



**A Proposed program based on use of the concepts
of innovation to promote sustainability at the
university students - Experimental study at the
King Faisal University**

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ABSTRACT

One of the major benefits of concepts of innovation is promote of the sustainability at the university students, this is achieved in the psychological practices, especially in assessing resilience of student in thinking skills; so the position of this study is that the concepts of innovation are very important among university students.

This study aims to identify the effect for using of concepts of innovation to promote sustainability at the university students; the study sample consists of 50 students from the third level for academic year 2014 – 2015, from the department of art education, faculty of Education, King Faisal University, Saudi Arabia.

To prepare the topics of the concept of innovation, the researchers adopted of largely on the person and the surroundings him. The generation of thoughts is one of the main issues for students, where brainstorming represents so important part, which is submit to strict analysis method before being implemented. To promote creativity areas as the tasks, studios experiments and lecture halls, where chances exist for the improving of innovation and keep it.



The results confirmed the existence of a significant difference between the two groups before and after the test. This confirms that the positive effect for students when using the concepts of innovation to promote sustainability at the university students.

In the light of the results, the researchers recommend developing the innovation abilities and responsible administrations should be providing of the innovation opportunities to development of innovation abilities among university students.

Key Words: Concepts of innovation, Sustainability, University students



INTRODUCTION

“Our biggest challenge in this new century is to take an idea that sound abstract sustainable development and turn it into reality for all the world’s people” (United Nations, 2001).

The Innovation Incubator utilizes a venture model of identifying or selecting new and inventive ideas and developing these ideas with the appropriate resources and research. The ongoing future of the continuing future of a nation depends greatly on the quality of the population of youngsters in the nation because of the fact that this group will be future commander who will play a crucial role in making the ability of the nation to sustain her development and economic progress. Youth, defined by the United Nations as individuals in the 15-24 age groups, constitutes approximately 18 per cent worldwide human population (World Youth Report, 2010).

It should be noted that any creative art that inclines towards abject trivialities, indecencies, depreciation of people's minds, deepening their ignorance, promoting moral perversion under the guise of creativity, will not find a place in our societies in the domain of acceptable creative arts.

A first conceptual widening of the framework of research concerns the relationship between innovation and renewable (or sustainable) growth. The Green Growth Approach Organization noted that expected production means of production and consumer policy only positive results up to a certain point, leading to a decline in



natural capital it has negative effects on overall progress. By pushing the frontier outward, innovation can make contributions to decoupling growth from natural capital depletion. Creativity and the related procedure for creative developing will as well leads to new thoughts and start action models, participating to the creation of new markets to contributing of recent occupations. Innovation is therefore a key in enabling renewable and growth to go together (Ajanlekoko, 2001).

Creativity is everywhere. From television to mobile phone design in your sine or advertising banners on the roads, People and institutions are always seeking to bring a new thoughts, and established new businesses to suitability for changing circumstances. This runs specifically true in the social sector, where the old adage "necessity is the mother of invention" drives NGOs, entrepreneurs, and others to try experiment with new solutions for local and international problems (Growth and Well-Being, 2015).

The definition of innovation is an individual's ability to creation for new something (Leuba, 1986). It is the capability that enable an individual to thought, the vision of follow-up, and assume a new / uncommon solution to the problems that we are facing. Innovation is the process of decrease an innovative thought of exercise, making method or ingredients or tools. It can be handle as controlled process of trying to develop a production to realize the required aims. (Torrance, 1976).

Creativity has been described (among various descriptions) as the use of imagination or original idea in



order to create or improve on something (Concise Oxford Dictionary, 2008) Creativity is not a privilege of a specific culture or civilization, rather it is a gift from the Creator, who decides who to be conferred with the power of creative thinking, power of imagination and ability to improve on an existing or idea in order to make it more captivating and beneficial to the people.

Innovation entails understanding or variety of activities as much as engaging with the changing meanings of the concept. This is obvious in numerous narratives and anecdotes through which performers and inventors have wanted to offer a consideration of what their creative efforts have involved and been driven by. In devoting a chapter to experience, we wish to emphasize these two issues: expression and communication.

