

Do Teachers' Perceptions of Digital Learners Match Learners' Self Perceptions? A Reality Check During the COVID-19 Pandemic

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Abstract: *Online learning came as a panacea to those engaged in teaching-learning. It softened the blow of the pandemic lockdown and physical distancing. However, there are several nuances that revolve around this mode of learning in a developing country. This study delved into the harsh but subtle and significant realities to gauge the inequity this mode of learning levies on those financially disadvantaged. The sample consisted of 298 students and 25 teachers from an aided, co-educational, secondary school, affiliated to the State Board and located in a Western suburb of Mumbai. The study provides insights into the lack of access students have to facilities used for distant learning. Teachers have made honest evaluations about their students' perspectives on the online mode of learning, based on their interactions. Answers provided by students are generally honest and match those of their teachers. However, some student responses seem to be filtered, based more on what they feel would be accepted norms of behaviour than reality. This can explain the significant differences observed in these responses. It requires learners who are intrinsically motivated to render online learning effective. However, there are several loopholes available to students who want to be superficially engaged, seeking to only clock attendance.*

Key Words: *Comparative perceptions, distance learning, online learning, technology-aided instruction.*

1. INTRODUCTION:

When the gates of schools shut the day before the nation-wide lockdown for the COVID-19 pandemic, little did anyone anticipate closure for an entire academic year. However, the machinery and systems in education responded favourably to the daunting task of transitioning overnight entirely to the virtual mode of teaching-learning.(1) It is heart-warming to see the overwhelming willingness of teachers and students to rise up to the cause of continuing education away from schools.

Digital education made inroads into Indian classrooms almost two decades ago. But its ramifications never imposed itself on the teacher or taught. Although the option existed, when it came to technology-aided instruction, it was always a matter of choice of how much, or when it is to be used. However, in the wake of the pandemic, technology and digitisation were the saviours that could bridge distances real-time, virtually. Artificial intelligence and ICT (information, communication, technology) all got encapsulated as the master key. Every school teacher and student ensured they were not edged off the bandwagon of online education.

As a newly-emerging capitalist country, India's masses are on the ends of the economic continuum. The stark disparity in the socio-economic and literacy levels of the population posed equity issues, not just in India but elsewhere.(2) Several benevolent agencies and organisations have risen to support the cause of educating children by hosting free webinars to empower teachers. Digital platforms and several online learning applications favour the transaction of online teaching.(3) Yet, the truth is that many groups are only chugging along, while many are left behind as Indian education is charting a new normal.

2. REVIEW OF LITERATURE:

Prolonged period of lockdown and reduced job opportunities forced migrant populations to return to their native places. Many children returned to their hometowns but stayed connected to schools online. However, this had an impact on school attendance as some geographic locations did not have adequate connectivity. Lack of connectivity became a major deterrent even to motivated students. Applications such as WhatsApp®, supported by online resources like YouTube® and Zoom®, provided an efficient and effective platform for dissemination of information and study materials, and enabled viewing of video and audio recordings.(1) Digital alternatives and personal electronic gadgets and mobile phones, which were frowned upon by schools earlier.(4) became the only supporting gadgets.

For obvious reasons, many students prefer the convenience of online learning,(5,6) although this is not a universal finding.(6) Students agree that teachers have adapted remarkably to the new modality.(7) Opinion on the choice between online and offline classes thus varies, with studies suggesting a healthy hybrid (blended learning) of the two.(3,4,5,6) Preferences for the structure of teaching have also been expressed by students.(2) In flipped classrooms, materials and assignments are provided for study, and guidance and explanations are provided in the classroom.

3. OBJECTIVES:

- 1) To ascertain the access students have to digital learning devices and connectivity.
- 2) To determine student perceptions of online learning.
- 3) To evaluate teachers' perceptions regarding students' online learning engagement.

4. MATERIALS AND METHOD:

The sample was procured from an aided Secondary School affiliated to the State Board. The school is an English medium, co-educational institution, located in a Western suburb of Mumbai, patronized by children of the middle- and lower-income groups of this area. During the lockdown, this school continued reaching out to its physically distanced students through the online mode.

