Journal of Strategic Human Resource Management
14 (1) 2025, 39-59
www.publishingindia.com/jshrm/
https://doi.org/10.21863/jshrm/2025.14.1.004

Submitted: 05 January, 2025
Revisions: 13 January, 2025
Accepted: 24 January, 2025

MEDIATING CREATIVITY AND HR ELEMENT IN EDUCATION ECOSYSTEM: AN EXPLORATORY STUDY

Partha Naskar*, Biki Digar, S. K. Sajit***, Pitu Kundu******

*General Manager (Accounts), West Bengal SCSTOBC Development & Finance Corporation, Government of West Bengal, West Bengal, India. Email: naskarpartha@yahoo.co.in

**Assistant Professor, Department of Commerce, K. D. College of Commerce and General Studies, Midnapore, West Bengal, India. Email: biki21296@gmail.com

***Research Scholar, Sidho Kanho Birsha University, Purulia, West Bengal, India. Email: sajit9030@gmail.com

****M.Com (Pursuing), Naba Ballygunge Mahavidyalaya, Kolkata, West Bengal, India. Email: pitukundu8697@gmail.com

Abstract: *On the threshold of the new millennium nurturing human elements has emerged as the epicentre of challenges, competition, and changes. In the era of global competitiveness, harmonising the innovative dimension seems to be the buzzword with continuous change and progression. Laying much importance and relevance on education has emerged as one of the transformative mechanisms to develop human agency. The paper focuses on how creativity is embraced by human elements culminated by integrity, enthusiasm and harmony creates a hub of knowledge potential for a strategic growth path in the long run. The key objectives of the paper revolves around revisiting literature on educational creativity, innovation on project centric learning, traditional and modern educational prospective, creative evaluation, innovative student engagement, teacher creative commitment and integrating HR with innovation. The key objective of the paper aims to understand people's perception about innovation and creativity in teaching and learning and its impact towards skill-linked knowledge system. The research design is exploratory using of primary and secondary data collection methods through non-probabilistic convenient sampling techniques. The study utilises a quantitative research design with regression analysis to evaluate the effect of each factor. The findings project a prominent connectivity between active learning and digital engagement and also a significant correlation between encouraging awareness and positive awareness. The coverage of the paper makes a realistic attempt to highlight creative and innovative skills for building a holistic education framework and opening the doors to a new human renaissance..*

Keywords: *Innovation, Creativity, Education, Skills, Human Resource*

Introducing Footsteps of Innovativeness

With the twenty-first-century world increasingly becoming digital, the roadmap for shaping the education ecosystem requires creative evaluation, linking applied knowledge with innovation. There seems to be a growing gap between the attention given to learners and the development of intelligence required to build skills that nurture humanity. Harnessing human intelligence by integrating individual capabilities with deep learning approaches is the need of the hour. In recent times, the emphasis on nurturing and incorporating empathy, collaboration, creativity, and self-learning has highlighted the importance of creative approaches in teaching, learning, and assessment processes. Needless to say, innovation stems from the creative application of knowledge. Thus, quite significantly, today's rapidly evolving global hemisphere aims at the cultivation of human skills, mindset, and knowledge with the changing paradigm that empowers the future mindset of aspiring learners. It is quite imperative to focus on the enduring impact of entrepreneurship education, collaborating academic knowledge and creative excellence in the organisational terrain. The quality of human capital, through the enhancement of creativity, accelerates creative

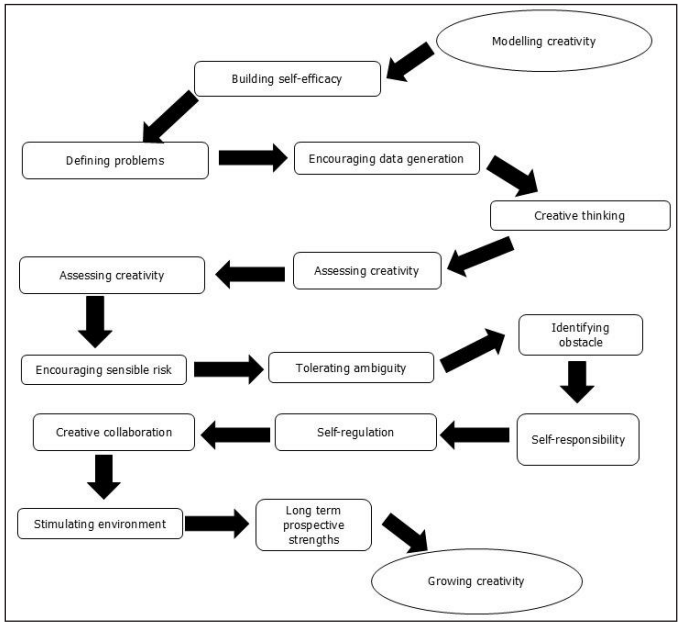
interest in learners. The cultural environment fostered from elementary education through the formative years of learning creates a resourceful mind with an innovative vision, supported by an intelligent quotient in the journey of knowledge. With the apparent and motivational design inducing a creative climate in education, it induces the harvesting of benefits both in academics and workplaces. It can be unanimously agreed that creativity and innovation are interlinked with each other. They act as a panacea for upholding creative potential and innovative intelligence in student-teacher learning platforms. Furthermore, the readiness to adapt creativity and innovation for learners to navigate and excel in the present digitalised global education landscape is the promising pathway for future education. At this backdrop, the relevance and implications of innovation and creativity in shaping the future generation need attention and priority.

Collaborating Innovation and Human Element

Dynamism is the call of the hour, and integration between innovativeness and the people factor is quite relevant in present times. In the current fluctuating global environment, nurturing and fostering of HR function is one of the modest attempts at an education ecosystem. Educational institutions today need to reorient themselves towards being more innovative and creative by recreating themselves in the line of people-based systems that focus on motivation, commitment and engagement. Human resources play a significant role in successful innovation from the perspective of educational progression and act as a torchbearer for critical problems in any functional domain. Aligning innovation with learning is the beginning, and thus creative people play a vital role in innovative activities with diverse learning and working spaces. The perception about innovation is linked with the development of creative ideas existing with human resources capable of handling strategic decisions at different frames and dimensions of issues and problems. Reshaping structure and system in an innovative effort and establishing innovativeness intellectually promotes learning acceleration. Studies project that creative people contribute most significantly to the process of innovation towards the education pathway. Significantly, education and training improve the effectiveness of pupils to contribute to an innovative venture and establish unbridled brilliance in creative pupils. Thus, collaborating on human factors empowers in creating a knowledge pathway bridging academic pursuit and the present world to drive the next-gen population with promises and possibilities.

Educating Creativity with Innovation in Learning Modalities: A Practical Approach

Exploring and expanding creative potential in academia has evolved in recent years. To put in synthetically, the role and responsibility of educating creative thinking equally need skills and knowledge blended with advanced technological up gradation in the changing educational framework. Nowadays there is a growing trend in grasping the root and role of learning pedagogies and is inclined towards developing creative skills. Such inclination initially demands a realistic and believable approach that breaks traditional norms and connects practical knowledge information to unleash the real responsiveness. Understanding multiple attitudes, thinking skills, techniques, and thought processes virtually acts as a tool in breaking normal learning patterns and creating new conveniences in our knowledge and skills. The entire process of exploring the best way to persuade creative appeal rests on a big idea or concept consisting of the essential aspects of affectivity and creativity and is depicted in Fig. 1.



Source: Author's creation.

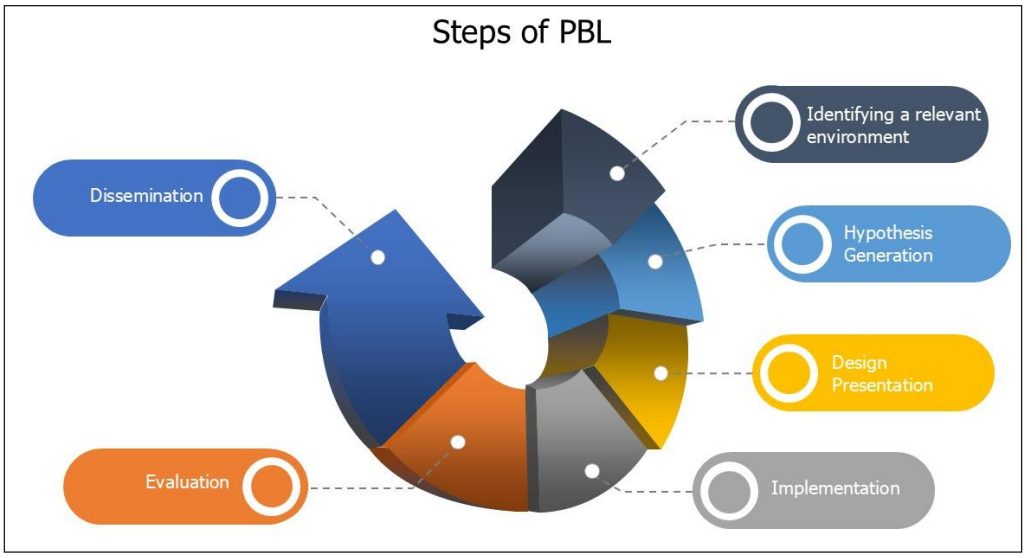
Fig. 1: Digital Creativity and Critical Thinking Framework

Mostly it can be witnessed that connectedness, appropriateness, and novelty are the pathways towards an innovative journey, which is linked with a creative mind filled with skilful applied knowledge. In the present digital landscape, however, harnessing technological component

connected by human imagery and designed with creativity creates of fruitful integration of thought, knowledge with new applications and features. In the educational perspective developing a tech-centric creative relationship has established to be encouraging, promising and fruitful. Merging both qualitative and quantitative approaches with technological resources focuses the importance of educating analytical and progressive thinking in the true sense of the term. In a digitalised transformed world better understanding for creative skills aligned with technology needs attention with priority to bridge the gap between generations, mentalities, and ever-changing life patterns.

