



Role Of Ambient Environment In Implementation Of Creativity And Innovations In Academic Libraries

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Abstract: Applications of creativity and innovative ideas have been taking place in the academic libraries for many years. But, over a period of years, technological changes have influenced the library users at a much faster rate than the academic libraries. This is causing a gap between the libraries and their users. To cope up with this, academic libraries need to strategically tackle the situation. The present study focusses on the role of ambient environment in the implementation of creativity and innovations in academic libraries.

Index Terms - Creativity, innovation, academic libraries, environment, ambience

I. INTRODUCTION

Libraries have been influenced by technologies for a long time. The entry of computers in the libraries in the early nineties paved the way for many revolutionary changes or modifications in the library functioning as well as the library services provided. A decade later, mobile technologies and internet technologies changed the world of communication. This had an effect on the libraries as well. The influence of these technologies saw a paradigm shift in the library activities. COVID-19 lockdown sped up the changes further ahead. The lockdown shifted the focus from print to online digital resources, because there was no access available to the print resources. Librarians had to adapt to these rapid and unexpected changes in a very short period of time. They used their creativity to modify the existing library services so that they could provide the required information resources to the library users. This was a crucial turning point for the libraries to stay connected with their users.

Librarians have been using creativity and innovative ideas well before the COVID-19 lockdown and also before the entry of different technologies in the libraries. As times change, modifications and adaptations are necessary for the continuation of any service, to keep up with the changing expectations of the patrons. Although expression of creativity is considered to be a very personal trait, it needs support from the surrounding work environment. In other words, if we want to see a rainbow, we need rain and sunshine at the same time. If either of them is missing, we cannot expect a rainbow to be formed. The position of the person is equally important for sighting a rainbow. A person standing in the wrong position will be unable to see the rainbow even if there is rain and sunshine at the same time. Like wise, expression of creativity requires a conducive ambience, or a positive working atmosphere. The right kind of environment supports and encourages the right kind of ideation at the right time. Hence, it can be said that expression of creativity and innovations is dependent on a combination of intrinsic and extrinsic factors.

II. CREATIVITY AND INNOVATION – THE BASICS

The terms ‘creative’ and ‘creativity’ may appear to be more inclined towards the fields of fine arts, painting, photography, etc., both the terms can be used in all the fields irrespective of the actual work done or the profession. It is necessary to know and understand the meaning of both these terms. According to

Cambridge Advanced Learner's Dictionary, creative means - "...producing or using original or unusual ideas" (Woodford et al., 2003). According to Longman Dictionary of Contemporary English, creativity means - "...the ability to use your imagination to produce new ideas, make things, etc." (Mayor, 2009).

Similarly, the meaning of the term 'innovation' also needs to be looked into. according to Oxford Advanced Learner's Dictionary of Current English, innovation means - "... a new idea, way of doing something, etc. that has been introduced or discovered" (Weiss, 2001)(Wehmeier, 2005).

The terms 'creativity' and 'innovation' have been used together or alternately, because superficially the understanding of the terms is almost similar. Amabile (1996) has defined entrepreneurial creativity that focusses on the use of novel ideas to start a new business, or to develop a new product, or to start a new service. This concept can actually encompass even small initiatives taken within an industry, or by modification of an existing service or by altering a particular system being implemented in an organization (Amabile, 1996). The current study of creativity in academic libraries has indicated that this spark of an entrepreneur is of great significance in academic librarians.

As per approach of J.P. Guilford, creativity involves convergent thinking and divergent thinking, The former is based on finding solutions considering the existing ideas and options, whereas the latter is based on finding solutions by ideating upon different, varied, unexpected options. Accordingly, divergent thinking has been said to play an important role in the generation of novel ideas and expression of creativity (Ewy, 2018a).

On the other hand, de Bono's approach to creativity is based on the concept of 'lateral thinking'. His research on the topic of creativity and influence of lateral thinking in 1967, led to the addition of the term 'lateral thinking' in the Concise Oxford Dictionary. The entry reads "- seeking to solve problems by unorthodox or apparently illogical methods". De Bono clarifies that 'lateral thinking' should not be considered as an alternate term for 'divergent thinking', instead 'divergent thinking' should be considered as one aspect of 'lateral thinking' (De Bono, 1996).

III. CREATIVITY AND INNOVATION – THE PROCESS

The expression and implementation of creativity in an organization depends on a number of factors. It is now clear from the studies conducted by J.P. Guilford and Edward de Bono that the expression of creativity in an individual depends on the way of thinking. It can be convergent thinking, divergent thinking or lateral thinking. The way of thinking can be considered as one of the in-built traits of an individual. And each individual has a different level of thinking. The outlook of an individual towards any particular situation decides the direction of his / her thought process.

