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Role of Students in Value Co-Creation for Online Learning: An empirical study in Higher Education Institutions

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Abstract
Students in India are integral to the process of co-creating value for virtual learning environments. Their engagement, constructive criticism, and active participation all greatly improve the learning process. Students give platforms priceless insights about the kinds of material and delivery techniques that work best for them. Additionally, by producing user-generated content like study guides, discussion boards, and group projects, they contribute to co-creation and enhance the learning environment in higher education. In addition, the engagement of students with virtual learning environments facilitates the identification of opportunities for development, promoting an ongoing improvement culture. They shape the platform's development and keep it current and useful by offering helpful criticism and recommendations. Additionally, students broaden the scope and influence of online education by sharing their learning experiences with peers, which aids in the spread of knowledge. Students that actively participate in online learning benefit not only themselves but the entire learning community as well, which makes them invaluable collaborators in the value co-creation process. A sample of 279 respondents was collected from students from higher education institutes. The four factors that identify the Role of Students in Value Co-Creation for Online Learning are Active Participation, Feedback, Collaborative Learning, and Content Creation.

Keywords: Students, Virtual learning environments, Co-creation, User-generated content, Improvement culture, Development opportunities, Knowledge sharing, Higher education.

Introduction

Students are essential actors in co-creating value in India's online learning environment. Through the creation of content, comments, and insights about preferences, their active participation determines the platforms' trajectory. Students create a vibrant learning environment by taking part in conversations, exchanging experiences, and working together on projects. The learning community as a whole in addition to their personal educational experience. A complete paradigm was given by Ranjbarfard and Heidari Sureshjani (2018), emphasizing how students at higher education institutions actively shape the dynamics of virtual academic contexts. Students made important contributions to the improvement of "learning experiences" and the general efficacy of online platforms through their participation, feedback, and teamwork.

According to Zarandi et al. (2022), students engage in a variety of tasks outside of the traditional classroom, including content creation, insight-giving, and feedback-giving. The creation of content is one of the main contributions made by

students. Students actively shape their own and their classmates' learning experiences by participating in discussions, creating study materials, and working together on projects in online learning environments. In addition to improving the content, this interactive approach gives pupils a sense of ownership and participation. Students also provide insightful comments and insights that have a big impact on how instructional resources are developed and improved. Students assist educators and institutions in better understanding their needs by sharing their ideas and experiences, which results in the development of more effective and relevant learning materials. Additionally, students are empowered by this collaborative method, which gives them a sense of agency and responsibility in their education. Students who actively participate in the co-creation process enhance their critical thinking, problem-solving, and communication skills—all of which are vital for their future success in both school and the workplace.

Curtin and Sarju (2021) promoted co-creation of online learning content from a student-centric perspective. In order to customise content to meet students' unique needs and preferences at higher education institutions, they emphasised involving students as partners in the design and delivery of educational materials. This collaborative model aimed to create personalised and engaging learning experiences, boosting student satisfaction and academic success in the online realm. Institutions ensured relevance across a range of learning styles and backgrounds by incorporating students into the content creation process and benefiting from their different perspectives and ideas. Deeper engagement was encouraged and students were given the opportunity to take charge of their educational experience. Teachers might better meet the interests, speeds, and abilities of each student by co-designing materials, which would increase student happiness and motivation. A sense of co-responsibility was fostered in the learning community as a result of this inclusive approach, where teachers and students supported one another's accomplishments. Encouraging student participation so offered a more productive and enriching virtual learning environment.

Literature Review

Annamalai (2017) examined the role of students in "value co-creation" for online learning. They explored the ways in which students actively shaped the educational process and the value that resulted from their experiences. Students were instrumental in "co-creating value" in the educational setting by participating in cooperative activities like project work and problem-solving exercises. Stoten et al. (2018) focused on the utilisation of online discussion at higher education institutions as they further investigated the dynamics of co-creation in online learning. Students participate in dynamic discussions and exchange ideas, viewpoints, and insights via various channels. In addition to improving the learning environment, this cooperative approach increased the value gained from online educational experiences.

