

Learning Styles and Creative Problem Solving among Musicians

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ABSTRACT

The study was conducted to understand whether there is any relation between Learning Strategies under which learning styles were taken as pertaining to the study and Creativity in which problem solving ability was taken as pertaining to the study among Musicians who play Guitar, Keyboard and Drums of among young adults belonging to the age group of 18-40 years of age. This quantitative research design study used 2 different assessment tools which are Kolb's Learning Styles and Passi-Usha Test of Creative Problem Solving which helps to assess the learning styles and creative problem solving ability. Convenient sampling and Snowball sampling methods were for data collection in this research and the total sample size was N=90, with 36 females and 54 Males. The statistical tools used in this study are Correlation and one-way Anova. The study aimed at understanding the relationship among the three variables in Young adults. The results revealed that there was no significant relationship between Creative Problem Solving and Abstract Conceptualization, Creative Problem Solving and Concrete Experience, Creative Problem Solving and Reflective Observation. The study found that there is a high negative correlation between Creative Problem Solving and Active Experimentation. The difference in the three variables of instrumentalists who are Guitarists, Keyboardists and Drummers with Creative Problem Solving was also analyzed which showed that there was no difference in the instrumentalists and Creative Problem Solving.

Keywords: Learning Styles, Creative Problem Solving, Musicians.

Humans are social beings, and their ability to think, comprehend, change, shape, and learn is what makes them unique among living things. Every person learns and perceives in a unique way. People learn in various approaches and in various ways. An individual's preferred method of studying a subject is their preferred learning style (Fer, 2014). Dunn (1990) asserts that methods for retaining new and challenging knowledge include learning style, attentiveness, and each learner's level of focus during the learning process.

Learning styles demonstrate how people differ in their preferred methods of instruction or study. According to Curry (1990), the primary goal of research on learning styles is to

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enhance learning-teaching procedures. It is challenging to pinpoint the learning style of a certain person. Using only abstract resources makes studying music much more challenging. Music may be learned and taught in a variety of ways, both formally and informally. Although learning music is a common and natural activity, relatively little is known about how individual variances affect music learning and creative processes. Learning music may be done in a variety of ways. However, it is unknown how learning techniques and creativity in the learning of music relate to one another. The act of creating involves choosing or inventing components important to a particular goal and arranging them into a fresh, original shape. Originality is meant by it. The word denotes uniqueness. Liberation from restraint, Imitation, academicism, intellectual and emotional servitude, and other negative aspects of art are the opposites of creation. A particular mental attitude is required for creativity. Democracy is an invitation to independent thought, discovery, and advancement in action. Imitation, on the other hand, is the definition of reaction, decadence, and conformity. Malcolm Knowles understood how important it was to provide novel and practical premises in order to improve adult learning. Hypotheses and principles that explain the processes and characteristics of creative behaviour and creative persons share many assumptions and theories in common with those that define adult learning. It is rare, hard to research, and challenging to measure creativity.

At least six significant barriers have historically prevented the study of creativity: Mysticism and spirituality, which appear neutral or even antagonistic to the scientific method, are the roots of the study of creativity. That creativity lacks a theoretical foundation or empirical support in psychology research, as shown by practical, commercial approaches to the subject. Because early research on creativity was conceptually and methodologically distinct from the majority of theoretical and empirical psychology, it was occasionally viewed as unimportant in comparison to the discipline of psychology's primary priorities. There have been issues with the definition and criteria for creativity, which have made the phenomenon seem either mysterious or trivial. Additionally, some approaches have a tendency to view creativity as an extraordinary outcome of regular structures or processes, making it seem unnecessary to conduct a separate study of creativity.

Cognitive learning styles encompass those brain functions that interpret meaning and engage with the environment (Keefe, 1991). Motivation, decision-making, and emotional preferences are all aspects of affective styles. Perceptual modes and environmental variables that influence learning are included in physiological styles. This is the method through which students utilize their senses and environment to filter information from their surrounding environments (Keefe, 1991). On the issue of learning styles, David Kolb (1984) has written extensively, and his model is commonly used.

Perception and processing were two distinct learning acts that Kolb distinguished. These educational activities may all be broken down into opposing categories. For instance, whereas some people better comprehend knowledge through tangible sensations like feeling, touching, viewing, and hearing, others do it best through abstract abstraction. Information must be processed once it is viewed. Some people assimilate knowledge best through active experimentation, which entails applying it, while others do it best through reflective observation, which involves considering it (Algonquin, 2003). Concrete Experiences (CE), Reflective Observation (RO), Abstract Conceptualization (AC), and Active Experimentation (AE) are the four main phases in Kolb's theory of experiential learning (AE).

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How people really learn music is a key subject in the field of music acquisition. The notion of music as a characteristic has been one of the most popular theories of music. Francis Galton is largely responsible for the trait theory of music (1822-1911). Galton contributed to the trait theory of music in two ways: by demonstrating how music was systematically inherited in families through lineage tracing, and by testing instruments to gauge musical intelligence. Galton's views were contested in many areas, but his contribution to setting the groundwork for subsequent study was significant.