Harmonising Creativity and Innovation in Project-Centric Learning: An Overview

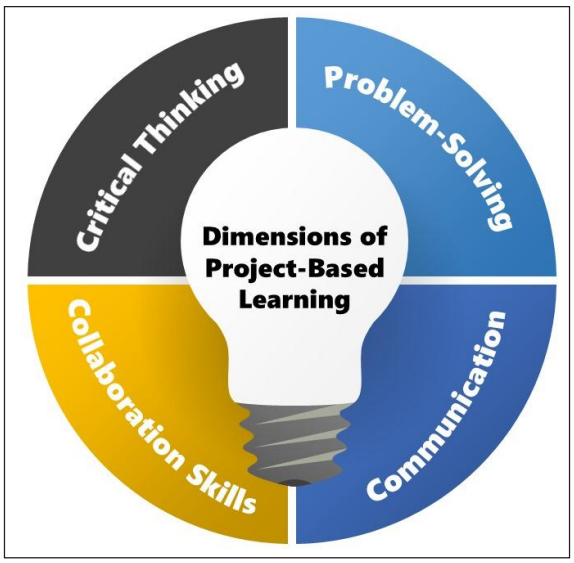
With rapid technological advancement and globalisation, the capability of novel thinking is becoming increasingly appreciated worldwide. The potential to think, imagine, and create original ideas has emerged as a fresh outlook in driving progress and solving real-world problems. The contribution of higher education in reshaping and nurturing creative and innovative skills among students significantly impacts the learning curriculum. Innovative pedagogical methodologies characterised through project-based learning have proven to be effective and impactful. Additionally, it fosters students creative and innovative aptitudes through education and training programs. With the background of encouraging critical thinking, problem-solving, and generating new ideas connecting innovative solutions, education learning centres are on the pathway to yielding a future, dynamic, and competitive workforce with an instructional approach popularly connoted as project-based learning. Project-based learning focuses on enabling learners to gain information and expertise through the proper investigation of problems or challenges that can be projected (Fig. 2).



Source: Author's creation.

Fig. 2: Process Flow of Project-Oriented Learning

In the realm of higher education, project-centric learning induces student engagement and motivation, which in turn develops an entrepreneurial mindset and expertise required to innovate and create new avenues in their future careers. It is a learning mechanism that assigns project-based teaching and assessment modules to impart knowledge and upgraded skills in promoting deeper learning and understanding to analyse and resolve multifaceted complications. The need and necessity of project-based learning in the present digitalised platforms actively engage students in exploring real-world problems with challenges and inculcate a sense of belongingness and commitment towards various aspects of learning. The diverse dimensions of project-based learning highlight the levels of acquisition of creativity and innovation skills, fostering motivation and student engagement, and can be outlined in Fig. 3.



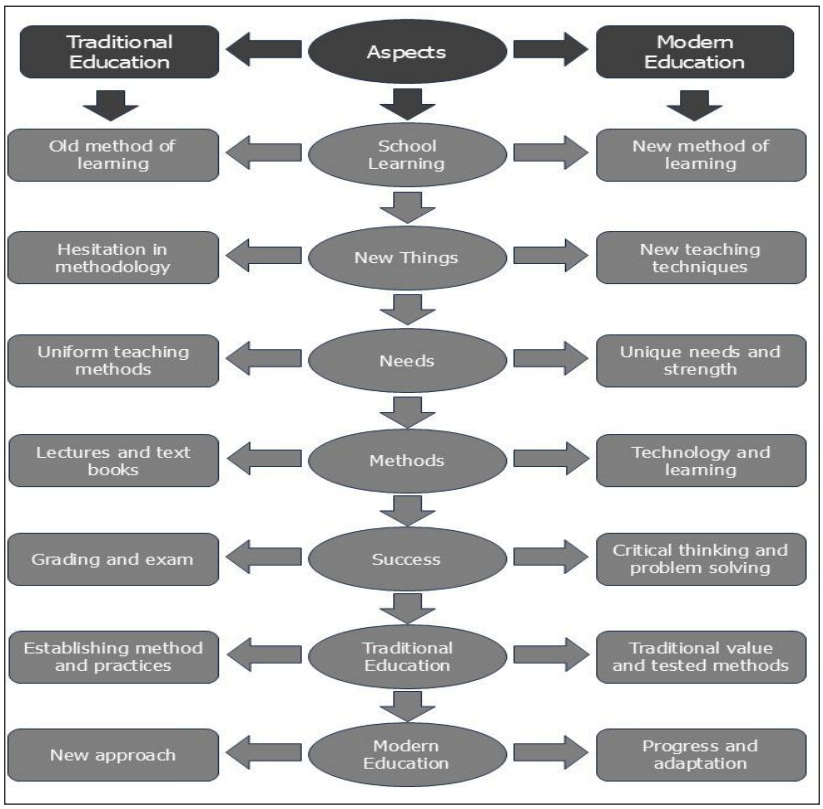
Source: Author's creation.

Fig. 3: Dimensions of Project-Based Learning

The evaluative component of project-based learning acts as a foundation stone to promote experiences developing personal and social skills and is instrumental in enhancing students' academic and professional attainment to think critically and communicate in the days to come.

Traditional versus Modern Education: A Relative Viewpoint

The pathway of education has travelled and encountered age-old beliefs and thoughts and ultimately arrived at the present-day destination of remote learning. Despite this paradigm shift, the success of impacting and delivering in the education domain rests on technological integration, pedagogical adaptation, student experience, and equity consideration. With the catastrophic effect of the pandemic, the flexible approach focuses on providing an inclusive education environment to promote the potential of learning modalities and study success in education. In the contemporary world, emphasising the impact of modern education substituting the traditional approach is struggling to maintain uniqueness and integrating digital learning into cloud-based educational architecture. The proponents of traditional education are characterised through lecture-based instruction, a teacher-centric approach, structured curriculum, standardised assessment, face-to-face interaction, social interaction, and consolidated discipline, which has transformed towards the e-learning arena in today's information-driven society. The pros and cons of both traditional and modern educational strategies can create a balanced learning analytic and have been illustrated in Fig. 4.



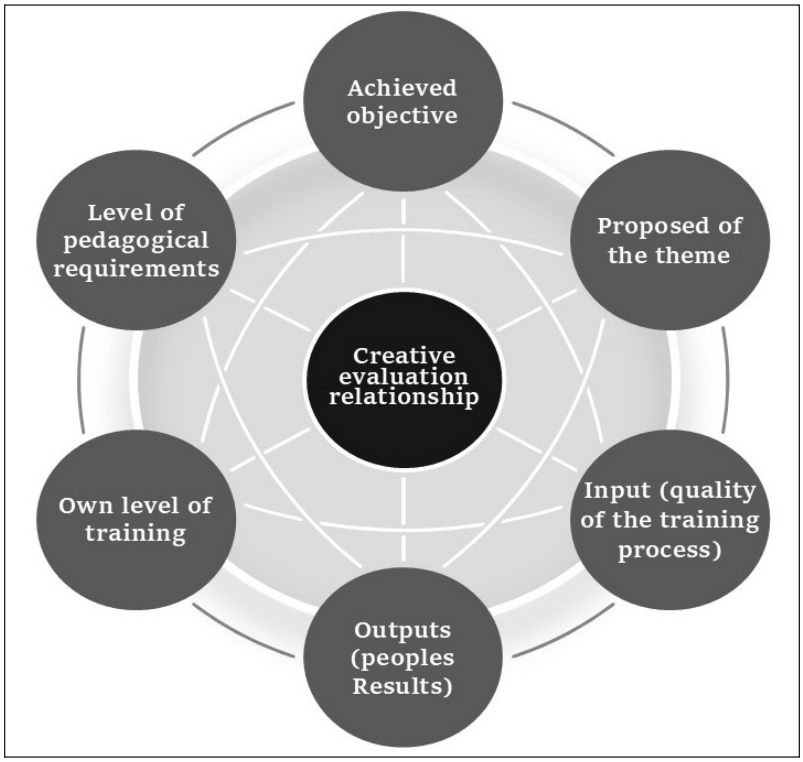
Source: Author's creation.

