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Students' Perception Towards Online Teaching and Learning: A Study of Universities in Rural Areas

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ABSTRACT

Online teaching became a mandate during the COVID-19 pandemic. Irrespective of technical expertise of teachers or students each one of them were made to sit before their mobile or laptop to complete the course curriculum and their examinations. The present study was carried out amongst university students, to find out the perception and satisfaction of students towards online teaching and learning and how this teaching mode changed their psychological behaviour as well as their perception towards exams and self-study. This study was conducted among students at rural universities in India. The findings of the study reveal that students found the online teaching and learning experience as effective and interesting like classroom learning, however competency with the online learning system was an area concern. Students found disturbances and lack of space in their home environment for online teaching and learning as one of the challenges faced in online teaching and learning.

Keywords: *online teaching learning; coronavirus pandemic; psychological behaviour*

INTRODUCTION

The coronavirus pandemic changed the teaching-learning process in educational institutions. As a consequence of the pandemic, every educational institution was constrained to carry out their academic activities with students exclusively in an online mode. However, it is a well-established assumption that no pedagogical approach can replace classroom teaching due to direct interaction of teachers and students as well as by having a unique ecosystem in educational institutions. But, in the aftermath of the pandemic, online education has emerged in a pedagogical shift towards a modern approach to teaching and learning, from classrooms to Google Meet, Microsoft Teams, and Zoom and from seminars to webinars. Previously, e-learning, distance education and correspondence courses were popularly considered as the part of non-formal education, but as of now, they are presumed to be as good as having regular education in classrooms. As a result, platforms like edx and Coursera were more actively promoting and providing online degrees during the pandemic. In India as well online education platforms like: SWAYAM (Study Webs of Active Learning for Young Aspiring Minds), DIKSHA, e-PG Pathshala, National Programme on Technology Enhanced Learning (NPTEL), BYJUs, UnAcademy, Vedantu, and Toppr. have witnessed a significant growth. Further, after the notification of the University Grant Commission (UGC) in 2021, top ranked Universities in India were also allowed to offer online education to their students offering great opportunities to students as well as to these universities.

Internet-based education is referred to as online teaching and learning. Numerous foreign institutions are switching from traditional face-to-face instruction to online, web-based courses. Online learning is sometimes referred to as distance learning or web-based learning. It is currently the most widely used educational method. In recent years, it has grown in significance across many academic programmes. This article offers a succinct overview of online instruction and learning. Dani (2021) throws a light on the impact of COVID-19 on education in India and noted that the pandemic brought anxiety, stress and unmotivated sprite to the teaching profession and education system, providing the opportunity to adapt to new challenges. At the start of the pandemic the education system of India was ready to cope with the sudden change, but the problem faced by teachers was not only to complete the syllabus but also to conduct exams. After some time, we

must accept the new technology and try to train ourselves for this now normal. Muthuprasad et al., (2021) noted students' perception and preference for online education in India during the COVID-19 pandemic. Most institutions shifted to online learning platforms to keep the academic activity going. However, the question about the effectiveness and designing of e-learning is still not clear, particularly for a developing country like India. Muthuprasad et al., (2021) focused on the opinion of students with the flexibility and convenience of online classes to make it an attractive option, whereas connectivity issues in rural areas makes it a challenge for students. Khan, Vivek, et al., (2021) discussed the views of faculty members of the universities and noted a direct impact of MOOCs in the improvement of different educational outcomes. This study is also considering the impact of MOOCs on the development of learning skills in students.

Chen et al., (2020) in an analysis of user satisfaction with online education during COVID-19, found that the opinion of teachers and parents are impactful for future studies and can assist with the analysis of the satisfaction of online education platform for multiple subjects. It can't be ignored so design and the environment of the platform should be easier to operate. Bordoloi et al., (2021) studied the perception towards online/blended learning during COVID-19. They conducted an analytical study in the Indian context. They found that delivering education in the context of India in the twenty-first century may lie in blended learning. Ullah et al., (2017) earlier discussed students' attitude at tertiary level towards Online Learning and focused on exploring the relationship between students' attitude towards Technology Acceptance Model (TAM) and online learning.

