Analysis of University Students' Generic Competence and Learning Experience in Face to-Face and Online Classroom

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ABSTRACT

Purpose of the current study was to "compare the generic competence and learning experience of university students in face-to-face and online classroom". Quantitative research method was used for the current study. Due to Pandemic situation of COVID-19, by using convenience sampling technique, sample was selected from three faculties i.e., Faculty of Social Sciences, Faculty of Engineering and Technology and Faculty of Agriculture of University of Sargodha. The sample of the current study consisted of 400 students from regular and self-support programs of BS (semester 5th and 7th). Data were collected online by using Google form. Two adapted instruments "Generic Competence Scale (GCS)" (Shah, 2009) and "Student Learning Experiences Questionnaire (SLEQ)" (Almoslamani, 2018) were used for the data collection. Academic performance was measured through students cumulative Grade Point Average (CGPA). Wilcoxon signed rank test was used for analysis of data by using SPSS. The study concluded that there was a significant effect of face-to-face classroom as compared to online classroom among university students. Based on obtained results, its concluded that face-to-face classroom learning is considered better than online classroom learning. It is recommended that to cope with the changing situation of world, educational institutions may conduct training programs for improvement of online education.

Keywords: *Higher Education, Online classroom, Generic Competence, face-to-face classroom, University Students*

INTRODUCTION

Universities contributed significantly to a range of fields, including intellectual talent development, human resource growth, economic and technical development. Universities are considered as a vital source which provides educational and training opportunities to future generation. (Boni& Lozano, 2007). Over the last two decades, many scholars have sought to uncover the generic abilities, attributes, and principles (Chapman & Neil, 2010). Competencies of university graduates are required for student success in their professional life (Chapman & Neil, 2010). University students can build customized, and technology-based learning skills through both online and face-to-face learning experiences (Wright et al., 2018). Unlike traditional teaching, online teaching and learning takes place in a virtual environment over the internet (Khan et al., 2017).

Student engagement is critical in both teaching and learning. The efficacy of online learning was determined in part by student learning experience with generic skills; students'

needs global competency to grasp the world in personal as well as professional life. The twenty-first century has successfully unfolded people in their working lives (Boni& Lozano, 2007). Universities are experiencing a change process. Various universities and educational systems define and identify graduate qualities in different ways (Chapman & Neill, 2010). Examples of such concepts include generic, central, or primary competences, transferrable talents, and generic graduate qualities (Barries, 2006). Generic abilities are becoming more important in universities. Lifelong learning and competence development are critical concepts in international attempts to satisfy the needs of a globalised, constantly changing, and complex world to support the economic, social, and environmental sustainability. Keeping track of educational and instructional programmes has become a key political priority all around the world (Bridgstock, 2005).

Key feature of generic competence is an ability to improve the outcomes of an entire organization's learning process, both at the group and individual level. Work performance of talented people is heavily influenced by their perceptions of generic skills or competency practices (Kallioinen, 2010). The process of teaching and learning is assimilation of knowledge. Educational institutions have continued to look for new ways to incorporate technology into their teaching and learning environments to make them more productive and efficient. From correspondence classes to interactive television to the digital approach, computer and communications technologies are blending. Colleges and universities demanded that online course delivery be implemented from several sources. The number of institutions that have entered the remote learning field has been steadily expanding (Ocuaman, 2010).

University students can improve their adaptive and technology-mediated learning abilities by participating in global verbal online education. The three primary eras of technology-mediated online learning were instructional television (ITV), Internet computer-mediated communication, and mobile technology. Niu (2014) compared face-to-face and online classroom performance in terms of student success, learning experiences, and happiness to assess how colleges stack up against their traditional classroom counterparts. it was discovered that performance in an online classroom was much lower than in a regular face-to-face classroom. The bulk of studies focused on either directly or indirectly improving students' learning experiences. Student engagement, in essence, relates to how much students engage in a variety of educational activities that have been shown in research to help students learn more efficiently (Kentnor, 2015).

Main objective of the current study was to examine how student participation differs across face-to-face and online course delivery modalities at university level.

Objectives of the Study

1. To find out the difference in generic competence of university students in face-to-face and online classroom
2. To find out the difference in learning experience of university students in face-to-face and online classroom

REVIEW OF LITERATURE

Competence is a broad concept with many different interpretations; it is often used interchangeably with the terms like "skills" or "capabilities". Over the last two decades, various issues affecting higher education around the world have driven the re-emergence of university statements of graduate attributes. The goal of the university education was to improve the generic skills of students so that they will use the required skills in future (Barrie, 2006). Depending on one's perspective, the term "competence" can have a variety of connotations.