Manzoor and Mahmud (2023) emphasised the importance of student happiness as well as the part that students play in "value co-creation" for online learning in India. They emphasised how the value that students obtain from their learning experiences is directly impacted by their active involvement with educational content and platforms. Students contribute significantly to the development of the educational ecosystem and the enhancement of online learning through their feedback-giving and collaborative participation in activities. In addition to improving their personal learning outcomes, this active participation helps Higher Education Institutions (HEIs) as a whole. In the context of online learning in India, they emphasise the significance of seeing students as active participants in the co-creation of value within the educational process, rather than just as users of knowledge.

Robayo-Pinzon et al. (2023) focused on the relationship between artificial intelligence (AI) and the value co-creation process in higher education establishments. The significance of students in this dynamic environment was emphasised, along with their active participation in building AI-driven learning solutions customised for particular situations like online education in India. By offering individualised learning experiences and instantaneous feedback systems, the incorporation of AI technologies has enormous potential to improve the efficacy and quality of online education. But student participation is essential to the successful application of AI, since their perspectives and insights help shape the creation and improvement of AI-powered learning materials. This change in perspective emphasises the significance of co-creating educational value and recognises the agency of students in directing their learning experiences. Using student thoughts and contributions is crucial to advancing meaningfully in the field of education, especially in the context of online learning in India, where cultural diversity and digital innovation collide.

Adikari et al. (2021) emphasised that students are active participants in the co-creation of value, rather than passive users of knowledge. This active student participation is especially important in the Indian context of online learning. Their participation in class discussions, interactions with teachers and classmates, and engagement with the course materials all add to the value of the educational experience. This active participation enriches the educational environment as a whole in addition to improving the quality of learning. Cavallone et al. (2021) further highlighted that, particularly when analysed through a business lens, student viewpoints are crucial in defining the calibre of higher education. Educational institutions can better match their offers to the needs and expectations of their students by viewing them as co-creators of value. This will improve the quality of education for all students. This strategy is especially pertinent to online learning in India, where it is important to carefully evaluate the various demands and preferences of students in order to guarantee the efficacy and applicability of educational initiatives.

Nguyen et al. (2021) highlighted the benefits of value co-creation in marketing for higher education that are relevant to online learning in India. There are many advantages to actively include students in value co-creation. First off, it raises student happiness since it makes them feel more involved in their learning, which gives them a sense of fulfillment and ownership. Additionally, students that are involved tend to be more devoted to the school and its programmes since they feel more connected to them. Academic institutions may foster a learning environment that is inclusive, supportive, and responsive to the varied needs and preferences of Indian students by actively seeking out and respecting student feedback. Initiatives that involve value co-creation also greatly increase student involvement. Students are more likely to actively participate in class and connect with the contents and activities when they feel that their contributions are valued and integrated into the learning process.

The collaborative efforts of instructors and students in altering the learning process were highlighted by Ventura-Leon et al. (2023). The focus of this strategy is on students' 'active involvement' in creating, distributing, and assessing digital learning platforms and materials. Students' contributions are essential to maintaining the "relevance" and "effectiveness" of educational programmes in the context of online learning in India, where "cultural diversity" and "technological advancements" collide. The advantages of seeing students as "partners" in the process of learning and teaching were emphasised by Lubicz-Nawrocka (2018), especially when it comes to co-creating curriculum content. Within the Indian online education context, the 'various backgrounds' and experiences of students provide insightful information for creating 'inclusive' and 'culturally relevant' learning resources. Educational institutions may ensure that online learning resources are tailored to the specific needs of Indian learners and align with the local context by incorporating students in the curriculum co-creation process. This approach can lead to increased student engagement and academic performance.

Kumari et al. (2019) focused on the importance of higher education institutions while examining co-creation for social innovation within an ecosystem. They concluded that students, as important participants in the educational system, are vital in fostering social innovation through co-creation and cooperation. Students contribute to the development of social value while improving their educational experiences when they work on projects and activities that address societal issues. Using a value co-creation approach, Zamora-Ramos et al. (2023) examined complaint behaviour among college students in a complex service ecosystem. They emphasises how crucial student participation and feedback are to raising the standard of educational services. Students in India actively contribute to the co-creation of value in the online learning environment by sharing their ideas and concerns and advocating for improvements to the educational process.

