



Online Teaching Effects Classroom Engagement of Students in Universities

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Abstract. The present study was aimed to investigating the effect of online teaching on student's classroom engagement at university level. There were 400 university students selected as sample. By using Quantitative approach, a descriptive and liner regression study research strategy was supposed. The result shows that 32% online teaching was effected the students' classroom engagement. The study also aimed that to find out the level of student engagement and learning the result shows that level student engagement were high. There were significant difference between two factors (classroom and behavioral engagement) with respect to nature of university, no significance difference was found between gender and program. On the other hand a significant difference was found in cognitive engagement with respect to CGPA and Age group. This study offers new standpoints regarding the better use of online teaching material for the engagement of students in their leaning.

Key words: Online teaching, students, classroom engagement

I. INTRODUCTION

The student commitment or engagement has gotten one of the ideal results of school lately in view of its solid association with prosperity of learners. Specifically, definitive relation between student commitment in learning and such results as school dropout substance use (Khan, Egbue, Palkie, & Madden, 2017), psychological well-being, and scholastic results (Dixson, 2010). The learning engagement of students were discovered to be more effective scholastically and more averse to exit school. As student commitment is broadly dared to be flexible, it is applicable to both investigate the indicators of school commitment and factors that can be invigorated to decidedly impact it. By enlightening variables that effect on learner commitment, specifically, by illustrating such factors that expansion it. There are four elements of engagement examined in study which comprise of behavioral, cognitive, affective and student engagement Yates, Brindley-Richards, & Thistoll, 2020).

Fredricks, Blumenfeld and Paris (2004) investigated a study about learners' engagement which divided into social, intellectual and passionate commitment as per Bloom's instructive objective arrangement. In student engagement was found that learners were bound to perceive commitment in three measurements: social, intellectual, and full of feeling commitment. Social commitment is the essential type of commitment, is express and noticeable, and primarily remembers learner's particular practices for learning measure. Psychological commitment essentially alludes to the utilization of learning systems, where students handle and control mental exertion in learning, and the utilization of various learning procedures will prompt various degrees of reasoning. Enthusiastic commitment primarily alludes to their passionate response, including interest, fatigue, satisfaction, bitterness and tension, and a few researchers comprehend passionate commitment into feeling of having a place and qualities.

The four sorts of learners' engagement incorporate behavior, psychological, and affective commitment. All factors of engagement was established to positive results (Axelson & Flick, 2011; Fredricks & McColskey, 2012). A small study by Robinson and Hullinger (2008) used the modified NSSE instrument to survey 225 online students enrolled in both undergraduate and graduate programs across three institutions, finding that online students were modestly engaged across major benchmarks of engagement and, similar to the Chen, Gonyea, and Kuh (2008) study, that online students have different engagement patterns than on-campus students. The analysts recommend further investigation on what advances engagement in the online climate and what relations exist between commitment information and other legitimate proportions of student learning in online settings.

A research about students' online courses at a huge exploration led in 2012 by Sun and Rueda and investigated how inspirational and learning components may impact explicit kinds of commitment in online learners. They found that situational interest and self-guideline were altogether corresponded with three kinds of commitment (social, enthusiastic, and psychological) and self-adequacy was not related with any of these commitment factors. Both proposed further exploration to address different factors that might be associated with online student commitment.

Kahin et al. (2017) characterizes that the commitment premise is straight forward and handily comprehended: the more learners study a subject, the more they think about it, and the more rehearse and get criticism from workforce and staff individuals on their composition and communitarian critical thinking, the more profound they come to comprehend what they are realizing.

Kahu (2013) clarify that the kinds of engagement that can happen in the class are exertion to learning, premium for learning, feeling of having a place with class, profound learning, self-guideline, and relationship with others.