Understanding competence, according to Barrie (2006), is a dynamic organizational ability that results from the effective integration, mobilization, and disposition of a set of capacities and abilities of a (cognitive, affective, psychomotor, or social order) and experience (declarative knowledge) in each situation. According to Chapman and Neil (2010), the focus on finding and evaluating generic abilities at universities began in the late 1980s, along with demands for stringent quality monitoring and control methods (Chapman & Neil, 2010). Generic abilities are in high demand in the industry, whether in the face-to-face and online classroom. Employers seek for market success by hiring and retaining people with a varied range of skills, personal attributes, and professional competencies. In other countries, generic skills are referred by various names. In certain countries, these skills are directly linked to work, whereas in others, their social significance has been stressed. The study identified the generic abilities that industry needs to stay competitive in global marketplace.

Basic skills like literacy and numeracy, as well as interpersonal skills like communication, teamwork, and personal traits were discussed (Gilbert et al., 2004). The meaning of learning experiences is that learners develop and evaluate in their learning environment. A learning experience is any interaction, course, programme, or other learning event that takes place in traditional academic contexts (schools, classrooms) or non-traditional ones (outside-of-school locations, outdoor environments). In this style of education, students use internet to access content, engage in interactive conversations with an instructor and other students and send and receive assignments and comments electronically. Effective learning opportunities for university students through immersive learning environments and trustworthy technology can only be sustained if online education has a defined vision, strategy, and support (Laaser, 2011),

Face-to-face learning is a technique of instruction in which a group of students is being instructed in person on course topic and material. It is the most widely used form of instruction. When an instructor and a student meet in each location at a specific time for either one-on-one or group teaching, this is known as a face-to-face meeting. Face-to-face training includes both teachers and students/classmates. However, with online learning, this is no longer possible. All the participants believed that online courses are flexible and open, but that additional interaction and support content are needed (Long et al., 2017). An online classroom provides a better learning experience than a traditional classroom (Long et al., 2017).

RESEARCH METHODOLOGY

Quantitative method was used for the present study. A research design is a method for gathering, analysing, interpreting, and reporting data in a research study (Creswell et al., 2011). In other words, the goal of research design is to choose a basic technique for combining the many components of the study in a logical and consistent manner. The nature of the study was descriptive in nature. In descriptive type of research, we deal with the current situation in an organized manner.

Population of this study includes all the students at University of Sargodha. The participants of this study were selected from University of Sargodha through convenience sampling technique due to situation of COVID-19. A sample is a subset of a population of people from whom data is collected. It may differ from the sample originally chosen for a variety of reasons (Frankle, & Wallen, 2013). The sample consisted of four departments from three faculties of University of Sargodha i.e., Faculty of social sciences, Faculty of engineering and technology and Faculty of Agriculture. This study included participants at university level with the sample size ($n = 400$) undergraduate students of 5th and 7th semester.

The term "instrumentation" refers to the data collection procedure in a research study (Wallen & Fraenkel, 2013). Two adopted and modified instruments were used in this study for the

purpose of measuring learners learning difference in between face-to-face and online classroom learning. Students' Generic competence, learning experiences were independent variables and face-to-face classroom environment and online classroom environment were dependent variables. Independent variable Students' Generic competence was measured through the Generic Competence scale (Shah, 2009). Generic Competence scale was consisted of 15 items with 5-point Likert scale. Students' learning experiences was measured by using Student Learning Experiences Scale (Almoslamani, 2018). Student learning experiences scale was consisted of 11 items with 5-point Likert scale. Student's academic performance was measured through their (CGPA).

Data was obtained through online Google Form. All educational institutions were closed for physical mode of education due to COVID-19 critical situation and providing online education to students. Data were analysed by using the Wilcoxon signed rank test because researchers intended to observe the differences in face-to-face learning and online learning. Moreover, to compare the generic competences and learning experiences of students in both classroom setting, researcher used Wilcoxon signed rank test.

DATA ANALYSIS AND INTERPRETATION

Table 1

Students' Generic Competence in Face-to-Face and Online Classroom (GCF-GCO)

| Variable | N | Mean | St. Deviation | Minimum | Maximum | Percentiles | | |
						25th	50th (Median)	75th
GCF	400	65.2000	22.88917	0.00	95.00	50.2500	68.0000	84.00
GCO	400	52.1909	26.19491	0.00	95.00	30.0000	52.0000	74.00

Table 1 showed the descriptive statistics of the student's generic competence in face-to-face and online classroom. Wilcoxon signed rank and descriptive statistics which provided information about the students' face-to-face and online classroom generic competence. The means, SDs, and median were calculated to measure the central tendency of the face to face and online classroom. Given the sample size ($n = 400$) on student's generic competence in face to face and online classroom; comparing mean score ($M = 65.20$) in face-to-face classroom, generic competence was higher as compared to the mean score ($M = 52.1909$) in generic competence of online classroom. Overall, descriptive statistics revealed that student's generic competence in face-to-face classroom was considerably higher as compared to their generic competence in online classroom. Based on the results, its concluded that face-to-face classroom learning is better than online classroom learning.

