

A CORRELATIONAL STUDY BETWEEN LEARNING MOTIVATION AND SATISFACTION IN ONLINE COURSES

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Abstract

Purpose of the study: The current study was carried out to find out the correlation between Learning Motivation and Learning Satisfaction of graduate students enrolled in English online courses in Alama Iqbal Open University which is one of the oldest distance education institutes of Pakistan having 1.7 million enrolments every year.

Methodology: Situational Motivation Scale (SIMS) measuring four types of motivation. The scale consists of 16 items. 150 students were selected through a convenient sampling method from the two-degree programs studying English Language as a compulsory offered online by the University. The data collected was quantitative in nature and it was analysed through Pearson correlation.

Main Findings: Pearson correlation of the data reveals that there exists a strong positive correlation between different types of Learning Motivation and Learning Satisfaction. The data reveal a strong correlation between motivation and satisfaction and tutor and tutorial and weak correlation Course content and organization.

Applications of this study: The study suggests that through the use of more advanced technology and more integrated technology these educational goals for distance learners can be achieved. Therefore, while preparing lessons teachers should keep in mind the maximum utility of resources, use of internet and multimedia in the most effective way to relate them to course contents for the attainment of objectives of the course.

Novelty/Originality of this study: Online distance education is not a very common research area in Pakistan. Only a handful of studies have been conducted especially considering the motivation and satisfaction of these students. Hence it is a first-hand study of its kind, and the results will be useful for Higher Education Institutes.

Keywords: Motivation, Satisfaction, Online, Distance, Technology Advancement, Intrinsic.

INTRODUCTION

Everything in the world has come under the influence of 21-century technological advancement including higher education (Jones, 2008). Apart from education technological advancement has changed the shape of e-banking, e-commerce, e-shopping and e-government, (Rahmi, Birgoren, & Aktepe, 2018). Higher education cannot sustain its existence without technology according to Khan, Shin, & Kim (2018). In particular, the credit of existence and survival of distance education goes specifically to technology as these programs are based on technology and the teaching/learning process or the delivery of the whole programs is conducted through technology. This is the reason that universities should keep their technology updated and in line with the approach towards delivery of education (Nayan, Othman, Tiong, & Hasan, 2018).

One of the miracles of the 21st century related to technology is the integration of the internet in distance education. There was a time that multimedia was considered the foremost source of distance education. Before that time, the corresponding teaching was the most common mode of distance education (Peters 2001; Kaye & Rumble, 2018; Kem, 2018). It is commonly assumed by the educationists that soon the regular face to face education structure will be replaced by the modern technologically friendly structure. These technologies will bring new and advance social, educational and scientific e sharing space that will be the biggest threat to the face to face education system all over the world. Researches these days are of the opinion that technology will soon overshadow the present regular system of education (Azeiteiro, Bacelar-Nicolau, Caetano & Caeiro, S 2015; Fraser, 2017). The following objectives have been studied after a thorough analysis of the above discussion.

Objectives

Objectives of the study are:

- To determine whether there is a significant relation between Learning Motivation and Learning Satisfaction.
- To determine whether there is a significant relationship between intrinsic motivation and learning satisfaction.
- To determine whether there is a significant relationship between identified regulation and Learning Satisfaction.
- To determine whether there is a significant relationship between external regulation and Learning Satisfaction.

- To determine whether there is a significant relationship between motivation and Learning Satisfaction.

LITERATURE REVIEW

The distance education system is supported by the online education approach as it can fully utilize the pedagogical practices ([Shopova, 2014](#); [De Freitas, Morgan & Gibson 2015](#)), due to which many developed and developing countries are transferring to the online approach of teaching/learning rather than the traditional face to face pedagogy. This transfer of education approach can be seen in the field of English language teaching swiftly as compared to others ([Vovides, SanchezAlonso, Mitropoulou, & Nickmans, 2007](#); [Settha Kuama & Usa Inthara, 2016](#)). As per linguistics, this change is because the online education is more student-centered, more led by the learner, more engaging, the progress is according to their own pace, and is flexible in terms of time, which fulfills the main requirements of language learning. ([Clarke & Hermens 2001](#)). Hurdles such as class size and distance can not cause any problem in group discussion, exchange of knowledge and conveying views and opinions in online classes ([Ongozi, 2018](#)).

Along with having all the above-mentioned benefits, online education system students have to face multiple problems as compared to the students from the regular education system ([Tsai, 2009](#)). According to [Davies & Graffs \(2005\)](#), these hurdles if not overcome can have a serious negative effect on the achievement of the students. Tutorial, participation, learning and assessment are the main areas where students can face problems.

Every year around 2 million students are enrolled in Allama Iqbal Open University. It is the first distance education university in Pakistan with more than 40 campuses all over the country. This university also provides education to overseas Pakistan's citizens and even to foreigners through online services. Several courses are being offered by the university including English, French and Arabic languages. Keeping in view the importance of online education in the modern world, much research has already been done on different dimensions of distance education and much literature already exists on the complications of online education offered in the developing countries. ([Aktaruzzaman & Plunkett, 2017](#)). However, the current study has novelty over the past researches as its focuses are on the English language learners' motivation and satisfaction in online courses offered by distance learning University in Pakistan. The focus of the study will be on graduate students in the programs BBA (Bachelor in Business Administration) and BS in Banking & Finance studying English as a compulsory language using Olive (online system) in Allama Iqbal Open University, Pakistan.