METHODOLOGY

The current research uses Quantitative design to study the impact of creative problem solving on learning styles among musicians. This study is totally a quantitative study using 90 sample of musicians equally divided into three parts of musicians like Guitarists (30), Keyboardists (30) and Drummers (30).

Statement of the Problem

To find out if there is any significant relationship between creative problem solving and learning styles.

Objectives of the study

- To find if there is any relationship between learning styles and creative problem solving among musicians.
- To find if there is any significant difference between the 3 types of musicians who are Guitarists, Keyboardists and Drummers and creative problem solving.

Hypothesis

- H₀₁- There is no significant relationship between Abstract Conceptualization and Creative problem solving.
- H₀₂- There is no significant relationship between Concrete Experience and Creative problem solving.
- H₀₃- There is no significant relationship between Reflective Observation and Creative problem solving.
- H₀₄- There is no significant relationship between Active Experimentation and Creative problem solving.
- H₀₅- There is no significant difference between Guitarists, Keyboardists, Drummers and Creative problem solving.

Operational Definition

Learning Styles

According to Kolb, learning entails acquiring abstract notions that may be flexibly used in a variety of contexts. According to Kolb's view, fresh experiences serve as the catalyst for the creation of new ideas. "Learning is the process wherein experience is transformed into knowledge to produce knowledge" (Kolb, 1984, p. 38).

Creative Problem Solving

Creative Problem solving is the process of describing a problem, figuring out its root cause, locating, ranking, and choosing potential solutions, then putting those solutions into action. The definition of creativity is the propensity to come up with or identify ideas, alternatives, or possibilities that may be helpful in resolving issues, interacting with others, and amusing ourselves and others. Searching for an innovative, previously undiscovered solution to a

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problem is known as creative problem solving. Problem solving fosters receptivity, and open minds converse more effectively than closed ones.

Description of the tool

The tools used in this study were

Kolb's Learning style Inventory Questionnaire

The Learning Style Inventory was created by Kolb (1976, 1985), who had participants score nine sets of four words (for the 1976 version) or twelve stem completions (for the 1985 version) according to their preferred methods of learning. Learning styles, according to Kolb, are a person's preferred ways to take in and process information. His four-stage experiential learning cycle led to the development of this definition, from which he deduced the existence of four adaptive learning styles: concrete experience (CE), reflective observation (RO), abstract conceptualization (AC), and active experimentation (AE) (AE). A continuum made up of CE and AC illustrates one's preferred way of viewing the outside world and understanding events therein. With values ranging from .73 to .88, the primary and composite scores "display strong internal reliability as determined by Cronback's Standardized Scale Alpha" (Ivey, 1992, p. 71).

Passi- Usha Test of Creative Problem Solving

The Passi- Usha test of Creative Problem Solving was designed by Passi, B.K., and Usha Kumar in 1996 with the aim of evaluating the level of Creative Problem Solving in both adults and schoolchildren. It has seven questions with non-verbal replies (drawing forms). The products are all both creative and elaborate. The examination lasts for 40 minutes. The test's reliability was assessed using the test-retest technique, with coefficients of 0.74 in originality, 0.86 for elaboration, and 0.85 for overall score. The assessment and its constituent parts are shown to have a good test-retest reliability. This test's validity was established using the concurrent validity approach.

Statistical tool used

The statistical techniques used for the data analysis in this study are: Correlation analysis and one-way ANOVA.

RESULTS AND DISCUSSION

The aim of the research was to study the relationship between Creativity and Learning styles among musicians who play Guitar, Keyboard and Drums. The study was conducted on 90 musicians who play Guitar, Keyboard and Drums. So the sample population was divided into 3 parts, 30 Guitarists, 30 Keyboardists and 30 Drummers. Among the Kolb Learning styles, learning through doing or Active Experimentation had the lowest mean of 22.86 and Abstract Conceptualization had the highest mean of 26.60. Although there is no much difference in the mean of the lowest and the highest learning styles. This study found that there is a significant negative correlation between Creativity and Active Experimentation which means that if Active Experimentation increases then Creative problem-solving ability decreases.

Table 1 Correlation

Variables	M	SD	1	2	3	4
Creative Problem solving	r 55.79	5.697		*		
	p					
AE	r 22.86	4.789	-.299**			
	p		.004			
CE	r 24.81	3.943	.111	-.479**		
	p		.299	.000		
RO	r 25.74	3.581	.095	-.334**	.001	-.297**
	p		.374		.004	
AC	r 26.60	3.671	.180	-.469**	.000	-.162 .127
	p		.090			-.216*

** p< 0.01

*p<0.05

Table 4.1 shows that the correlation between Creative problem solving and 4 learning styles named Active experimentation, Concrete Experience, Reflective Observation and Abstract Conceptualization among musicians.

H₀₁- There is no significant relationship between Abstract Conceptualization and Creative problem solving.

The mean and standard deviation of Abstract Conceptualization is 26.60 and 3.67. The correlation between Creative Problem Solving and Abstract Conceptualization is found to be r-.180 and a significance level of .090 which is less than the significance level of .05. Therefore, we can say that there is no significant correlation between Creative Problem Solving and Abstract Conceptualization. Hence the null hypothesis H₀₁ is accepted.