The idea that comes up to find a solution to any problem would differ from person to person. This ideation is said to lead towards an innovative concept or a solution. In other words, creative ideation is the first step which later involves more steps that lead to an innovation. Hulme, et al (2014) have aptly described these steps that together describes the cohesive framework necessary for the process of innovation. In fact, these steps have to begin before the process of ideation. The following Fig. 1 illustrates the steps through which the process of creativity leads to an innovation.

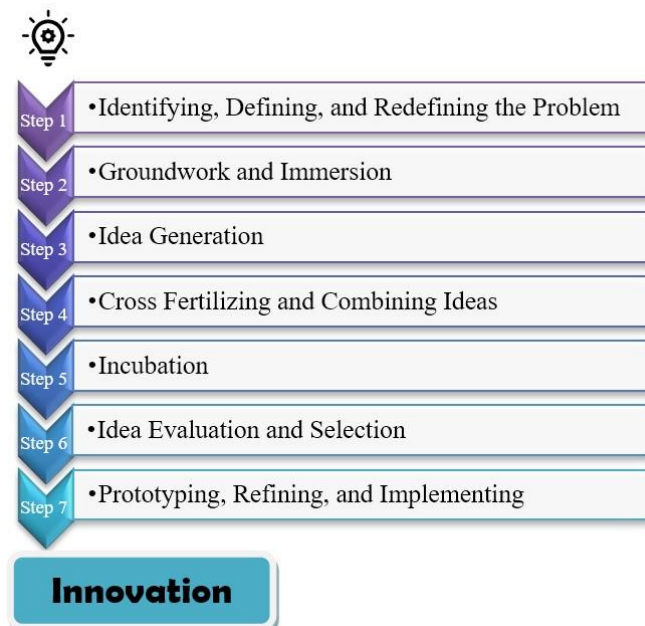


Figure 1: Steps in the process of Innovation (Hulme et al., 2014)

These steps are very important when any creative idea is to be converted into an innovation and implemented in an academic library. Since, libraries are service oriented organizations, it becomes very essential to look at the user satisfaction and fulfillment of the user expectations when planning anything new.

IV. MODELS OF CREATIVITY AND INNOVATION

Studies conducted by many experts in the fields of creativity and innovation have led to designing of or proposing of different models to explain the concepts and working of creativity and innovation. These models help us to understand the various factors that have a direct and indirect influence on the expression of creativity and innovation.

Rhodes (1961) conducted extensive studies on creativity and innovation, that included finding 40 definitions for creativity and 16 definitions for imagination. He shortlisted four basic overlapping pointers among them and designed the 4Ps model of Creativity. The four Ps stand for Person, Process, Press, and Products (Rhodes, 1961). It can be illustrated through the following Fig. 2:

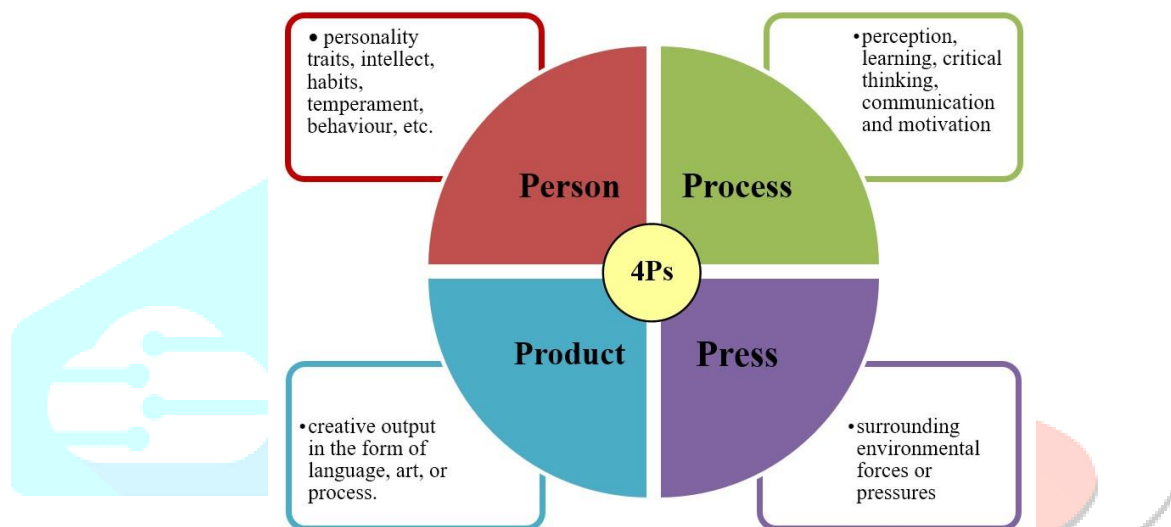


Figure 2: Rhode's 4Ps of Creativity

The third P, i.e. 'Press' stands for external factors like surrounding environmental forces or pressures. This model shows that although the intrinsic factors like individual personality traits, intelligence, temperament, behavioural traits are very important and decisive, the extrinsic factors like the surrounding ambience within the workplace and the organization, in general, is also equally important.