Achievement of students is the result of multiple physical and psychological factors including, learning, memory, emotions, satisfaction, and attitude. Many education specialists including researchers from the field of Organization behaviour, Management, Teaching, Classroom organization, Psychology and marketing have taken motivation as the researchable topic ([Tsitskari, Tzetzis, & Vernadakis, 2014](#)) however only a handful of research is available on different types of motivation.

Students need to be motivated to achieve learning outcomes. Motivation is the central force that pushes an individual towards a certain goal or has active participation in a particular activity. A theory offered by [Deci and Ryan \(1985\)](#) called self-determination theory explains the force or energy that makes an individual try to achieve a certain task. [Deci and Ryan \(2000; 2004\)](#) categorized motivation into two sections i.e. intrinsic and extrinsic motivation.

The first category of motivation exists in the tasks undertaken for the feelings of joy, pleasure, accomplishment, and success etc. It doesn't demand and external energy or push such as money, fame, promotion ([Deci & Ryan, 1985](#)). Adults mostly are motivated to learn through this type of motivation as they can have pleasure in learning or they can satisfy their curiosity [Danis and Tremblay's \(1987\)](#). Learning motivation activates learners' interest in a particular task and makes the learners participate in the process towards achieving some predetermined goal. [Chang & Lin \(1989\)](#) say that to achieve an already determined goal, the learner's motivation to learn is activated by arising his interest in that particular activity.

However external motivation is opposite to internal motivation as it takes place with some external motive in mind that can be in the form of reward, money, degree, upgradation or praise. When an individual performs a task without having any pleasure or joy in it but he does it solely for his belief in the significance of the task, this is the highest form of self-determination in external motivation. Whereas the lowest level of self-determination is amotivation. In this state of mind, the individual is not sure about his decisions. He is neither internally nor externally motivated ([Deci & Ryan, 1985](#)).

[Chang \(1991\)](#) determines that psychological factors like success, relationship, cooperation, and alliance are the central sources of learning motivation. And according to [Vansteenkiste, Simons, Sheldon & Deci \(2004\)](#), learning motivation can lead to learning outcomes. The external motivation was thought to be relevant in young learners' only but [Huang \(1992\)](#) claims that internal and external both can affect not just young learners but adults' learners as well. By changing the external factors, certain learning goals can easily be attained in adults. Factors such as surroundings, aims, attitude and beliefs can contribute to learning motivation in an adult individual. ([Danis and Tremblay, 1987](#))

In research about the influence of learning motivation on learning outcomes, the researcher states that motivation is a constant and consistent process that starts and moves towards its objective ([Tsai and Chang, 2007](#)). Intrinsic and extrinsic motivation are explained by [Tsai and Chang \(2007\)](#) as intrinsic motivation contains the element of self-

fulfilment and is the product of one's own beliefs and attitude. On the other hand extrinsic motivation compels an individual to exhibit such behaviour which may lead him to achieve some outward reward in the form of money, prize, trophy or positions. To reach the targeted learning, equilibrium between the external and internal motivation should be achieved, till that time motivation keeps on working in the mind of an individual.

Education serves two purposes. Its short term purpose is to promote the student to the next grade, while its long term purpose is to equip the students with an understanding of life so that in future they can handle any kind of economical, technological and knowledge change, which will eventually make them survive in the society. A few decades back, the aim of education was solely to make a learner skilful but with the emergence of the 20th century, the purpose of education has changed overall. Now education means lifelong learning, creation, revolution and multi-layered understanding of the world. One of the pre-request of learning is satisfaction. Job satisfaction is considered an important predicting factor in students' achievement.

Job satisfaction comes from the learners' satisfaction as a result of learning experiences. According to [Rovai \(2002\)](#), the feelings of being connected to multiple factors that have an impact on a particular situation can be given the name of learner's satisfaction. Whereas [Astin \(1993\)](#) says the contentment and the sense of understanding that a learner receives from a learning situation is the actual learning satisfaction. Another researcher [Liaw \(2008\)](#) discussing online education and motivation says that the assurance of learners that they can understand and utilize information systems per their need is very important in an online class as the online education system works on technology. Besides technology in an online course students satisfaction can be effected by tutors and tutorials, lectures, assessment, course design, students and environment ([Woltering, Herrler, Spitzer, Spreckelsen, 2009](#); [Swan, 2001](#); [Johnson, Aragon, & Shaik, 2000](#); [Richardson, Swan, 2003](#); [Martín-Rodríguez, Fernández-Molina, Montero-Alonso, & González-Gómez, 2015](#); [Sun, Tsai, Finger, Chen, & Yeh 2008](#)).

