

Determining the effect of motivation on computer mediated communication during COVID-19

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ABSTRACT

A survey was conducted among college graduate female students aged 18-21 years during the lockdown period due to COVID19 using online portals. As the Lockdown boosted the enrolment of online courses, e-learning, video conferencing and many more avatars of Computer Mediated Communication by the educational institutions and governments, the study was aimed to explore the probable sources that could enhance better involvement of the students in the CMC platforms. The survey hypothesised that motivation predicts the interest towards computer mediated communication (CMC) and that there is a relation between motivation and CMC. Students who are motivated towards excellence will find CMC platforms challenging and reinforcing towards their educational goals. The survey used an online activity based on hidden puzzle as an experiment to gain insight, introspect the instructions, gain experience at basic level and the need to execute the instructions with commitment. Besides the puzzle, the survey incorporated the use of tools, 'Motivation to Achieve' questionnaire by Waugh (2002) and 'CMC Competence Questionnaire' by Spitzberg (2004) to measure Motivation and CMC respectively. The sample population for the survey included 35 participants who volunteered to take the activity puzzle test twice a day for consecutive three days. All the puzzles had same instructions but they were not repetitive. Following three consecutive days, the students were requested to answer the 'CMC competence questionnaire' and 'Motivation to Achieve' questionnaire. The study identified a poor correlation between CMC and Motivation ($r = .521$) and the results were found to be insignificant. The conclusion from the survey could be stated that perception of the students high in motivation towards academic excellence is not a strong predictor for commitment towards CMC platforms. Only 1.2% ($R^2 = .012$) of the variance scores of CMC and Motivation were supporting the analysis. This suggests that though the students are high academic achievers (mean = 16.08, $N = 35$), they still need to develop their attitudes towards technical ability, interest and the necessity to strive for excellence when it comes to online learning. With a lack in these areas and probably due to COVID 19 frustration, students showed poor motivation towards the online instructions or perhaps there still is a demand for face-to-face learning. The study could be expanded with more sample, gender difference studies and further empirical evaluations.

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“Electric Communication will never be a substitute for the face of someone who with their soul encourages another person to be brave and true”

- **Charles Dickens**

Living in a world engaged with electronics everywhere during the time of pandemic is the only ‘peek-hole’ to get in touch with the world amidst lockdown. This method of communicating using electronics is way more appreciating and engaging currently and to foresee this as a curriculum to follow raises a plethora of queries. Such communication named as ‘Computer Mediated Communication (CMC)’, is explained as a form of human interaction using computers and other related electronic accessories in real-time, synchronously or asynchronously, according to Wikipedia (2020).

Interaction among two or more people with the help of electronic gadgets to share information, thoughts, audio or video resources has become a culture of the millennia. And, it has become inevitable to lead a life sans technology. The challenge to reach the students amidst lockdown to pace up with their educational goals required the necessity to inculcate the method of interacting using CMC. Reaching the students using CMC demands critical planning for the development of online courses (Rockinson-Szapkiw, 2012).

Not just the pedagogy and methodology remains a challenge but also the personality of the course takers. It has been found that introverts find CMC based instructions more helpful than extroverts (Maldonado, Gracia, Mora, & Edipo, 2001). The current study wanted to speculate the perception of the motivated achiever’s and goal-oriented student’s towards CMC usage in delivering instructions via online platform. Motivation definitely acts as a predictor for a student’s academic achievement and grade performance (House, 1994).

Motivation of the students predominantly depends on the student –teacher relationship which further enhances the development of academic self-concept and achievement of a student. The interaction between student-faculty brings a better learning platform in an informal setting beyond the formal one (Komarraju, Musulkin, & Bhattacharya, 2010). But in a CMC platform this informal communication is interrupted by factors like the voluntary nature of the students, their schedule time as well as the teacher’s time etc (Mahdi & El-Naim, 2012).

This clearly conveys the fact that the social interaction between the students and faculty is poor in a CMC initiated learning program (Gregor & E.F.Cuskelly, 1994). When given a choice between face-to-face communication and Computer-Mediated Communication, the choice of the student is face-to-face interaction and perceived to be comfortable (Tiene, 2000). The prior reason behind the preference for face-to-face communication remains to be the ease of reaching the whole group for any discussion (Zwaanswijk & Dulmen, 2014). Thus, the future educational system must aim for a collocated effort from both CMC as well as Face-to-Face communication (Olson, Teasley, & Olson, 2002). By this, more methodological tools and curriculum framework are essential to render a better interaction to make learning fun and productive.