The school was selected to provide the teacher and student samples for this study since teacher-trainees mentored by me had joined regular teachers of the school to transact teaching-learning.

Questionnaire

The questionnaire administered to the students consists of 18 objective test items. The first 3 items collected information regarding the access students have to digital learning devices and connectivity. The subsequent 15 test items are a mix of positively and negatively worded statements that are scored differently.

The teacher questionnaire was identical to the questionnaire administered to students, except that the items were reworded when needed to reflect teacher perceptions of student problems. This was meant to enable comparison between teacher and student responses.

Sample

298 Students from the Secondary Section (Std V to IX)

25 Teachers from the Secondary Section (Std V to X)

The data were procured online using Google Forms®. All teachers of the Secondary sent their responses. However, only about 30% of the students had access to online learning facility and so could be respondents in the study.

5. RESULTS AND DISCUSSION:

The first 3 items (Table 1) collected information regarding the access students have to digital learning devices and connectivity. A majority of students had a digital device at home and had internet connectivity; a majority also used smartphones for access (Figures 1.1, 1.2 and 1.3).

Table 1. Students' access to digital learning devices and connectivity

No.	Item	Yes		No	
1.	Do you have access to a digital device for learning online?	82.5%		17.5%	
2.	Do you have broadband internet connection at home?	66.8%		33.2%	
		Laptop	Desktop	Tablet	Smartphone
3.	Which device do you use for distance learning?	9.6%	0.3%	2.6%	87.5%

Figure 1.1. Do you have access to a digital device for learning online?

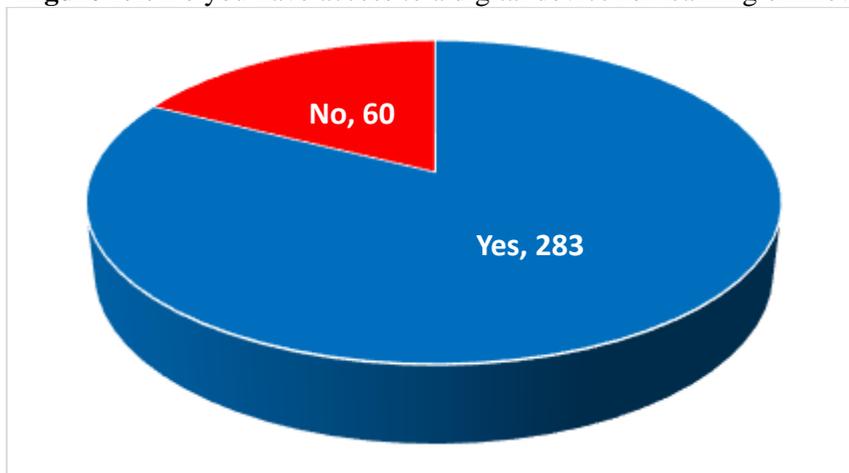


Figure 1.2. Do you have broadband internet connection at home?