[Ma \(1989\)](#) states that Student satisfaction can be grouped into three categories i.e. satisfaction from teachers' teaching, learning results, and interpersonal relationship. Whereas [Astin \(1997\)](#) categorizes them into teacher and course content, development of educational background, interpersonal relationship, attitude and emotion, and institutions. Materials, teachers' teaching and interpersonal relationships as categories of students' satisfaction were recommended. The interpersonal relationship was replaced by peer relationships and the other two categories i.e. course content and learning results were included in the group by [Chen \(1997\)](#). Higher Education Commission of Pakistan (HEC) has established seven categories to measure students' satisfaction. The same satisfaction scale will be utilized by the current study. It comprises of students' contribution; learning environment and teaching methods; learning resources; course contents and organization; assessment; quality of delivery; tutor and tutorial.

[Kehrwald & McCallum \(2015\)](#) while talking about the online education system highlights the difference between teacher-directed learning and self-directed learning. He says when a teacher directs the student to learn that learning will be narrower and shallow as compared to self-directed learning which will be broader and long-lasting. It will lead to an increase in learning satisfaction causing the strong link between motivation and satisfaction. The desire of the student to learn and their motivation leads to the feelings of learning satisfaction ([Abraugh, 2000](#)). So it can be said that there exists a stronger relationship between learning motivation and learning satisfaction. [Eom & Ashill \(2016\)](#) argue that motivation can be the rule of learning satisfaction by arousing learners' desire and need to learn. This ultimately proves the connection between learning motivation and the satisfaction of students.

The completion of feelings or desire of learners to learn governed by motivation converts into learning satisfaction ([Sogunro, 2015](#)). A strong tie emerges with the passage of time between learning motivation and satisfaction. When students are provided with an active and creative environment, only then their desire to learn can be satisfied and they can feel motivated. Even with the above-mentioned condition, there can be some issues in learning as no two individuals are alike, so are their motivation and satisfaction types different from each other. A relationship does exist between the two factors but just their nature is different in different individuals ([Harvey, Locke and Morey, 2002](#)). This is applicable not just on young learners but for mature learners as well as the relationship between learning motivation and satisfaction is strong and significant ([Shen, 2010](#)).

Hypothesis

The following hypothesis is constructed in light of the literature review.

Ho1: There is no significant relation between Learning Motivation and Learning Satisfaction.

Ho2: There is no significant relationship between intrinsic motivation and Learning satisfaction.

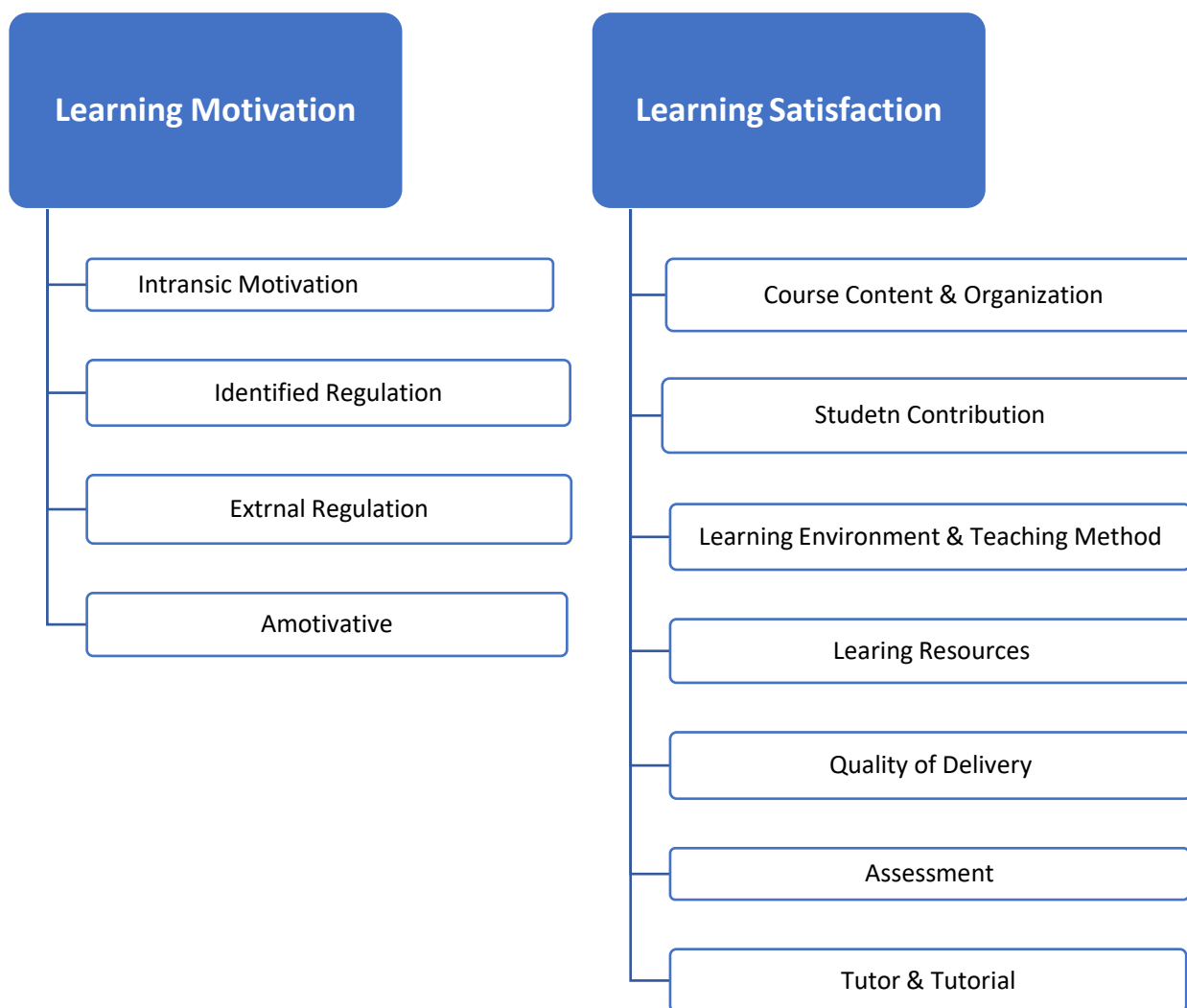
Ho3: There is no significant relationship between identified regulation and Learning Satisfaction.