Udwadia (1990) has identified technological innovation as one of the most important factors that is affecting organizations in all sectors. According to him, creativity is the most important and critical element in the process of innovation. After studying this element, Udwadia has proposed a 'Multiple Perspective Model' that has three perspectives – the individual perspective, the technical perspective, and the organizational perspective. Udwadia states that the third perspective i.e. the organizational perspective, should be in focus when creative ideas have to be converted into innovations that are to be implemented. He emphasizes on the managerial practices followed in the organization as well as the organizational culture, that would be playing an important role in influencing the expression of creativity among the workforce (Udwadia, 1990). The interactions in the three perspectives of this model can be illustrated in the following Fig. 3:

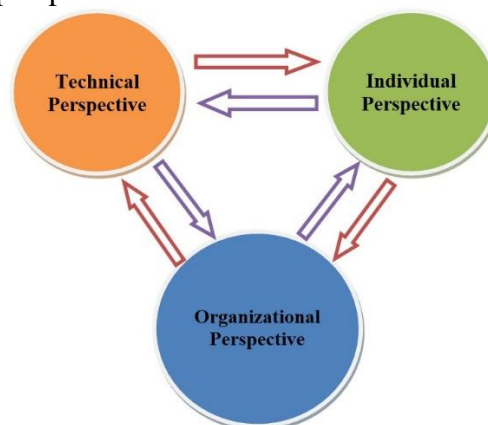


Figure 3: Udwadia's Perspective Model of Creativity (Udwadia, 1990)

V. CREATIVITY AND INNOVATIONS IN ORGANIZATIONS (INCLUDING LIBRARIES)

Creativity and innovation have been a saviour for many organizations. The organizational working is very complex in nature and prone to ups and downs. These ups and downs can be intrinsic or extrinsic in nature. This is applicable to the libraries as well. Libraries are also prone to facing similar challenging situations. Situations may arise due to changing user behaviour, changes in technologies, human resource issues, availability of reading resources, etc. Solutions may not be easily available, or even if they are available, they may not be accepted by the authorities. Finding a solution to such challenges sometimes requires a different approach instead of taking the regular expected approach. Going the unexpected way, requires a novel approach. And considering a novel approach, requires creative thinking.

Cochrane (2017) in his book 'Your Creative Mind' has delved into the intricacies of how creativity can affect an organisation and also how the right approaches help to tide over any catastrophic situations. Various situations and the ways to tackle them have been explained with the help of real-life examples. The author has put in some dark realities of stagnant and stereotypical thinking in the workplace, which can become very serious and disastrous for the organization in the long run. It can ultimately lead to the 'death' of an organization. A lot of factors have been discussed on how creative thinking can be induced, how creativity can be expressed, how it can flourish, how it can be fostered and how it can help in the growth of an organization. A very important message given out in this book is to forecast the situations that may be arising in the near future and a few years down the line, and then to focus on overcoming the problematic situations in innovative ways. This thought process is very important for the survival of academic libraries in the current era of dynamically changing technologies and easy accessibility to information resources (Cochrane, 2017).

Cochrane has further explained the interplay of intrinsic and extrinsic factors in the expression of creativity and innovation. He has referred to an explanation given by Prof. Baba Shiv in Stanford Business (a magazine of the Stanford Graduate School of Business, Stanford University), which highlights the role of neurotransmitters in influencing the individuals' thoughts and emotions. The analysis mentions the role of serotonin and dopamine in keeping the person calm and energized, which in turn is useful for optimising creativity. The function of Serotonin is to regulate the mood, hence more the better. Low levels of Serotonin are linked with depression. The function of Dopamine is to regulate the pleasure and rewards system of the brain, again suggestive of higher the better. Low levels of Dopamine are linked to Parkinson's disease and addictions. Hence, if both these neurotransmitters are in healthy amounts, it helps an individual to be enthusiastic, excited, hopeful, and optimistic. These keep the mind fresh and open to novel thoughts and creativity (Cochrane, 2017). The significance of a positive ambience and surrounding comes into the picture. If the ambience is conducive to a creative thought process, it will help creative ideation. Otherwise, creativity and innovation in a negative atmosphere should not be expected at all.