Rather, we believe our experience of the world is shaped and given value by the act of creation, and that our knowledge of the world is realized through the process of communication. People do not - as designers, writers, musicians - include some pre-formed condition, which they then seek to express in an art and communicate to others. The contours and characteristics of experience are given form, meaning and value through the expression and communication (Keith. and Michael, 2014).

It is very important to note that one major issue to which many creative artists pay little or no agenda is the fact that the capacity of cognition, reflection and understanding with which they are endowed cannot be put into the right use without the divining guidance and



laid down regulation. Once high level of compliance has been obtained, a creative artist will use his God's given talent to add beauty to life, to provide an enabling environment for men who will use that in preparation for the next life.

The use of creative approach would certainly assist in passing the message to the intended audience, but that has to be within the stipulated rules and regulations otherwise such a method may not find acceptance in our communities.

IMPORTANC OF STUDY

1. Introducing the concepts of innovation among university students.
2. Researchers predict this study can enables an area for further studies to develop different strategies in the field of concepts innovation.
3. To recognize the importance of teaching student learns the value of concepts of innovation.

OBJECTIVES OF THE STUDY

1. To identify the effect for using of concepts of innovation to promote sustainability at the university students.
2. To develop means and methods to ensure the development of student's skills.
3. Development of a scientific program based on using of concepts of innovation containing complete information to assist of university students.
4. Thinking of many things around us that we could use as revelation to develop student abilities.



HYPOTHESES OF THE STUDY

1. There is a positive effect for students when using concepts of innovation to promote sustainability in university students.
2. The concepts of innovation could positively affect for innovation abilities at the university students.

METHODOLOGY OF THE STUDY

This study involves a total sample of 50 students of the third level, for academic year 2014 – 2015, from the department of art education, faculty of Education, King Faisal University, Saudi Arabia.

Firstly, the 50 students were asked to draw any a problem that requires a solution through a design. This test was marked out of 10 marks using of the below criteria. Then there was about two weeks to wash their ideas. After this period, the specific concepts of innovation program were taught which depends largely on the individual, and the innovation skills. Each student was then given the same task to undertake: draw another design based on idea. The task was marked out of 10 marks. Then the task was chosen as a valid measure of critical thinking. The total score for the test is 10 marks and the marks were distributed as follows:

1. Shrewdness- Two marks.
2. Equipment - Two marks.
3. Making ready - Two marks.
4. Lighting - Two marks.
5. Realization - Two marks.

A researchers from the same university was directly



involved in this project for marked the task work. The sample was divided for two main groups: experimental and control group. The purpose of conducting cross-validation was to determine the validity and reliability of the instruments employed. The collected data was analyzed by the program of statistical package for social sciences (SPSS) using the appropriate statistical treatments. (T- Test) for independent data was conducted to verify the significant differences between scores, before and after the test.

RESULTS

1. There is a significant difference between groups before and after the program, in addition is a significant difference between the experimental and control groups before and after the test. This confirms that the positive effect for students when using the concepts of innovation to promote sustainability at the university students.
2. There are significant differences between two groups before and after the test. This confirms that the concepts of innovation could positively affect for innovation abilities at the university students.

DISCUSSION OF RESULTS

Table 1
Grouping variable- Correlation Samples Test

	Variable	Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Experimental group before	.2700	50	.44309	.06266



	Variable	Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Experimental group before	.2700	50	.44309	.06266
	Control group after	.6900	50	.47121	.06664

Table 2:
Correlation Samples Test

	Variable	Correlation Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Period of the Difference				
					Lower	Upper			
Pair 1	Before	.45309	.45309	.07266	.24847	.61153	4.692	97	.000
	After	.48121	.48121	.07664	.24847	.61153	4.692	98.631	.000

This study was prepared out with the objective of assessing the importance of innovation concepts of to advance and sustainability at the university students. The result of the current study showed that the concepts of innovation significantly contributed to sustainability at the university students.

The tables (1, 2) explained that: there are significant differences between the two groups (experimental and control) before and after applying of the proposed program, out of the potential value, totaling (0.000). This value is less than the permissible error level (0.05%) after implementation the proposed program, through the arithmetic mean value, which is amounted to (.6900) this means that, is greater than the arithmetic mean value



before applying of the program, amounting to (.2700). As, accordingly P. (Value = 0.000) is less than (0.05%), this means that there are significant differences before and after the test, which confirms that applying the concepts of innovation has enhanced the sustainability at the university students. The results of the study are explained that the use of concepts of innovation has effectively improved the learning process.

