

Time to move from past to future by making present creative: A Scoping review

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Abstract

Creativity is one of the tools in the toolkit of modern day learners. Scientific progress cannot be accomplished without developing creative capacities of individuals. The Muslim countries, despite their historical achievement in different creative and innovative discoveries and positive encouragement by Islam towards creativity, have paradoxically gone down from their position. Creativity is one of the priorities of modern age due to its role in the progress of humanity and future. The education system is spoon-feeding our learners and killing creativity. The main aim of the current scoping review is to summarise and disseminate research findings pertaining to the evidence on the definition of the concept of creativity, its importance in education, role of teachers and learners in making creativity a part of their educational endeavours, and their implications. Moreover, it provides a broad and detailed outline of the topic and exploring more general questions rather than providing answer to limited questions. It will help to determine how important it is to foster creativity as educators.

Keywords: Creativity, Creativity and education, Creative learners, Higher educational, Innovation, Creativity and Islam, Iqbal's ideology of man, Creativity and Asian countries.

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Introduction

Creativity is one of the most important skills in the repertoire of millennial learners. Learning is not only gaining knowledge, but is also about generation of ideas, possibilities, innovation, problem-solving, complex situations, combining ideas and things in a novel way. There is a need to add creativity to education, especially at the higher education level. Creativity has generated ripples

in many fields, including medicine, technology, business, art, music and entrepreneurship, with increasing recognition day by day. This value is now extended to higher education.¹ The concept of creativity stretches back to Plato's age as well as in Greek, Christian and Muslim traditions, but the realisation of its importance was felt after the launch of satellite Sputnik 1 by the erstwhile Soviet Union in 1957. The United States, Europe and other western countries realised this and attributed their lack of creativity as a factor for falling behind in the race of becoming a global superpower. As a result, the National Defence Education Act accepted the concept of creativity important for prosperity and survival of society. These ripples led to tsunami of creativity in every field, specifically education.² Creativeness is regarded as priority in the 21st century due to its importance in the progress of humanity and its future. Therefore, by the end of 20th century, special attention was diverted towards creativity keeping in view the crucial fact that creativity is related to future progress and development. The aim of education is to equip the millennials not only with knowledge and information, but also to inculcate creativeness in problem-solving and decision-taking.² Apart from a few exceptions, like Turkey, Iran, Egypt, Malaysia and Indonesia, most of the Muslim world despite its historical achievement in different creative and innovative discoveries and positive encouragement of the religion towards creativity, have paradoxically slid down from their position. These unfortunate circumstances of ignoring creativity has prevented reaping benefits both economically and socially from the huge creative markets.³ Now educational scientists focus more on creative students rather than intellectual students and creativity is the language of the present age. Numerous studies have highlighted the importance of creativity, but the development of higher education creativity depends on what happens at the level of schools in Pakistan.⁴⁻⁶

The current scoping review was planned to summarise and disseminate research findings pertaining to the evidence on the definition of the concept of creativity, its importance in education, role of teachers and learners in making creativity a part of their educational endeavours, and their implications. Moreover, it aimed at providing a broad and

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detailed outline of the topic, exploring more general questions rather than providing answers to limited questions.⁷

Methodology

Scoping reviews are defined in many ways and serve various purposes. The current review meets some of the objectives already defined, like summarising and disseminating research findings, and to identify research gaps in the existing literature.⁸

Identification of research question: According to Arskey and O'Malley, a research question should be devised to guide the search strategy.⁹ Three research questions were developed in the current review to answer the central question: How creativity is defined in literature? What and how teachers, learners and universities contribute towards creativity? What are the future implications of creativity in education?

Identification of relevant studies: The initial search comprised PubMed, Education Resources Information Center (ERIC) and Google Scholar electronic databases. Except one article which was added from 2005 with the aim of reviewing differences between Asian and Eastern ideas and approaches to creativity.

Following search terms were used; Creativity, Creativity and education/creative learners/higher education/innovation/creativity and Islam/Iqbal's ideology of man/creativity and Asian countries. Reference lists of the shortlisted articles were also searched as it is always beneficial to check the bibliographies of studies found through the database searches, especially systematic reviews and traditional literature reviews, to ensure they had been included in the scoping exercise. The search yielded a huge number of articles. Duplicate articles were removed, and abstracts of the rest of the articles were browsed through to assess relevance. Finally, text of a short-listed articles was read and 27 full-text articles were included in the current scoping review (Figure-1).

Study selection: We outlined the exclusion and inclusion criteria and each study was appraised against the set criteria. The results were recorded on Microsoft excel and conclusions were made transparent. The inclusion criteria were articles published in 10 years from 2010 till 2020 specifically related to higher education. Articles related to technology, music, literature and pharmacology were excluded.