According to Khan, Kamal, et al., (2021) factors like quality of the Internet, prior knowledge of ICT, family income, mother's education, and the number of rooms in the home have an impact on online classes. They have also added that there is a positive perception of students towards online classes noted during the COVID-19 pandemic, to maintain their academic growth. But with this, they have also experienced several challenges in online classes. Barzani & Jamil, (2021) articulated the challenges faced by students during online teaching which are external factors like, unstable Internet connection and electricity problem, and internal factors like time management, and concentration difficulties. Syauqi et al., (2020) indicated in their research that teachers are unable to manage online learning as per the expectations of the students, while the students, did not have better experience and productivity in context of getting the competencies with the online learning system.

Theoretical Framework

For the present study, we refer to the Technology Acceptance Model (TAM). TAM is the theoretical model which explains how an individual make use of technology and why. The Technology Acceptance Model works on two main components which are:

Perceived Usefulness

The degree to which a person thinks utilising a certain or particular technology would improve their daily activities or professional performance is known as perceived usefulness.

Perceived Ease of Use

A person's perception of how easy it is to utilise or use a certain or particular technology is referred as perceived ease of use.

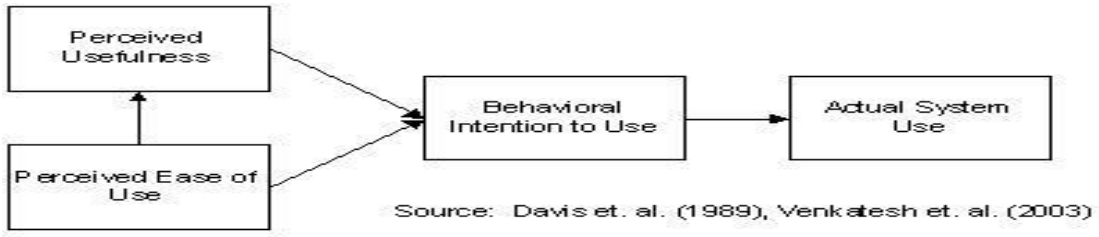

Figure 1: The TAM Model

In this study, the TAM is used to understand the factors or components which influence the use and adoption or acceptance of technology by the students as well as teachers during online education and offline education. This model addresses different questions like: Are students and teachers finding the ICT tools or educational technology easy to use or not? Do students and teachers find ICT tools and educational technologies useful or not?

In this study TAM is providing a very important, effective, and useful framework to address the above questions and can help or guide the design of effective strategies regarding use of ICT tools and technology in education which can be online or offline.

Need for this study

Our study entitled "Students Satisfaction towards Online Teaching/After Effects on Online Teaching" is designed to assist with understanding the perception of students towards online teaching and learning.

Implications of the Study

The COVID-19 pandemic has led to a tremendous growth in the use and availability of online learning platforms like Coursera, edx and SWAYAM, for the professional certification courses for the students in Higher Education. The findings of the present study will be useful to determine whether students are comfortable with the online mode of teaching and learning or would like to participate in hybrid mode or the traditional mode of the teaching and learning process. This study will determine the future of many emerging start-ups which are providing online education or courses in a country like India. The findings of this study may provide valuable inputs to improve the quality of online teaching and learning by these ventures.

Objectives of the study

1. To study the perception of students towards online teaching learning.
2. To study the students' satisfaction towards different factors associated with online teaching learning
3. To study the challenges faced by the students during online teaching learning.

Sampling Technique

A Random Sampling technique was used to collect data from the respondents. The rationale behind the use of this technique was to ensure that the sample of study is representing the whole population and the results of the study are generalised with respect to the population. This technique is also useful to reduce bias as each member of the target population had an equal chance to be a participant in the research. This technique also helps to estimate the population parameters.

Sample Size

For the present study, the sampling unit is comprised of respondents from different departments of the universities situated in the rural areas. 150 participants comprised the final sample for the study, however only 131 respondents completed the questionnaire Of these 131 respondents, 69 were Male and 62 were female. Respondents were enrolled in Certification Courses, Diploma, Undergraduate and Postgraduate courses. The respondents were located in the brick-and-mortar institutions in rural areas of the selected location.

