A Study On The Identification Of Creative Teaching Practices And Their Effect On Students Academic Achievement At University Level

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ABSTRACT

The present study focused on the identification of creative teaching practices and their effect on the academic achievement of students at university level. The objectives of the study were: to identify different creative teaching practices used by teachers at university level; to find out the effect of creative teaching practices on the academic achievement of university students. The study used the quantitative methods and followed the descriptive survey research design. The 77 faculty members who are taking courses of BS (Hons) in Fall 2018 semester was selected as the sample of the study by using the total population sampling technique. A self-developed questionnaire was used. The findings of the study showed that faculty members often use creative teaching practices in their teaching. It was also identified that creative teaching practices have a significant effect on academic achievement of university students. So, it is recommended that faculty members may be encouraged to participate in workshops which may be helpful for their professional development to make the teaching learning process more effective. It may also be recommended that teachers may use creative teaching practices in the class which in result increase students academic achievement.

Keywords: Identification, Creative teaching Practices, Effect, Students, Academic Achievement, University Level

INTRODUCTION

Since its conceptualization, creativity has a special place in education. In the previous couple of years, there have been various endeavours to integrate creativity in curriculum and assessment. Various arguments have been advanced to help such mission. From an existentialist-phenomenological point of view, Moyer and Wallace (1995) contended that education must primarily concern with the development of creativity and originality, to permit graduates' self-actualization and success in life.

Moran (2010) argued that creativity is a multidimensional concept that has elicited numerous ways to define it. Within the educational context, a clear understanding of creativity is important. Often, creativity is viewed by teachers through the limiting scope of exclusively artistic or intellectual acuity. Plucker, Beghetto, and Dow (2004) discussed that the disadvantage with a unclear or misguided scope can lead to the view that certain individuals are creative inherently while others are not. Clear understanding of what creativity is within the educational context provides educators with the tools to aid students in producing innovative projects, solving problems, and contributing original and useful ideas.

Oliver (2013) and Craft (2005) described that It has been broadly acknowledged that creativity is an intricate concept for which there is no specific definition. Cropley (2001) defined creativity as a cause, effect and interaction between a human and the environment. While, Fisher (2005) described creativity as an innovative action which is perceived for the whole person.

Craft (2005) depicted that creativity is the ability to see conceivable outcomes that others haven't noticed. Sternberg and Lubart (1999) describe creativity as the ability to deliver work that is both novel (innovative, unforeseen) and suitable. Cropley (2001) argued that without a purpose beyond simple originality or novelty, creativity cannot exist.

Amabile, Barsade, Mueller, and Staw (2005) defined creativity as the creation of novel, useful ideas or solutions to a problem. It alludes to both the process of idea generation or problem solving. Zhou (1998) also defined it as a result, focusing on the creation of new and helpful ideas concerning products, processes, and procedures. Amabile (1996) states that to be viewed as creative, an idea or a product must be not quite the same as what has been done previously.

Robinson (2013) stated that the importance of creativity has been gradually perceived by researchers and experts from various fields. The importance and need of creativity in the present time have pulled in the attention of researchers and educational planners towards the study and

exploration of creativity from the educational perspective. Simplicio (2000) discussed that most societies have concentrated since long ago on the review and alteration of the educational curricula and educational programs with the aim to help the adolescents and children to enhance their creative abilities. The old time tested strategies may no more be practical due to the recent technological change in the educational system.