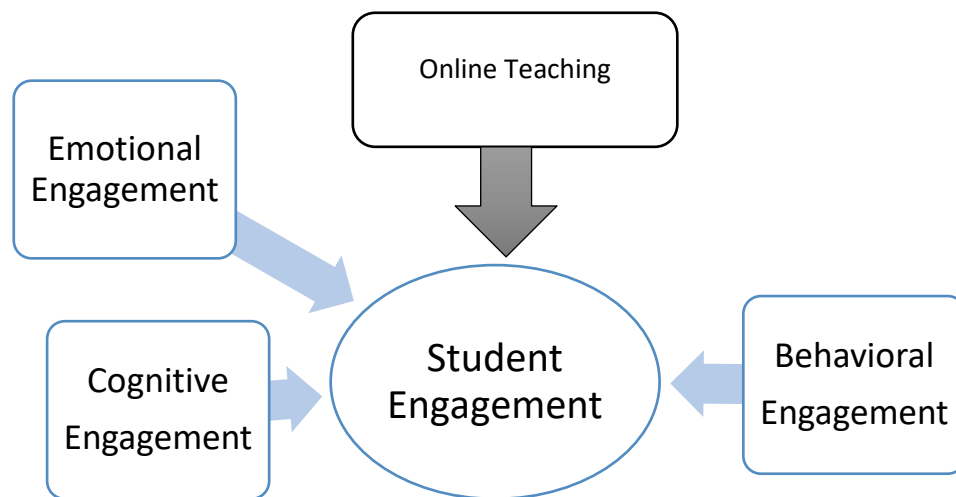


FIGURE 1: *Theoretical Framework*

Research Objectives

Objective of the study were:

1. Determine the level of classroom engagement of university students with concern to online teaching
2. To explore the effect of online teaching on student engagement at university level.
3. Compare students' classrooms involvement and learning differences in social variables such as (gender, programs, university environment, and age range, and CGPA).

II. METHODS

In this quantitative and descriptive study researchers explored the effect of on-line teaching on students' classroom engagement in universities in Lahore district. The sample was obtained by convenient sampling. The researchers used survey instrument which was an adopted questionnaire. Statements were constructed for exploring the effect of online teaching on students' engagement of university students. Five point likert scale was used to examine the students' responses. The pilot testing was done to check the validity and reliability. The Reliability of the instruments was examined by using Cronbach Alpha showed online teaching .89 and classroom engagement .91. The researchers visited the selected universities and got permission for data collection. After briefing the relevant students about the significance of the study, questionnaire was given to students and responses were obtained. The data were analyzed using statistical analysis techniques (regression, t-test, and ANOVA).

III. RESULTS AND FINDINGS

Table 1. Level of classroom engagement of university students with concern to online teaching

| Level | Low | Moderate | High | Mean | SD |
|----------------------|-------------|-------------|-------------|--------|-------|
| Classroom Engagement | 105 (26.3)% | 129 (32.3)% | 166 (41.4%) | 185.32 | 21.33 |
| Learning | 104 (26.0)% | 177 (29.3)% | 179 (44.7)% | 29.77 | 4.61 |

This table shows that, 400 students in the current research related to classroom engagement 105(26.3) % are at low level, 129(32.3%) are at moderate level and 166(41.4%) at high level. Therefore, it confirms the high level of engagement in classroom.

Table 2. Effect of online teaching on student engagement

| | Online Teaching | | | | |
|---------------------------------|-----------------|------------|-------|-------|------|
| | B | Std. Error | Beta | T | p |
| Classroom Engagement (Constant) | 2.796 | 1.864 | | 1.500 | .134 |
| Classroom Engagement | -.036 | .053 | -.040 | -.672 | .502 |
| Student Engagement | -.041 | .059 | -.044 | -.694 | .488 |
| Emotional Engagement | .018 | .070 | .022 | .254 | .799 |
| Intellectual Engagement | .295 | .045 | .468 | 6.48 | .000 |
| Behavioral Engagement | -.022 | .063 | -.022 | -.346 | .730 |
| R ² | .18 | | | | |
| F | 17.95 | | | | |

Table shows classroom engagement (B.= -.040, t.= -.672, p.= .502) student Engagement (B.= -.044, t.= -.699, p.= .488) expressive Engagement (B.=.022, t.= -.254, = .799) and behavioral Engagement (B.= -.022, t.= -.346, p.= .730) were not significantly related to online teaching but cognitive Engagement (B.= .468, t.= 6.48, p.= .000) was significantly related to online teaching. It also confirms that online teaching effects students' classroom engagement.

Table 3. Independent sample t-test for difference in classroom engagement of students and on-line teaching

| | Public N=(242) | | Private N=(158) | | t | df | P |
|-----------------------|-------------------|------|--------------------|------|------|-----|------|
| | M | SD | M | SD | | | |
| classroom Engagement | 33.21 | 4.34 | 31.65 | 5.46 | 3.18 | 398 | .002 |
| Student Engagement | 35.42 | 4.51 | 34.89 | 4.95 | 1.10 | 398 | .271 |
| Emotional Engagement | 34.85 | 5.08 | 34.94 | 4.63 | -.17 | 398 | .858 |
| Cognitive Engagement | 44.33 | 7.14 | 44.41 | 6.93 | -.11 | 398 | .911 |
| Behavioral Engagement | 38.97 | 4.69 | 37.32 | 4.28 | 3.53 | 397 | .000 |
| Online Teaching | 13.00 | 4.39 | 13.09 | 4.51 | -.20 | 398 | .841 |