Ho4: There is no significant relationship between external regulation and Learning Satisfaction.

Ho5: There is no significant relation between amotivation and Learning Satisfaction.

METHODOLOGY

The purpose of the study was to examine the relationship between learning motivation and learning satisfaction of graduate-level students learning English as a compulsory course in an online system of education. For this exploration Phenomenological survey method was selected as the data was collected through questionnaires and the data only presented their believes or attitudes about motivation and satisfaction (Creswel, 2009). Data from 150 students were collected through convenient sampling techniques from two study programs of Allama Iqbal Open University. It was analysed through Pearson correlation in SPSS.



Population and Sample

The population of a study represents the set of individuals that the study can be generalized (Creswel, 2009). For the current study, all the online students studying English at the graduate level are considered to be the population of the study. Since a researcher cannot study the whole population he/she takes a small group of individuals caring the same qualities as the population has and which is the centre of the study that small sample becomes the sample of the study (Creswel, 2009). There are many types of sampling procedures. For the current study through convenient sampling techniques, 150 ESL students from the degree programs BS (Business and Finance) and BBA (Bachelor's in Business Administration) were selected.

Instrument

Two questionnaires were adapted for the current study. The first questionnaire was the Situation Motivation Scale by Deci and Ryan (1985). It categorized motivation into four types i.e. intrinsic motivation, identified regulations, external regulation and amotivation. The questionnaire consisted of 16 items. For the convenience of the data respondents, it was translated into the Urdu language. The second questionnaire was to measure learning satisfaction. Higher Education Commission review Performa was used for data collection. It consisted of seven sub-groups i.e. Course Content and Organization; Student Contribution; Learning Environment and Teaching Methods; Learning Resources; Quality of

Delivery; Assessment; Tutor and Tutorial. A total of 22 Likert scale questions were there in the questionnaire ranging from strongly agree to strongly disagree.

Procedure

Every semester online students come to Allama Iqbal Open University for attending workshops which are a compulsory component of all the online study programs at AIOU. The researcher approached these workshops and with the help of the course coordinators collected the required data from the students. The researcher distributed the questionnaires by hand and announced the purpose of the study and explained how to fill the questionnaires. The data was collected in 35 minutes from each group.

Data collection and Analysis

The collected data were coded in SPSS version 2.4. Inferential statistics were carried out as the data was to be generalized to the population. In inferential statistics, Person correlation was selected for data analysis as it is a good statistical measure of association between independent variables (Field, 2016). Pearson correlation has benefited over others as it can show us positive as well as a negative relation between the variables. Its relation range can be between -1.0 to +1.0. This data analysis technique can tell about the strength of the relationship between variables. In this research, Pearson analysis was used to measure the bond between an independent and dependent variable. Given below is the result of the person correlation in Table 1.

ANALYSIS

The main purpose of the study was to find the relationship between learning motivation and learning satisfaction of online English language course students. A total of 150 students were selected for the study and two questionnaires measuring motivation and satisfaction were distributed among them to obtain the data. The analysed data through Pearson correlation is given below.

Table 1: Relationship of Motivation and Distance Students Satisfaction and Their Sub Factors

Scale	N	r & Sig	Motivation	Intrinsic	Identified Regu	External Re	Amotivative
1 Satisfaction	150	<i>r</i>	.827**	.836**	.690**	.605**	.589**
		Sig	0.000	0.000	0.000	0.000	0.000
2 Tutor and Tutorial	150	<i>r</i>	.808**	.851**	.685**	.561**	.546**
		Sig	0.000	0.000	0.000	0.000	0.000
3 Learning Resources	150	<i>r</i>	.668**	.704**	.521**	.484**	.469**
		Sig	0.000	0.000	0.000	0.000	0.000
4 Learning Environment and Teaching Methods	150	<i>r</i>	.667**	.703**	.520**	.483**	.469**
		Sig	0.000	0.000	0.000	0.000	0.000
5 Student Contribution	150	<i>r</i>	.595**	.571**	.469**	.450**	.475**
		Sig	0.000	0.000	0.000	0.000	0.000
6 Quality of Delivery	150	<i>r</i>	.593**	.570**	.467**	.449**	.473**
		Sig	0.000	0.000	0.000	0.000	0.000
7 Assessment	150	<i>r</i>	.575**	.571**	.467**	.450**	.472**
		Sig	0.000	0.000	0.000	0.000	0.000
8 Course Content and Organization	150	<i>r</i>	.478**	.475**	.387**	.383**	.336**
		Sig	0.000	0.000	0.000	0.000	0.000