Fig. 4: Traditional vs. Modern Educational Approaches

The transformative impact of technology on education has the ability to connect students worldwide, conducive to successful teaching and learning. In contrast with the effectiveness of the traditional vs. modern education system, wherein traditional methods simulate memorisation and recitation and the modern approach focuses on creativity, critical thinking, and a deeper understanding of concepts. Thus, in reshaping the education paradigm, a perfect blend of sharing traditional values and mastering skilful activities is quite imperative and essential to the call. Despite the comparison and contrast of both modalities of the education system, the relevance of a balanced education environment rightfully ensures the success and accomplishment of all learners in a rapidly changing society.

Encouraging Creative Evaluation in Education: A Futuristic Assessment Practice

The traditional Indian education system is characterised by a heavily loaded knowledge resource oriented towards memorising and recapitalising for achieving higher grades in examinations. The age-old techniques and methods of imparting education need a holistic transformation to understand and practice creativity & innovation in learning curriculum. Creativity is a multi-dimensional phenomenon that manifests itself in many domains, emphasising new media and technology in the education system. To undertake a practical creative assessment, equating both educators and pupils is anchored with the social relations to the contemporary world. Creativity acts as a potent driver toward generating channels of flexible thinking, adaptability, and enthusiasm for greater participation in building one's own knowledge. Needless to say, there exists an intricate connectivity between teaching, learning, and evaluation. Broadly, evaluation can be viewed as a process of determining the value of things. Encouraging integration between teaching, learning, and evaluation through innovation in teaching methods and modalities can be outlined in Fig. 5.



Source: Author's creation.

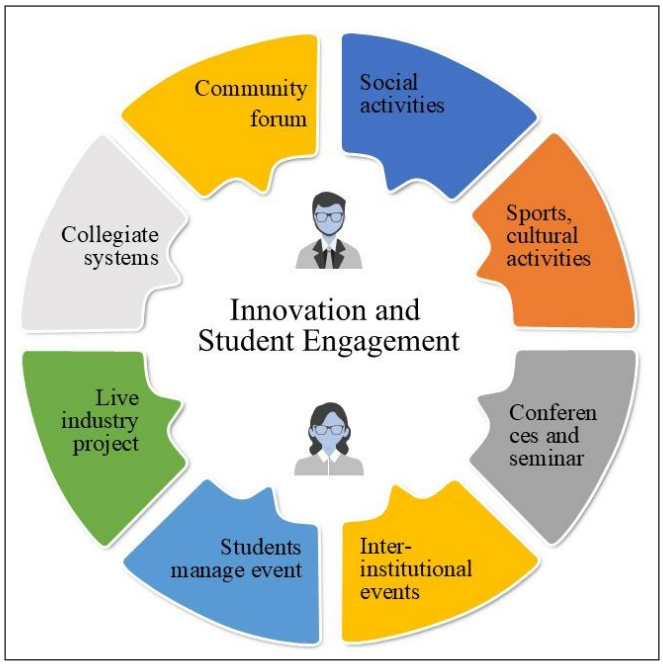
Fig. 5: Connectivity between Teaching, Learning, and Evaluation

Evaluation in turn provides evidence and evaluative statements, which act as a mirror, creating an optimistic impact on people at large. Interestingly, creativity constitutes an integral component of innovation. Creativity signifies an essential element of the teaching-learning assessment process based on the fundamentals of originality, relevance, fluency, and flexibility. In recent times, creativity has been commonly connoted with creative personality, focusing on strong motivation, ability, intellectual quest and emotional sensitivity connecting likelihood towards teaching lessons

with the real world. In the fast-paced, digitalised world, reassuring teachers and people with creative dispositions leads to a professional culture and meaningful understanding of inventiveness and novelty in all educational disciplines in the present-day ecosphere.

Aligning Innovative Initiatives for Student Engagement in Higher Education: Pathway Towards Sustainable Progression

Innovation has its origin in the creative application of knowledge. In recent years, myriad innovations have sharpened the minds of learners in institutional platforms. Coordinating the use of multiple skills through new ideas and thoughts acts as a yardstick in harnessing creative minds in the learning domain. Nurturing a creative environment from early school through the formative years stimulates a curious mind, reinforcing encouragement and supplementing motivation, boosting the cognitive and analytical capabilities of learners. Getting involved and attached to investigating a vast array of knowledge depends on the route of engagement in different perspectives and spheres of knowledge. Students' attraction to academic schedules, allied with diverse curricular activities, internalises students' attachment and fosters overall growth, making it a more sustainable approach to learning. Appreciating the roots of sustainability and encouraging students in their understanding for environment and nature focus on inclusive growth and promote fresh learning initiatives. Bridgewaying student engagement with sustainable development catalyses innovative willingness on the path of the learners to learn, search, and remain determined in their learning journey. Enhancing creativity through the adoption of a student-enhancement program integrating minds and skills adds value creation in career achievement and attainment of success. Developing and executing innovative student' engagement activities signifies creativity and ultimately results in innovative accomplishments and can be projected in Fig. 6.



Source: Author's creation.

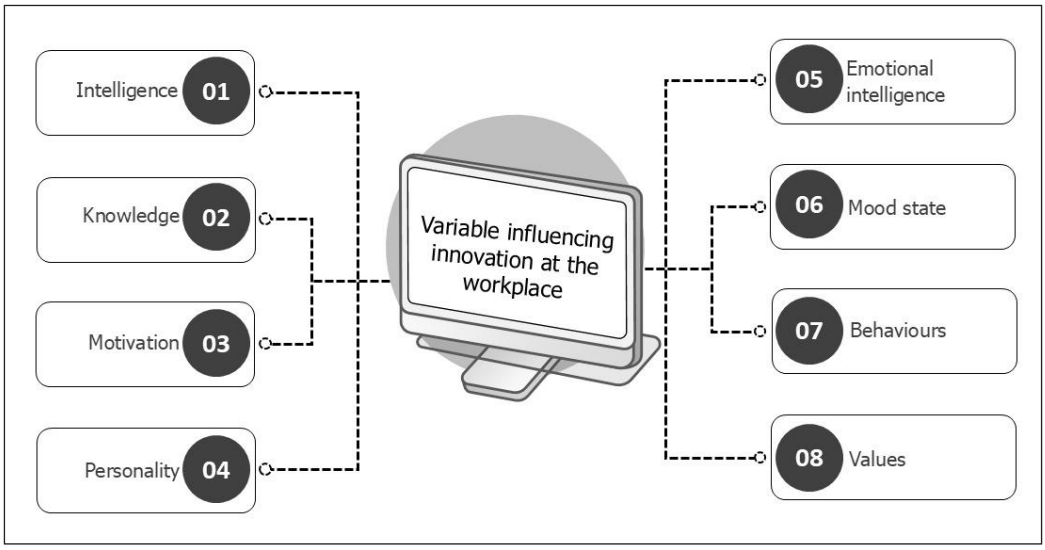
Fig. 6: Pathways to Innovation Through Student Engagement

Combining expertise, creativity, and capabilities fosters students' engagement, enabling students' transformation and building a potential environment for achieving sustainable development goals. In the pathway towards innovative processes, acknowledging innovation in the education terrain can surely build future leaders of society, promising new ideas, new potential, and new possibilities.

Teacher Commitment and Creative Adaptability in Education: An Outlook

Creativity originates in the individual. How education influences individual innovation to create new ideas in the minds of individuals needs to be understood. The teacher's profile and skills contribute towards imparting education in

diverse backgrounds with distinct disciplines of expertise. Education is directly associated with creative thinking, activeness, and teamwork. A teacher's knowledge influences students to learn, develop creative ideas, and work harder to harvest the benefit of their higher education. Creative ideas and breakthroughs address mobility or originality through which teachers acquire intrinsic motivation, independent judgement, industriousness, the atmosphere in the team building, and implementation for students for creative excellence and individual upliftment. Studies reveal that eight prime individual variables predict innovative attributes in teaching platforms and are projected in Fig. 7.



Source: Author's creation.