Charting the data: We outlined the findings from each included study, including variables related to research questions. Descriptive map was made which provided detailed mapping of research activity in relation to the

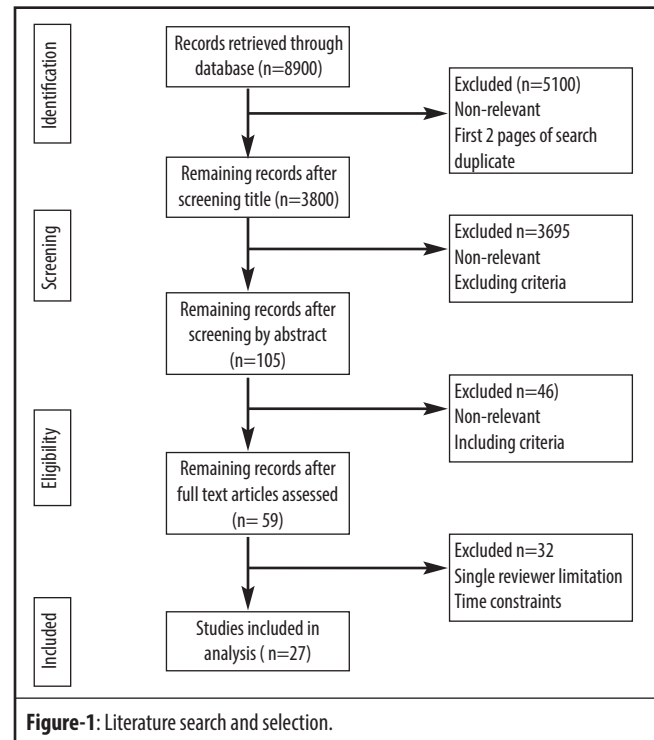


Figure-1: Literature search and selection.

research question.

Synthesising study findings: Narrative empirical synthesis was used to provide comprehensive results from each study. As narrative reviews have become increasingly systematic, their methods have diversified and the terms to describe them have proliferated. These methods have been published in recent years in books written by Dixon-Woods et al., Mays et al., Pope et al., Barnett-Page and Thomas, Noyes et al., Saini and Shlonsky.¹⁰ Methods include content analysis, critical interpretive synthesis, thematic synthesis, realist synthesis, grounded theory, case survey, qualitative comparative synthesis, meta-summary and framework synthesis.

We used inductive thematic headings with narrative paragraphs to summarise the pertinent messages.

Results and Discussion

After going through the articles selected for analysis, the following themes emerged:

Defining creativity: Many definitions of creativity were extracted, but there was no single clear definition. Creativity is contextual, so, rather than reaching a consensus on how to define creativity, it is better to understand themes or characteristics related to it, according to Egan et al.¹ Another study explained creativity as "the ability to produce work that is both novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive

concerning task constraints).¹¹ Creativity was classified into three types: combinational, exploratory or transformational. Villalba expressed creativity as a complex construct.¹² According to him, there are five common things extracted from research on creativity worldwide: producing compelling and novel ideas or products; apart from domain-specific and domain-general elements, there are domain crossing and overlapping creativity elements; it is partly measurable; it is possible to develop and promote creativity; and it is not rewarded in practice as other fields of knowledge are, and it is not rewarded as quoted in theory. Kleiman compared creativity to puzzle, paradox and a mystery.¹³ When an outcome is original and is of value it is called creativity and defined as personal innovation that promotes the holistic idea or complex situation handling. Creativity is the act of presenting the 'real curriculum' in ways that conform to the regulatory expectations of how a curriculum should be framed. Gibson called creativity a mystical phenomenon.¹⁴ He also quoted Einstein who preferred imagination, which encircles the world, over knowledge which is limited. Davies et al. defined creativity as the bridge between previously separate and unlinked ideas as well as imaginative activities so that outcome is of value and original.¹⁵ According to Rampersad & Patel, creativity is a precursor or overarching umbrella of innovation and both these terms can be used interchangeably.¹⁶ Sarybayeva et al. defined creativity as ability to create, ability to produce creative results, ability to have an original vision of a problem and situation.¹⁷

Why it is important to define creativity? Creativity has been said to be too loosely defined, ill-defined, chaos, mystery, puzzle, multifaceted, complex and so on so forth by critics. The task is left to the teachers to understand creativity which is invariably affecting the policies advocating creativity and its development. When it is said that creative outcome is that which is original and valuable, then "original and valuable" is open and broad concepts. Interestingly Ayob et al. divided creativity into high and normal creativity which fits into the new creativity concepts.¹⁸