P = .01

H01: There is no significant relation between Learning Motivation and Learning Satisfaction. Table 1 rejects hypothesis one based on the proven data that shows a strong relationship between motivation and satisfaction. Table 1 highlights the analysis from the Pearson correlation of motivation and satisfaction of online English language course students. The motivation was correlated with seven sub-categories of satisfaction i.e. 1-Course content and organization, 2-students contribution, 3-learning environment, 4-learning resourced, 5-quality of delivery, 6-Assessment, 7-Tutor and tutorial. Though all the factors were significantly correlated with motivation yet they have been divided into strong, moderate and weak categories for the easy understanding of the data. A strong correlation was found between motivation and satisfaction ($r = .827, p < .01$), followed by tutor and tutorial ($r = .808, p < .01$). A moderate relationship was found between motivation and learning resources ($r = .668, p < .01$) as well as motivation and learning environment and

teaching methods ($r = .668, p < .01$), Students contribution ($r = .595, p < .01$), Quality of Delivery ($r = .595, p < .01$) and assessment ($r = .575, p < .01$). Whereas a weak correlation was found between Course content and organization ($r = .478, p < .01$).

Ho2: There is no significant relation between intrinsic motivation and learning satisfaction. Hypothesis two was rejected on the base of the above analysis proving that intrinsic motivation has significant relationship with learning satisfaction. There was positive strong significance relationship of motivation factor intrinsic with English language online students satisfaction ($r = .835, p < .01$), tutor and tutorial ($r = .851, p < .01$), learning resources ($r = .704, p < .01$) and learning environment and teaching method ($r = .703, p < .01$). Whereas moderate positive significant relationship with student contribution ($r = .595, p < .01$), quality and delivery ($r = .593, p < .01$), assessment ($r = .575, p < .01$). The least correlation was noted with intrinsic motivation and course content and organization ($r = .475, p < .01$).

Ho3: There is no significant relation between identified regulation and Learning Satisfaction. The third hypothesis was also rejected as there was positive but rather moderate relationship of motivation factor identified regulation with English language online students satisfaction ($r = .690, p < .01$), tutor and tutorial ($r = .685, p < .01$) learning resources ($r = .521, p < .01$) and learning environment and teaching methods ($r = .520, p < .01$). However weak positive significant relationship can be seen with student contribution ($r = .469, p < .01$), quality and delivery ($r = .567, p < .01$), assessment ($r = .467, p < .01$) and course content and organization ($r = .387, p < .01$).

Ho4: There is no significant relation between external regulation and Learning Satisfaction. The forth hypothesis was also to be rejected as again significant relationship was proven by the data analysis between external regulation and learning satisfaction. The relationship was positive significance but moderate between motivation factor external regulation with distance students' satisfaction ($r = .65, p < .01$), tutor and tutorial ($r = .561, p < .01$). However weak positive and significance relationship with all other factors including learning resources ($r = .484, p < .01$), learning environment and teaching method ($r = .483, p < .01$), student contribution ($r = .450, p < .01$), quality of delivery ($r = .449, p < .01$) assessment ($r = .450, p < .01$) and course content and organization ($r = .383, p < .01$).

Ho5: There is no significant relation between amotivation and Learning Satisfaction. The last hypothesis had the same result as the other because a significant relationship was found between the two variables. The last category of motivation was amotivation which has a positive moderate but significant relationship with English language online students' satisfaction ($r = .589, p < .01$) and tutor and tutorial ($r = .546, p < .01$). Whereas with the rest of the factors of satisfaction its relationship is weak with learning resources ($r = .469$), learning environment and teaching method ($r = .469, p < .01$) student contribution ($r = .475, p < .01$) quality of delivery ($r = .473, p < .01$), assessment ($r = .472, p < .01$) and course content and organization was ($r = .336, p < .01$).

CONCLUSION

Distance education has a strong relationship with learning satisfaction which is established from the data analysis of the graduate online students. The conclusion is in line with the previous studies carried out by [Zhang et. al \(2014\)](#). Who claims that there exists a strong relationship between motivation and course satisfaction of English language students. As per the current study, it proves that learning motivation is strongly related to tutor and tutorial; learning environment and teaching methods; and learning resources, suggesting that these three are the main sources to motivate distance education students. Although other factors especially student's contribution, quality of delivery and assessment also has a positive relationship with motivation.

The data further concluded that tutor and tutorial, learning resources and learning environment had a strong correlation with different categories of motivation. This was previously claimed by [Yang et. al \(2006\)](#) but his conclusion was about regular face to face education students whereas this study proves the same thing but for online students. [Shroff & Vogel \(2009\)](#) conducted an experimental study and found that intrinsic motivation in the online tutorial has a strong effect on online education as compared to regular students.