Fig. 7: Variables Driving Innovative Teaching-Student Learning

Thus, to improve teachers' professional and individual attitudes, the impact of integrity towards the institution plays an essential role in adapting new innovative techniques bridging commitment and performance in the learning domain. Teaching creatively requires responsive structure helpful for learners and support to develop their innovativeness in the learning process. Teacher motivation towards work, inclusive of classroom and student needs to be collaborated in building student career attributes, making learning enjoyable and productive. The urge to develop within professional creativity ultimately improves individual skills, practicing innovation and creativity and developing dynamic professionals in the teaching exercise. Positive experiences gained by teachers considerably influence the creation of bold relationships with students, resulting in teaching efficacy and fulfilment. Indeed, creative innovation creates a new paradigm to create agreeable and engaging learning environments both for teachers and learners in the future education horizon.

Problem Relevance

Human resources are increasingly perceived as assets in a work setting, and assessing the worth of human capital can create productive capabilities for the entire work setting. Needless to say, that innovation springs from the creative application of knowledge, which are considered to be a fundamental building block impacting creative interest to fruitful innovation. Considering human resources as the key factor for organisational survival in a global economy emphasises accelerating innovative attributes in human capital and has emerged progressively in recent years. The problem of study is relevant in the educational domain, as human resources play a significant role in successful innovation, which essentially enhances the effectiveness and efficiency of learners and educators in educational institutions at large. The notion of HR orientation through the initial application of deep insight requires the acquisition of new knowledge, collaborating creative and intellectual human capital in all spheres of knowledge system. Greater application of HR oriented innovative skills has the potential to promote diverse skills in education platforms and thereby contributing toward a creative workforce in the knowledge system. Hence, exploration and investigation of the theme is essential and justified.

Need of the Study

Reshaping and connecting learning minds through a creative mindset with the real world is considered to be the best

educational practice in the contemporary ecosphere. In the present era, there has been an overwhelming response towards generating hopeful avenues for creative leaps to fruitful innovations in the education landscape. Understanding the optimistic impact of creativity in education simulates imaginative and intellectual attributes among learners in the present digitalised biosphere is of utmost significance. Connecting pedagogical experiences with the latest technologies largely asserts the spirit of constructive and innovative thinking in the digitalised platform. A student preparedness to adopt future education ultimately helps them in developing intelligence through deep-learning approaches that combine active, self-motivated exploration of the real external world. With the growing reliance on digital platforms, the process of educating creativity and nurturing creative skills has emerged as one of the fast-growing agendas in the diverse horizon of academia and allied domains.

Research Question

Quite a number of issues related to innovative applications with educational institutions to augment human capital with qualitative excellence are yet to be fully understood in the existing education system. The knowledge-based exploration is broadly limited to case studies and inferences with measurement techniques. The key research question of the study can be highlighted as:

- Does creativity of an individual is linked with a creative mind at the education level?
- Does innovative education and skill-based training improve the effectiveness of the person for fruitful contribution?
- Does creativity linked HR element can be a benchmark for successful learning?

Objectives of the Study

It can be unanimously agreed that technological progression has emerged as a blooming game-changer in present times and how inventiveness and originality-linked education practices can promote and foster next-generation education environments. Education plays a pivotal role in efforts to make future workforces empowered with transformative solutions. In the context of a near-future generation, it is quite imperative to develop new-fangled innovative skills and competencies in educational programs with the capacity to access, manage, understand, integrate, communicate, and evaluate in the digital-powered world. Against this backdrop, the emergence of fostering a culture of innovation and self-reliance in the educational resources blended with teaching, learning, tutoring, thinking, understanding, training, and selection needs careful attention and emphasis in building an 'Innovative education management information system'. Thus, the changing paradigm of the 21st century education system aims to create a 'creative skills' algorithm to develop a dynamic geography of educational opportunities worldwide.

- The prime aim of the study is to analyse the impact of creativity and innovation in skill-linked education learning. The analytical study is conducted through hypothesis estimation. The selection of an alternative hypothesis is done by comparing the calculated value with a 5% significance level.
- To secondary focus of the study is to evaluate people's perception of innovation and creativity in teaching & learning. The study objectives were addressed through a descriptive study, including demographic and perception analysis by comparing mean values.
- Projecting future trends of innovation in the education domain on a global scale.

Research Gap

With the 21st century world increasingly becoming digital, the roadmap toward shaping the education ecosystem needs linkage with creative evaluation and applied knowledge. By and large, there exists a growing gap between the attention paid and the development of intelligence towards learners, and thereby building skills that nurture humanity requires adequate importance. Harnessing human intelligence that integrates individual capabilities with deep learning approaches is the call of the hour. In recent times there has been rising momentum towards nurturing and incorporating, empathy, collaboration, creativity, and self-learning that emphasises creative approaches for teaching learning assessment processes. Needless to say, that innovation springs out of the creative application of knowledge. Thus, quite significantly, the aim of today's rapidly evolving global hemisphere, the cultivation of human skills, outlook, and knowledge, is the changing paradigm that empowers the future mindset of aspiring learners. It is quite imperative to focus on the encouraging impact of entrepreneur-blended education bridging academic knowledge and creative excellence in the organisational terrain. Against this backdrop, the relevance and implication of innovativeness and creativity in shaping the future generation need attention and priority.

Methodology of the Study

Data Collection: The research methodology of the study is both exploratory and explanatory. The data collection process involves the usage of primary and secondary sources. *The primary data is compiled through a questionnaire, applying a non-probabilistic convenience sampling technique.* The sample size consists of 152 respondents from both public and private sector educational institutions comprising higher secondary schools, universities, and training institutes. The data has been collected and compiled using the Likert 5-point scaling technique.

Period of the Study

Data were collected for this study from higher education institutions and administrative offices both within and outside the state. The data collection process was completed within six months (period of collection: April' 2024-September' 2024).

Application of Non-Probabilistic Sampling

Probabilistic sampling becomes impractical when constraints such as limited time, resources, or accessible population data arise. In this study, the authors primarily collected data from higher education institutions and offices, targeting specific groups and populations. The researchers aimed to gather in-depth and detailed insights tailored to the study's objectives by focusing on these well-defined groups (Table 1). This approach prioritises depth and specificity over broad generalisability, enabling a more focused understanding of the targeted population's unique characteristics and experiences.

Table 1: List of Sources of Data Collected

Sr. No	Institution Name	Professor	Associate Professor	Assistant Professor	Research Scholar/ Research Associate	Teaching Associate/Guest Lecturer	Administrative Officer	Joint Director	Financial Advisor
1	Vidyasagar University	2							
2	University of Calcutta	2	1	1	3				
3	Indian Institute of Management (Calcutta)		2	1	2	4	2		
4	Indian Institute of Technology (Kharagpur)	1	1	2	3				
5	Indian Institute of Technology (Roorkie)			2	3				
6	Indian Institute of Technology (Dhanbad)		1		2				
7	St. Xavier's College (Kolkata)		2	2	3				
8	K.D. College of Commerce and General Studies		4	3					
9	Egra S.S.B College			3					
10	Adam Smith Business School, University of Glasgow		1						
11	T.H.K Jain College					2			
12	Sidho Kanho Birsha University (Purulia)	2	2	3	6				
13	St. Xavier's University (Kolkata)		1	1					
14	Netaji Subhas Admnistrative Training Institute	1	1					1	
15	Higher Education Department								1
16	Pranabananda Institute Management & Technology						1		
17	University of Calcutta	1							
18	EILM University Kolkata				1				

Sr. No	Institution Name	Professor	Associate Professor	Assistant Professor	Research Scholar/ Research Associate	Teaching Associate/Guest Lecturer	Administrative Officer	Joint Director	Financial Advisor
19	Kharagpur College		1	1					
20	Ramananda College			1					
21	Kalyani University	1	1	1	1				
22	Naba Ballygunge Mahavidyalaya	2	2	4	3	1			
23	Acharya Grish Chandra Boae College	1	1	3	1	2			
24	Mrinalini Dutta Mahavidyalaya		2	2					
25	City College North		1	1	1				

Findings and Analysis

Analysis of data is divided into two parts: 1A: Reliability and Validity Testing and 1B: Analysis of Variance [ANOVA] 2A: Demographic and Perception Analysis

1A: Reliability and Validity Testing

Analysis of Constructs and Reliability

Reliability testing is conducted to make sure about the reliability of the data and analyse an error-free outcome (Table 2).

Table 2: Reliability Test Statistic

Sr. No	Constructs	Reliability Test Statistics Result	Observations
1	Impact on Education	0.926	The reliability test statistic of 0.926 for the construct Impact on Education indicates excellent internal consistency, ensuring high reliability and credibility.
2	Innovative, Creative, Aware	0.904	The construct Innovative, Creative, and Aware indicates strong internal consistency among the items, demonstrating reliable measurement and enhanced construct validity.
3	Adequately Emphasised	0.897	Reflects excellent reliability, indicating strong internal consistency in measuring creativity and innovation.
4	Effectively Promotes	0.896	Indicates high internal consistency, demonstrating that the items are strongly correlated and reliably assess the concept of effective promotion.