Data Collection

In this survey, the primary data was obtained by administering structured questionnaires. The secondary data was collected through various literature reviews and articles. The research instrument contained 23 items, excluding demographic profiles. The scale used for the responses was a Likert 5-point scale and some questions were closed ended. The survey was intended to measure the perception and preference of students towards online teaching and learning.

Reliability of the Questionnaire

Reliability was checked using IBM SPSS 26 version and the 23 items were assessed for internal consistency of the data based on Cronbach's alpha. As per Nunnally (1978) and Cronbach (1951), the rule of thumb of 0.70 was used. The alpha value returned on the items was 0.72 and being greater than 0.70, was considered suitable for the study

Data Analysis

In this study cross tabulation and percentages were used for the data analysis. In response to the item - *Online Learning and Teaching is as interesting as Classroom Learning, a*s shown in Table 1 below.

Table 1: *Online Learning & Teaching is as interesting as the Classroom Learning*

Course		**Maybe**	**No**	**Yes**	**Total**
Certification Courses	**Count**	3	3	8	14
	% Within Course	21.4%	21.4%	57.1%	100.0%
Diploma	**Count**	5	1	7	13
	% Within Course	38.5%	7.7%	53.8%	100.0%
PG	**Count**	11	24	25	60
	% Within Course	18.3%	40.0%	41.7%	100.0%
UG	**Count**	11	19	14	44
	% Within Course	25.0%	43.2%	31.8%	100.0%
Total	**Count**	**30**	**47**	**54**	**131**
	% Within Course	**22.9%**	**35.9%**	**41.2%**	**100.0%**

Source: Author's Research

Among the 14 respondents from certification courses, 8 (57.1%) agreed that they found online

earning to be as interesting. In the Diploma courses, 53.8% of the 13 respondents also agreed that online learning is as interesting as classroom learning. Among the 60 postgraduate student respondents, 25 (41.7%) agreed and among undergraduate 19 of the 44 respondents (43.2%) did not agree. The data for all respondents (131) shows that 54 (41.2%) found online teaching and learning to be as interesting as traditional classroom learning.

In response to the item - *Effectiveness of Online Classes*, as shown in Table 2 below, out of 131 students/respondents, 45 (34.4%) strongly agree while 11 (8.4%) of the respondents strongly disagree with the statement: Online learning classes are as effective as classroom learning.

Table 2: *Effectiveness of Online Classes*

Course		SD	D	N	A	SA	**Total**
Certification Courses	**Count**	1	2	3	3	5	14
	% within Course	7.1%	14.3%	21.4%	21.4%	35.7%	100.0%
Diploma	**Count**	0	1	5	2	5	13
	% within Course	0.0%	7.7%	38.5%	15.4%	38.5%	100.0%
PG	**Count**	6	7	14	11	22	60
	% within Course	10.0%	11.7%	23.3%	18.3%	36.7%	100.0%
UG	**Count**	4	3	15	9	13	44
	% within Course	9.1%	6.8%	34.1%	20.5%	29.5%	100.0%
Total	**Count**	**11**	**13**	**37**	**25**	**45**	**131**
	% within Course	**8.4%**	**9.39%**	**28.2%**	**19.1%**	**34.4%**	**100.0%**

Source: Author's Research
SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

Table 3: *Competency with Online Learning Tools*

Course		**SD**	**D**	**N**	**A**	**SA**	**Total**
Certification Courses	**Count**	1	2	5	2	4	14
	% within Course	7.1%	14.3%	35.7%	14.3%	28.6%	100.0%
Diploma	**Count**	5	2	3	3	0	13
	% within Course	38.5%	15.4%	23.1%	23.1%	0.0%	100.0%
PG	**Count**	8	10	22	8	12	60
	% within Course	13.3%	16.7%	36.7%	13.3%	20.0%	100.0%
UG	**Count**	5	9	8	7	15	44
	% within Course	11.4%	20.5%	18.2%	15.9%	34.1%	100.0%
Total	**Count**	**19**	**23**	**38**	**20**	**31**	**131**
	% within Course	**14.5%**	**17.6%**	**29.0%**	**15.3%**	**23.7%**	**100.0%**

Source: Author's Research

SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

As shown in Table 3 above, in response to the item – *Competency with Online Learning Tools*, then the categories of agree and strongly agree were combined, approximately 39% of the students were of the view that they are competent with the tools associated with online learning Whereas 32% of the students disagreed or strongly disagreed that they were competent in using online tools, while the responses of 29% of the students indicated that they were neutral in their view.