In addition to the above, the data concludes that students' participation, quality of delivery and assessment has a relation with motivation but not as high as the above-mentioned satisfaction factors. This also was agreed by Lin et.al in 2001. Their study was conducted on students of Sanford University. It found that the students were of the opinion that the assessment motivated them to study and have good outcomes. Talking about Preparing Instructors for Quality Online Instruction [Yang \(2005\)](#) says that in order to give quality online education, the quality of instruction should be improved. The last and not very strong relationship of motivation is with course content and organization. Speaking about the delivery of instructions to students Berge [Liaw, Hatala & Huang \(2010\)](#) says learning is a social activity and to facilitate that, a teacher should consciously deliver the content.

RECOMMENDATIONS

Among the three components of education (teacher, student, and teaching), the teaching method plays a different and significant role both in face to face and in the online education system. Teachers should be well aware of the use of technology in education in general, and in online education in specific. Teachers should be well aware of the technology. They should always keep themselves updated and trained in the use of technology that they will be using while teaching. As the study verified students take much motivation from the tutors, tutorials and resources, the aim of an online teacher

should be to make learning more interesting and engaging by coming up with new ideas of utilizing the available resources. It will make the teaching process more effective and fun for the learners.

The only way for any learner to obtain information is through his senses i.e. a sense of hearing, seeing, touching, smelling and tasting. Only two of these senses are utilized to take information from the external world that is through seeing and listening. The aim of any education (regular or distance) system should be to give maximum opportunities to the students so that by using these two senses they can get as much variety of delivery of knowledge as possible. It is possible through learning resources, as the study proves to learn recourse to be one of the most effective factors in motivation, it should be manipulated by the researcher as much as possible. Technology has made it easy in the 21st century as there are many software such as Edmodo, Socrative, Projeqt and TED-Ed etc. through which online learners can be engaged and attracted to the learning task.

Pakistan is a developing country and it's trying to follow the footprints of developed countries like USA, Canada and China, where most of the courses are available online for the convince of the learners. So far only a few universities (Allama Iqbal Open University and Vertual University) out of 110 universities in Pakistan are offering online education ([Pakistan education statistics 2016-17](#)). The policymakers need to know that online education is the future of education and they should give it due attention and importance. Moreover, it will open doors to the section of the population (religious families, girls, housewives and working individuals) who cannot afford to have education through the regular education system due to multiple reasons.

Online education is an upcoming topic in Pakistan and more research can be conducted on different factors related to online distance education to understand the problems and issues that learners may face during this process. One of the methods to find the problems in the emerging online education system in Pakistan can be through comparison of distance and face to face learning that may provide us with some unique features of online education. These features can be examined for the purpose of future research on online education in Pakistan.

LIMITATION AND STUDY FORWARD

This study is limited to graduate students of only one distance education institute. The study is further limited to two distance learning courses only.

SCOPE

The main focus of this research was to examine the effects that different forms of motivation exert on the satisfaction factors of online graduate learners. Seven factors including course content and organization; students' contribution; learning environment and teaching methods; learning resources; quality of delivery; assessment; tutor and tutorials were taken into consideration. Some suggestions are given in the light of data analysis for teachers and administrators which can open new doors for research and pedagogy.

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REFERENCES

1. Abraugh, J. B. (2000), How classroom environment and student engagement affecting in internet-based MBA courses, *Business Communication Quarterly*, Vol.4, pp.9-26. <https://doi.org/10.1177/108056990006300402>
2. Aktaruzzaman, M& Plunkett, M. (2017). Institutional and community perceptions of distance education in Bangladesh: preparing for the 21st century. *Turkish Online Journal of Distance Education*. 18. <https://doi.org/10.17718/tojde.340370>
3. Ali Arshad, (2019) Retrieved from <http://educationist.com.pk/aiou-enrolment-reaches-1-7-million-64-are-female-students/>
4. Astin, A. W. (1993). Diversity and multiculturalism on the campus: How are students affected?. *Change: The Magazine of Higher Learning*, 25(2), 44-49. <https://doi.org/10.1080/00091383.1993.9940617>
5. Astin, A. W. (1997). *What matters in college?*. JB
6. Azeiteiro, U. M., Bacelar-Nicolau, P., Caetano, F. J., & Caeiro, S. (2015). Education for sustainable development through e-learning in higher education: experiences from Portugal. *Journal of Cleaner Production*, 106, 308-319. <https://doi.org/10.1016/j.jclepro.2014.11.056>
7. Chang, C. F. & Lin, C. S. (1989). *Educational Psychology*. Taipei: Tung Hua.
8. Chang, C. X. (1991). *Modern Psychology*. Taipei: Tung Hua.
9. Chen, G. E. (1997). A study of the relationship among students' learning styles, learning satisfaction and learning achievement in National Open University. Unpublished master's thesis, National Taiwan Normal University, Taiwan.
10. Clarke, T., & Hermens, A. (2001). Corporate developments and strategic alliances in e- learning. *Education and Training*, 43(4/5), 256-267. <https://doi.org/10.1108/00400910110399328>