Source: Author's computation.

Validity Testing

Validity testing is a crucial aspect of ensuring that the constructs accurately measure the intended concepts (Tables 3 and 4). Validity testing was conducted using the Pearson Correlation Test at a significance level of 5%.

Table 3: Validity Testing (Pearson Correlation)

Correlations											
		Innovative, Creative, Aware	Adequately Emphasised	Inspires Active Learning	Shapes Digital Engagement	Positively Aware	Encourages Awareness	Proactively Innovate	Effectively Promotes	Enhances Learning	Impact on Education
Innovative, Creative, Aware	Pearson Correlation	1	.572**	.473**	.624**	.642**	.423**	.309*	.577**	.333**	0.030
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.001	0.014	0.000	0.008	0.888
Adequately Emphasised	Pearson Correlation	.572**	1	.581**	.591**	.511**	.409**	.472**	.676**	.269*	0.014
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.001	0.000	0.000	0.033	0.948
Inspires Active Learning	Pearson Correlation	.473**	.581**	1	.712**	.437**	.495**	.573**	.480**	.457**	0.391
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.059
Shapes Digital Engagement	Pearson Correlation	.624**	.591**	.712**	1	.675**	.627**	.563**	.645**	.416**	0.224
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.001	0.294
Positively Aware	Pearson Correlation	.642**	.511**	.437**	.675**	1	.706**	.559**	.625**	.390**	0.306
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.002	0.146
Encourages Awareness	Pearson Correlation	.423**	.409**	.495**	.627**	.706**	1	.641**	.535**	.538**	0.200
	Sig. (2-tailed)	0.001	0.001	0.000	0.000	0.000		0.000	0.000	0.000	0.349
Proactively Innovate	Pearson Correlation	.309*	.472**	.573**	.563**	.559**	.641**	1	.614**	.446**	0.208
	Sig. (2-tailed)	0.014	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.330
Effectively Promotes	Pearson Correlation	.577**	.676**	.480**	.645**	.625**	.535**	.614**	1	0.244	0.235
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.054	0.270
Enhances Learning	Pearson Correlation	.333**	.269*	.457**	.416**	.390**	.538**	.446**	0.244	1	0.276
	Sig. (2-tailed)	0.008	0.033	0.000	0.001	0.002	0.000	0.000	0.054		0.192
Impact on Education	Pearson Correlation	0.030	0.014	0.391	0.224	0.306	0.200	0.208	0.235	0.276	1
	Sig. (2-tailed)	0.888	0.948	0.059	0.294	0.146	0.349	0.330	0.270	0.192	
**. Correlation is significant at the 0.01 level (2-tailed).											
*. Correlation is significant at the 0.05 level (2-tailed).											

Source: Author's computation.

Table 4: Snapshots of Validity Testing Results

Sr. No.	Validity Testing	Findings/Results
1.	Adequately Emphasised	Indicates a moderate to strong positive relationship with "Effectively Promotes (Refer to Table 3).
2.	Inspires Active Learning	"Inspires Active Learning" and "Shapes Digital Engagement" indicate a moderate to strong positive relationship (Refer to Table 3).
3.	Shapes Digital Engagement	A moderate to high positive correlation exists between variables (Refer to Table 3).
4.	Encourages Awareness	There is a high and significant correlation between encouraging awareness and positive awareness (Refer to Table 3).

Source: Author's computation.

Validity Testing Results

1B: Analysis of Variance (ANOVA)

ANOVA stands for Analysis of Variance. The conclusion is based on the p-value (significance) linked with the F-statistic in the ANOVA (Tables 5, 6, and 7), which is less than 0.05 (typically considered the threshold for statistical significance). Hence, it shows that AI has a significant and positive relation to teaching and learning mechanisms.

Table 5: Model Summary

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1. With Mediating Factor	0.614	0.578	0.446	1.318
2. Without Mediating Factor	0.623	0.388	0.12	1.265

Source: Authors computation.

In the Model Summary, the authors provide an analysis of the fitness of the models presented. In Model 1, the R-square value of 0.578 signifies a good fit, primarily due to the inclusion of the mediating factor. This suggests that the mediating variable significantly contributes to explaining the variability in the dependent variable, improving the model's overall explanatory power.

Conversely, when the mediating factors are removed from Model 1, the model's fit deteriorates substantially. Without these factors, the R-square value drops to only 38%, indicating that the model explains a much smaller portion of the variance in the outcome variable. This contrasting outcome highlights the importance of the mediating factors in enhancing the model's effectiveness and underscores their critical role in understanding the relationships being studied. Overall, the findings illustrate how mediating factors can significantly impact model fitness, and their absence can lead to inadequate representations of the underlying relationships.

Table 6: ANOVA[a]

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	15.795	8	1.974	1.137	.034[b]
	Residual	26.038	15	1.736		
	Total	41.833	23			

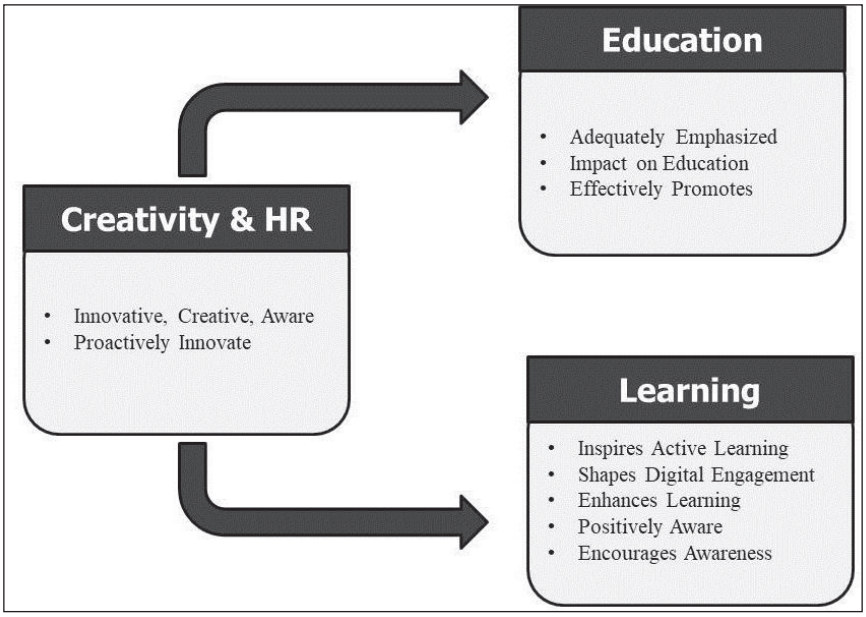
Source: Author's computation.

Table 7: Coefficients[a]

Coefficients[a]						
Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.324	1.348		0.982	0.342
	Innovative, Creative, Aware	-0.116	0.550	-0.069	-0.211	0.836
	Adequately Emphasised	-0.729	0.483	-0.516	-1.509	0.152
	Inspires Active Learning	0.842	0.392	0.695	2.149	0.048
	Shapes Digital Engagement	-0.180	0.827	-0.153	-0.218	0.830
	Positively Aware	0.482	0.640	0.390	0.753	0.463
	Encourages Awareness	-0.196	0.526	-0.165	-0.372	0.715
	Proactively Innovate	-0.276	0.583	-0.217	-0.474	0.642
	Effectively Promotes	0.619	0.471	0.462	1.314	0.208

Source: Author's computation.

Formulating the comprehensive framework between Creativity Human Resource and Education in Fig. 8.



Source: Author's creation.

Fig. 8: Linking Creativity-HR with Education and Learning

2A: Demographic and Perception Analysis

The clarification of demographic and perception analysis was necessary to understand people's perception of AI for education (Table 8).