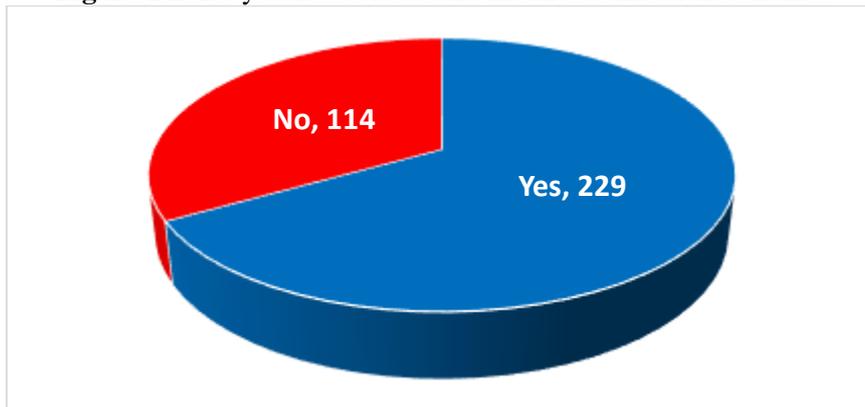
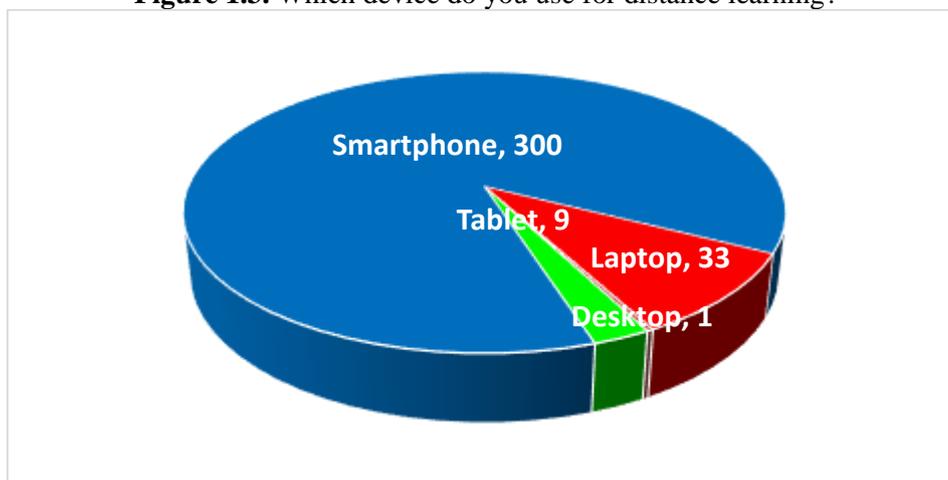


Figure 1.3. Which device do you use for distance learning?



Of the subsequent 15 questions that addressed the perceptions of online learning, it is heartening to see similarities of view among students and teachers in some areas (Table 2 and Figure 2.1).

However, it is apparent that students' and teachers' perceptions of issues with online learning differ in significant areas (Table 2 and Figure 2.2). Possible explanations for these differences are elaborated on below.

Table 2. Responses to online learning issues that students face (p values in red indicate statistically significant differences in the percentage of students and teachers with "Yes" responses)

No.	Item	Students (%)	Teachers (%)	Chi square <i>r</i> (with Yates' correction)	<i>p</i> value
4.	Is the environment at home favourable to learning online?	69.5	28	15.93	.00006
5.	Are you comfortable with spending several hours at a stretch watching a screen?	48.3	28	3.05	.08
6.	Do learners blame the network when they fail to submit assignments on time?	38.3	96	29.11	.00001
7.	Do you believe that effective learning can take place without face-to-face interaction of a classroom?	51	20	7.68	0.006
8.	Do you feel that a lot of time, effort and money is wasted while being confined in a classroom?	25.5	32	0.51	.48
9.	Do you think it is okay to attend online classes because your teacher sends across the study material?	82.2	76	0.253	.61
10.	Do you attend online classes as there are consequences of staying absent?	75.8	60	2.28	.131
11.	Do you miss the excitement of learning together with your friends?	14	100	-	.000

12.	Are you able to contact your teacher personally to clarify your doubts when you need to?	75.8	96	4.27	.04
13.	Has online learning made you more responsible towards studying independently?	66.8	40	6.12	.01
14.	Are you comfortable typing the answers during an online examination?	72.1	40	9.81	.002
15.	Is it difficult for you to concentrate during an online class from home?	47	92	16.9	.00004
16.	Do you multitask with other things with your camera disabled while at home doing online studies?	64.4	96	9.0	.003
17.	Do you find it difficult to study using a phone or computer?	54	76	3.67	.06
18.	Do the online assessment apps like H5P, Testmoz, Class Tools raise your motivation to learn?	58.4	56	0.0	.98

Figure 2.1. “Yes” responses to online learning issues: no significant difference ($p > .05$) between students’ and teachers’ perceptions