Through analyzing the results, the researchers noted that before the applying of the proposed program, the university students were not able to apply thinking ability, and did not use innovation-thinking skills. Results have shown there is a significant difference between the two group's performance before and after the proposed program. Also this confirmed that using concepts of innovation has enhanced the sustainability at the university students.

The results of the current study has confirmed for construct validity for innovation in the students. Furthermore, both tools demonstrated evidence of internal consistency reliability.

This study produces results, which are consistent with the finding of other previous studies on innovation (World Youth Report, 2010), (Growth and Well-Being, 2015).

Based on the above submission of (Al-Fareqe 1989), in order to revamp education and form a new system requires rigorous intellectual competence. According to (Ahmad 2011), creative idea and critical thinking are integral components of the intellectual competence. Some



countries like Malaysia, Turkey, and Singapore etc. have been able to integrate creative ideas into teaching and learning. In 1980s, educational reform in USA had affected the level of students' creativity in Malaysia, which must be aggravated to Malaysia's vision 2020 as being a progressive nation through holistic development (Hashim and Hussien, 2003).

Through discussion of the results we have to ask some questions such as: How do we promote sustainability? What is our greatest challenge in this new century? How to selecting new and inventive ideas and developing these ideas? Who are they who will play a crucial role in making the ability of the nation to sustain her development and economic progress? How do we achieve our aims? What infrastructure do we need to achieve it? Through solidarity jointly the leadership approach with the design operation, CCL Organization has specified six thinking skills for innovation that we need. Through creativity, society can find solution to sustainability at university student problems. It is also part of the benefit of creativity that nature has been conquered to a reasonable extent. The resources that are available in abundance become ready materials in the hands of creative arts, which use them to advance the wheel of the civilization.

Finally, Innovative thinking skills process it involves six distinct steps, which is the proposed program for this study:

1. **Surveying things**: the earliest impressions and



hypothesizes are not the full image, so do not lead to careful hypothesis or correct solution. Surveying things is the ability to observe what is not disclosed. It's the deepening into the things, look closely from a new perspective.

2. **Serious work**: Good study, planning, experimentation, rapid prototyping, confirmed results are serious work.
3. **Photography**: Photos is a tool that helps you for treating of your information. Photos are a very good style to take out the details of things, and it look alike reasonable. Photos are strong tools for saving of events, build of thoughts, and recovery of positions.
4. **Outline**: Which demands us for divides the problems into separation parts; recognize truth, and current hypothesis - formulation for authorship, integral, and prospect. Out of the so called mental thinking, we can build conjectural relation between seemingly irrelevant Information and start forming the system from chaos.
5. **Collaboration**: Collaboration is a process of exchange of ideas with specialists
6. **Specification**: : At work, adding style to showcases your interests, interests, or ideas and can be applied on the work, and deepening into ideas, style, or speculating about things in your life may add to the work (David Horth, 2014).

CONCLUSION



This study has implications for educational and psychological practices, especially in assessing resilience of student in thinking skills, is therefore this study, useful in conducting diagnostic assessment of resilience and innovation among university students at king Faisal University - Saudi Arabia. The findings of this study forward evidence that innovation can promote sustainability at the university students by innovation. The results have been put forward that creativity has a significant role to play at the university students. If truly sustainable development should be achieved the article has integrally argued that creativity must be combined into the teaching of students in order to realize the sustainability at the university students.

Through creativity, society can find solution to teal thing problems that could have been in surmountable; for example, it is through innovation and creativity that various means of transportation such as aero plane, ship and vehicle have been invented, thereby making movement and travelling to any distant destination, easier and less hazardous.

It is also part of the benefit of creativity that nature has been conquered to a reasonable extent. The resources that are available in abundance become ready materials in the hands of creative arts, which use them to advance the wheel of the civilization.

According to the results, researchers recommend at future researches should examine whether the present results generalize to other samples and settings,



comprehensive strategic plan focusing on the development of innovation abilities among university students, developing the innovation abilities and to responsible administrations should be providing of the innovation opportunities to development of innovation abilities among university students.

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