In response to the item – *difficulty in grasping the online learning system*, the data in Table 4 below indicates that just over 39% of the students found the online learning system a difficult system, while 35.1% were neutral in their view of the difficulty of the system.

Table 4: *Difficulty in grasping online learning system*

Course		**SD**	**D**	**N**	**A**	**SA**	**Total**
Certification Courses	**Count**	3	3	5	3	0	14
	% within Course	21.4%	21.4%	35.7%	21.4%	0.00%	100.0%
Diploma	**Count**	1	7	4	1	0	13
	% within Course	7.7%	53.8%	30.8%	7.7%	0.00%	100.0%
PG	**Count**	12	14	19	15	0	60
	% within Course	20.0%	23.3%	31.7%	25.0%	0.00%	100.0%
UG	**Count**	4	8	18	14	0	44
	% within Course	9.1%	18.2%	40.9%	31.8%	0.00%	100.0%
Total	**Count**	**20**	**32**	**46**	**33**	**0**	**131**
	% within Course	**15.3%**	**24.4%**	**35.1%**	**25.2%**	**0.00%**	**100.0%**

Source: Author's Research

SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

In response to the item – *flexibility of online classes*, as shown in Table 5 below, approximately 50% of the students agreed that online classes are flexible in nature.

Table 5: *Flexibility of Online Classes*

Course		**SD**	**D**	**N**	**A**	**SA**	**Total**
Certification Courses	**Count**	0	2	4	4	4	14
	% within Course	0.0%	14.3%	28.6%	28.6%	28.6%	100.0%
Diploma	**Count**	2	0	6	2	3	13
	% within Course	15.4%	0.0%	46.2%	15.4%	23.1%	100.0%
PG	**Count**	3	7	17	11	22	60
	% within Course	5.0%	11.7%	28.3%	18.3%	36.7%	100.0%
UG	**Count**	6	4	15	10	9	44
	% within Course	13.6%	9.1%	34.1%	22.7%	20.5%	100.0%
Total	**Count**	**11**	**13**	**42**	**27**	**38**	**131**
	% within Course	**8.4%**	**9.9%**	**32.1%**	**20.6%**	**29.0%**	**100.0%**

Source: Author's Research

SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

In response to the item – *structured course curriculum,* the data in Table 6 indicates that just over 4 in 10 students agreed that the curriculum in the online environment was structured and well planned, however a similar number were neutral in their response.

Table 6: *Structured Course Curriculum*

Course		**SD**	**D**	**N**	**A**	**SA**	**Total**
Certification Courses	**Count**	0	1	6	3	4	14
	% within Course	0.0%	7.1%	42.9%	21.4%	28.6%	100.0%
Diploma	**Count**	1	0	10	2	0	13
	% within Course	7.7%	0.0%	76.9%	15.4%	0.0%	100.0%
PG	**Count**	3	3	19	18	17	60
	% within Course	5.0%	5.0%	31.7%	30.0%	28.3%	100.0%
UG	**Count**	1	3	21	8	11	44
	% within Course	2.3%	6.8%	47.7%	18.2%	25.0%	100.0%
Total	**Count**	**5**	**7**	**56**	**31**	**32**	**131**
	% within Course	**3.8%**	**5.3%**	**42.7%**	**23.7%**	**24.4%**	**100.0%**

Source: Author's Research
SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

The data in Table 7 – *space during online classes at home*, indicates that the space available at home for online classes is inadequate., although 32.8% of the students were neutral in their view.