All the psychological and medical research on creativity have been found to focus the attention on two aspects – the individual and the influence of surrounding ambience on the individual. A balanced shift in focus is required between an individualistic approach and an organizational approach, as the current study focusses on use of creativity and innovations in academic libraries. It does not mean in any way that creativity among individuals should not be focussed. Ultimately, the ideation is going to be a productive output of the human brain. Hence, role of the individual and the organization are equally significant. When creativity and innovation are to be applied to a process or a product or a service in any organization, there are a lot of factors to be considered. This is not as simple as it appears to be. It is a very systematic process right from its initiation to its final culmination. The process begins with a creative idea which is practically possible to be implemented. There can be numerous creative ideas for bringing out an innovation, but all ideas may not be doable. So, shortlisting the best possible and practical ideas becomes mandatory. Major challenges for innovation in an organization are –

- i) A creative idea must first be conceptualised by an individual or a group,
- ii) The value of the innovation must be accepted by the organization, and
- iii) The innovation must be implemented. (Ewy, 2018b)

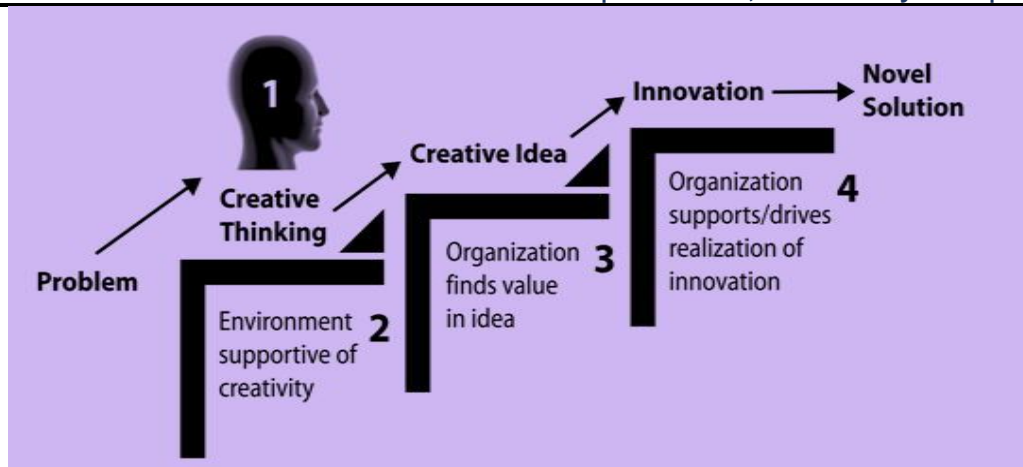


Figure 4: The problem-solving process of an innovative organization (M. E. Ewy, 2018b)

The explanation reveals that creativity and innovation can be used as an important part of a problem-solving process, where the solution is expected to be a novel one. It initiates with creative ideation and culminates with an innovative solution. However, any organization wanting to implement such ideas should have a conducive environment from beginning to the end. The Fig. 4 is very useful in explaining this viewpoint. The Fig. 4 also puts forth an important role played by the organizational culture in supporting the generation of new and creative ideas among its employees and also the process of implementation till the realization of the innovation.

Amabile (1996) has studied the concept of entrepreneurial creativity and its importance in an organization. She has also focused on the characteristics features of a creative individual and how the organizational ambience influences expression of creativity. The intrinsic factors required in an individual to express creativity are:

- a) Creativity skills
- b) Expertise, and
- c) Task motivation

The factors that influence the expression of creativity in the workforce are:

- a) Organizational motivation
- b) Resources, and
- c) Management practices.

The organizational factors play an important role in whether the work environment can be kept positive for individual creativity to flourish in individuals. In a study, Serrat (2017) has highlighted many important issues of how an organization can create a conducive environment for fostering creativity. If an organization is not open to new ideas, it suppresses creativity and innovations. This further leads to stagnation and under-performance in the organization. Such organizations cannot adapt to the changing circumstances and lose out in the competitive world (Serrat, 2017).

There is a Hindi word for innovation – ‘Jugaad’! Shri Ratan N. Tata, Former Chairman, Tata Group, in the Foreword of the Book – ‘Jugaad: Innovation’ (written by Radjou and others), has said – “*Jugaad is a Hindi word which does not have an exact English translation, partly because it is derived from the common Indian experience of innovating frugal, homespun, and simple solutions to the myriad problems that beset everyday life in India*”. This elucidation of the idea of ‘Jugaad’ gives a very holistic and a real-world view of innovation in the Indian context. Indians are said to find innovative solutions to problems or challenges in their workplace with the least available resources, and in the least possible time. The innovative solutions have also been found to be very unusual, but simple, at the same time very beneficial to their organizations. Survival and severe competition may be giving the right stimulation at the right time for such creative thinking. Radjou et al. (2016), have taken a practical approach in dealing with innovation in an organization (Radjou et al., 2016).