The classroom engagement difference among the M. and SD. for male was (M=33.21, SD=4.34) and for female was (M=31.65, SD=5.46), (t= 3.18 and (p=.002) for both public and female. The student Engagement difference among M. and SD. The intellectual engagement difference among the M. and SD. for male was (M=34.85, SD=5.08) and female (M=34.94, SD=4.63), (t= -.17 and (p=.858) for both public and female. The cognitive Engagement difference among the M. and SD. for male was (M=44.33, SD=7.14) and female (M=44.41, SD=6.93), (t= -.11 and (p=.911) for both public and female. The behavioral engagement difference among the M. and SD. for male was (M=38.97, SD=4.69) and female (M=37.32, SD=4.28), (t= 3.53 and (p=.000) for both public and female. The online teaching difference among for male was (M=13.00, SD=4.39) and female was (M= 13.09, SD=4.51), (t= -.20 and (p=.841). However, there

was significant difference among public and private universities with concern to classroom engagement and behavioral Engagement.

Table 4. *T-test for Gender Difference about classroom engagement and Online teaching*

| | Male N=(166) | | Female N=(234) | | T | df | p |
|-----------------------|-----------------|------|-------------------|------|------|-----|------|
| | M | SD | M | SD | | | |
| Classroom Engagement | 33.01 | 4.78 | 32.29 | 4.92 | 1.45 | 398 | .147 |
| Student Engagement | 35.72 | 5.08 | 34.85 | 4.38 | 1.81 | 398 | .070 |
| Emotional Engagement | 35.37 | 5.01 | 34.53 | 4.80 | 1.69 | 398 | .092 |
| Cognitive Engagement | 44.33 | 7.90 | 44.39 | 6.39 | -.08 | 398 | .929 |
| Behavioral Engagement | 38.60 | 5.05 | 38.12 | 4.24 | 1.01 | 397 | .313 |
| Online Teaching | 13.26 | 4.54 | 12.88 | 4.36 | .83 | 398 | .406 |

The classroom engagement difference among the M. and SD. for male was (M=33.01, SD=4.78) and for female was (M=32.29, SD=4.92), and (t= 1.45 and (p=.147) for both male and female. The student Engagement difference among M. and SD. for male (M=35.72, SD=5.08) and for private (M=34.85, SD=4.38) and (t= 1.81), (p= .070). The intellectual engagement difference among the M. and SD. for male was (M=35.37, SD=5.01) and for female was (M=34.53, SD=4.80), (t= 1.69 and (p=.092) for both male and female. The cognitive Engagement difference among the M. and SD. for male was (M=44.33, SD=7.90) and for female was (M=44.39, SD=6.93), (t= -.08 and (p=.929) for both male and female. The behavioral engagement difference among the M. and SD. for male was (M=38.60, SD=5.05) and for female was (M=38.12, SD=4.24), (t= 1.01 and (p=.313) for both public and female. The online teaching difference among the M. and SD. for male was (M=13.26, SD=4.54) and for female was (M= 12.88, SD=4.88), (t=.83and (p=.406)for both public and female. There was no substantial variance among male and female with concern to classroom engagement and behavioral Engagement, student, cognitive, emotional, learning and online teaching.

Table 5. *ANOVA test was applied to check the difference among classroom engagement and learning of university students regarding CGPA*

| FACTORS | CGPA 2.5-2.9 N=(46) | | | CGPA 3.00-3.5 N=(262) | | CGPA 3.6-4.00 N=(92) | | ANOVA | |
|-----------------------|---------------------------|------|-------|-----------------------------|-------|----------------------------|------|-------|--|
| | M | SD | M | SD | M | SD | F | Sig. | |
| Classroom Engagement | 31.76 | 6.23 | 32.74 | 4.72 | 32.52 | 4.39 | .812 | .445 | |
| Student Engagement | 36.20 | 3.53 | 35.16 | 4.77 | 34.73 | 5.02 | 1.36 | .257 | |
| Emotional Engagement | 36.93 | 3.68 | 34.65 | 5.05 | 34.47 | 4.68 | 1.36 | .257 | |
| Cognitive Engagement | 46.65 | 5.50 | 44.28 | 7.33 | 43.03 | 6.36 | 3.59 | .028 | |
| Behavioral Engagement | 37.93 | 3.47 | 38.46 | 4.82 | 37.95 | 4.25 | .49 | .613 | |
| Online Teaching | 14.26 | 4.50 | 12.77 | 4.47 | 13.42 | 4.05 | 2.54 | .080 | |