Table 7: *Lack of space during online classes at home*

Course		**SD**	**D**	**N**	**A**	**SA**	**Total**
Certification Courses	**Count**	3	2	5	4	0	14
	% within Course	21.4 %	14.3 %	35.7 %	28.6 %	0.0%	100.0 %
Diploma	**Count**	1	2	4	1	5	13
	% within Course	7.7%	15.4 %	30.8 %	7.7%	38.5%	100.0 %
PG	**Count**	4	6	23	9	18	60
	% within Course	6.7%	10.0 %	38.3 %	15.0 %	30.0%	100.0 %
UG	**Count**	5	5	11	9	14	44
	% within Course	11.4 %	11.4 %	25.0 %	20.5 %	31.8%	100.0 %
Total	**Count**	**13**	**15**	**43**	**23**	**37**	**131**
	% within Course	**9.9%**	**11.5 %**	**32.8 %**	**17.6 %**	**28.2%**	**100.0 %**

Source: Author's Research
SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

The data in Table 8 provides support for the student views on the availability of space at home for online learning. In response to the item – *disturbance during online classes*, 61% agreed that

disturbance is one of the main factors during online classes at home due to home conditions or other unavoidable factors.

Table 8: *Disturbance during online classes*

Course		SD	D	N	A	SA	Total
Certification Courses	**Count**	2	2	5	2	3	14
	% within Course	14.3%	14.3%	35.7%	14.3%	21.4%	100.0%
Diploma	**Count**	1	2	3	4	3	13
	% within Course	7.7%	15.4%	23.1%	30.8%	23.1%	100.0%
PG	**Count**	4	3	14	17	22	60
	% within Course	6.7%	5.0%	23.3%	28.3%	36.7%	100.0%
UG	**Count**	2	2	11	9	20	44
	% within Course	4.5%	4.5%	25.0%	20.5%	45.5%	100.0%
Total	**Count**	**9**	**9**	**33**	**32**	**48**	**131**
	% within Course	**6.9%**	**6.9%**	**25.2%**	**24.4%**	**36.6%**	**100.0%**

Source: Author's Research
SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

The data in Table 9 shows us that over 40% of students are liking online classes and enjoying the environment of online teaching learning, although we note that 32.1% were neutral in their views.

Table 9: *Liking toward online classes*

Course		SD	D	N	A	SA	Total
Certification Courses	**Count**	0	3	2	2	7	14
	% within Course	0.0%	21.4%	14.3%	14.3%	50.0%	100.0%
Diploma	**Count**	0	3	2	4	4	13
	% within Course	0.0%	23.1%	15.4%	30.8%	30.8%	100.0%
PG	**Count**	6	3	23	15	13	60
	% within Course	10.0%	5.0%	38.3%	25.0%	21.7%	100.0%
UG	**Count**	5	9	15	8	7	44
	% within Course	11.4%	20.5%	34.1%	18.2%	15.9%	100.0%
Total	**Count**	**11**	**18**	**42**	**29**	**31**	**131**
	% within Course	**8.4%**	**13.7%**	**32.1%**	**22.1%**	**23.7%**	**100.0%**

Source: Author's Research
SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

Regarding the respondents' satisfaction with the quality of their education in online classes, we note in Table 10 that over 50% of the students were satisfied with 29.8% of them strongly agreeing that they were satisfied with the quality of education during online learning.

Table 10: *Satisfaction with the quality of education during online classes*

Course		**SD**	**D**	**N**	**A**	**SA**	**Total**
Certification Courses	**Count**	0	4	2	4	4	14
	% within Course	0.0%	28.6%	14.3%	28.6%	28.6%	100.0%
Diploma	**Count**	1	0	3	4	5	13
	% within Course	7.7%	0.0%	23.1%	30.8%	38.5%	100.0%
PG	**Count**	2	7	19	14	18	60
	% within Course	3.3%	11.7%	31.7%	23.3%	30.0%	100.0%
UG	**Count**	5	5	10	12	12	44
	% within Course	11.4%	11.4%	22.7%	27.3%	27.3%	100.0%
Total	**Count**	8	16	34	34	39	131
	% within Course	6.1%	12.2%	26.0%	26.0%	29.8%	100.0%

