RELATIONSHIP AMONG PERCEPTIONS, EXPERIENCES, MOTIVATION AND ENGAGEMENT OF STUDENTS INVOLVED IN E LEARNING MODEL- A CORRELATIONAL STUDY

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Background

Technological advancements, in the recent years,   have majorly transformed the teaching learning process (Ni, 2013). The debate over the potential of online learning model to replace the traditional face-to-face education model and the teacher–student relationship still remains unsettled (Schmid et al., 2014).. However, despite preference for in-class teaching, the online teaching still considered as one of the alternative and supplementary model of education, more so especially during life threatening situations such as natural calamities, disasters, cyclones, pandemics etc.. Ever since it had been identified , this COVID19 had been a major impact on people and the economic, social and emotional disturbances caused by this pandemic is dreadful and totally devastating. Education is one such field which has undergone major changes in terms of its teaching and learning process. Most of the schools and colleges had started adopting e- learning model and starting conducting online classes during COVID 19 and still continuing as an adjunct model of learning.

Rationale

Though e-learning is widely proclaimed to be an effective mode of education, certain limitations were observed especially when it comes to rural and economically backward students. The present study was conducted to , understand the student's perceptions towards e learning, its impact on their online learning experience as well as its effect on student motivation and engagements.

Method

A online survey Questionnaire was developed and circulated through whatsapp & email. The respondents were requested to provide information regarding their experiences, perceived benefits of e learning and their impact on their academic performance. The assessment tools used for the study are Modified Student e-learning perception scale, Dr. M.A Khan, (2020) . (Cronbach's Apha 0.957) , Modified Online experiences scale, Pankaj Deshwal (2017) and .Students Engagement, Motivation & beliefs Survey form (SEMS V 2.0) developed by Young Development Executives of King Country(YDEKC). A total of 101 students participated voluntarily and their responses recorded through Google form and the data was analyzed using SPSS

Results

The results indicated marginally low levels of perception towards e learning (51.5%) , and low levels of online learning experiences (64.6%) and student engagement and motivation (56.4%). The results also indicate highly significant ($P<0.05$) correlation among Students Perception towards online learning, their e-learning experiences and their motivation & Engagement. , however the association was found to be weak in nature ($r<0.19$). The study further reports high level of significant relationship ($P<0.05$) between age of the respondents and Students' Motivation and Engagement. The findings also indicate significant difference ($P<0.05$) between genders with reference to online learning experience with females reporting better experiences than males.

Keywords : E-learning Model, New Normal, online learning , perceptions, e-learning experience, motivation , student engagement

BACKGROUND

Technological advancements, in the recent years,   have transformed the teaching learning process in a very big way (Ni, 2013). The debate over the potential of the online model learning to replace the traditional face-to-face education model and the teacher–student relationship still remains unsettled (Schmid et al., 2014). In

principle, the essentiality of classroom activities are way beyond education and knowledge acquisition rather help students to acquire social skills also that have implications on their future personal and professional growth (Goodman et al., 2015). Interaction with teachers and other students is paramount for developing positive self-esteem, self-confidence, and also improving students' ability to work in a team collaboratively and productively with peers (de Souza Fleith, 2000). The main threat concerning to online learning is the absence of face-to-face interaction (Bao, Selhorst, Moore, & Dilworth, 2018). Fraser and Goh (2003) noted that communication behaviour encouraged in a face-to-face classroom are not always supported or available within online teaching. The ability to ask questions, share opinions, or disagree with points is fundamental to learning (Chin & Osborne, 2008). 844 Thomas Walters et al. Research has often compared performance and learning outcomes due to online teaching versus classroom-based teaching (Akkoyunlu & Soylu, 2008; Ni, 2013). A study conducted by Kemp and Grieve (2014) compared undergraduate students' preferences and academic performance during the presentation of class material and written assessments online and within the classroom, reported that students rated face-to-face teaching much higher than online teaching. The feedback collected as part of this study further suggested they felt more engaged during face-to-face teaching since they receive immediate feedback.