Table 8: Demographic Analysis

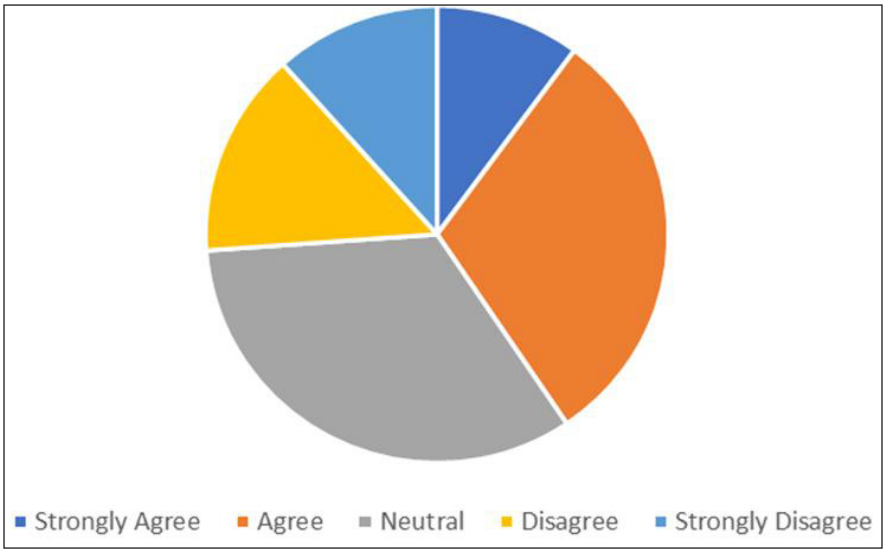
Nature of Analysis	Major Outcome
Demographic Data Analysis	• The majority of respondents are male (74%), with females comprising 26% of the sample, indicating a dominant male representation. • The age distribution is balanced, with 40% of respondents in the 18-24 group and 31% in the 25-33 range, while smaller proportions are in older age groups, primarily reflecting young to middle-aged individuals. • A significant proportion of respondents hold graduate-level education (49%), followed by post-graduate qualifications (21%) and doctoral degrees (2%), indicating a highly educated demographic, with most possessing at least a graduate degree. • The majority of respondents, 42% are students, followed by 27% employees and 4% self-employed, indicating that most are focused on education or professional careers, with a smaller number in self-employment.

Source: Author's computation.

Perception Analysis

Awareness of Innovation and Creativity in Education

A significant number of respondents (41%) believe that students are reasonably informed about innovation and creativity in education, with 7% strongly agreeing and 21% agreeing. However, 30% of respondents either disagree or strongly disagree, indicating a notable gap in awareness. This suggests that while some students are aware, many others may require further education on the importance of innovation and creativity in their learning (Fig. 9).

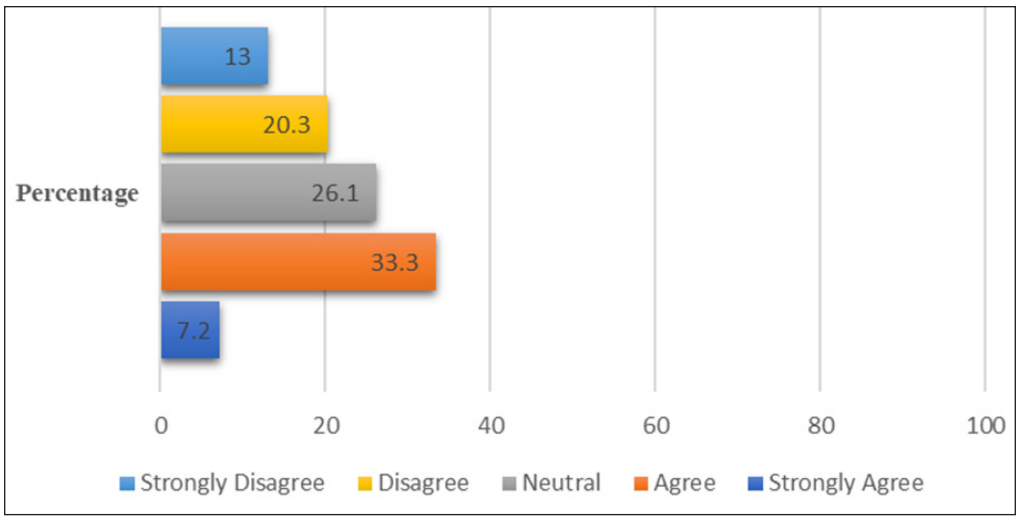


Source: Author's creation.

Fig. 9: Awareness of Innovation and Creativity

Emphasis on Innovation and Creativity in Schools and Colleges

There is a mixed perception regarding the emphasis on innovation and creativity in educational institutions. While 28% of respondents agree or strongly agree that schools and colleges adequately emphasise these elements, 22% strongly disagree or disagree. The remaining 18% are neutral. This indicates that, while some institutions are prioritising creativity and innovation, there is room for improvement in making it a core focus across the educational system (Fig. 10).

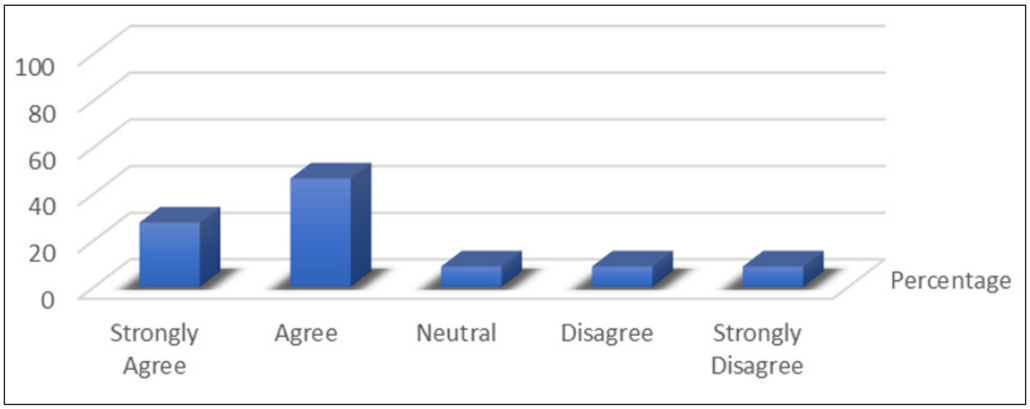


Source: Author's creation.

Fig. 10: Emphasis on Innovation and Creativity

Impact of Innovation and Creativity on Learning Practices

A majority of respondents (58%) agree or strongly agree that innovation and creativity in education encourage learning practices among students, suggesting that creative teaching methods are seen as beneficial for engaging students in their studies. This reflects a positive picture on the impact of creativity in motivating and enhancing learning experiences. However, 12% remain neutral, and 12% disagree, indicating that not all students experience these benefits uniformly (Fig. 11).

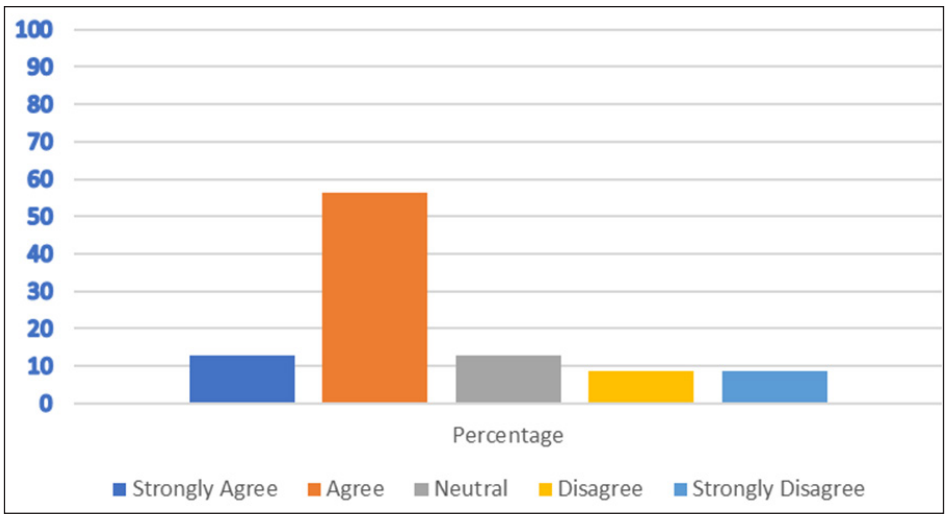


Source: Author's creation.

Fig. 11: Learning Practices of Innovation and Creativity

Impact of Innovation and Creativity on Online Activities

The role of innovation and creativity in influencing young students' online activities seems to be moderately recognised, with 43% of the respondents mostly agreeable. However, 12% of respondents comprise disagreement, which indicates that innovation and creativity might not be fully integrated into the way students engage with online platforms or learning tools. Further incorporation of creative approaches in digital education could help address this gap (Fig. 12).

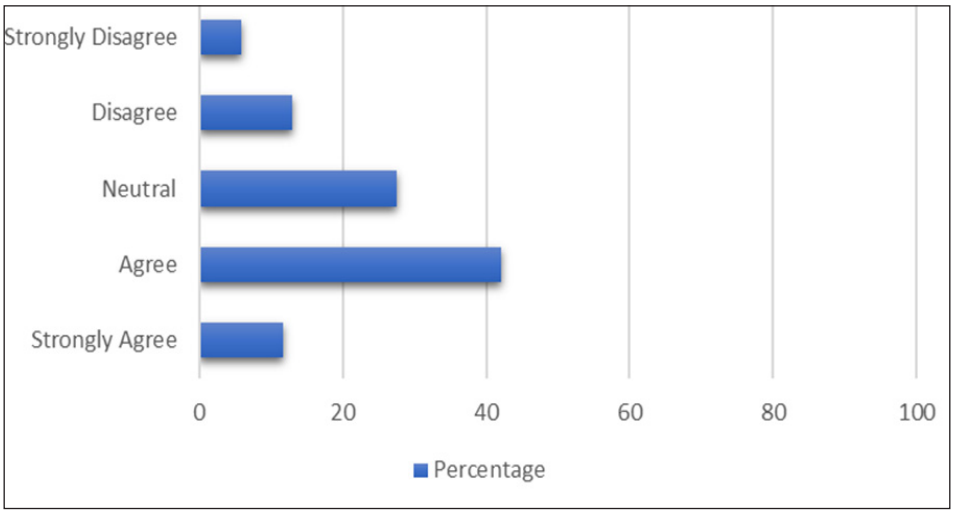


Source: Author's creation.