Objective

For identifying “Role of Students in Value Co-Creation for Online Learning”.

Study’s Methodology

279 respondents are considered for this study which was collected from students from higher education institutes. Random sampling method was used to collect data and examined by “Explanatory Factor Analysis” for results.

Findings of the Study

Below table shows demographic details of participants it shows that 52.33% are male, and 47.67% are female participants. Regarding age of the respondents, 31.90% are between 22 to 25 years, 35.48% are 25 to 30 years, and 32.62% are above 30 years of age. About Types of Institutes, 59.50% are private institutes, and 40.50% are government institutes.

Details of Participants

Variable	Participants	% age
Gender of Participants		
Male	146	52.33%
Female	133	47.67%
Total	**279**	**100**
Age in years		
22 to 25	89	31.90%
25 to 30	99	35.48%
Above 30	91	32.62%
Total	**279**	**100**
Types of Institutes		
Private Institute	166	59.50%
Government Institute	113	40.50%
Total	**279**	**100**

"Factor Analysis"

"KMO and Bartlett's Test"

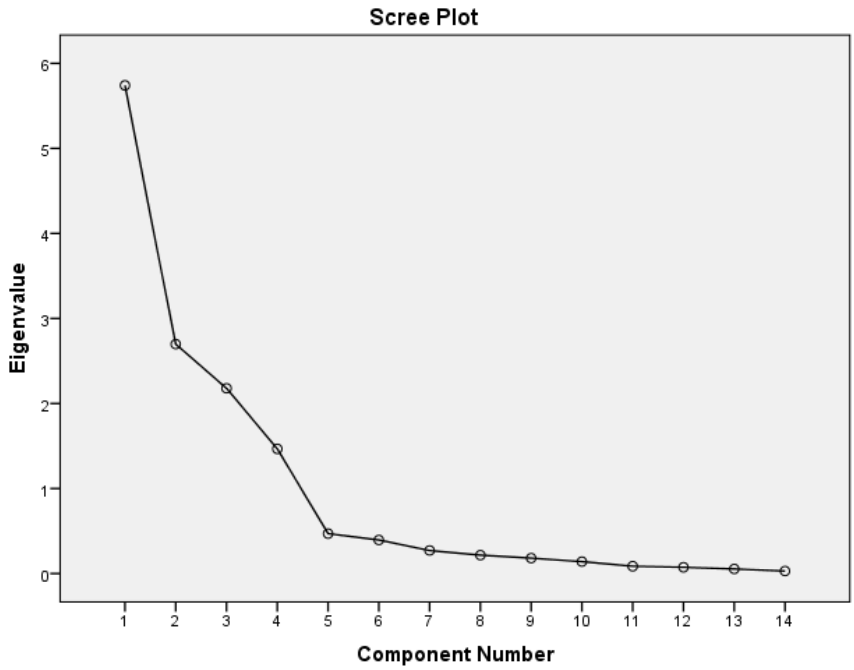
"Kaiser-Meyer-Olkin Measure of Sampling Adequacy"		.782
"Bartlett's Test of Sphericity"	"Approx. Chi-Square"	4303.006
	df	91
	Significance	.000

"KMO and Bartlett's Test", value of KMO is .782

"Total Variance Explained"

"Component"	"Initial Eigenvalues"			"Rotation Sums of Squared Loadings"		
	"Total"	"% Of Variance"	"Cumulative %"	"Total"	"% Of Variance"	"Cumulative %"
1.	5.740	41.002	41.002	**3.706**	26.471	26.471
2.	2.698	19.270	60.272	**3.611**	25.795	52.266
3.	2.179	15.562	75.834	**2.415**	17.248	69.515
4.	1.466	10.474	86.308	**2.351**	16.794	**86.308**
5.	.470	3.357	89.665			
6.	.394	2.818	92.483			
7.	.271	1.936	94.419			
8.	.216	1.545	95.964			
9.	.181	1.294	97.258			
10.	.140	1.001	98.259			
11.	.086	.616	98.875			
12.	.074	.528	99.403			
13.	.054	.387	99.790			
14.	.029	.210	100.000			

All the four factors are making contribution in explaining total 86.308% of variance. The variance explained by Active Participation is 26.471%, Feedback is 25.795%, Collaborative Learning is 17.248%, and Content Creation is 16.794%.



