

# Perceptions of Students studying in Arts Stream on Online Teaching: An Exploratory Study Using the Community of Inquiry Framework

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## Abstract

*This study is based on the perceptions of the Arts stream students about online teaching in the schools. The theoretical basis of this study is the Community of Inquiry (CoI) framework developed by Garrison .et al(2000). The sample of this study included students of Class 12, these students of batch 2020-2023, were taught through online mode and they are now in hybrid mode of learning. For eliciting responses from the students a five-point Likert scale was developed. The findings outlined how digital tools such as WhatsApp and educational platforms shaped the learning experiences of students. The results suggested that online learning has long-term effects, The results of this study give insights on opportunities and challenges that have been experienced by different stakeholders during online education. The study also put forth promising future directions for education..*

**Keywords:** *Community of Inquiry (CoI) Framework, Online Teaching, Cognitive Presence, Social Presence, Teaching Presence, Arts Stream Students, Perception, Digital Education.*

## Introduction

Community of Inquiry (CoI), Model was developed by Garrison, Anderson and Archer in 2000. In order to create meaningful and engaging educational experiences, it highlighted the significance of three fundamental components: social presence, cognitive presence, and teaching presence. The school students who have been taught through online classes between 2020 to 2023 (COVID-19 pandemic) and those are being exposed to online teaching invariably post pandemic were

part of this study. Online teaching, here includes virtual instruction, online classes both through synchronous or non- synchronous mode, e-learning days, students using other technology devices for assessment or using learning apps e.g., Diksha, PM e-vidya or DTH channels and many more .

The CoI framework (Garrison et al., 2000) states that forming a learners' group is an essential component for assessing the effectiveness of online instruction. In this group, which is comparable to a regular classroom setting, teaching and learning

process occurs as a result of three interrelated factors teaching presence, social presence, and cognitive presence. Even though teaching in person has become more popular after the pandemic, the use of digital tools in the classroom shows that online instruction is still an essential part of modern education. The way the students see things has changed significantly, demonstrating how the CoI model encourages more in-depth participation, group projects, and critical thought. Students' educational transformation is comparable with the degree of integration of digital resources into their learning environments. Important components of the framework are as follows:

### **Social Presence**

The ability of members to project their qualities into the society and show themselves as "real people" is referred to as social presence. It involves open communication, group cohesion, and interpersonal relationships. In the Indian context, where diverse linguistic and cultural backgrounds can be barriers to effective communication, fostering social presence is crucial. Garrison's emphasis on group identity over individual identity highlights the need for Indian educators to design activities that build a collective sense of belonging and trust among students (Garrison et al., 2000)

### **Cognitive Presence**

Cognitive presence is explained as the process of meaning making involving the process of knowledge construction, sustained reflection and discourse. The Practical Inquiry Framework, derived from John Dewey's work, underpins this element and involves four phases: triggering event, exploration, integration, and resolution. For Indian online education, this implies the necessity

of designing learning tasks that encourage critical thinking and iterative reflection, helping students navigate from mere information gathering to knowledge construction and application.

### **Teaching Presence**

Teaching presence encompasses the design, facilitation, and direct instruction needed to guide the educational experience. It is pivotal in maintaining the balance and interaction between social and cognitive presences. For India, where teacher-student ratios are often high, the role of teaching presence can be enhanced through technology-enabled solutions like discussion forums and interactive sessions, ensuring that learners receive adequate guidance and feedback.

### **Review of related literature**

Garrison (2009) in the article "Communities of Inquiry in Online Learning" identifies three basic presences: cognitive, social, and teaching, which form the basis for understanding the online environment. Drawing on John Dewey's educational theories, the Community of Inquiry (CoI) framework emphasizes the need for an interactive, collaborative learning experience to achieve higher-order learning outcomes. Teaching presence involves the design of and facilitation of the social space, some sense of communication, and belonging to a community. Cognitive presence is the ability to collaborate critically. This work by Garrison illustrates how these elements all work well in concert to form an effective online learning community.

Ignacimuthu & Vijayakumar's (2022) in the article "WhatsApp Learning in the Light of Communities of Inquiry" explored the role

of WhatsApp with regard to enhancing online education within higher education, framed under the framework of Community of Inquiry (CoI). The highly critical interplay between teaching presence, social presence, and cognitive presence will be threaded and intervened by pointing out the highly obvious impact of instructor involvement on student engagement and, subsequently, learning. By drawing on a questionnaire of 769 undergraduate students in Vijayawada, India, the study now reflects that WhatsApp promotes continuous interaction, collaboration, and contents sharing particularly at times of disruption like COVID-19 pandemic. The moderated correlation between teaching presence and both social and cognitive presence emerges from the quantitative analysis while it strengthens the value of structured instructional strategies. Thus, the study reiterates not only the potential of WhatsApp but also hails its feasibility in bridging the digital divide in the Indian education system, which can support inclusive, interactive, collaborative learning styles associated with the CoI framework.