METHODOLOGY

A study on the topic, “Determining the Effect of Motivation on Computer Mediated Communication during COVID 19” was conducted to the graduate female students of 18 – 21

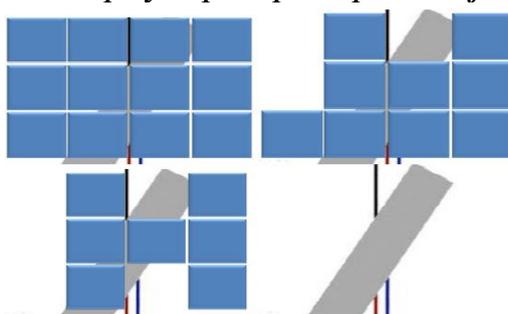
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years. The number of participants in the study included 35 voluntary students. The study had two phases: 1) Online activity based on hidden puzzle; 2) Answering of two questionnaires: 'Motivation to Achieve' questionnaire by Waugh (2002) and 'CMC Competence Questionnaire' by *Spitzberg (2004)*

1) *Online activity based on hidden puzzle:*

An activity was developed using Microsoft Power Point, where in the students are supposed to identify the picture by clicking on the boxes to reveal the hidden image (Fig 1- in this case poggendorff illusion was given). The students were then asked to register the time taken to reveal the image on to a spreadsheet. The activity was carried out twice a day for 3 consecutive days with the same instructions.

Figure 1 shows the step by step snapshot picture of the online activity



The goal behind the activity is to identify how many students participated regularly and how many of them took responsibility to register their time taken score as a priority.

The idea behind the activity is that students who are interested, motivated, technically literate will record their scores. This activity will also provide an experience over online instructions and executing it as well as provide introspection towards online learning experience at a basic level.

After 3 consecutive days with different puzzle twice a day, two questionnaires were provided to the students.

2) *Questionnaire 1: Motivation to Achieve by Waugh (2002)*

The standardized questionnaire developed by Waugh titled 'Motivation to Achieve' is based on the concept to measure academic motivation based on three aspects: Striving for Excellence, Desire to Learn and Personal Incentives. Each of these three aspects were based on attitude and behaviour, interests and learning and finally on incentives respectively. There are 50 motivational items with a likert score ranging from 1 to 4 and the questions were adapted and simplified to suit to the needs for the current study.

3) *Questionnaire 2: CMC Competence Questionnaire by Spitzberg (2004)*

Spitzberg standardized and developed CMC Competence Questionnaire in 1997 and published in the year 2004, which contains 50 questions and responses are based on a likert scale ranging from 1 -5 with 1 being very low and 5 being very high. The questionnaire predominantly measured four main factors namely: Technological Literacy, Interaction Skill, Motivation and Satisfaction. The motive of the

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questionnaire was to measure the skills of competence associated with computer mediated communication. The questions were adapted and simplified to suit the needs for the current study.

The study involved only online platforms to share instructions, record the scoring and answering the questionnaire. The study used SPSS 16.0 and Microsoft Excel to compute and analyse the results.

DISCUSSION AND RESULTS

A survey titled, “Determining the Effect of Motivation on Computer Mediated Communication during COVID 19” was conducted among graduate female students of age 18 – 21 years. The aim of the study was to explore the perception of academically motivated students towards computer mediated communication. The study was hypothesised that the academically motivated students will show high interest towards CMC. Also, that CMC and motivation will have positive correlation.