However, despite preference for in-class teaching, the online teaching still considered as one of the alternative and supplementary model of education, more so especially during life threatening situations such as natural calamities, disasters, cyclones, pandemics etc.. COVID 19 is one such alarming pandemic situation where the entire world was forced to adopt the online teaching model for teaching leaning process. Ever since it has been identified , this pandemic had been a major impact on people and the economic, social and emotional disturbances caused by this pandemic is dreadful and totally devastating. Infact this pandemic had literally forced a new normal way of living in all walks of life. The educational system across the world is one such field which has been immensely affected and had undergone major changes in terms of its teaching and learning process. Due to the restrictions imposed by this COVID 19 pandemic, education had shifted from the traditional class room teaching to computer based e learning. Most of the educational institutions and students across the world have stated adopting this online platform of learning and continuing to use e-learning as an adjunct model of learning even now.

Rationale For The Study

Though e-learning is proclaimed to be an effective mode of education, on the other hand, as described there are certain limitations such as social isolation, lack of face to face interaction, connectivity issues etc. reported from all over the world. An article on "The Impact of COVID-19 on Education – Recommendations and Opportunities by Robin Donnelly, et al (2021) reported that despite best efforts to sustain supportive remote learning, closures of educational institutions have resulted in actual learning losses & increase in inequality. The article further reported that these outcomes are likely to be even more acute in middle- and lower-income countries where there is much less technological capability and a larger share of families live below the poverty line.A study conducted by George Orlov (May 2021) has reported decline in the student performance in the pandemic semester. Further a study by Eze S.C et al (2020) investigated the use of e-learning facilities by students of Higher education Institutions and revealed the impact of technology-related factors such as ease of use, speed accessibility and service delivery, organization-related factors such as training support and diversity, environment-related factors such as attitudes of the users and impact-related factors such as learning experience, skill development, academic performance, and degree of engagement on the students' adoption of e-learning facilities A study conducted by M.A.Khan et al(December,2020) at NCT, Delhi had reported positive student's perception towards e learning and acceptance of this new learning system thus demonstrating the significance of e learning in this COVID Pandemic.

Against such back drop and contrasting reports relating to the effectiveness of online learning model, the present study was conducted to , understand the student's perceptions towards e learning, its impact on their online learning experience and its effect on student motivation and engagements in Indian context.

Objectives Of The Study

The primary objective of the study is to measure the levels of perception on e learning , online learning experiences and motivation and engagements of the respondents involved in e learning model during the study period. The second objective is to the study the.significant correlation among perception on e learning , online learning experiences and motivation and engagements levels of the respondents The third objective is to provide suitable evidence based recommendations to varied stake holders of online learning for enhancing of e learning perceptions, online learning experiences and student motivation and engagements. The third objective is to study the relationship and variance among the levels of perception on e learning , online learning experiences and student motivation and engagements with reference to age and gender of the respondents.

Method
The study was conducted on junior and senior college students of both the genders, belonging to varied socio economic regions of the country, who were involved in e-learning. The data collection was carried out using online survey method. The age range of students for the study was restricted to 18-35 years and those students who had pre existing special needs or with any kind of disability were excluded from this current study. A online survey questionnaire was prepared using google form. The form comprised of PART A. Demographic details of the respondents and PART B : 3 specific domains that assess the e-learning perception of students, their online experiences and student's motivation and engagement . The data collection was done by sharing google form through online, social networking, email & whatsapp groups and instant messaging to the prospective samples. The participation of the respondents was voluntary in nature and no special incentive was given to any of the participants. A total of 101 students responded and all were found to be eligible as per the sampling criteria. The Collected data was statistically analyzed and results were tabulated

Assesment Tools Used For The Study
The assessment tools used for the study are Modified Student e-learning perception scale, Dr. M.A Khan, (2020) (Cronbach's Apha 0.957) , Modified Online experiences scale, Pankaj Deshwal (2017) and .Students Engagement, Motivation & beliefs Survey form (SEMS V 2.0) developed by Young Development Executives of King Country(YDEKC).