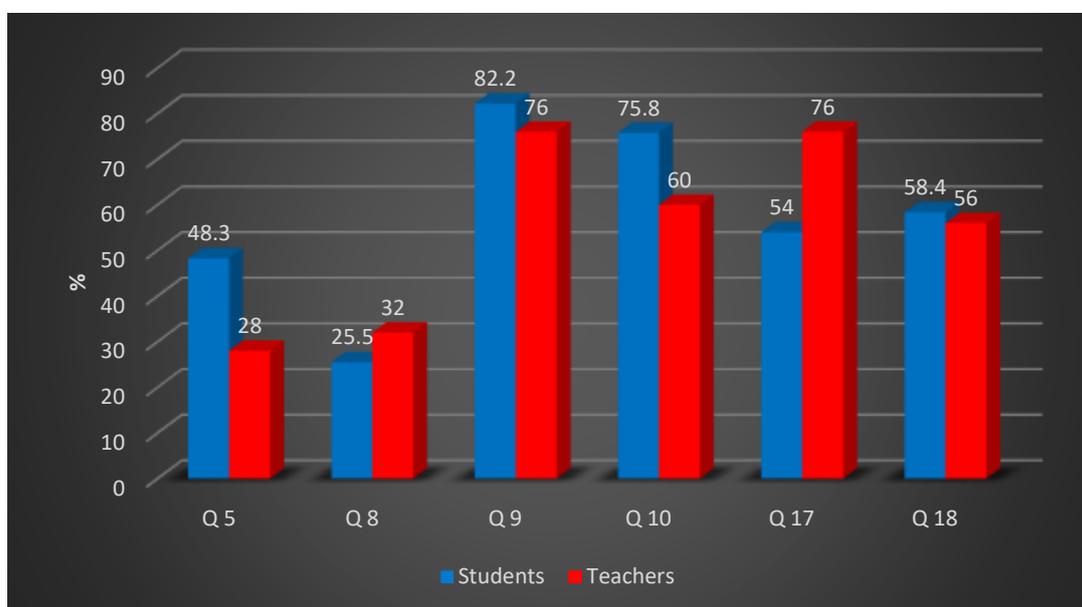
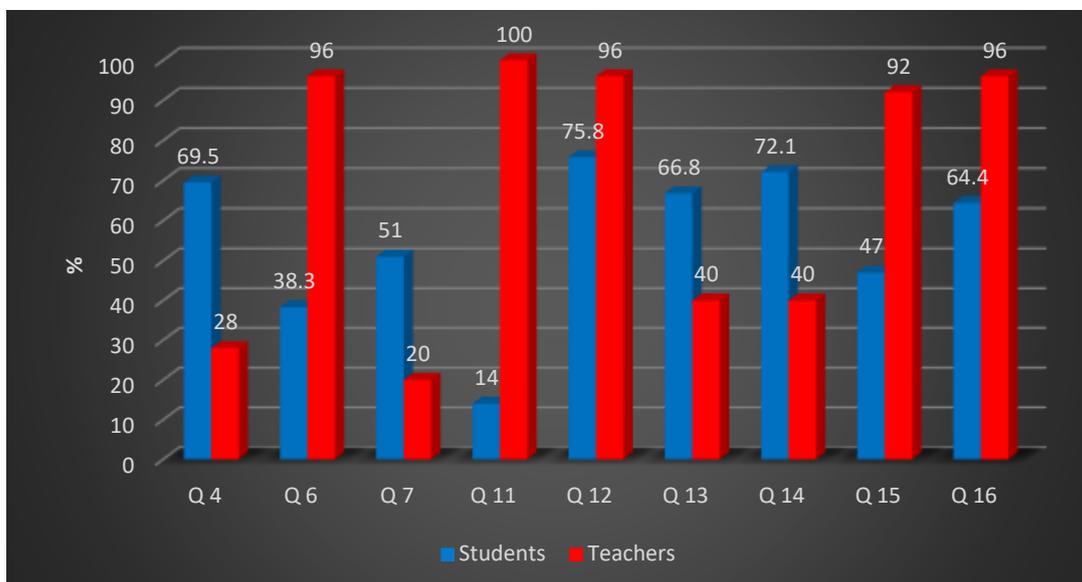


Figure 2.2. “Yes” responses to online learning issues: significant differences ($p < .05$) between students’ and teachers’ perceptions



Question 4: Is the environment at home favourable to learning online?

