking refers to fluency, flexibility, originality, elaboration, risk-taking, and humor. In doing this test, test-takers will demonstrate their creative thinking by drawing anything on a 5x5 square. There are 5 spots in the square and 1 outside. This test is accepted to be used with people of all ages.
2. Learning style measurement of David Kolb (1992) This measurement was translated from English to Thai. There are 9 questions, which can be divided into 4 categories.
2.1 Diverger: combines preferences for experiencing and reflecting.
2.2 Assimilator: combines preferences for reflecting and thinking.
2.3 Converger: combines preferences for thinking and doing.
2.4 Accomodator: combines preferences for doing and experiencing.

This measurement is accepted to be used with university students. There are several research studies (David Kolb (1992) and Anderson, Ronald D. and Others (1970)) that were conducted by the use of this measurement.

Population and Samples

1. The population were 45 female and 290 male students. There were 335 students in total.
2. The samples were 35 female and 180 male students. There were 215 students in total.

Data Collection

1. Preliminary study about creative thinking
2. Find out the appropriate instruments to measure the students’ creativity and learning styles
3. Collect the data
4. Check the data
5. Analyze the data
6. Make a conclusion and recommendation

Data Analysis

The information for this study was gained by a survey, and then analyzed by using SPSS.

1. Creative Thinking
   1.1. Check the tests and give scores
   1.2. Rank the scores from the highest to the lowest
   1.3. Group the scores by using percentile
      - high 100-70%
      - middle 69-30%
      - low 29-0% of Pungrat Taweerat (1997)
2. Learning Styles
   The researchers put the scores in columns, and used a computer program to process the data (learning styles) of each subject.

Research Scope

This research is on the level of creative thinking and learning styles of 2nd and 3rd year students at the Faculty of Education and Faculty of Sport Science, Institute of Physical Education Udonthani.

Result and Discussion

1. The students with different genders, fields of study and curriculums had no have differences in the levels of creative thinking with statistical significance of 0.05. Most of them had the moderate level of creative thinking.
2. The students with different genders and curriculum had no differences in the learning styles. However, the students with different fields of study had differences in the learning styles with statistical significance of 0.05. Most of them had the learning styles as Accommodator, which means the learning style that integrates real experiments and practices.
3. The relationships between creative thinking and the learning styles had the statistical significance of 0.05. A study of Correlation Coefficient between the creative thinking and the learning styles as Converger was at 0.168. That is to say the students with the high creative thinking would have the learning style as Converger, referring to the learning style which integrates abstract thinking, and experiments and practices.

Conclusions

Part 1

1.1 From the study, the researchers found that there were no differences in the level of creative thinking of male and female students. This is similar to Nirach Sudsung’s study (2003) which states that the levels of male and female students in thinking creatively at Faculty of Industrial Education, King Mongkut’s Institute of Technology
Ladkrabang were not different.

1.2 The study shows that students from different departments had a similar level of creative thinking. This might due to a similar academic environment such as student codes of conduct, culture and tradition. This is in line with Torrance’s study (1970), asserting that people can improve creative thinking regardless of their sex or age. The difference will depend upon codes of conduct, rules, culture and tradition. If in an appropriate environment, people can still develop their creativity.

1.3 The study of creative thinking of students from 2 different programs shows no significant difference. The students in Bachelor of Education Curriculum were at 33.74 and the students in Bachelor of Sport Science Curriculum were at 36.61. However, there was no significant difference of level of creative thinking. This shows that the students could develop their creative thinking while learning at the Faculty, though they had different learning background before learning at the Faculty. This idea is similar to Anderson et al (1970), saying that everyone was born with creative thinking, which can be developed if they are given proper learning experiences.

Part 2

2.1 The research found that there was no difference in learning styles for male and female students. Most male and female students had the accommodator style of learning. This was 38 %. The finding was similar to the study conducted by Methi Pilanthananod (1994), who studied the learning styles of master’s degree students of education administration in Thai universities. He found that many students in different universities, regardless of their gender, age, academic year, had similar learning styles.

2.2 The learning styles of students from 2 different departments are not different. Students in both programs learned from experiences, theories and practices. This is in accordance with David Kolb (1992), saying that those who have this style of learning will learn by doing until they construct their own knowledge.

Part 3

Conclusion of A Study of Relationships Between Creative Thinking and Learning Styles of the Bachelor’s Degree Students at the Faculty of Education and Faculty of Sport Science, Institute of Physical Education Udonthani.

The researchers found the relationships between creative thinking and learning styles. Generally, students who have the converger style will have a higher level of creative thinking than those with other learning styles. However, this study showed that most students in the Faculty of Education and Faculty of Sport Science would have the accommodator style, which is experiential learning. They learn from both theory and practice. David Kolb (1992) says people who have accommodator will like hands-on experience. They like to learn by doing and also like to be challenged. In solving problems, they do not like to read, but prefer to have hands-on experience and ask for information from others. They can adjust themselves well in new, different environments.

From this study, the researchers found the relationships between creative thinking and the converger style. As mentioned earlier, students who have the converger style will have a higher level of creative thinking than those with other learning styles. David Kolb (1992) says that these learners work best when there is a simple and correct answer to a problem. Their learning abilities are abstract conceptualization and active experimentation. The learners prefer dealing with things rather than people and are likely to excel in the physical sciences and engineering. This is also similar to Prasart thinking ability (Prasart,1989), being able to analyze problems and understand related variables or issues. This type of learning style ‘converger’ can be fostered by using ‘brain storming’.

As a result, the researchers think that in teaching the students at the Faculty of Education, teachers should organize and provide learning activities that go in line with the majority of the students, who have the accommodator learning style. This can be done through workshops, practices, and
experiments. Besides, they should be given enough learning materials and tools, good and friendly learning environment. The teachers should also encourage the students to think creatively and freely. The teachers should give constructive criticism. The teachers should be open-minded and also give them opportunities to ask questions so that they can learning happily.

Reference

Prasart Isaraprida, (1989), Developing creative think though training procedure. Faculty of Education: Srinakarinwirot Mahasarakham University.