Results

Socio Demographic Charactreistics Of The Respondents
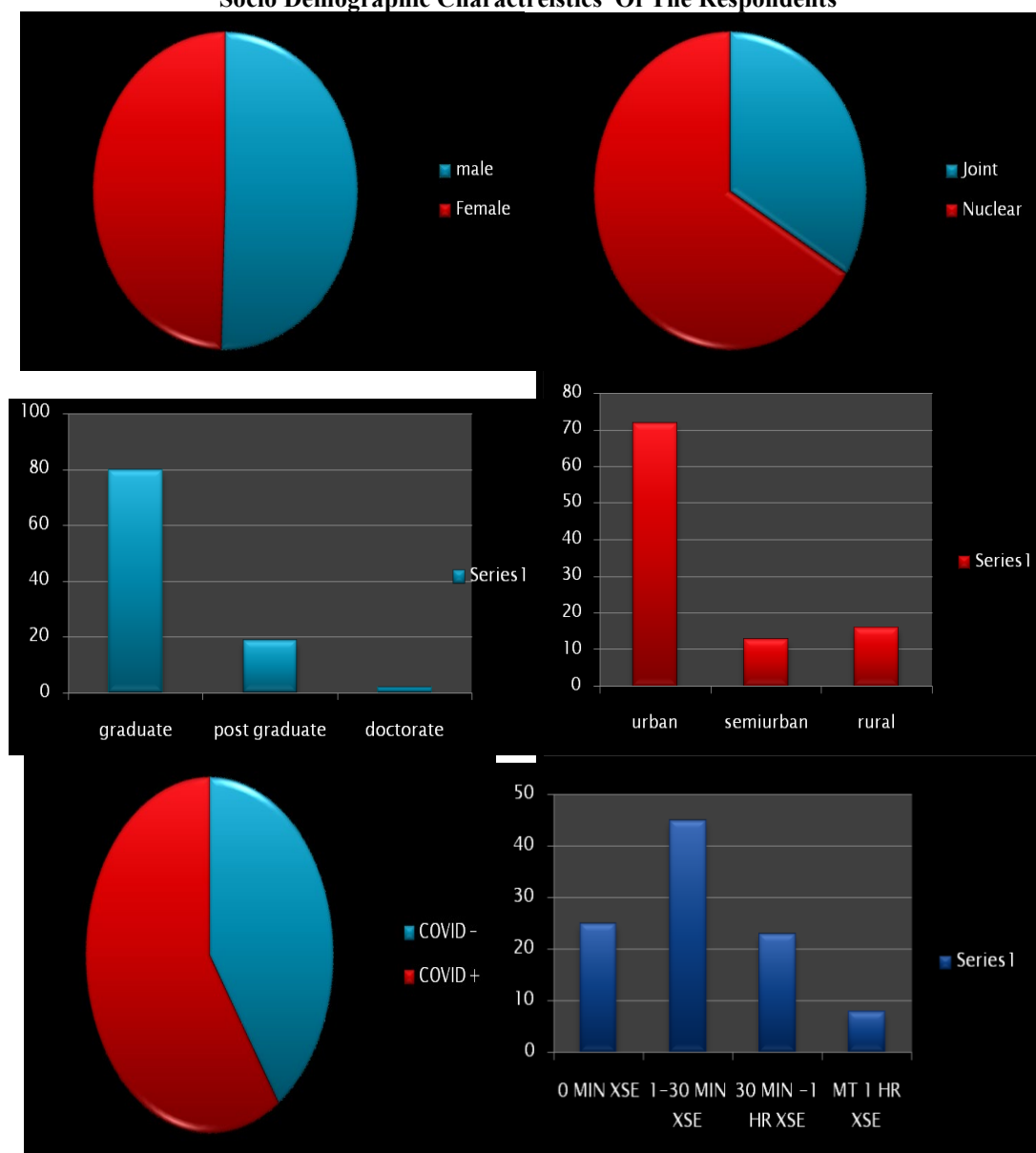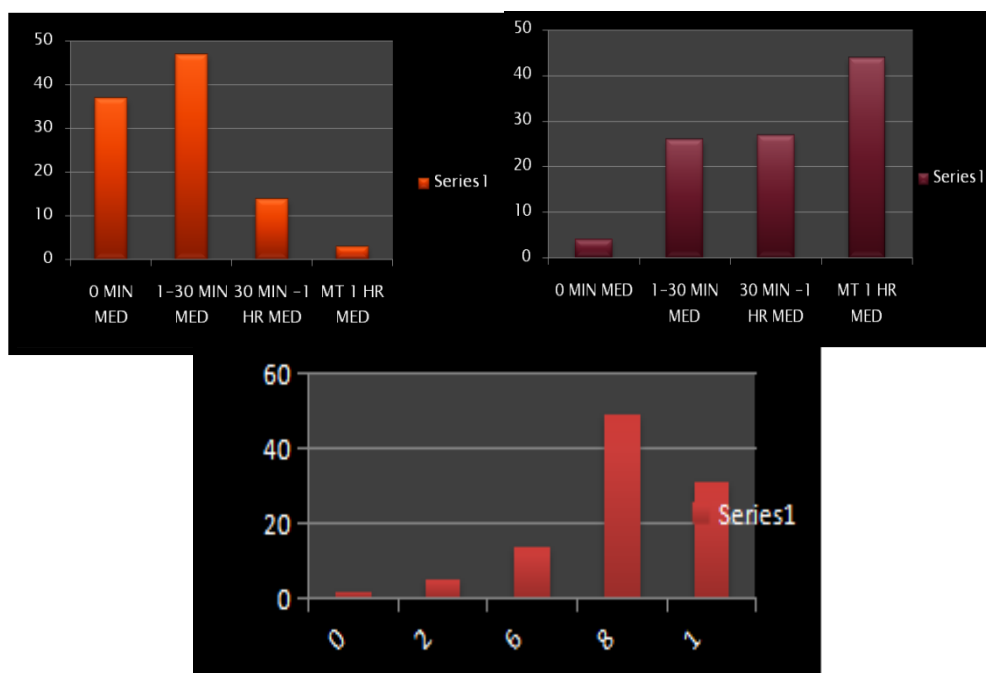
The mean age of the respondents is 23. More than half (50.5%) of the respondents are male.Nearly 3/4th (71.3%) of the respondents belong to urban region. More than 3/4th (79.2%) of the respondents are undergoing graduation studies.Less than 3/4th (66.3%) of the respondents belong to nuclear family. More than half (59.4%) respondents have reported history of COVID in their family and friends. Nearly half (44.6%) of the respondents are involved in 30 minutes of regular exercise and nearly half (46.5%) of the respondents are practicing 30 minutes of meditation regularly. Nearly half (43.6%) of the respondents are regularly connected with their friends and families through virtual or telecommunication and almost half (48.5%) of the respondents reported to have a sleep of 8-10 hours.