Creativity and medical education: Medical students' time is precious as they have to grab a wide range of knowledge in limited time. They should be creative problem-solvers. Green et al. concluded that devoting precious curricular time to creativity will help medical students become better doctors.¹⁹ In the words of the 2005 TAP Report (www.tap2015.org), produced by a prominent group of American corporate leaders, "To maintain our country's competitiveness in the 21st century, we must cultivate the skilled scientists and engineers needed to create

tomorrow's innovations." One study said that due to rapidly changing patient needs as well as diseases, innovative and creative students, trainees and employees are required for the healthcare sector.²⁰ In healthcare, there is an increasing need for individuals to generate new ideas and implement these to improve working practices due to the rapid changes taking place. One study described physicians as 'thinkers'.²¹

Why is creativity important for us: It has been highlighted that to keep up with growing economic needs, creativity is one of the essential keys which invariably led to its inclusion in policy documents of many countries. Several European, American, Australian and East Asian countries included creativity in education to keep pace with rapidly progressing global contexts. For reforms in multiple domains, including political, cultural, economic and educational, to name few, integration of creative skills has become pertinent. How is our educational system preparing the young generation for future social and environmental demands? Creativity is now considered a priority to equip students with originality, innovation, elasticity, flexibility and critical thinking (Figure-2). All studies included in this scoping review highlighted needs of reforms in educational system and inculcation of creativity culture. They also identified what educators all around world are thinking, discussing, focussing on and talking about the role of creativity for coming generations. In the current scoping review, 6(22.2%) studies specifically highlighted higher education and 3(11.1%) studies, 1(3.7%) letter to editor discussed creativity in medical education.²²

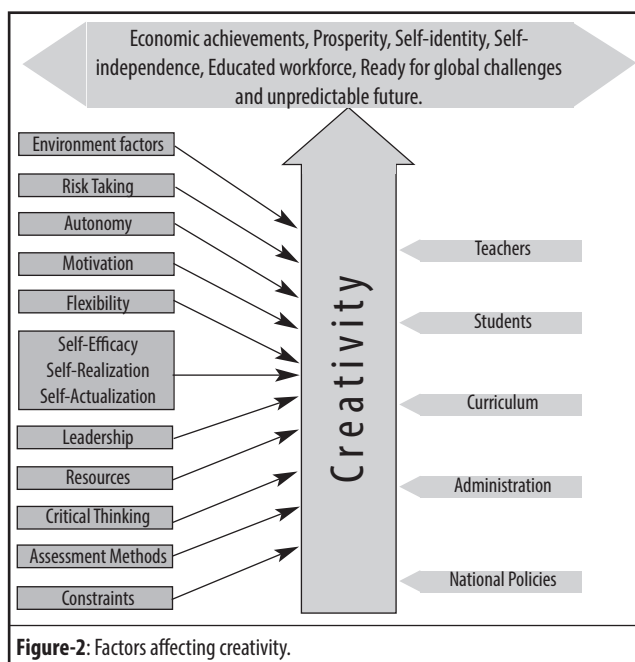


Figure-2: Factors affecting creativity.

Creativity is made part of curriculum in Foundation Stage Curriculum and National Curriculum for schools in England.⁴ Investment is also done in staff development and resources.

Creative student's personality traits: There are many personality traits of creative individuals, but the argument is whether creativity is genetic or is determined by the environment and to what extent education can improve or inculcate creative abilities.²³ Studies discussed various personality traits. Among these traits, risk-taking was mentioned in 9(33.3%), studies self-efficacy in 6(22.2%), flexibility in 8(29.6%), self-actualisation in 4(14.8%), motivation in 9(33.3%), autonomy in 6(22.2%), adaptability in 3(11.1%), self-development in 1(3.7%), vision in 2 (7.4%), habit-breaking and boundary-breaking in 1(3.7%)each, openness in 5(18.5%), critical thinking in 7(25.9%), and leadership in 5(18.5%) studies.

Teaching for creativity or teaching creativity: A successful teacher is one whose students are successful, creative and innovative²⁴ but there are certain factors which contribute to it. These factors are cultural, educational, social, economic, personal, values, beliefs and trends (Figure-3).