Fig. 12: Online Activities

Awareness of Positive Outcomes from Innovation and Creativity

A majority of respondents (51%) are aware of the positive outcomes of innovation and creativity in education, agreeing or strongly agreeing that such practices lead to better learning outcomes. However, 12% disagree, and 19% are neutral, suggesting that while there is general awareness of the benefits, there is still a segment of students who might not fully understand the potential advantages of creative learning methods (Fig. 13).

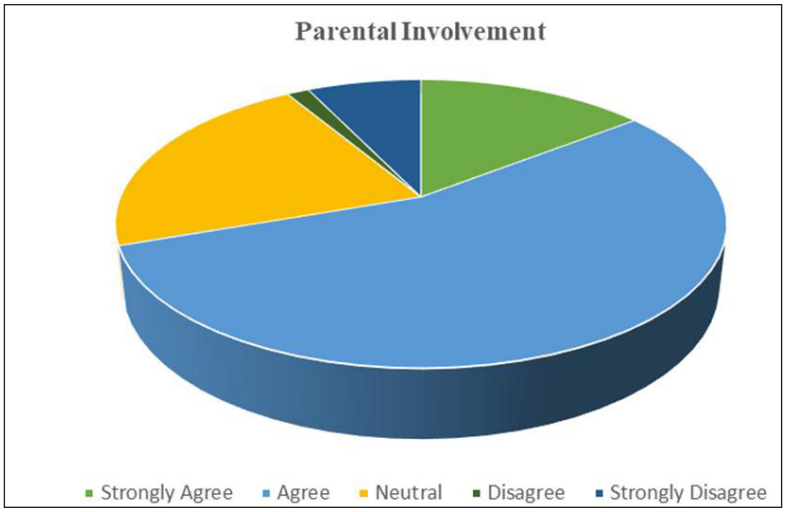


Source: Author's creation.

Fig. 13: Awareness of Positive Outcome

Parental or Guardian Involvement in Innovation and Creativity

Parental or guardian involvement is widely seen as beneficial in fostering awareness of innovation and creativity, with 65% of respondents agreeing or strongly agreeing. The result projects that family support impacts enhancing students' understanding and appreciation of creative approaches to learning. However, 6% of respondents disagree or strongly disagree, indicating that some students may not have the benefit of such involvement at home (Fig. 14).

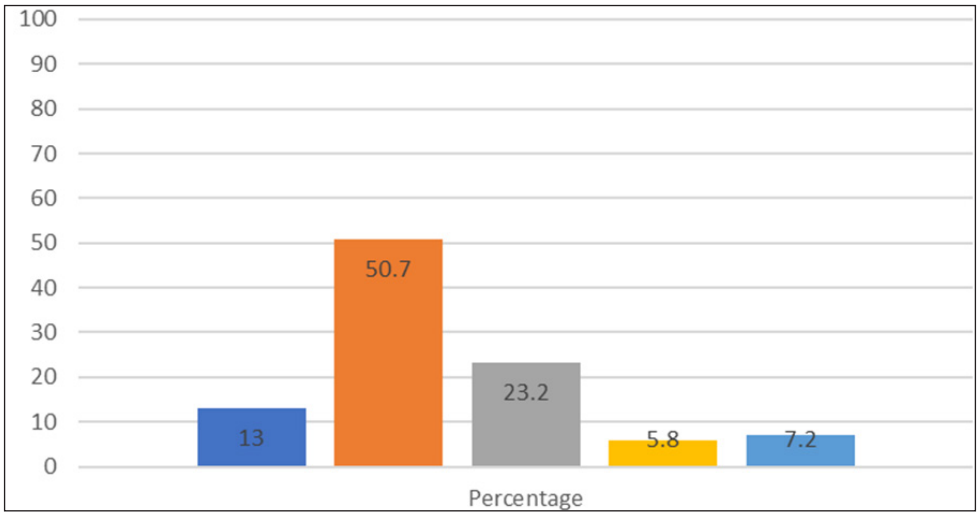


Source: Author's creation.

Fig. 14: Parental Involvement

Pro-Activity of Students in Improving Intelligence Through Innovation and Creativity

A significant proportion of respondents (68%) believe that young individuals take proactive steps to improve their intelligence through innovation and creativity, indicating that students are generally motivated to enhance their learning through creative means. However, 9% strongly disagree and 7% disagree, suggesting that some students may not be as proactive or may face barriers in accessing creative learning resources (Fig. 15).

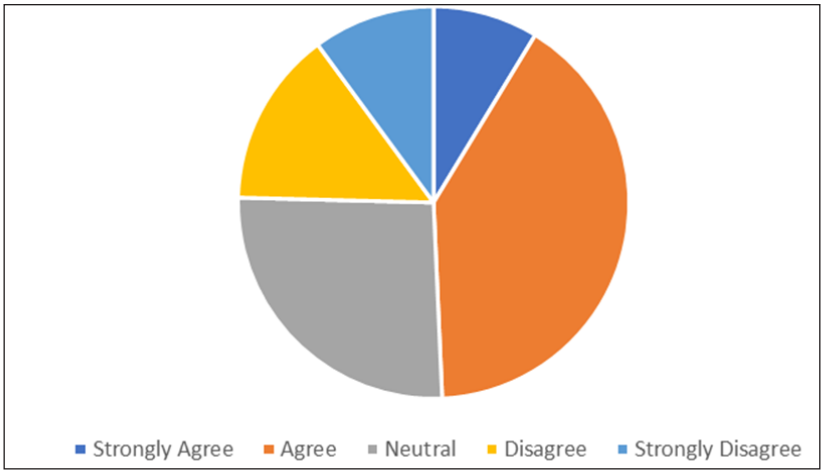


Source: Author's creation.

Fig. 15: Improving Intelligence

Government and Non-Government Institutions' Role in Promoting Innovation and Creativity

While 34% of respondents agree or strongly agree that government and non-government educational institutions effectively spread awareness about innovation and creativity, 17% disagree or strongly disagree. Fig. 16 reflects a mixed perception of the effectiveness of current educational policies and programs related to promoting creativity and innovation. More targeted initiatives might be necessary to enhance the impact of such programs.

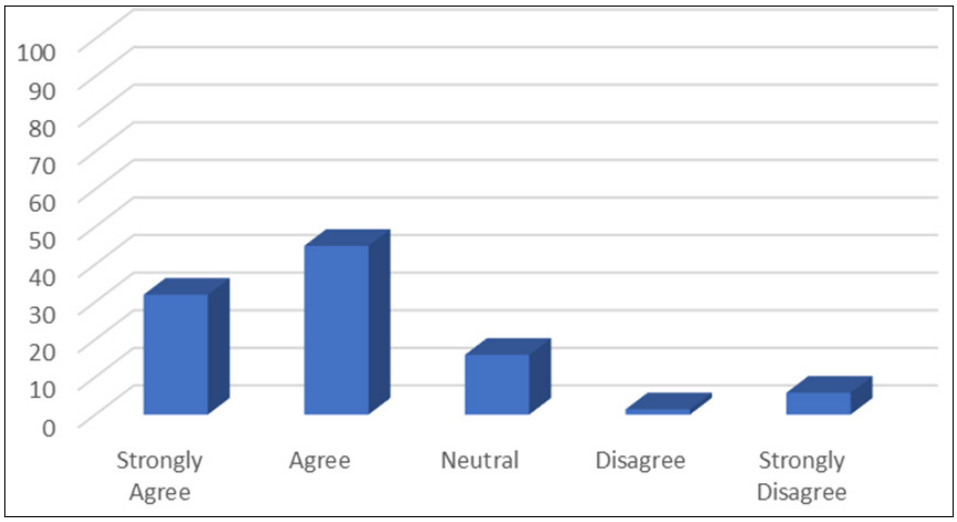


Source: Author's creation.

Fig. 16: Role of Government and Non-Government Organisation

Adoption of Innovation and Creativity Best Practices

Strong majorities (52%) of respondents agree or strongly agree that adopting innovation and creativity best practices would significantly improve students' learning abilities. Fig. 17 shows a clear acceptability of creative approaches in enhancing learning modalities. However, 5% disagree, and 11% are neutral, indicating that while the benefits are widely recognised, there may be some scepticism or hesitation in fully embracing these practices.