Table 1 : Distribution Of The Respondents Based On The Levels Of E Learning Perception, Online Learning Perception And Students Motivation And Engagement

S.No	Variables	No. of Respondents (n:101)	Percentage
1.	**Students' Perception towards E-learning**		
	Low	52	51.5
	High	49	48.5
2.	**Online Learning Experience**		
	Low	65	64.6
	High	36	35.6
3.	**Students' Motivation and Engagement**		
	Low	57	56.4
	High	44	43.6

Table 1 illustrates that students have marginally low level of perception towards e-learning (51.5%),low levels of online learning experience (64.6%)and student motivation and engagement (56.4%).

Table 2: Correlation Among Students' Perception Towards E-Learning, Their Online Learning Experience And Students' Motivation And Engagement

Variables	Correlation value	Strength of relationship	Statistical inference
Students' perception toward E-learning with Online Learning Experience	r=.277 P=0.05	Week	P<0.01 **Highly Significant**

| Students' perception toward E-learning with Students' Motivation and Engagement | r=.380 P=0.00 | Week | P<0.01 **Highly Significant** |
| Online Learning Experience with Students' Motivation and Engagement | r=.417 P=0.00 | Moderate | P<0.01 **Highly Significant** |

The Karl Pearson Coefficient of correlation statistical test table 2 explains that Students' perception toward E-learning and have a high level of statistically significant linear relationship (p<0.01) with Online Learning Experience as well as Students' Motivation and Engagement   and the direction of relationship is positive.Also the Online Learning Experience and Students' Motivation and Engagement have a high level of statistically significant linear relationship (p<0.01) and the direction of relationship is positive.

