

**SULAYMAN DARBOE**

CREATIVITY AND INNOVATION

**ATLANTIC INTERNATIONAL UNIVERSITY**

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**Introduction**

Innovation and creativity are core fundamental to all academic disciplines and educational setting not just the arts. The creative process is a critical component of making a sense of learning experience. Many approaches to teaching and learning that help to nurture creativity and innovation.

Innovation can be broadly thought as the new ideas, new way of approaching things, new methods or products that have value in educational system. Innovation contains the idea of output of producing or doing something different or making something happen or implementing something new. Innovation involve hard work, persistence and perseverance which are necessary as many good ideas never get followed through and developed.

Creativity is an active process that involved in innovation. It is a learning process that requires skills as well as understanding the contexts in which creativity is being applied. The creative process is at the heart of innovation and often the word used together.

Creative thinking is defined as the thinking ability that enable students to apply their imagination into existence in generating ideas, questions and hypotheses, experimenting with alternatives and evaluating their own and their peers final products, ideas and processes.

**Literature Review**

In the concept of creativity different psychologist has put their thoughts in developing creativity and innovation in educational system. This help to develop sense of creating, evaluating, analysing, applying, understanding and remembering. This concept could be seeing in high order thinking skills and lower order thinking skills. This area is where cultural sensitivity is more likely to be important. If students are not uses to being asked to demonstrate create habits and skills they need to be guided to it. How creative activity is linked to



broader learning objectives needs to be clearly stated and understood by teachers and students.

**Creativity, innovation and learning**

Learning involves lots of challenging, refining, improving and understanding by being made to think hard. Sometimes to understand new concepts in broader perspectives, our approaches to thinking need to be creative, imaginative and

lateral in incorporating new ways of looking at things as well as linear in using existing patterns of thought in the learning process.

One characteristic of creative process to be powerful is that it requires not only knowledge and understanding of the learning domain being investigated but also to have the willingness to question an asked questions and not be constrained by the existing knowledge. Learners should understand how they can question or challenge established knowledge to help them to formulate their own understanding and imagination which can play an important role. One cannot think creatively unless one has the knowledge with which to think of creatively. Creativity represents a balance between knowledge and freeing oneself of that knowledge.

For creative thinking has to expand learning rather than be an enjoyable. It must be grounded in understanding of the content being investigated. It is important that learners have sufficient understanding of the materials with which they are being asked to be creative with. Creative practice needs to be complement diligently and deliberate practice that develops foundational skills not be a substitute for it.

**Four problematic prescriptions for creativity**

There are four prescriptions that fostered creativity to a serious ethical issues, these four prescriptions includes

1, breaking the rules or avoiding standard approaches to problems.

2, challenging authority and avoiding traditions

3, creating conflict, competition and stress

4, taking risks

Most people assume that employees will understand that these four categories of behaviour should not go alone with unethical or illegal behaviour. These isn’t like advocating to do anything that is illegal, immoral or unethical. These is clearly highlighting that most of the rules we follow aren’t however, written down in a book or manual legal status books. It also implies that people should concern themselves with adhering or codified rules and standards rather than



higher order, unwritten ethical principles or virtue such as respect, integrity , trust or honesty. With this we can suggest that managers seeking creativity and innovation should build trust, maintain accountability and establish integrity with stakeholders in and outside the firm. However, these ethical practices seem to conflict with other prescriptions for developing creativity.

In the rule breaking and other three categories in recommendation for increasing creativity do not explore the ethical dilemmas and issues with which

managers and the employees must battle to engage in creative and ethical endeavours. Managers or principles striving to implement recommendations for improving creativity or the employees attempting to work shows that there are highly creative firms consciously hire employees who are slow learners of the institution code or set of rules. These employees resist learning and following the rules of the firm. These slow learners offer new perspectives initiate different solutions to problems and raise questions about why these institution operates at these way.

**Braking rules and standard operating procedures**

One most say how does breaking rules enhances creativity. In most institutions they develop rules, procedures and processes to provide consistency in and control over decisions and behaviours. Most people believes that employees become bogged down as they attempt to generate new ideas and get worm down by unnecessary steps and managerial approvals required to experiment with new ideas. In a rigid bureaucratic structure and rigid norms can inhibit creativity to the point where creative employees adhere to the motto of Better to ask forgiveness than permission. Employees often become discouraged as they try to acquire resources to support their creative activities. In some innovation institutions have a successful streamlined processes, but some institutions underestimate the negative impact that extent rules and procedures have on creativity. Evidence has suggested that institutions allowing or enabling employees to break the rules may be more creative. Others suggested that and highly innovative person break from accepted practices to developed a new solutions for more conventional problem.anger and bring about new ways of thinking and behaving, thus enhancing creativity and institution performance. That may be true but these is a dark side rules breaking can also expose and institution to the consequences of unethical behaviour.