Source: Author's Research
SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

Table 11: *Satisfaction with the Grade Assessment*

Course		**SD**	**D**	**N**	**A**	**SA**	**Total**
Certification Courses	**Count**	0	1	6	3	4	14
	% within Course	0.0%	7.1%	42.9%	21.4%	28.6%	100.0%
Diploma	**Count**	2	0	3	3	5	13
	% within Course	15.4%	0.0%	23.1%	23.1%	38.5%	100.0%
PG	**Count**	3	1	23	15	18	60
	% within Course	5.0%	1.7%	38.3%	25.0%	30.0%	100.0%
UG	**Count**	1	5	10	19	9	44
	% within Course	2.3%	11.4%	22.7%	43.2%	20.5%	100.0%
Total	**Count**	**6**	**7**	**42**	**40**	**36**	**131**
	% within Course	**4.6%**	**5.3%**	**32.1%**	**30.5%**	**27.5%**	**100.0%**

Source: Author's Research
SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

The data in Table 11 above shows that just under 3 in 5 students are satisfied with the grade assessment system in their environment of online teaching and learning. We note that 32.1% of the students were neutral in their view.

FINDINGS

The present study was mainly focused on the preference, competency level with technology, perception, and the challenges faced by the students of different areas of Himachal Pradesh during the COVID-19 pandemic. The study attempted to determine the different aspects of overall satisfaction having an impact on the parameters of satisfaction. Out of 131 respondent, 10.6% were enrolled in Certificate courses; 9.9% were in Diploma courses; 45.8% were in postgraduate courses; and 33.5% were in undergraduate courses.

The key results of the study are as follows:

- 2 in 4 of the student respondents found online teaching and learning as interesting as classroom learning.
- Just over 50% of the students agreed that online classes are as effective as classroom learning.
- If we look at the competency level with online learning tools, a smaller proportion of the students (39%) were competent with all the tools associated with online teaching and learning.
- 50% of the students agreed with the statement that online teaching and learning is flexible in nature.
- Just under 50% of the students agreed that the course curriculum in online teaching and learning is structured and well planned.
- About 40% of the students indicated that they liked online teaching and learning, as they were enjoying this environment of online classes more than the classroom learning.
- 50% of the students, indicated satisfaction with the quality of online teaching learning.
- 58% of the students indicated satisfaction with the assessments and grading in their online classes.

The findings also indicate challenges experienced by the students as follows:

- 2 in 5 of the students found it difficult to grasp the online learning system as there are different platforms which provide different kind of features.
- 2 in 5 students shared that there is a lack of space at home for online classes as there is a very busy work culture in the villages.
- The highest proportion of students' responses (61%) indicated one of the challenges is the disturbance factor associated with the online teaching and learning environment, when studying at home. The different associated factors include having kids at home, house chores, and external nuisances.

CONCLUSION

From the results of the study, we conclude that there is a positive perception of students towards online teaching and learning. From the past studies discussed in the literature review it is found that the education system in India is shifting towards the use of online teaching and learning and promoting the use of ICT tools in education. But there are still some challenges like network connectivity issues in rural areas (Muthuprasad et al., 2021). The flexibility and convenience of online teaching and learning is playing a crucial role in this shift among students. Competency level with the ICT tools is increasing among students as they are finding them quite attractive and easy

to use. However, there are some challenges which are creating a hinderance among students. A surprising factor is even after the challenges in the use of ICT in online teaching and learning, students are still in favour of online teaching and learning and they are comfortable with this online learning environment.

LIMITATIONS

The population targeted for the study was only from one state of the country and from rural areas. Further, we have targeted only the students at the universities and there were no teacher respondents. The perceptions of teachers regarding online teaching and learning may be different from the students.

FUTURE SCOPE

As the COVID-19 pandemic settles into a phase of normalcy, there is the chance of an increase in the use of ICT tools in education along with regular offline classes. This study will be useful in redesigning or recreating different strategies including the different components which are associated with online teaching and learning.

As we have studied only the student perception towards online teaching and learning there is scope for study of the perception of faculty members as well as parents for input on the major components or factors to study in future.

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