11. Creswel, J. W. (2009). Research design: Qualitative, quantitative, and mixed methods approaches. *Los angeles: University of Nebraska–Lincoln*.
12. Danis, C., & Tremblay, V.A. (1987). Propositions regarding autodidactic learning and their implications for teaching. *Lifelong learning: An Omnibus of Practice and Research*, 10(7), 4-7
13. Davies, J., & Graff, M. (2005). Performance in e-learning: Online participation and student grades. *British Journal of Educational Technology*, 36(4), 657-663. <https://doi.org/10.1111/j.1467-8535.2005.00542.x>
14. De Freitas, S. I., Morgan, J., & Gibson, D. (2015). Will MOOCs transform learning and teaching in higher education? Engagement and course retention in online learning provision. *British Journal of Educational Technology*, 46(3), 455-471. <https://doi.org/10.1111/bjet.12268>
15. Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of research in personality*, 19(2), 109-134. [https://doi.org/10.1016/0092-6566\(85\)90023-6](https://doi.org/10.1016/0092-6566(85)90023-6)
16. Deci, E. L., & Ryan, R. M. (2000). The what and the why of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry*, 11, 227-268. https://doi.org/10.1207/S15327965PLI1104_01
17. Deci, E., & Ryan, R. (2004). Overview of self-determination theory: An organismic dialectical perspective. In E. Deci, & R. Ryan (Eds), *Handbook of self - determination research* (pp. 3-33). Rochester N.Y.: The University of Rochester Press.
18. Educational Encyclopedia Dictionary Editing Committee. (1994). *Educational Encyclopedia Dictionary*. Taipei: Wu Nan.
19. Eom, S. B., & Ashill, N. (2016). The determinants of students' perceived learning outcomes and satisfaction in university online education: An update. *Decision Sciences Journal of Innovative Education*, 14(2), 185-215. <https://doi.org/10.1111/j.1540-4609.2006.00114.x>
20. Field, A. (2016). *An adventure in statistics: The reality enigma*. Sage.
21. Fraser, W. (2017). Science teacher educators' engagement with pedagogical content knowledge and scientific inquiry in predominantly paper-based distance learning programs. *Turkish Online Journal of Distance Education*. 18.
22. Harvey, L., Locke, W., & Morey, A. (2002). *Enhancing Employability, Recognizing Diversity*. London: Universities UK. <https://doi.org/10.17718/tojde.340375>
23. Huang, Y. X. (2002). The study on learning motivation and learning satisfaction degree in Community College learners. Unpublished master's thesis, National Chung Cheng University, Taiwan.
24. Johnson, S. D., Aragon, S. R., & Shaik, N. (2000). Comparative analysis of learner satisfaction and learning outcomes in online and face-to-face learning environments. *Journal of interactive learning research*, 11(1), 29-49.
25. Jones, S. (2008). *Internet goes to college: How students are living in the future with today's technology*. Diane Publishing.
26. Kaye, A. T., & Rumble, G. (Eds.). (2018). *Distance teaching for higher and adult education*. Routledge. <https://doi.org/10.4324/9780429430930>
27. Kehrwald, B. A., & McCallum, F. (2015). Degrees of change: Understanding academics experiences with a shift to flexible technology-enhanced learning in initial teacher education. *Australian Journal of Teacher Education*, 40(7), n7. <https://doi.org/10.14221/ajte.2015v40n7.4>
28. Kem, D. (2018). Role of Information and Communication Technology in Open and Distance Learning. *research journal of social sciences*, 9(11).
29. Khan, M. I., Shin, J. H., & Kim, J. D. (2018). The promising future of microalgae: current status, challenges, and optimization of a sustainable and renewable industry for biofuels, feed, and other products. *Microbial cell factories*, 17(1), 36. <https://doi.org/10.1186/s12934-018-0879-x>
30. Liaw, S. S. (2008). Investigating students' perceived satisfaction, behavioral intention, and effectiveness of e-learning: A case study of the Blackboard system. *Computers & education*, 51(2), 864-873. <https://doi.org/10.1016/j.compedu.2007.09.005>
31. Liaw, S. S., Hatala, M., & Huang, H. M. (2010). Investigating acceptance toward mobile learning to assist individual knowledge management: Based on activity theory approach. *Computers & Education*, 54(2), 446-454. <https://doi.org/10.1016/j.compedu.2009.08.029>
32. Lin, M. C. (2000). The study of interaction between teachers and students and the satisfaction of learning in National Open University. Unpublished master's thesis, National Kaohsiung Normal University, Taiwan.
33. Lin, S. S., Liu, E. Z. F., & Yuan, S. M. (2001). Web-based peer assessment: feedback for students with various thinking-styles. *Journal of computer assisted Learning*, 17(4), 420-432. <https://doi.org/10.1046/j.0266-4909.2001.00198.x>
34. Ma, F. T. (1989). The study of teachers' teaching behaviors and students' learning satisfaction in short-term courses at Social Education Center. Unpublished master's thesis, National Taiwan Normal University, Taiwan.
35. Martín-Rodríguez, Ó., Fernández-Molina, J. C., Montero-Alonso, M. Á., & González-Gómez, F. (2015). The main components of satisfaction with e-learning. *Technology, Pedagogy and Education*, 24(2), 267-277. <https://doi.org/10.1080/1475939X.2014.888370>
36. Nayan, L. M., Othman, S. S., Tiong, L. K., & Hasan, N. N. N. (2018). Reading Motivation of Online.