**Challenge authority and avoid tradition**

And institution structure’s design relies primarily on corporate culture, that is the system of shared values, norms and beliefs rather than on formal rules and regulations. Employees at all levels may work in terms or across functional areas, often communicate through informal channels and are empowered to



make key and effective decisions. These design characteristics foster open exchange of ideas, fresh perspectives and innovation, prompting the observation that organic corporate cultures that tends to be more intellectually fertile than alternative forms. In other institution they adopted a traditional hierarchy with a relatively strict chain of command in which the managers at the high position make decisions and rely on formal communication channels and reporting relationships. The workers in such an institution may struggle to

innovate new ideas to for it to be developed, presented and approved. Most institution operate in somewhere between the two structures and so doing employees who wish to innovate must deal with certain amount of hierarchy, reliance on formal authority and traditional management techniques. Creativity researchers addresses that the reality of organisational constrains by recommending that innovation seekers need to challenge authority and avoid traditions. The employees can challenge authority by asking provocative questions and repeatedly asking why to push others thinking.

**Ethical issues associated with challenging authority and avoiding tradition**

Institutions that encourage employees to challenge authority must take up the duality of employees questioning authority and avoiding traditions by crafting structural mechanisms that embrace ethical decision-making and behaviour. In addition, managers need to know how to respond to employees challenges with ethical sensitivity especially if they view the bases for the challenges as illegitimate. The other issue is to ethically challenge authority should treat others with respect while raising questions and avoid attacks and remain open-minded to new information and alternative viewpoints. These behaviour reflect moral virtue that help to create an ethical community.

**Create conflict, competition and stress**

How creating conflict, competition and stress can help in creativity. These is seen in employees actions. Employees often conform to group pressure expressly to get along with one another and maintain the status. Cohesion is a social construct that becomes manifested when individual subordinate self-interest for the good of the group. Indeed most if the employees would want to belong to the cohesive group which mean the used of force to achieve something. However, serious institutional problems may arise if the employees value group membership so to the highly that they place higher priority on the absence of cognitive conflict than on critical thinking, sound decision making or searching for more effective ways of operating.

**Ethical issues connected with creating conflict, competition and stress**

many researchers and managers would support initiative that encourage employees to fully consider alternative perspectives and avoid



complacency.however, apathy may not fully explain the absence of creativity and designed to shock employees into creative behaviour may have a dark side. The central ethical questions that arise within address the means used to foster creativity and ask to what extent if any managers should create conflict, competition and stress.

**Take risks and risk failure**

Risks is the variability in outcome. Many institution actors are risks averse, indeed, it often articulate an aversion to failure. We wish to distinguish between the perspectives of risk and knowledge based perspectives of risk as we explore this ethic.

**Ethical issues associated with taking risks and risking failure**

The concept of encouraging employees to take risks and try out new ideas has merit but contain some inherent ethical issues. Employees will face questions about the nature and scope of risk they should take as well as questions regarding the ethical consequences and implications of those risk for all of the institutional stakeholders. We offer two examples that demonstrate the nature and the scope of taking risk which is providing employees the willingness to undertake major investment risks. Another classical examples is the reinforce scope of risk problems is taking risks without the fear of failure.

**Implications for theory and practice**

We believe that the argument presented in this project have important implications for research on creativity and ethic. Research in creativity has not investigated the impact that efforts to increase creativity may have on ethical behaviour. One of the goal involves identifying the key ethical issues related to the four creative approaches of behaviour used to embrace creativity. The second goal encourages in generating interest in research aimed at investigating these issues. The next step involves studying relationship among ethics and creativity to learn more about how they interact. Ethics researchers should consider the relationships between creativity and ethics since many of the practices are intended to develop ethical behaviour which prove useful in generating creativity.

**Collaborative creativity and innovation in education**

As many institution are becoming more increasingly dependent on collaborative teamwork there has been major shifting in focus from individuals to team based innovation. The value is increasing increasing in promoting



team level of creative competence in students. In this context of creativity and innovation we will discuss more on the theoretical basis for collaborative creativity and its application in the context of educational system. We will also look at the different procedures for generating ideas in groups, the process of selecting the best ideas.

**Idea generation**

Brainstorming is a widely and potentially useful method for generating creative ideas. Since brainstorming is simple to use and is the most approach to collaborative creativity. We can examine it in details. Most of the ideas in brainstorming shows a great performance at the group level compare to individual level brainstorming. These shows that groups generate more ideas that the individuals working.

**How to generate more and better ideas**

The level of performance in collaborative exchange is often evaluated in conjunction with the modality of brainstorming used. Although the traditional method of collaborative exchange in groups is verbal brainstorming, several methods have been developed. We now look into the various ways of brainstorming to optimal performance and the key issues associated with each one.