Table 3 : Relationship Between Age Of The Respondents With Regard To Perception Towards E-Learning, And Their Online Learning Experience

Variables	Correlation value	Strength of relationship	Statistical inference
Age with Students' perception toward E-learning	r=.044	Very week	P>0.05 **Not Significant**
Age with Online Learning Experience	r=.067	Very week	P>0.05 **Not significant**
Age with Students' Motivation and Engagement	r=.257	Week	P<0.01 **Highly Significant**

The Karl Pearson Coefficient of correlation statistical test table 3 illustrates that the age of the respondents and Students' Motivation and Engagement have a high level of statistically significant linear relationship (p<0.01) and the direction of relationship is positive The table 2 further illustrates that the age of the respondents have no statistically significant linear relationship (p>0.05)with both perception toward E-learning as well as E-learning experiences.

Table 4: Mean Difference Between Gender Of The Respondens With Regard To Students' Perception Towards E-Learning, Online Learning Experience And Students' Motivation And Engagement

Variables	Type of the respondents	N	Mean	Std. Deviation	Statistical inference
Students' perception toward E-learning	Male	51	58.55	7.923	t=.005 df=93.631 P>0.05 **Not significant**
	Female	50	58.54	9.908	
Online Learning Experience	Male	51	82.35	15.956	t=2.009 df=98.967 P<0.05 **Significant**
	Female	50	75.98	15.926	
Students' Motivation and Engagement	Male	51	184.78	27.771	t=1.634 df=93.183 P>0.05 **Not significant**
	Female	50	174.48	35.113	

The independent sample 't' statistical test table-4 demonstrates that male respondents had higher mean(82.35)score in Online Learning Experience when compared to the mean score(75.98) of female respondents who are female and was found to be having a statistically significant difference[$t_{98.967}$=.2.009, p<0.05] between gender of the respondents and Online Learning Experience. Male Respondents had slightly higher mean(58.55)score in Students' Perception Towards E-Learning when compared to the mean score(58.54) of female respondents and was found to be having no statistically significant difference[$t_{98.967}$=.005, p>0.05]. Also male respondents had slightly higher mean(184.78)score in Students' Motivation and Engagement scale when compared to the mean score(174.48) of female respondents and was found to be having no statistically significant difference[$t_{93.183}$=1.634, p>0.05].

Discussion

While analyzing the level of Students' Perception Towards E-Learning, Online Learning Experience and student's motivation and engagement (Table-1) , it was observed that, slightly more than half (51.5 percent) of the respondents are having low level of Students' Perception Towards E-Learning and the remaining (48.5 percent) of the respondents are having high level of Students' Perception Towards E-Learning. .This demonstrates that nearly half of the students did not find online teaching as engaging, enjoyable and productive.These findings are in line with the earlier research which reported that pupils' self-reported concentration, engagement, and ability to learn were significantly lower during online learning (watler et al, 2022).. The results also supplement the existing literature which reports that online education is challenging for learners and can impact their learning process (Friedman, 2020). The results of the present study also complements the finding of research conducted on parental perspectives that reported poor pupils' engagement and self-worth during online learning (Garbe et al., 2020). However there are few researchers who have reported contrasting findings. Zheng et al (2021), in his study had reported that most of the online courses were well accepted by the students, and majority (80 %) of them wanted to continue with online instruction. However these findings could vary among different regions as well as various academic streams. Students pursuing academic streams which require relatively more practical oriented inputs would be benefited from regular class room teachings and demonstrations. Where as students of other streams can benefit from online teaching due to the reduction in travel time and expenditure, ease in accessibility,comfortable home environment, convenience and reduced energy expenditure.