Question 15: Is it difficult for you to concentrate during an online class from home?

These questions are based on the split-half method of reliability. The answers meet the reliability test but fail to reflect honesty from students. Although two-thirds of students claim that the home environment is conducive to learning, more than two-thirds of teachers feel otherwise. This difference could arise from the students acceptance of the home environment in order to continue online learning, whereas teachers take into consideration distractions a child is exposed to at home, and the cramped confines of urban homes. Most children are happy even if they achieve less but are permitted to remain in their comfort zones.

Question 6: Do learners blame the network when they fail to submit assignments on time?

Blaming an extraneous factor that cannot be proven wrong is an easy diversion tactic. Understandably, it takes courage to admit resorting to it, for fear of being reprimanded. For teachers the message is that they should permit flexibility of time to ensure this factor is not a valid reason.

Question 7: Do you believe that effective learning can take place without face-to-face interaction of a classroom?

Students are happy to continue with least interference. Teachers generally feel that students are better off in the face-to-face mode; they are used to the two-way interactions that are prompt, and have always been in control over the dynamics of the classroom. The sociometry of virtual interactions suffers a time-lag. It will take teachers time to transition into this new reality of the virtual mode; this will be a deterrent to a generation of online teachers.

Question 11: Do you miss the excitement of learning together with your friends?

Humans are social animals, and children would naturally benefit from human interaction. Unfortunately, as in this case, children are also quick at adaptation, and now staying away from school and within their friendly home atmosphere has come as a welcome situation. They do not perceive any possible long-term deficit or deprivation from online teaching-learning – they have not yet faced a future where human interaction, for example, is essential for development of social skills. They have a myopic view only of today. However 100% of teachers believe differently; according to them the influence of school and peer learning cannot be discounted. Only 14% of students were of the same opinion.

Question 12: Are you able to contact your teacher personally to clarify your doubts when you need to?

To this question almost all teachers responded 'Yes' and so did most students (which is satisfying to note), although not as an overwhelming majority. This is the only question to which the response differed between boys (70%) and girls (80%) ($p < .04$). This is probably because girls are less hesitant and more at ease raising doubts and queries.

Question 13: Has online learning made you more responsible towards studying independently?

Question 14: Are you comfortable typing the answers during an online examination?

Students are obviously still not mature enough to self-evaluate; they tend to overestimate their skills. Only 40% of teachers believe that digital learners engage responsibly in the virtual mode, but 68% of students assume they do. Two-thirds of students tend to overestimate their psychomotor skills in typing but only 40% of teachers support this claim.

Question 16: Do you multitask with other things with your camera disabled while at home doing online studies?

This is an honest admission of easy distraction and cheating. Two-thirds of students have been honest about this; almost all teachers believe for sure that this happens. To counter such errant behaviour, teachers can effectively adopt self-learning packages that can monitor the pace of learning.

6. CONCLUSION:

Teachers and students have accepted online learning as a reality that has come to stay. But it is disturbing to note that only two-thirds of the respondent students from a metropolitan city declared that they have broadband access to the internet. It is possible that the others too have access but intermittently, because of shared facilities and bandwidth. How are we going to overcome this? How and when will equity be a reality for the disadvantaged?

In this study teachers have made honest evaluations about their students' perspectives on the online mode of learning, based on their interactions. The responses of the teachers and students match in general areas. However, the student responses seem to be filtered, based more on what they feel would be accepted norms of behaviour than reality. This can explain the significant differences observed in many of the responses.

Online learning is not appropriate at all stages of development and for all types of learners. Blended learning is the most effective form of learning that can erase the nuances that arise from the virtual learning mode. Simulations and artificial intelligence can create the best concrete examples for comprehension of abstract concepts, and gamification is a great way to raise the motivational levels of students.

This new normal of digital learning will definitely bring flexibility into classrooms. It will demand new skill-sets from teachers and learners. Dependence on text-books will decrease and the internet will offer myriad possibilities to the ever-changing landscape of education. The school's ecosystems have become a dynamic interplay of multiple perspectives and intelligences.

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