**Verbal brainstorming**

Many institutions uses verbal or face to face brainstorming to solve problems or share ideas with their students. During these session the students are group together and no discussion or criticism took place. The student are group together and allowed the to come up with ideas using four rules like do not criticize, quantity is wanted, combine and improve suggested ideas and express all ideas that come to your mind no matter how wide its. Most teachers use this method expecting that the cognitive stimulated from hearing others ideas will trigger new ideas and that piggybacking ideas for another person. Then a larger pool of ideas can be generated by increasing group ideas size. However, others believe that the expectation studies of verbal brainstorming group produce loss relative to nominal groups as group size increase.

**Electronic brainstorming**

The used of electronic brainstorming the participant interact by using computers rather than speaking their ideas or writing them on a paper. The student types their ideas on a special computer software, an example is the group support system that collect the ideas and share them with the group. In team of process gain such groups have shown increased creativity over time



and increased stimulation due ti the production of large ideas make several studies to found the performance of electronic rises when the group size reaches up to 9 or more. However, with this group size the average increase in productivity only ranged from 1-2.5 ideas per person. One reason for this limited benefit could be that electronic brainstormer pay more attention to

non-risk related communications and thus generate many irrelevant ideas. Additional instruction is relevant to pay attention to the risk and build on members ideas after participants have generate a important numbers ideas which may be helpful in the electronic brainstorming paradigm.

**Recommendation for brainstorming**

we can focused our review thus far on the brainstorming literature as this is the most extensive work on collaborative creativity and it has a strong theoretical base. However, let look in to the summary of the basic practicals that would be relevant in the application of brainstorming in an educational system for student groups and administrators.

1. The method of sharing ideas has a strong impact on groups creative output. Sharing ideas by sharing ideas in writing or electronically increase the quantity of ideas and the extent to which all group members can contribute.
2. Verbal brainstorming is probably the most popular method brainstorming in real-world settings and participants tend to enjoy it more than the other versions of brainstorming such as electronic brainstorming. However, unless the participants also write down their ideas or record these for transcription many share ideas may be lost.
3. Short training session incorporating aspects of accountability enhanced application of diverse ideas and detailed feedback can increase the effectiveness of the group brainstorming..

**Ideas selection**

Went it come creativity and innovation must of creativity researches has focused more on the idea generating phase of innovation and innovation is incomplete unless suitable ideas designated for implementation. The selection of ideas is a critical part of innovation but this area has received relatively little research attention. In practice, there is often a strong tendency for people to underestimate the originality of truly novel ideas and instead to default to selecting feasible or practical ideas over a creative ones.

**How to select the best ideas**

1. ***Facilitation***



Facilitation at the first stage of idea selection can be helpful in the selection of the most important and best answers. The participants tendency to rely on feasibility as a selection criterion could be minimized by giving specific creatively instructions during the idea selection process. In most case

participant found it difficult to take the originality and feasibility into account because they perceived the two to be incompatible. Hence providing specific

instruction geared towards focusing on a specific criterion of creativity may be beneficial. Alternatively, a process in which the participants first select the creative ideas and then refine them to make them better might also improve the overall quality of ideas.

1. ***Refinement of selected ideas***

The studies shown in creativity have examined the idea of refinement. This involves the strong attentional demands and controlled processing as brainstormer go through deeper processing and evaluation of their ideas to make more suitable for meeting requirements. Since its difficult for a group best ideas survive from the idea generation into final implementation stage, allowing a separate stage of refinement will help the brainstormer to create solutions to the problem.

**Diversity and collaborative creativity**

In diversity of and collaborative creativity has a major benefit of a group interaction in problem solving solutions is a exposure to the different perspective on a given problem. Groups that have members with different experience and expertise relevant to a problem should be able to think of more creative and useful ideas in part because of their diverse knowledge and mutual stimulation of ideas. Although a groups should benefit from intellectual diversity, thus has been mixed in term of the support expressed for this expectation.

**The summary of studies in education setting**

In summary on collaborative creativity in general and on creativity in education, it could be considerable on a group creativity exist and some on creative in education settings. On collaborative creativity in educational settings is very limited. In the educational environment it has lacked strong focus on creativity. It concern with maintaining order in schools and meeting various achievement goals also restrict the attention on creativity. Creativity and critical thinking are difficult to teach and few have the ability or confidence o teach, encourage, or facilitate collaborative creativity.



**Conclusion**

In creativity and innovation there are many significant point and its role and benefit it has on students. In some discipline there are efforts put in place to employee creative methods of teaching in education setting but there are very few reports stipulated in the systematic attempts to enhance students creativity.

In educational setting it focused on obtaining knowledge in specific area but without attending much to using this knowledge for creative exploration. There is also a great need for creativity to solve problems and develop innovation. This increasingly require effective collaborative with others and diverse groups. There are some benefits of creativity programs which support in providing a broader contexts. However, its important for teamwork skills to be encourage and for it to work effectively group setting has to be out in place. With creativity and innovation students will have the ability to critically think in life most especially during their exams periods.

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