ScreePlot

"Rotated Component Matrix"

S. No.	Statements	Factor Loading	Factor Reliability
	Active Participation		**.971**
1.	Students engage in the process asking questions, sharing insights, and contributing in discussions	.954	
2.	Their participation enriches the learning experience for themselves and their peers	.949	
3.	Their active participation determines the platforms' trajectory	.929	
4.	Active participation enriches educational environment in addition to improving the quality of learning	.924	
	Feedback		**.954**
1.	Students provide feedback on course materials, teaching methods, and overall learning experiences	.956	
2.	This feedback helps instructors and course designers to continuously improve the quality of online courses.	.910	
3.	Through instantaneous feedback, incorporation of AI technologies improves online education	.894	
4.	Participation and feedback are to raise the standard of educational services	.886	
	Collaborative Learning		**.876**
1.	Students are empowered by collaborative method, gives sense of agency and responsibility in education	.892	
2.	This collaborative model aimed to create personalized and engaging learning experiences	.847	
3.	Through collaboration, they share knowledge, skills, and perspectives, enhancing the learning outcomes	.831	
	Content Creation		**.846**
1.	Students may create content such as blog posts, videos, or presentations related to course topics	.920	
2.	By sharing their content and creations, they contribute valuable resources for learning	.899	
3.	To meet students' needs and preferences at higher education institutions, contents are customized	.745	

Factors and the associated variables

The first factor of the study is Active Participation, the variables it includes are Students engage in the process asking questions, sharing insights, and contributing in discussions, their participation enriches the learning experience for themselves and their peers, Their active participation determines the platforms' trajectory, and Active participation enriches educational environment in addition to improving the quality of learning. Feedback is the second factor, the variables it includes are Students provide feedback on course materials, teaching methods, and overall learning experiences, this feedback helps instructors and course designers to continuously improve the quality of online courses, through instantaneous feedback, incorporation of AI technologies improves online education, and Participation and feedback are to raise the standard of educational services. Third factor of the study is Collaborative Learning, it includes variables like Students are empowered by collaborative method, gives sense of agency and responsibility in education, this collaborative model aimed to create personalized and engaging learning experiences, and Through collaboration, they share knowledge, skills, and perspectives, enhancing the learning outcomes. Last and fourth factor is Content Creation, it includes variables like Students may create content such as blog posts, videos, or presentations related to course topics, by sharing their content and creations, they contribute valuable resources for learning, and to meet students' needs and preferences at higher education institutions, contents are customized.

"Reliability Statistics"

"Cronbach's Alpha"	"Number of Items"
.880	14

Total reliability of 14 items that includes variables for Role of Students in Value Co-Creation for Online Learning is 0.880

Conclusion

To sum up, in Indian higher education institutions, students are essential to the process of co-creating value for online learning. They greatly aid in the development and improvement of educational experiences as engaged participants in the learning process. Students immediately impact the calibre and efficacy of online learning environments and initiatives by their participation, feedback, and teamwork. A useful source of feedback for ongoing innovation and improvement in the delivery of online education is the varied range of opinions, needs, and preferences among students. By actively participating, they help students feel more empowered and in control of their education, which makes it more student-centered. Utilising this knowledge, educational institutions and instructors may better adapt online programmes and materials to the changing needs of students, increasing student happiness and academic results. Additionally, students promote online learning in their communities by influencing attitudes and encouraging adoption by serving as advocates and ambassadors for it. They encourage a culture of lifelong learning and draw in new students with their success stories and positive experiences. Essentially, students are active co-creators of value within the online learning ecosystem rather than only being recipients of it. The prosperity and continuous expansion of higher education institutions in India and abroad in the digital era depend on acknowledging and utilizing their contributions. The four factors that identify the Role of Students in Value Co-Creation for Online Learning are Active Participation, Feedback, Collaborative Learning, and Content Creation.

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