Fatt (2000) stated that inordinate educating requires an open connection between the educator and understudies. Educators ought to give understudies chances to have a contribution in the classes. This association among educator and understudy enables the educator to find the specific capacities and requirements of every understudy. Ritchart (2004) likewise accentuated the significance of educator and understudy relationship. In a genuinely creative classroom, the understudies are doing more than learning the curricular stuff. Creative instructors provide students space for expression of their views and ideas freely.
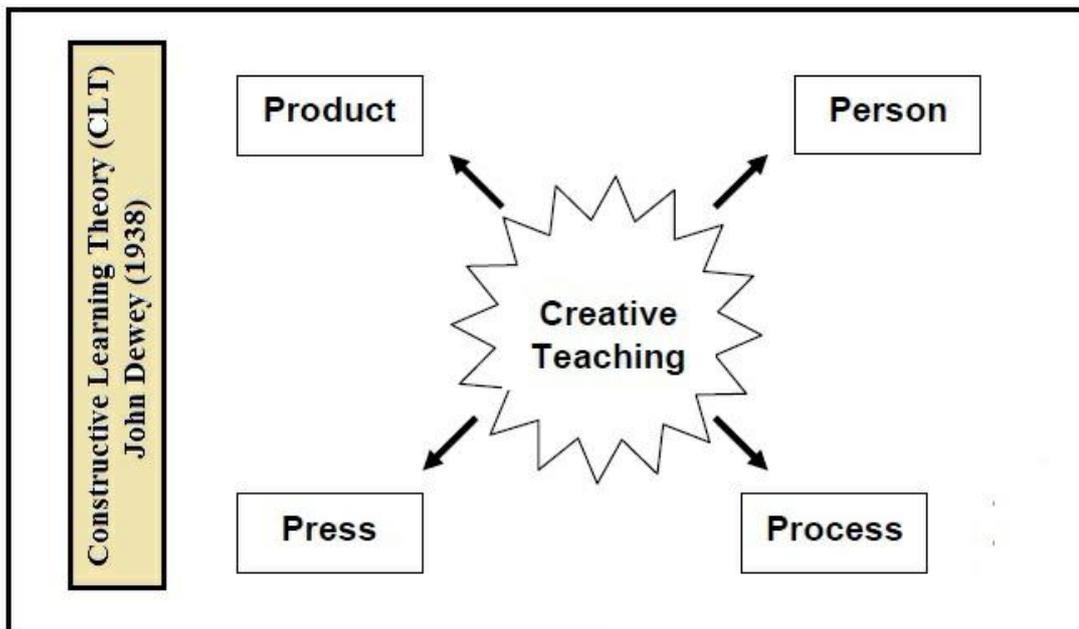
Ritchart (2004) and Jaskyte, Taylor, and Smariga (2009) acknowledged two areas of creative educating; curriculum and instruction. As per him, creative educators attempt to shape educational plans and present it in new, increasingly valuable ways. An innovative way to deal with curriculum includes finding new subjects/themes for understudies to investigate. An innovative way to deal with instruction includes discovering new methodologies or approaches for delivering content. The inventive instructor will discover various strategies to involve his understudies.

Deci and Ryan (2002) described that Education that stresses to youngsters' capacities and interests is probably to develop their prosperity and learning and, thus, better prepare them to contribute to the dynamics of present day society. Tanggaard (2014) further explained that within this perspective, creativity is not regarded as something reserved for certain individuals, but it is a central part of cognition and performing in new ways, in a world that expects us to do so. Sternberg (2006) and WRR (2013) express that there is ample evidence that it is possible to develop pupils' creativity. Therefore, policymakers as well as educators claim that education should play an essential part in building up the ability and creativity in students that the 21st century society needs.

Lou, Chen, Tsai, Tseng & Shih (2012) and Stojanova (2010) argued that teachers should be familiar with strategies that invigorate students' curiosity and creativity, including encouraging students to reflect, take part in discussion and ask questions instead of forcing students to just listen, edict, and memorize, consequently preparing them to be dynamic and find new things. Hamza and

Griffith (2006) and Starko (2005) further explained that various strategies must be utilized to present content in order to study issues from a wide range of viewpoints. In addition, teachers must initiate self-started projects and give children positive feedback.

Rhodes (1961) classified the myriad of definitions of creativity into four strands which he called the 4 P's of creativity, namely, 1) Process, 2) Person, 3) Press and 4) Product. Process definitions mostly depict the stages of creative processes working in the mind of the creator. It alludes to the behavior coordinated towards creative accomplishment. Persons definitions allude to the potential for creative achievement wherein creativity is viewed as a set of characteristics of the person. Press definitions refer to the environmental conditions that are vital for creative activities. Product definitions allude to the end product where expressions of a person's creativity are sited. It tends to be seen that creative teaching can be looked to be based on this classification of creativity.

Theoretical Model of Creative Teaching Adopted From Palaniappan (2004)

Creative Teaching Strategies /Approaches
There are many creative teaching frameworks and strategies developed by scholars. Among them are (a) Shared Puzzlement by Woods (2004), (b) Creative Instructions by Horng, Hong, Chanlin, Chang, and Chu (2005), and (c) Creative Cycle by Best and Thomas (2008).

Woods' Shared Puzzlement

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Woods (2004) identified that creative teaching can be obtained through the spontaneous reaction by using students' prior knowledge and experiences at homes, in schools and vice versa. Linking home and school will allow students to revisit relevant experiences in order to develop their conceptual skills that are constantly going on in the learning process. Going with the flow is a way to encourage students to come up with solutions of relevant occurrences in students' lives which Woods referred as shared puzzlement.

Horng's et al Creative Instructions

Horng et al (2005) hypothesized five main strategies to achieve creative instruction. They are: (1) student-centered learning, (2) use of multi-teaching aids, (3) classroom management strategies, (4) connection between teaching content and real-life experience, and (5) open questions and encouragement of creative thinking.