The study by Annamalai et al. (2024) provides insights into how the Community of Inquiry (CoI) framework is utilised in online education, particularly with regard to the use of WhatsApp by ESL students in Malaysia to improve their English language skills. The mixed-methods study demonstrates the ways in which social, cognitive, and instructional presences appear in WhatsApp conversations. The results show that while there is a decline in casual social connections with professors, there are still strong social relationships among pupils. Active participation is an indicator of a teaching presence, although crucial knowledge is shared less often. These results suggest that WhatsApp can be an effective tool in online

education by enhancing accessibility and flexibility, though its informal nature might limit more formal academic discussions.

The article by Carroll, Lang, and Connolly (2024) extends the traditional Community of Inquiry (CoI) framework to support students in online and digital education. This framework emphasizes the importance of the three core components of presence: teaching, cognitive, and social presence. The authors propose enhancements to address the unique challenges of digital environments, such as fostering more immersive interactions and supporting learner engagement through advanced digital tools. They also highlight how the framework can be adapted to promote self-efficacy and digital embodiment, helping students feel more connected in online learning spaces. By integrating these advancements, educators are better positioned to create a more interactive and inclusive online learning experience. This extended CoI framework serves as a valuable guide for educators to structure online courses that support deeper learning and a sense of community, ultimately leading to improved educational outcomes in digital environments.

Most studies carried out regarding online teaching during the pandemic and even after the pandemic have shown some outstanding results in terms of impact. This study, with a focus on art stream students studying in Delhi's schools, draws upon the well-developed Community of Inquiry (CoI) framework to analyze perceptions of online instruction they have received since 2020. By examining the factors associated with teaching presence, social presence, and cognitive presence, this study will help in gaining further insight into these online influences on these students and provide glimpses for future educational strategies.

### **Objectives of the study**

To explore the perceptions of Art stream students on online teaching

To analyse the perception of Arts Stream students on the component of Community of Inquiry (CoI) Framework (teaching presence, social presence, and cognitive presence)

### **Data and methods**

The research employed a quantitative approach, using a survey method to collect data on the perceptions of school students on online teaching studying in the Arts stream.

### **Sample**

The sample for the study was selected through convenient sampling, allowing the researcher to gather data from a readily accessible group of students, making it a cost-effective and time-efficient method. Though convenient sampling may have limitations in generalizability, it provided a suitable way to explore the initial perceptions of students in this specific educational setting. 50 Students who studied class 12 with art stream in the session 2023-2024 were chosen as the participant of this research. The participants have been taught through online mode since 2020. They will provide valuable insight from initial phase of introduction of Online Teaching in Delhi's School to hybrid mode of online teaching, post covid.

### **Tool used**

A five-point Likert scale was developed to measure various aspects of student perceptions, ranging from "Strongly Disagree" to "Strongly Agree." This scale was designed to assess students'

perceptions on Cognitive Presence, Teaching Presence and Social Presence of Community of Inquiry Framework of Online Teaching influencing their educational experience. With the goal of developing a perception scale tailored to this context, the data collected through the Likert scale was statistically analysed using descriptive and inferential techniques. Online Teaching Perception Scale for Students (OTPSS) was developed under the framework of CoI. Survey Form link was developed, and perceptions of the students were collected. There was total 30 items in the rating scale 9 were related to demographic details like gender, age, and academic achievement of the students and 21 items were related to different type of presence-cognitive, teaching, and social of COI framework. Table -1 shows different items used in the survey for collecting perception and the responses ranges from Strongly Agree (5) to Strongly Disagree (1).

**TABLE -1** Items of Online Teaching Perception Scale for Students (OTPSS) under the framework of Community of Inquiry (CoI)

Item	Statement	CoI Category	Positive/Negative Statement
1	The instructions provided on online platforms are clear and easy to understand.	Cognitive Presence	Positive
2	The communication between students and teachers during online teaching is clear and effective.	Social Presence	Positive
3	There is insufficient opportunity for interaction with teachers during online teaching.	Teaching Presence	Negative
4	The multimedia content (videos, presentations, etc.) used during online teaching was not of good quality.	Cognitive Presence	Negative
5	The multimedia content used in online sessions did not improve my understanding of the subject.	Cognitive Presence	Negative
6	Online teaching effectively facilitated a positive learning environment.	Teaching Presence	Positive
7	Teachers did not provide timely feedback during online teaching.	Teaching Presence	Negative
8	Teachers provided additional learning resources such as audio, video, case studies, etc.	Teaching Presence	Positive
9	Online teaching made learning better with additional materials.	Cognitive Presence	Positive
10	Online teaching provided limited opportunities for interaction with peers.	Social Presence	Negative
11	Online teaching encouraged peer learning through pair work/small group activities.	Social Presence	Positive
12	The online quizzes and assessments were not effective in evaluating students' learning.	Teaching Presence	Negative