Source: Author's creation.

Fig. 17: Adoption of Innovation and Creativity

Future Trends of Innovation and Creativity in Education

In the cutting-edge innovative strategy of the digitalised era, there is a rising competitive paradigm shift in new, technology-intensive educational platforms. In the rapidly changing world, innovative approaches to learning act as catalytic agents for the development of students' creativity and innovative abilities. Fostering innovative pedagogies, entrepreneurial education, and technical skills within learning curricula is a growing trend that is essential for enhancing students' creative thinking and competitive skills, enabling them to thrive in a rapidly evolving world. As educational institutions continue to navigate the innovative landscape of education, it is crucial to project future learners in nurturing educational innovation and enhancing teaching practices with continuous improvement. To thrive academically in

the present millennium, it is essential to have the potential to think creatively and innovate, and Fig. 18 projects the upcoming innovative trends in the competitive landscape of the 21st century landscape.

Source: Author's creation.

Fig. 18: Future Trends of Innovative Education

Thus, in an ability, complexity, and uncertainty rapidly evolving global landscape, it is quite imperative to recreate an engaging and interactive learning environment that has the transformative potential in education and innovation in building positive outcomes with the culture of the innovative learning environment in the contemporary world.

Implications of the Study

In today's dynamic platform of universities and educational institutions, entrepreneurship has emerged as a critical driver of innovation, fostering resilience, inclusivity, and technological integration that empowers the next generation of entrepreneurs. With the acceleration of innovation and skill development approaches to teaching entrepreneurship, the youth of future generations will be equipped with tools and thinking potentials to create new ventures for sustained economic growth in the coming days. Like any other contributory factor, the essence of human resources is the critical success factor for innovation that empowers next-generation learners to drive economic growth for Vikshit Bharat 2047. The study upholds a realistic approach and keeps in mind the innovative-creative mindset in shaping future-generation leaders and next-generation entrepreneurs with a vision to pave the way for transformative solutions to allow creativity and innovativeness with ultimate delight and satisfaction to the society at large.

Concluding Remarks

The use and applicability of innovative education technology have emerged as one of the primary keys in boosting the pedagogical creativity of prospective educators, blending innovative educational methodology with creativity and innovation to create a supportive educational ecosystem in the contemporary world. There is broad recognition of emphasising and establishing an innovative learning environment that significantly influences and induces creativity among learners and effectively promotes creativity and education as strategic steps toward lifelong education and sustainable development. Systematically investing in innovative attributes not only enhances the learning experience of students but also effectively prepares educators to face dynamic challenges, think critically, and develop innovative solutions to complex problems. Embracing innovative approaches in learning fosters skill and mindset-specific skill bridging the gap between academic domain and global business constrains that can drive positive change towards the holistic progression of people, society, and the education system as a whole.

References

Baldwin, E. (2010). Innovation isn't creativity, it's a discipline you manage. *MIT Sloan Management Review.* Reprint

Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. *The Clearing House a Journal of Educational Strategies Issues and Ideas, 83*(2), 39-43. doi:https://doi.org/10.1080/00098650903505415

Binh, V. T. T., Nga, N. T. H., & Loan, N. T. T. (2022). Innovative teaching, delivering materials and the student's satisfaction in online learning: Evidence from a sharp shift due to COVID-19 pandemic in Vietnam. *Annals of Computer Science and Information Systems*, *34*, 87-92. doi:https://doi.org/10.15439/2022m3034

Boden, M. A. (2004). *The creative mind: Myths and mechanisms*. Routledge.

Camerilova, G., Kartavykh, M., & Ageeva, E. (2020). Development of professional creativity in the system of higher pedagogical education on the basis of independent activity. *SHS Web of Conferences*, *87*, 00050. doi:https://doi.org/10.1051/shsconf/20208700050

Carey, C., & Matlay, H. (2010). Creative disciplines education: A model for assessing ideas in entrepreneurship education? *Education + Training*, *52*(8/9), 694-709. doi:https://doi.org/10.1108/00400911011088999

Cropley, A. J. (2001). *Creativity in education and learning: A guide for teachers and educators*. Retrieved from http://ci.nii.ac.jp/ncid/BA52631085

Cummings, J. B., & Blatherwick, M. L. (Eds.). (2017). *Creative dimensions of teaching and learning in the 21st century*. Springer.

Feldhusen, J. F., & Treffinger, D. J. (1986*). Creative thinking and problem solving in gifted education.*

Ghafar, A. (2020). Convergence between 21st century skills and entrepreneurship education in higher education institutes. *International Journal of Higher Education*, 9(1), 218. doi:https://doi.org/10.5430/ijhe.v9n1p218

Gullo, D. F. (2004). *Understanding assessment and evaluation in early childhood education*. New York: Teachers College Press.

Henriksen, D., & Mishra, P. (2013). Learning from creative teachers. *Educational Leadership*, *70*(5), 1-4.

Hopkins, E. A. (2008). Classroom conditions to secure enjoyment and achievement: The pupils' voice. Listening to the voice of Every child matters. *Education 3-13*, 36(4), 393-401. doi:https://doi.org/10.1080/03004270801969386

Hosseini, A. S. (2011). University student's evaluation of creative education in universities and their impact on their learning. *Procedia-Social and Behavioral Sciences, 15*, 1806-1812.

Isis, P. D., Bush, J., Siegel, C. A., & Ventura, Y. (2010). Empowering students through creativity: Art therapy in Miami-Dade county public schools. *Art Therapy, 27*(2), 56-61. doi:https://doi.org/10.1080/07421656.2010.10129712

Jahnke, I., Haertel, T., & Wildt, J. (2017). Teachers' conceptions of student creativity in higher education. *Innovations in Education and Teaching International, 54*(1), 87-95.

Jeffrey, B., & Craft, A. (2004). Teaching creatively and teaching for creativity: Distinctions and relationships. *Educational Studies, 30*(1), 77-87. doi:https://doi.org/10.1080/0305569032000159750

Kelly, R. (Ed.). (2012). *Educating for creativity: A global conversation*. Brush Education.

Lundvall, B. A. (2008). Higher education, innovation, and economic development. *Higher Education and Development, 8*, 201-228.

Noor, N., Ahmed, Y., & Shahid, U. (2022). Innovative culture and students' learning in higher education institutions. *Journal of Development and Social Sciences*, *3*(3), 37-51.

Patphol, M. (2020). Developing a training curriculum to enhance teachers' learning management skills for promoting learners' creativity and innovation: A case study of Thai teachers. *Advanced Journal of Social Science, 7*(1), 181-187. doi:https://doi.org/10.21467/ajss.7.1.181-187

Piirto, J. (2004). *Understanding creativity.* Great Potential Press.

Rhodes, M. (1961). An analysis of creativity. *The Phi Delta Kappan*, *42*(7), 305-310.

Runco, M. A. (2003). Education for creative potential. *Scandinavian Journal of Educational Research*, *47*(3), 317-324.

Simonton, D. K. (2000). Creativity: Cognitive, personal, developmental, and social aspects. *American Psychologist*, *55*(1), 151.

Siraj-Blatchford, I. (2007). *Creativity, communication and collaboration: The identification of pedagogic progression in sustained shared thinking.*

Tilbury, D. (2004). Environmental education for sustainability: A force for change in higher education.

In *Higher Education and the Challenge of Sustainability: Problematics, Promise, and Practice* (pp. 97-112). Dordrecht: Springer Netherlands.

Torrance, E. (1963). *Education and the creative potential*. University of Minnesota Press.

Uzzi, B., & Spiro, J. (2005). Collaboration and creativity: The small world problem. *American Journal of Sociology*, *111*(2), 447-504.

Wei, B., Zhang, H., Zheng, H., & Zhang, F. (2019). Research and practice of the research - Exploration curriculum design oriented by practical innovation ability. *DEStech Transactions on Social Science Education and Human Science,* doi:https://doi.org/10.12783/dtssehs/eiem2018/26911

Wu, C. S., Lee, C. J., & Tsai, L. F. (2012). Influence of creativity and knowledge sharing on performance. *Journal of Technology Management in China*, *7*(1), 64-77.

Secondary Data Source

https://fastercapital.com/topics/fostering-innovation-and-creativity-in-entrepreneurship-education.html

Salybekova, F. M., Almetov, N. S., Karbozova, G. K., Suyuberdieva, A. A., Kudaibergenova, M. R., & Nazarova, G. Z. (2023). Role of the integration of the 4C model in the professional training of foreign language teachers. *Frontiers in Education, 8.* doi:https://doi.org/10.3389/feduc.2023.1125728