37. News among Youth in Sub-Urban Area. *International Journal of Academic Research in Business and Social Sciences*, 8(8), 700–709.
38. Ongozi, S. (2018). The use of ict tools in e-mentoring: a case study. *Turkish Online Journal of Distance Education*, 19. <https://doi.org/10.17718/tojde.471655>
39. Pakistan Education Statistics 2016-17. (2017). 25th Annual Publication since 1992-93. Unicef.
40. Peters, O. (2001). *Learning and Teaching in Distance Education: Analysis and Interpretations from an International Perspective*. London: Kogan Page.
41. Rahmi, B. A. K. I., Birgoren, B., & Aktepe, A. (2018). A Meta Analysis of Factors Affecting Perceived Usefulness and Perceived Ease of Use in The Adoption of E-Learning Systems. *Turkish Online Journal of Distance Education*, 19(4), 4-42. <https://doi.org/10.17718/tojde.471649>
42. Richardson, J., & Swan, K. (2003). Examining social presence in online courses in relation to students' perceived learning and satisfaction.
43. Rovai, A. P. (2002). Sense of community, perceived cognitive learning, and persistence in asynchronous learning networks. *The Internet and Higher Education*, 5(4), 319-332. [https://doi.org/10.1016/S1096-7516\(02\)00130-6](https://doi.org/10.1016/S1096-7516(02)00130-6)
44. Settha Kuama & Usa Intharaksa, (2016). Is Online Learning Suitable for All English Language Students? *PASAA*.52.
45. Shin, Y. M. (2010). The impacts of self-efficacy and job stress on learning motivation - Case study on staff of International Tourist Hotels in Taichung City. Published master's thesis, Chaoyang University of Technology, Taiwan.
46. Shopova, T. (2014). Digital literacy of students and its improvement at the university", *Journal on Efficiency and Responsibility in Education and Science*, 7(2) (pp.26-32). <https://doi.org/10.7160/eriesj.2014.070201>
47. Shroff, R. H., & Vogel, D. R. (2009). Assessing the factors deemed to support individual student intrinsic motivation in technology supported online and face-to-face discussions. *Journal of Information Technology Education: Research*, 8(1), 59-85. <https://doi.org/10.28945/160>
48. Sogunro, O. A. (2015). Motivating factors for adult learners in higher education. *International Journal of Higher Education*, 4(1), 22-37. <https://doi.org/10.5430/ijhe.v4n1p22>
49. Sun, P. C., Tsai, R. J., Finger, G., Chen, Y. Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & education*, 50(4), 1183-1202. <https://doi.org/10.1016/j.compedu.2006.11.007>
50. Swan, K. (2001). Virtual interaction: Design factors affecting student satisfaction and perceived learning in asynchronous online courses. *Distance education*, 22(2), 306-331. <https://doi.org/10.1080/0158791010220208>
51. Tsai, H. H. & Chang, Y. P. (2007). The impact of learning motivation on learning effect: The moderator of perceived leadership. *Chung Hua Journal of Management*, 8 (4) : 1-18.
52. Tsai, M. J. (2009). The model of strategic e-learning: Understanding and evaluating student e-learning from metacognitive perspectives. *Educational Technology & Society*, 12(1), 34-48.
53. Tsitskari E., Tzetzis G. & Vernadakis N. (2014). Assessing fan motivation in a Greek population; the psychometric evaluation of SPEED. *International Journal of Sports Psychology*, 45 (2), 138-15.
54. Vansteenkiste, M., Simons, J., Lens, W., Sheldon, K. M., & Deci, E. L. (2004). Motivating learning, performance, and persistence: the synergistic effects of intrinsic goal contents and autonomy-supportive contexts. *Journal of personality and social psychology*, 87(2), 246. <https://doi.org/10.1037/0022-3514.87.2.246>
55. Vovides, Y., Sanchez-Alonso, S., Mitropoulou, V., & Nickmans, G. (2007). The use of e-learning course management systems to support learning strategies and to improve self-regulated learning. *Educational Research Review*, 2(1), 64-74. <https://doi.org/10.1016/j.edurev.2007.02.004>
56. Woltering, V., Herrler, A., Spitzer, K., & Spreckelsen, C. (2009). Blended learning positively affects students' satisfaction and the role of the tutor in the problem-based learning process: results of a mixed-method evaluation. *Advances in Health Sciences Education*, 14(5), 725. <https://doi.org/10.1007/s10459-009-9154-6>
57. Yang, C. C., Tsai, I. C., Kim, B., Cho, M. H., & Laffey, J. M. (2006). Exploring the relationships between students' academic motivation and social ability in online learning environments. *The Internet and Higher Education*, 9(4), 277-286. <https://doi.org/10.1016/j.iheduc.2006.08.002>
58. Yang, Y., & Cornelious, L. F. (2005). Preparing instructors for quality online instruction. *Online Journal of Distance Learning Administration*, 8(1), 1-16.
59. Zhang, H., Song, W., Shen, S., & Huang, R. (2014). The effects of blog-mediated peer feedback on learners' motivation, collaboration, and course satisfaction in a second language writing course. *Australasian Journal of Educational Technology*, 30(6). <https://doi.org/10.14742/ajet.860>