Less than three fourth (64.6 percent)of the respondents have reported low level of Online Learning Experience and slightly more than one third (35.6 percent) of the respondents have reported high level of Online learning Experience. The results supplement the findings of the study by walters T et al (2022) which reported that students learning experiences consisting of concentration, engagement, ability to learn, and self-worth from learning were significantly lower for online learning when compared to the regular classroom learning. However there are few researchers who have reported contrasting findings. Zheng et al (2021), in his study had reported that most of the online courses were well accepted by the students, and majority (80 %) of them wanted to continue with online instruction. However these findings could vary among different regions as well as various academic streams. Students pursuing academic streams which require relatively more practical oriented inputs would be benefited from regular class room teachings and demonstrations. Where as students of other streams can benefit from online teaching due to the reduction in travel time and expenditure, ease in accessibility,comfortable home environment, convenience and reduced energy expenditure.

The study (Table 1) also demonstrates that more than half (56.4 percent) of the respondents have reported low level of students' Motivation and Engagement and more than one third (43.6 percent) of the respondents reported high level of students' Motivation and Engagement. Such low levels of perceptions towards e- learning , online learning experiences and Student's motivation & Engagement levels reported by the students could be attributed to the fact that students who were used to regular class room teaching had been enjoying constant social contact with peer groups and teachers as well as timely and immediate feedback which were relatively less in the online mode of teaching. Further the regular class room has a rigid structure and scheduling with reference to classes and it usually happens in an academic environment where all the essentials are made available and the student is free from other distracting forces. This is in contrast to online model, where the control over varied elements of teaching learning process is relatively plastic in nature. Further in online mode, there are individual variations and large looming uncertainties with reference to the availability of internet connections, adequate bandwidth, power supply, devices such as laptop etc, comfortable searing arrangement, calm and least distractive environment. These could be the reasons for low level of perception, experience, motivation and engagement in online learning reported by students of the current study.A similar national wide cross sectional study on medical students at United kingdom by Dost.s et al (2020).reported that family distractions, Internet connection, timing of tutorials, anxiety and lack of space as barriers to effective online learning. Experiencing a lack of motivation, difficulty concentrating and asking questions and a lack of contact with colleagues are also found to be the additional limitations. These findings highlight the necessity for enhanced focus on addressing such issues so as to improve student's online learning.

The present study (**table 2**) further explains that Students' perception toward E-learning and Online Learning Experience have a high level of statistically significant positive linear relationship (p<0.01) with approximately weak magnitude and strength of relationship (r=277) The table also illustrates that the Students' perception toward E-learning and Students' Motivation and Engagement also have a high level of statistically significant positive linear relationship (p<0.01) and Engagement) with weak magnitude and strength of relationship[r=.380]. . Further the Online Learning Experience and Students' Motivation and Engagement have a high level of statistically significant positive linear relationship (p<0.01) with moderate magnitude and

strength of relationship [r=.417] between Online Learning Experience and Students' Motivation and Engagement.

Similar findings were reported in the regression analyses by Zheng et al (2021) which revealed that students' perceived engagement with faculty and classmates predicted their perceived effectiveness of the online course. This emphasizes the importance of effective planning, structured design and implementation of online classes so as to promote sustaining motivation levels and effective student engagement.

A Recent study (Siah C.R et al (2022) on online learning revealed five important themes that need to be analysed in depth: lack of motivation; limited teamwork; missed learning opportunities; decreased interactions; and differences between online and face-to-face learning.Though recent Literature recommends for Online-tutorials as a feasible pedagogical approach, they also warn that motivation to learn, teamwork and quality of discussion may be compromised due to the lack of socialization and interactions between students and tutors. Literatre (kern et al 2022) also report screen fatigue, physical isolation from peers, and poor internet connection as the Commonly perceived barriers.

The current study further (**table 3**) illustrates that the age of the respondents and Students' Motivation and Engagement have a high level of statistically significant positive linear relationship ($p<0.01$) and magnitude and strength of relationship is approximately weak [r=-.257]. However the age of the respondents and Students' perception toward E-learning as well as Online Learning Experience have no statistically significant linear relationship ($p>0.05$).