Item	Statement	CoI Category	Positive/Negative Statement
13	Teachers effectively addressed technology-related challenges faced by students.	Teaching Presence	Positive
14	Teachers did not effectively adapt their teaching styles in online teaching to meet different learning needs.	Teaching Presence	Negative
15	Online teaching improved students' academic performance.	Cognitive Presence	Positive
16	Opportunities provided by teachers for doubt clearance.	Teaching Presence	Positive
17	The ease of access to study materials through various platforms.	Teaching Presence	Positive
18	Students were not actively engaged in the online teaching-learning process.	Social Presence	Negative
19	Online teaching through platforms like Zoom, Google Classroom, and others helps students feel connected and engaged with peers, similar to a real classroom.	Social Presence	Positive
20	I do not feel confident about understanding and mastering the concepts taught during online teaching.	Cognitive Presence	Negative
21	Online interschool competitions (quiz, debate, cultural programs, etc.) did not enhance social interactions and engagement.	Social Presence	Negative

\*For the above table Linkert scale of 5-point rating (1to5) where 1 indicates strongly disagree and 5 indicates strongly agree for positive statement and the scale is reversed in the case of negative statement while scoring.

### Reliability and validity

The validity of the Linkert scale was tested through the content validity. Online teaching Perception Scale for Students was sent to the two experts in the concerned field and their suggestion were incorporated while designing the final tool for data collection.

The ensure the reliability of the scale, the researcher used Cronbach Alpha test for the various items in each presence (Cognitive, Teaching and Social) under the COI Framework. The Score of the Scale for Cognitive Presence was 0.74, Teaching Presence was 0.71 and Social Presence was 0.72 which indicates satisfactory reliability of the Linkert Scale.

### Analysis and findings

The responses of the participants from the Likert scale were combined together to analyze the presence of the teaching, social, and cognitive presences in online learning. Originally, the Likert scale had five points: 1 (Strongly Disagree), 2, 3, 4, and 5 (Strongly Agree). Researcher aggregated them to simplify the analysis and draw more meaningful insights. Rating score -3,4 and 5 were combined together indicating a neutral to positive perception of the different presence in Category 1 whereas rating scores 1 and 2 were categorized together in Category 2, indicating a negative/low perception of the different presence. Then, the data was analysed on the basis of 21 items related to different presence (cognitive, teaching and social) in the above category. The proportion of respondents whose rating fell in the positive perception category (3-5) was then calculated. Such a proportion simply suggests the proportion of students who perceived a positive or influential presence within the online teaching.

**Table-2** Item wise Analysis of Cognitive Presence of Online Teaching in Responses Category-1 and Category-2

S.no	Cognitive Presence	Category -1	Category-2
1	The instructions provided on online platforms are clear and easy to understand. (Q10)	52%	48%
2	The multimedia content (videos, presentations, etc.) used during online teaching was of good quality. (Q13)	71%	29%
3	The multimedia content used in online sessions did not improve my understanding of the subject. (Q14)	35%	65%
4	Online teaching made learning better with additional materials. (Q18)	71%	29%
5	Online teaching improved students' academic performance. (Q24)	62%	38%
6	I do not feel confident about understanding and mastering the concepts taught during online teaching. (Q29)	36%	64%

Analysis using the framework of CoI revealed that most students perceive cognitive presence in online teaching positively. Most items that measured cognitive presence, in this case those related to multimedia content quality, availability of supportive materials for learning, and general enhancement of academic performance, acquired a high positive response. For instance, 71% of the students reported that the quality of multimedia material used in online teaching was good, and 65% of the respondents also stated that supplementary materials offered in online teaching enriched their learning. Negative items also justifiably shows the same result.