H₀₂- There is no significant relationship between Concrete Experience and Creative problem solving.

The mean and standard deviation of Concrete Experience is 24.81 and 3.943. The correlation between Creative Problem Solving and Concrete Experience is found to be r.111 and a significance level of .299 which is less than the significance level of .05. Therefore, we can say that there is no significant correlation between Creative Problem Solving and Concrete Experience. Hence the null hypothesis H₀₂ is accepted.

H₀₃- There is no significant relationship between Reflective Observation and Creative problem solving.

The mean and standard deviation of Reflective Observation is 25.74 and 3.581. The correlation between Creative Problem Solving and Reflective Observation is found to be r-.095 and a significance level of .371 which is less than the significance level of .05. Therefore, we can say that there is no significant correlation between Creative Problem Solving and Reflective Observation. Hence the null hypothesis H₀₃ is accepted.

H₀₄- There is no significant relationship between Active Experimentation and Creative problem solving.

The mean and standard deviation of is 22.86 and 4.789. The correlation between Creative Problem Solving and Active Experimentation is found to be r = -.299. and a significance level of .004. which can be interpreted that there is a high negative correlation and is

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significant at 0.05 significance level. Which means that if one variable increase then the other variable decreases. Therefore, we can say that there is high negative significant correlation between Creative Problem Solving and Concrete Experience. Hence the null hypothesis H_{04} is rejected.

Contradicting to the study done on relationship between learning styles and creativity, it was found that all the learning styles are positively correlated with creativity.

Table 2 Descriptive statistics and one-way Anova.

Variables	Guitarists		Keyboardists		Drummers		F	p
	M	SD	M	SD	M	SD		
Creative problem solving	55.30	5.10	54.5	5.79	57.53	5.91	2.311	.105

$p > 0.05$

There was a positive correlation between creativity and active experimentation and positive correlation between abstract conceptualization and concrete experience.

The current study has also found that there is no significant difference between Guitarists, Keyboardists, Drummers and Creativity as the p value is .105 which is less than 0.05.

H_{05} - There is no significant difference between Guitarists, Keyboardists, Drummers and Creative problem solving.

The table 4.2 shows one-way ANOVA, of Creative problem solving on 3 kinds of Instrument players which are Guitarists, Keyboardists and Drummers. The mean value and standard deviation for Creative problem solving of Guitarists is 55.30 and 5.10 respectively, the mean value and standard deviation for Creative problem solving of Keyboardists is 54.53 and 5.79 respectively, the mean value and standard deviation for Creative problem solving of Drummers is 57.53 and 5.91 respectively. The analysis of variance shows that $F=2.311$ (ns) and p value is .105 ($p > 0.05$). This clearly shows that the null hypothesis is accepted as the p value is less than 0.05. Which says that creative problem-solving ability has nothing to do with the instrument musician play. Creative problem-solving ability and instruments of music has no significance. So, we can conclude that there is no significant difference between Creative problem solving and musicians who play different instruments (Guitarists, Keyboardists, Drummers). So, the null hypothesis is accepted.

Summary

The study was conducted to understand whether there is any relation between Learning Styles and Creative Problem Solving among Musicians who play Guitar, Keyboard and Drums of among young adults belonging to the age group of 18-40 years of age This quantitative research design study used 2 different assessment tools which are Kolb's Learning Styles and Passi- Usha Test of Creative Problem Solving which helps to assess the learning styles and creative problem solving ability. Convenient sampling and Snowball sampling methods were for data collection in this research and the total sample size was $N=90$, with 36 females and 54 Males. The statistical tools used in this study are Correlation and one-way Anova. The study aimed at understanding the relationship among the three variables in Young adults. The results revealed that there was no significant relationship

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between Creative Problem Solving and Abstract Conceptualization, Creative Problem Solving and Concrete Experience, Creative Problem Solving and Reflective Observation. The study found that there is a high negative correlation between Creative Problem Solving and Active Experimentation. The difference in the three variables of instrumentalists who are Guitarists, Keyboardists and Drummers with Creative Problem Solving was also analyzed which showed that there was no difference in the instrumentalists and Creative Problem Solving.

CONCLUSION

According to the research the following hypotheses were studied and the results were found to be:

- The null hypotheses H_{01} - There is no significant relationship between Abstract Conceptualization and Creative problem solving has been accepted.
- The null hypotheses H_{02} - There is no significant relationship between Concrete Experience and Creative problem solving has been accepted.
- The null hypotheses H_{03} - There is no significant relationship between Reflective Observation and Creative problem solving has been accepted.
- The null hypotheses H_{04} - There is no significant relationship between Active Experimentation and Creative problem solving has been rejected as there is a high significant negative correlation.
- The null hypotheses H_{05} - There is no significant difference between Guitarists, Keyboardists, Drummers and Creative problem solving has been accepted.

Limitations

- Sample size is relatively small.
- The questionnaire is lengthy and time consuming.
- The study collected data only from Bangalore and Hyderabad. The sample could have been collected from other locations as well.

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Conflict of Interest

The author(s) declared no conflict of interest.

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