The study also (table-4) demonstrates that male respondents had higher mean(82.35)score in Online Learning Experience when compared to the mean score(75.98) of female respondents which was found to be statistically significant difference[$t_{98.967}$=.2.009, $p<0.05$]. It has been inferred that respondents who are male have reported higher Online Learning Experience. The above table also demonstrates that male respondents had slightly higher mean(58.55)score in Students' Perception Towards E-Learning when compared to the mean score(58.54) of female respondents who are female, which was found to be not statistically significant difference[$t_{98.967}$=.005, $p>0.05$] . It has been inferred that respondents who are male have reported a slightly higher Students' Perception towards E-Learning. Similar findings were reported by SIminds T.A et al (2014) where in a statistically significant relationship between student age and student preference for certain types of online learning activities was found.

Male respondents had slightly higher mean(184.78)score in Students' Motivation and Engagement scale when compared to the mean score(174.48) of female respondents who are female and was found to be having no statistically significant difference[$t_{93.183}$=1.634, $p>0.05$] between gender of the respondents and Students' Motivation and Engagement. It has been inferred that respondents who are male have reported higher Students' Motivation and Engagement**.**

Numerous Studies in the past have explored the impact of gender (e.g. Boyte-Eckis et al., 2018; Cai et al., 2017) on online learning outcomes and the reports are controversial. Some studies reported that females achieve better learning outcomes than males because they were more persistent and committed than males (Richardson & Woodley, 2003). Females had better self-regulation than males, which also led to their significantly more positive online learning outcomes than males (Alghamdi et al., 2020). However, no significant gender differences were reported in leaning outcomes since males were more stable in attitudes and females performed well in engagement (Nistor, 2013). There were also no significant gender differences in the learning satisfaction levels among the online millennial learners (Harvey et al., 2017).Rationales for inconsistent findings in gender differences may not be limited to the above and there is a need for more in-depth research into this field in future.

To conclude , online learning has both its own merits and demerits. For improving the e-learning model, there is a need to fine tune the existing process of teaching learning,keeping in mind the level, age, stream of education, teaching learning environment and infrastructure. Moving forward, the development of effective online courses and research-based guidelines for e-learning is desirable in order to establish e learning as an adjunct model and to improve the educational landscape as well as to prepare students for competent services in contemporary digital world.

Recommendations For Future Research
The study can be replicated on a larger sample size for better generalization. Future studies can focus on learners across different geographical and socioeconomic regions . Future studies can also attempt to understand the

students based on their stage of learning viz primary,high school ,higher secondary and college levels. Even among college levels, different streams of education can be analyzed as each stream has its own requirements in terms of teaching & learning, practical exposure etc. Further in depth analysis on the impact of various demographic characteristics on the e learning model at Pan India level with larger sample size can help in having better idea of the challenges inherent in the e learning model. This can also help in designing appropriate learning courses in online mode and effective e-teaching learning methods.

Conclusion

This descriptive study reported that students have marginally low levels of perception towards e-learning , online learning experience and student motivation and engagement. The study further reported that statistically significant correlation found among one another namely student's perception towards e learning, online learning experience , student's motivation and engagement. The study also reported significant relationship between age and motivation & engagement levels of students as well as significant difference in online learning experience with reference to gender.

Based on the findings of the study, it is concluded that online learning can be an appropriate model with its own merits and demerits. In order to improve the students perception, experience, motivation and engagement in online, there is a need for fine tuning the existing e learning teaching learning mechanism. More structured teaching design, human resources trained in online mode of teaching, appropriate student orientation, provision of needful technological support to students, upliftment of the organizational technological infrastructure , enhanced reflection & self evaluation mechanisms for all the stake holders, an appropriate and fair monitoring-feedback system are the need of the hour for the betterment of the e-learning model. Notwithstanding, with needful incorporation, e learning can be an adjunct model for the current educational system for creating a more robust and adaptable student's community and also to reach out to more larger learner population .

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