**Table-3** Item wise Analysis of Socia Presence of Online Teaching in Responses Category-1 and Category-2

S.no	Social Presence	Category -1	Category-2
1	The communication between students and teachers during online teaching is clear and effective. (Q11)	68%	32%
2	Online teaching provided limited opportunities for interaction with peers. (Q19)	32%	68%
3	Online teaching encouraged peer learning through pair work/small group activities. (Q20)	66%	34%
4	Students were not actively engaged in the online teaching-learning process. (Q27)	30%	70%
5	Online teaching through platforms like Zoom, Google Classroom, and others helps students feel connected and engaged with peers, similar to a real classroom. (Q28)	70%	30%
6	Online interschool competitions (quiz, debate, cultural programs, etc.) did not enhance social interactions and engagement. (Q30)	40%	60%

An analysis of online teaching within the Community of Inquiry framework found that social presence generally was perceived positively by participants. Statement 11, which solicited opinions regarding the clarity of student-to-teacher communication as well as the effectiveness of such communication in the context of online teaching, was scored positively by 68% of the respondents. Another, item 28 which is related Online teaching through platforms like Zoom, Google Classroom, and others helps students feel connected and engaged with peers, similar to a real classroom was also positively perceived by 70%. This, therefore, indicates that with online teaching social interaction and communication among participants is assured and positive. Negative statement also reflects the same result.

**Table-4** Item wise Analysis of Teaching Presence of Online Teaching in Responses Category-1 and Category-2

S.no	Teaching Presence	Category -1	Category-2
1	There is insufficient opportunity for interaction with teachers during online teaching. (Q12)	34%	66%
2	Online teaching effectively facilitated a positive learning environment. (Q15)	72%	28%
3	Teachers did not provide timely feedback during online teaching. (Q16)	46%	54%
4	Teachers provided additional learning resources such as audio, video, case studies, etc. (Q17)	70%	30%
5	The online quizzes and assessments were not effective in evaluating students' learning. (Q21)	38%	62%
6	Teachers effectively addressed technology-related challenges faced by students. (Q22)	74%	26%
7	Teachers did not effectively adapt their teaching styles in online teaching to meet different learning needs. (Q23)	44%	56%
8	Opportunities provided by teachers for doubt clearance. (Q25)	80%	20%
9	The ease of access to study materials through various platforms. (Q26)	76%	24%

An analysis of teaching presence in online teaching based on the CoI Framework finds that most items reflected a generally positive perception of the participants. For instance, item number 15, whereby online teaching effectively established a positive learning environment, was scored by 72% who fell into the “neutral to high” rating scale category, Category-1. Similarly, number 17, which offered supplementary learning materials in the form of audio, video, and case studies. It received a very good response at 70% positive response. Negative Statement in Item-23, which actually stated that instructors did not have their teaching methods flexible enough to different learning styles within an online environment scored 44 % of the responses under Category -1 (rating 3, 4, and 5), while 56% under the category-2 (rating 1 and 2). This, then means that even though the students were critically analyzing elements of teaching presence, over all they perceived the adaptive work of teachers positively

### Discussion

The literature study highlights the Community of Inquiry (CoI) framework’s substantial potential for improving online learning in the Indian environment. The CoI paradigm, with its emphasis on the integration of social, cognitive, and teaching presences, offers a productive virtual learning environment. Analysis of online teaching through the CoI framework reveals that most students hold very positive views about cognitive, social and teaching presence. The considerable approval on multimedia content

quality with 71% and 65% respectively all agree with Garrison et al. (2000) observation that the cognitive presence of students in meaning creation through reflection and discourse is supported. This is particularly pertinent to the Indian context, where students may bring with them diverse linguistic antecedents that can play the role of complicating factors in learning; and, consequently, the diffusion of high-quality multimedia resources becomes of high priority in the facilitation of students' cognitive engagement.

Furthermore, the overall positive perceptions in terms of social presence as manifested in 68% of the respondents facing effective communication with their teachers and 70% feeling connected to peers while using Zoom and Google Classroom are also in tune with the literature as establishing a sense of community, in general, is more important in online environments, as famously echoed by Garrison et al. (2000). Such aspects form the basis of trust and belonging in a culturally diverse nation like India, where collaborative learning is very crucial for its future.

Teaching presence, similarly, elicited strong positive responses, because 72% of the respondents agreed that the online teaching environment was supportive. This is an indication that adaptive teaching methods which help in fulfilling different kinds of learning needs are essential, according to Edumadze and Govender (2024), concerning the importance of instructor engagement in blended learning. Indeed, even though 44% of the students had negative comments about the inflexibility of teaching methods, the majority appreciated the efficiency of the instructional methods used. By focusing on cognitive, social, and teaching presences, the CoI framework not only facilitates

productive online learning but also readies Indian students for battles within the digital arena. These results strengthen the CoI framework relevance in developing enhanced online education in India, as validated by recent empirical studies (Carroll, Lang, & Connolly, 2024).

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