All studies included in the current scoping review highlighted the role of teachers in creative education. A teacher can model how to tackle problems, promote creativity, ask divergent questions, encourage students to ask questions, give new problems, encourage new solutions, give concepts and doesn't consider students' result as the only criteria of success. In today's globalised world, it is now the responsibility of teachers to prepare and equip their students with effective and creative skills to face the challenges.²⁵ Teaching can be for creativity or creative teaching. Creative teaching involves imaginative approaches of teachers to transform learning into more effective, interesting and informative. Teaching for creativity involves teachers identifying and fostering

student's creativity. It is important not to forget the role of university administrations in this regard. The universities should work in creating atmospheres of forgiveness, justice and freedom for the creators.²⁶ This invariably allows the development of learner skills as well as suppressing negative attitudes towards studies or university. In the long term, these measures will prevent learners from facing psychological, personal and social problems.²⁷

Assessment of creativity: In the current scoping review, 3(11.1%) studies discussed assessment methods, but, as already highlighted, creativity is complex and multidimensional so it can't be judged by any single method or analytical procedure. The six approaches the current review was able to not in literature were psychometric, experimental, biographical, biological, computational and contextual. Assessment drives learning, and our assessment strategies reflect what we value.²⁸

Creative leadership: Creative and innovative leaders are positive drivers for their followers. They keep the rest motivated and goal-oriented along with flexibility and openness. Creativity in leadership emerged as a desirable graduate attribute. Effective leadership not only foster creativity and innovation, it also enables leaders to work in innovative ways in order to be fierce and challenging future demands. In the current review, 6(22.2%) studies highlighted leadership as a creative platform.^{29,30}

Creativity, Maslow and self-efficacy: Maslow noted that in each person two needs are dominating; need for safety, and need for growth. In compliance with Maslow's concept, growth is occurring via small steps and each next step is possible only when feeling of safety is existent. Self-actualising people must be creative. In Maslow's view, self-actualisation and creativity are functionally interdependent and both facilitate each other.³¹ Maslow went as far as to suggest that creativity and self-actualisation turn out to be the same thing. Self-efficacy is another key factor driving the development of creativity

which is seen as teachable and learnable. In the current review, 6(22.2%) studies addressed self-actualisation and 4(14.8%) addressed self-efficacy. Vulnerability and uncertainty fuels creativity and productivity; this supports Maslow's view that although many people fear self-knowledge, they are more likely to discover their true potential and innovation level while developing creative freedom awareness.³²

Constraints: Barriers whether external or internal must be removed. Knowing the barriers is a step towards removing them.³³ In the current review, 7(25.9%) studies discussed constraints regarding

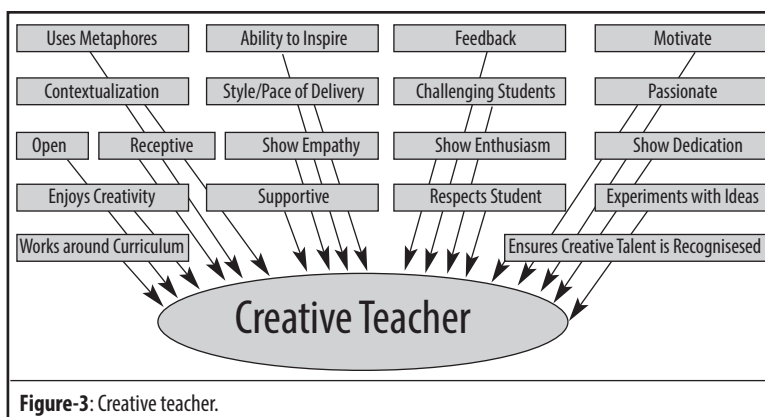


Figure-3: Creative teacher.

Table: Hindrance to creativity in the educational system, adapted from (Shaheen, 2010).²

Teacher	Students	Organization
Over loaded syllabus	Passive learners	Inadequate resources
Stress to complete syllabus	No motivation	Customs
Preparing students for exams	Unequal aptitudes	Culture
Teaching workload	Background	Funds
Lack of time	Values	Policies/objectives
No appreciation of teachers	Beliefs	Curriculum
Emphasis on delivery of knowledge	No support	Assessment methods
No training in creativity and creative teaching	Scared to take risks	Institutional regulations
Not motivated	Reluctant	Model of authority
Lacking experience	Pessimistic look at life	
Scientific shallow	Lack of confidence	
Lack of knowledge		

creativity in education, including environmental, circumstantial, social and sponsorship scarcity (Table).

Further research recommendations

It is suggested that more research is warranted in relation to inclusion of creativity and innovation in healthcare education. Research is required to outline guidelines which can diagnose creative abilities. Moreover, academic medicine should explore ways to maximise creativity and innovation as it is the engine of discovery.

Conclusion

The national educational system is producing 'conformists' and 'stereotypes' whereas the need of the hour is to produce 'freely creative and original thinkers'. Creativity is not merely a matter of paying 'lip service' to the concept. Adding creativity in educational policy is pertinent, as in many developing countries, creativity remains ignored. Moreover, integration of creative thinking skills in education is a pivotal tool for economic development and keeping up with rapidly changing and growing world scenario.

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