Best and Thomas' Creative Cycle

The creative teaching framework developed by Best and Thomas is known as the Creative. It consists of eight cyclical processes: (1) vision, (2) idea generation, (3) idea selection, (4) planning for action, (5) action, (6) outcome, (7) reflection, and (8) modification. Teachers may use these creative cycles flexibly based on their skills and appropriateness to classroom activities.

Effective teaching occurs when creativity is injected into every cycle. The first cycle is setting the purpose of carrying out the creative act in engaging the learners. Once this technique set, teachers can utilize creative thinking skills to get responses and ideas from a student as the second cycle. The third cycle is to select creative ideas to generate further actions. In the fourth and fifth cycles, the chosen ideas are creatively planned and implemented through articulation of visual, auditory and kinaesthetic senses. The sixth to final cycles are to creatively manage the outcomes, make necessary reflection and modification.

Beghetto and Kaufman (2014) identify teachers' practices that can affect on nourishing children's creativity in the classroom, which is used as a model for the development of students' creative behaviors and develop an effective classroom environment where creativity thrives by reacting productively to unexpected ideas. Teachers' characteristics should include openness, knowledge of the prerequisites, and trust in themselves and in their particular field.

The relationship between creativity and academic achievement has been studied by different experts. According to Ai (1999), creativity barely correlates with academic achievement. He also discussed that the fervor to investigate the relationship between creativity and academic achievement goes back to the 1960s, when Getzels and Jackson (1962) first described the outcomes of their

study on the role of creativity in school achievement. The results of their study importantly affected psychology in the field of education and set a map for researchers to understand what the nature of creativity looked like.

RESEARCH METHODOLOGY

Research Objectives
The research objectives of the study were:
  i.   To identify different creative teaching practices used by teachers at university level
  ii. To find out the effect of creative teaching practices on the academic achievement of university students

Research Design
To identify the creative teaching practices and their effect on students academic achievement, researcher used quantitative method and descriptive survey research design. A questionnaire for teachers was used as a survey tool to identify the creative teaching practices which are independent variable and academic achievement of students was dependent variable. Demographic information was also obtained from the faculty members which include their academic and professional qualification, teaching experience, area of specialization and students' academic scores according to their grades in their particular subjects.

Population
The Population of the study comprised of all the faculty members (77) from the 11 Departments of Education in the public sector universities of Kber Pakhtunkhwa..

Sample
77 faculty members who took courses of BS (Hons) in Fall 2018 semester in the Education Department of public sector universities of Khyber Pakhtunkhwa were selected as the sample of the study.

Sampling Technique
Total Population Sampling was used for selecting the sample of the study. Total population sampling is the type of purposive sampling used where the whole population that meets the criteria for example, specific skills, experience etc., are incorporated into the research being directed. Total population sampling mostly utilized where the quantity of cases under study is moderately small. In occasions, where leaving out certain cases from your sampling would be as though you had a deficient riddle with clear pieces missing. In this case, the best

sampling strategy to utilize is Total Population Sampling (Etikan, Musa, & Alkassim, 2016).

Research Instrument

A questionnaire was developed based on the review of literature for the process of data collection. The questionnaire comprised of 3 sections i.e. Demographic information section, 28 closed-ended statements, and 01 open-ended question. 5-point Likert scale "Never to Always" was used for closed ended statements. Also, these closed-ended statements were divided into four domains of creative teaching: Characteristics of Creative Teachers (CCT), Strategies for Creative Learning (SCL), Learning Environment for Creativity (LEC), End Product of Creativity (EPC).

For obtaining the academic achievement of students, students' marks in Fall 2018 semester were obtained by their concerned teacher. In the questionnaire, teachers were asked to write the names of subjects that they taught in Fall 2018 semester at BS level. Also, write the number of students in concerned column who took grade A, B, C, D, E and F as per mentioned criteria for each grade: ≥ 80 marks = Grade A, 70-79 marks = Grade B, 60-69 marks = Grade C, 50-59 marks = Grade D, < 50 marks = Grade F. The above mentioned criteria was obtained from the pro-forma filled by Faculty members of HEC recognized universities given by Quality Enhancement Cell (QEC).