Table shows Mean and SD with concern to classroom engagement of students who has 2.5-2.9 CGPA having (M=31.76, SD=6.23), students of 3.00 - 3.5 CGPA having (M=32.74 SD=4.72) and 3.6-4.00 CGPA having (M=(32.52), SD=(4,39) F = .812 and p value was .445. The M. and SD. of factors of student engagement with concern to the 2.5-2.9 CGPA having (M=(36.20), SD=(3.53) , students of 3.00 - 3.5 CGPA having (M=35.16 SD=4.77) and 3.6-4.00 CGPA having (M=(34.73), SD=(5.02) (F= 1.36;p=.257). The M. and SD. of factors of emotional engagement with concern to the 2.5-2.9 CGPA having (M=(36.93),

SD=(3.68) , students of 3.00 - 3.5 CGPA having (M=34.65 SD=5.05) and 3.6-4.00 CGPA having (M=(34.47), SD=(4,68) (F= 1.36;p=.257). The M. and SD. of factors of cognitive engagement with concern to the 2.5-2.9 CGPA having (M= (46.65), SD= (5.50), students of 3.00 - 3.5 CGPA having (M=44.28 SD=7.33) and 3.6-4.00 CGPA having (M=(43.03), SD=(6.36) (F= 3.59p=.028).

M. and SD. with concern to behavioral engagement of students who has 2.5-2.9 CGPA having (M=37.93, SD=3.47), students of 3.00 - 3.5 CGPA having (M=38.46 SD=4.82) and 3.6-4.00 CGPA having (M=(37.95), SD=(4.25) F = .49 and p value was .613. M. and SD. with concern to online teaching of students who has 2.5-2.9 CGPA having (M=12.16, SD=4.50), students of 3.00 - 3.5 CGPA having (M=12.77SD=4.47) and 3.6-4.00 CGPA having (M= (13.42), SD= (4.05) F = 2.54 and p value was .080. There was no substantial variance among CGPA Group with concern to classroom engagement learning and online teaching. The hypothesis was accepted. There was a substantial variance among CGPA Group with concern to cognitive engagement.

Table 6.Post hoc test

| | (I) AGE | (J) AGE | Mean Difference (I-J) | Std. Error | Sig. |
|----------------------|---------|----------|-----------------------|------------|------|
| Learning | 2.5-2-9 | 3.00-3.5 | 1.66 | .578 | .021 |
| Cognitive Engagement | 2.5-2-9 | 3.00-3.5 | 2.65 | .869 | .013 |

Post hoc were conducted to identify differences between different age groups in terms of learning and understanding of work, age group 20-25 and 26-30 has statistically significant difference (p= .021) with respect to learning and having mean score (M=35.85 SD=5.62) and with respect to learning age group 20-25 and 26-30 have mean score M=45.01, SD=5.95 were significant difference (p= .013).

IV. DISCUSSION AND CONCLUSION

The student engagement is a very important aspects of online teaching and students learning. Various examinations have been led on Student Engagement in the customary and web based learning conditions (Centner, Alvey, & Stelzleni, 2014). These examinations connected Student Engagement to the key elements affecting the learning cycle comprehensive of instructional plan and conveyance, innovation uphold, self-managed or self-coordinated learning, university fulfillment, determination, university execution, and university scholarly achievement. The job of the teacher in encouraging Student Engagement likewise has been investigated and discovered to be an extra key factor, especially considering the progress cycle to online stages (Chi & Wylie, 2014). The definition proposed by Kuh et al. (2008) that Engagement connects to the measure of exertion consumed by the university in the learning climate was utilized in this examination. Ghasemi, Amani and Nazemi Moghadam (2017) clarified that Student Engagement comprises of conduct factors (support) and enthusiastic components (distinguishing proof) in his introduction of the interest ID model. The conduct factor addresses a functioning disposition toward learning, like posing inquiries or submitting tasks, and the enthusiastic factor alludes to the understudies' sentiments toward learning, for example, inclusion in or a feeling of having a place with the learning local area. As per Gray and DiLoreto (2016) fruitful online students examine their learning with peers and are propelled to learn, contribute a fitting measure of time to plan for exercises, and can use the innovation that is expected to take online classes. The study explored the effect of online teaching on students' classroom engagement and their learning of public and private universities at district Lahore. It was concluded that students were showed high classroom engagement in online teaching, and students' engagement was also effected by online teaching. There was no significant difference due to program and gender regarding classroom engagement and online teaching.

V. RECOMMENDATIONS

Following are recommendations:

1. Universities may continue to design and provide quality education / learning strategies for their students to enhance their learning.
2. Universities need to improve online teaching methodology which enhance the engagement level and learning level of the students.

3. Web services also need to be improved as there is useful information available online to motivate students to participate in education and develop new strategies. These recommendations should encourage more students to serve and seek information and advice about their achievements includes additional parameters for student engagement and variables for acceptance factors.

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