Workplace ambience should always be a matter of concern for any organization. A positive and supportive workplace gives out positive vibes for creative and efficient workflows. Negative vibes are said to bring down the interest of employees in their respective work in organizations. In a recent study of academic librarians, 66.1% responding librarians have given their opinion that facing multiple challenges at the workplace causes demotivation, leads to frustration and loss of focus on the implementation of ideas. This indicates that the ambience of the work environment influences creative ideation and successful implementation of innovative ideas. Creative ideation always requires a positive and a supportive atmosphere, and it is difficult to have any creative thoughts in its absence.

Examples from India and abroad signify the power of creativity and innovation. It is not 'what you have' that triggers creative ideation, but 'what you do not have' that motivates to travel the new path, finding novel solutions to challenges, struggles, and problems. Such situations can arise in any organization, be it a manufacturing company, a government organization, an educational institution or a library. Autonomous organizations and educational institutions are better placed to experiment with creativity and innovations due to the flexibility available to them. Autonomous educational institutions can innovate on their academic programmes looking at the market-industry demands. Libraries, on the other hand, be it public libraries or academic libraries, have to focus on innovative services to tide over the dwindling usage crisis and also look at survival in the long run.

Governing bodies like the University Grants Commission (UGC), Central Government, State Government, and accrediting bodies like NAAC (National Assessment and Accreditation Council) are having a lot of expectations from college and university libraries. These expectations are directed towards providing library services through innovative ways, and towards fulfilment of the library users' expectations. This requires full support from higher authorities, Library Advisory Committee, Teaching faculty members, library support staff, and all the governing bodies as well. Until and unless a conducive environment is available in the libraries, the process of creative ideation to the successful implementation of innovations cannot be successful. The new generation library users are more techno-savvy and are very much comfortable with their smartphones to support their information seeking needs. Technology based innovations in library services have become 'the need of the hour' to keep in touch with the new generation users. And these innovations come at a price, which are almost out of reach of many academic institutions in India. So, if expectations are to be fulfilled, the financial and infrastructural support gains a lot of significance. Thus, fulfilment of these requirements will lay a proper foundation for supporting creative ideation and establishing innovative library services in academic institutions. Creating a proper positive environment in academic institutions and their libraries should be an integral responsibility of the governing bodies as well as the internal workforce. This will help to bridge the gap between creative ideation and implementation of innovations, as well as gap between user expectations and fulfillments.

For some organizations, it can be 'innovate to stay in the competition', but for others it can be 'innovate to survive'! A very stern statement given by Iger and Lovell (2019) is "Innovate or die!" There point of concern is that if an organization does not focus on change or innovation out of fear of bringing in something new, then such organizations are bound to invite their own death (Iger & Lovell, 2019).

VI. SUMMARY AND CONCLUSION

Studies by experts in the field of creativity and innovations as well as academic libraries have revealed many important things. One of the most important ones is that, the expression of creative ideation depends on intrinsic factors as well as extrinsic factors. Intrinsic factors focus on the traits of the individuals whereas extrinsic factors focus on the organizational culture and working environment in that organization. The significance of these factors has been established through the different models developed by experts like Rhodes and Udawadia. These are applicable to all organizations including academic institutions, of which libraries form an integral part.

It is expected that the 21st century will show an increase in the quantum of challenges at the individual level as well as the organizational level. Every individual will have to be well equipped to face and overcome the challenges. Accordingly, it has been found that creativity and innovation are the two important skills necessary for sustainment (Nakano & Wechsler, 2018). These skills help in utilizing the positive human potential to its best in the interest of all. These skill sets are very much necessary in the library field as well. Librarians and library professionals should be harnessing these skills to overcome the challenges. These skills can be applied to modify an existing library service so that its usage increases. It can also be applied to start new library services as per demand of the users or by forecasting the changing user behaviours. Since the library usage has seen a drastic change in numbers as well as patterns in the last few decades, it is necessary to look at these changes as a challenge. Traditional services or conventional services may no longer appeal to the user community due to changing requirements or the direct / indirect influence of technologies. And to bring about fulfilment of all these challenges, full fledged support from the organizations is essential. Ultimately, creativity and innovations are possible only if there is a cohesive blend of the intrinsic and extrinsic factors.

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