Data Collection

The researcher personally visited the concerned universities by taking formal permission from the Head of Department. Before data collection, researcher contact the concerned HODs of the concerned universities for making the data collection process more effective

DATA ANALYSIS AND FINDINGS

After the data collection, the data were entered in excel and analyzed in the Statistical Package for Social Sciences (SPSS). Descriptive statistics and Linear regression were run for the analysis of data. The analysis was as below:

Descriptive Statistics

Table 4.1 Creative Teaching Practices used by Teachers at University Level

Creative Teaching Practices	N	Minimum	Maximum	Mean	SD
Characteristics of Creative Teachers	77	1.00	5.00	3.98	1.00
Strategies for Creative Learning	77	1.55	5.00	3.98	0.91

Learning Environment for Creativity	77	1.57	5.00	3.92	0.86
End Product of Creativity	77	1.25	5.00	3.84	1.05

Table 4.1 showed that responses of faculty members regarding characteristics of creative teachers (Min = 1.00, Max = 5.00, Mean = 3.98, SD = 1.00). Meanwhile, responses of faculty members regarding strategies for creative learning (Min = 1.55, Max = 5.00, Mean = 3.98, SD = 0.91). Furthermore, responses of faculty members about learning environment for creativity (Min = 1.57, Max = 5.00, Mean = 3.92, SD = 0.86). Whereas, responses of faculty members about end product of creativity (Min = 1.25, Max = 5.00, Mean = 3.84, SD = 1.05).

Table 4.2 What are your creative teaching pract6ices for effective teaching?

S.No	Statements	Frequency	Percentage
1	Use differential teaching methods such as discussions, Lecture, role play, team teaching, demonstration etc.	12	15.58 %
2	Assigning different tasks/ projects/assignments for students to create something new.	11	14.28 %
3	Ask open-ended and challenging questions to incite the creative capacity of the students.	10	12.98 %
4	Use differential teaching strategies such as think-pair-share, peer tutoring, brainstorming, creative writing, Gallery walks etc.	08	10.44 %
5	Give students' topics for presentation from the content of the course.	06	7.79 %
6	Encourage students for sharing of views, ideas and their experiences freely.	06	7.79 %
7	Provide opportunities for self-regulatory and independent learning.	05	6.49 %
8	Give students practical and real life examples for developing connections between content and real life.	05	6.49 %
9	Provide opportunities and access to a variety of learning materials.	04	5.19 %

10	Encourage students and involve them in teaching learning process.	04	5.19 %
11	Provide students with regular and proper feedback on the tasks completed by them.	03	3.89 %
12	Arranging Co-curricular activities and events for students.	03	3,89 %

Table 4.2 described the narrative responses of faculty members about the creative teaching practices that they used for effective teaching. It was found that 12 (15.58%) faculty members use different teaching methods such as discussion, demonstration, role play for effective teaching. Furthermore, 11 (14.28%) faculty members assign different tasks/projects/assignments to students to create something new. In addition to, 10 (12.98%) faculty members ask open-ended and challenging questions to incite the creative capacity of the students. Likewise, 8 (10.44%) faculty members use different teaching strategies like think-pair-share, peer tutoring, brainstorming, creative writing, gallery walk, etc. On the other hand, 6 (7.79%) faculty members gave students topic for presentation. Likewise, 6 (7.79%) encourage their students to share their ideas, views and experiences freely. Furthermore, 5 (6.49%) faculty members provide students opportunities for self-regulatory and independent learning. Similarly, 5 (6.49%) faculty members gave practical and real life examples to their students for developing connections between content and real world. On the other hand, 4 (5.19%) faculty members provide their students opportunities and access to a variety of learning materials. Similarly, 4 (5.19%) encourage students and involve them in teaching learning process. Likewise, 3 (3.89%) gave their students regular and constructive feedback to their students to develop their creative abilities.and, 3 (3.89%) faculty members arrange co-curricular activities and events for their students to develop their creative abilities.

Linear Regression Analysis

Table 4.3 Model summary of Regression Analysis of strength of relationship between model and dependent variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.987[a]	.974	.972	1.44178

a. Predictors: (Constant), EPC, CCT, SCL, LEC

The above table showed how the relationship occurs between regresser and regressed. Table 4.3 depicted the value of coefficient of multiple

determination (0.987) which showed a strong relation between independent and dependent variables. The value of R^2 illustrated (97.4%) variation explained by the independent variable to the dependent variable. Moreover, adjusted R^2 (97.2%) presented the overall model is fit.

Table 4.4 Academic Achievement ANOVA Summary Table (Regression Model)

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5546.533	4	1386.633	667.054	.000[b]
	Residual	149.669	72	2.079		
	Total	5696.202	76			

a. Dependent Variable: AA

b. Predictors: (Constant), EPC, CCT, SCL, LEC

Table 4.4 illustrated the ANOVA analysis, which depicted the overall effect of the independent variable to the dependent variable. The df (4, 72) Mean Square (1386.633, 2.079) F value (667.054) with p-value (0.000) showed significant effect of the independent variables as $p < 0.05$.