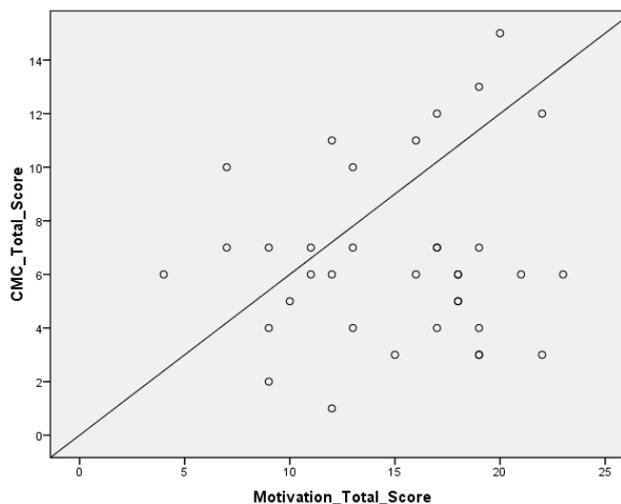
In order to analyse over these questions, a statistical analysis was carried out using SPSS 16.0 and Microsoft Excel. Measuring motivation, the independent variable, was done using “Motivation to Achieve” by Waugh (2002) and measuring CMC, dependent variable was done using “CMC Competence Questionnaire” by Spitzberg (2004).

Table 1 shows the descriptive statistics for the variables Motivation and Computer Mediated Communication.

Variable	N	Mean	Std. Deviation
Computer Mediated Communication (Dependent)	35	7.77	3.18
Motivation (Independent)	35	16.08	4.61

The above analysis shows that the mean of CMC (N=35) as 7.77 and the mean of Motivation to be 16.08 (N=35). The statistics can be interpreted that the students are with higher motivation but their interest towards Computer Mediated Communication is moderate. It can be speculated that if provided correct methodology and technical support for enhancing CMC, the motivation of the students will equally gets improved and vice-versa (Wu, Marek, & Yen, 2012).

Figure 2 shows the scatter plot between dependent and independent variable



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We can comprehend from the plot graph (figure 2) that the actual scores are sparsely aligned near the slope indicating a weak correlation between motivation and CMC. And from table 2, we can find out from the analysis that there is an insignificant relationship between motivation and CMC score with $r = .110$. With the result being insignificant it can be interpreted that the strength is insufficient to predict the relationship between the variables. Only 1.2% of the variance scores ($R^2 = .012$) of CMC and Motivation scores were related. If more samples are used, probably a better idea will be generated. Or perhaps, the students showing higher motivation towards academics (Table 1) are not in favour of Computer Mediated Communication due to varied interests, technical skills and satisfactory levels and that their preference for face-to-face communication is higher and there are individual differences. It has been studied that motivation as such is of two kinds as positive and negative, wherein the positive motivation is more related to proactive CMC attitudes such as confidence, comfort, communicator involvement etc and negative motivation is associated with social anxiety, apathy, shyness etc (Ritcher, Groeben, & Naumann, 2000) (Source retrieved from (Spitzberg, 2004)). Perhaps, the academically motivated students are not positively motivated when it comes to CMC. Further study is suggested.

Table 2 shows the correlation table between the variables

Variables		CMC	Motivation
CMC	Pearson Correlation	1	.110
	Sig. (2-tailed)		.521
	N	35	35
Motivation	Pearson Correlation	.110	1
	Sig. (2-tailed)	.521	
	N	35	35

CONCLUSION

The study titled, "Determining the Effect of Motivation on Computer Mediated Communication during COVID 19" hypothesised that academic achievers with high motivation will perceive Computer Mediated Communication as interesting. Also, that there will be a positive correlation between CMC and Motivation. However, the result of the study was not significant to provide information relevant to the relationship between Motivation and Computer Mediated Communication and only a small variance ($R^2 = 1.2\%$) score of both the variables (CMC and motivation) got analysed supporting the rejection of the hypothesis. Few speculations over the study could be the presence of missing values in between the questions asked in the survey and the representation of small number of students ($N=35$). The chances of not having positive motivation attitudes like confidence, comfort etc present during the study might have contributed to the missing values in between the questions asked. Besides these, the preference for face-to-face communication and personality of the students might also be a hidden factor. Further study is needed to be more specific for the lack in motivation towards Computer Mediated Communication. This study could really be a spark for igniting many more researches and suggestions regarding the personality of students, the preference for Face to Face Communication, methodology and tools to inculcate in the educational streams by considering CMC as a potential platform to meet the futuristic demands and challenges in the educational system.

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Conflict of Interest

The author declared no conflict of interest.

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