Table 4.5 Coefficient

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	46.344	.744		62.322	.000
	CCT	.426	.125	.272	3.421	.001
	SCL	.345	.108	.357	3.208	.002
	LEC	.414	.193	.256	2.142	.036
	EPC	.283	.337	.113	.840	.404

a. Dependent Variable: AA

The table 4.5 demonstrated significant effect of independent variable individually in which CCT beta weight ($\beta = 0.272$) with t-value (3.421) and p-value (0.001 < 0.05). Likewise, SCL beta weight ($\beta = 0.357$), t-value (3.208) and p-value (0.002 < 0.05). Furthermore, LEC beta weight ($\beta = 0.256$), t-value (2.142) and p-value (0.036 < 0.05). Coefficient table found positive significant effect of CCT, SCL and LEC on students' academic achievement. On the other hand, EPC beta weight (0.133), t-value (0.840) and p-value (0.404 > 0.05) found non-significant effect.

DISCUSSION

The current study results showed that faculty members use creative teaching practices at university level. They adopt characteristics of creative teachers during their teaching. The results found consistent with Ariffin and Baki (2014); Faizuddin (2017); and Fitriah (2017). They use strategies for creative learning in their daily teaching in order to incite creativity into their students. These results were found consistent with Esquivel (1995); Horng et al. (2005); Faizuddin (2017); Seechaliao (2017) except for Schacter et al. (2006) who finds teaching strategies did not implement by the teacher which nourish students creaivty. They provide an effective learning environment for creativity to their students. These results found consistent with Esquivel (1995); De Souza (2000); Davies et al. (2013); Hondzel and Catharine (2013); Ariffin and Baki (2014); Alfuhaigi (2015) ;Al-Dababneh, Al-Zboon, and Ahmad (2017); Fitriah (2017); and Diebel (2018). They motivate their students to create an end product of creativity. These results were also found consistent with Doppelt (2009); Long (2014); Sarkar and Chakrabarti (2011); and Lille and Romero (2017).

The current study results also showed the beliefs of faculty members of the Education Department regarding creative teaching practices. The findings of our research study were consistent with Lucas (2001); Rudowicz and Yue (2000) who also identified that teachers have adequate knowledge about creative practices and are aware of at best creative practices entails.

The current study results also showed that creative teaching practices have a significant effect on the academic achievement of the university students. These results found consistent with: Hamdallah et al. (2014); Soleymanpour (2014); Sugiyanto, Pribadi, & Supriyanto (2017); Narayanan (2017) except for Naderi et al. (2009); Arya et al. (2017) who finds that creative teaching practices have no significant effect on the academic achievement of students.

CONCLUSIONS

Following conclusions were made on the basis of the findings and analysis of the study:

i. It was concluded that the faculty members often use creative teaching practices in the classroom as their perceived responses were at the 4th option i.e. Often.

ii. It was concluded that the majority of faculty members use different teaching methods like discussion, role play, and demonstration as their creative teaching practices. Some of the faculty members assign different tasks/projects or assignments to students and also ask open-ended and challenging questions. Whereas, a few of them gave regular and constructive feedback and arrange Co-

curricular activities and events for the students to develop their creative abilities.

iii. Creative teaching practices had a significant effect on academic achievement of students. It can be concluded that faculty members provide opportunities to their students for independent learning. They also nourish their creative abilities by providing them challenging tasks. Also, every teacher has its own teaching and learning styles coped with their own adjustable environments.

iv.

RECOMMENDATIONS

Following recommendations were made based on the findings and conclusions of the study:

i. It may be recommended that faculty members may be encouraged to use creative teaching practices in their daily teaching such as discussion, role play, hands-on activities, etc. Adequate teaching strategies such as asking open-ended questions, assigning challenging tasks/projects for students to motivate them to be creative in nature.

ii. It may be recommended that faculty members may be encouraged to participate in workshops which may be helpful for their professional development to make the teaching learning process more effective.

iii. It may be recommended that Education Department encourage faculty members to develop teaching practicum portfolios from their students in their teaching practicum which can be used to measure creative skills of students as well as reflects teachers' creativity as their end product.

iv. The literature suggested that creative teaching fosters academic achievement of students. So it may be recommended that teachers may use creative teaching practices in the classroom, which in result increase students academic achievement.

v. It may be suggested that creative curriculum should be implemented in universities and especially in public sector universities of Khyber Pakhtunkhwa. An excellent creative curriculum will generate excitement for both the faculty members and students to enjoy the process of teaching and learning.

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