Table 2

Students' Generic Competence in Face-to-Face and Online Classroom (GCF-GCO)

variable		N	Mean Rank	Sum of Ranks	Z	P
	Negative Ranks	121[a]	119.91	14509.50		
GCF-GCO	Positive Ranks	86[b]	81.61	7018.50	-4.342[b]	.000
	Ties	13[c]				
	Total	400				

Table 2 showed that the negative ranks, positive rank, mean rank, sum of ranks, Z column and p value. The Z column reports the Z score, which can sometimes be referred to in Wilcoxon Signed Ranks Test. The P value for this test is reported as Sign. If the P value in the face-to-face and online classrooms is greater than.05, there is no significant difference between the two groups in face-to-face and online classroom. The results of Wilcoxon signed rank test revealed a statistically significant difference on perceptions, $Z = -4.342$, $P =.000$. So, table 2 showed that the significance testing value of $P < 0.01$, quantifying the strength of the results against the null hypothesis and accepted the alternative hypothesis. The student's generic competence in face to face and online classroom learning improves with Z score (-4.342). So, there was a significant difference in students' generic competence in face-to-face and online classroom.

Table 3

Students' Learning Experience in Face-to-Face and Online Classroom (LEF+LEO)

| Variable | N | Mean | St. Deviation | Minimum | Maximum | Percentiles | | |
						25th	50th (Median)	75th
LEF	400	49.1136	15.47692	.00	65.00	39.0000	53.0000	63.00
LEO	400	33.5864	18.46475	.00	65.00	18.0000	34.0000	49.00

Table 3 showed the descriptive statistics of the students' learning experiences in face-to-face and online classroom survey data. Wilcoxon signed rank and descriptive statistics, which provided information about the students' face-to-face and online classroom learning experience. The means, SDs, and median were calculated to measure the central tendency of the face to face and online classroom. Given the sample size ($n = 400$) on student's learning experiences face-to-face and online classroom; comparing mean score ($M = 49.11$) in face-to-face classroom learning experiences was increased as compared to the mean score ($M = 33.58$) in learning experiences online classroom. Overall, descriptive statistics revealed that student's learning experiences in face-to-face considerably increased as compared to their learning experiences in online classroom. Based on obtained results, its concluded that face-to-face classroom learning is better than online classroom learning.

Table 4

Students' Learning Experience in Face-to-Face and Online Classroom (LEF+LEO)

variable		N	Mean Rank	Sum of Ranks	Z	P
	Negative Ranks	136[a]	115.60	15721.50		
LEO-LEF	Positive Ranks	62[b]	64.19	3979.50	-7.273[b]	.000
	Ties	22[c]				
	Total	400				

Table 4 Showed that the negative ranks, positive rank, mean rank, sum of ranks, Z column and P value. The Z column reports the Z score which can sometimes be referred to in Wilcoxon signed ranks test. There is insignificant difference between two compared groups in face-to-face and online classroom if the P value is greater than.05. The findings of revealed a statistically significant difference on perceptions, $Z = -7.273$, P =.000. So, results showed that

the significance testing value $P < 0.01$, quantifying the strength of the results against the null hypothesis. This is a probability confidence interval of the .00, thus rejecting the null hypothesis and accepting the alternative hypothesis. The student's learning experiences in face to face and online classroom learning improves with Z score (-7.273). So, there was a significant difference in students' learning experiences in face-to-face and online experiences.

DISCUSSION AND CONCLUSION

Present study examined the differences between two types of classroom environments: face-to-face and online classrooms, using two variables *(generic competence and students' learning experiences)* among university learners. Results of current study showed that there was a significant difference in learner's generic competence in the face-to-face classroom and online classroom. By supporting the findings of current study, arguments are in support of using face-to-face classrooms which demonstrated that students' generic competency and learning experiences (Allen et al., 2002).

The findings demonstrated that there is a statistically significant difference between traditional face-to-face and online classrooms. Another study evaluated the similarities and differences in face to face and online classroom learning and overall classroom learning satisfaction by students enrolled in either of the two modalities (i.e., face-to-face, and online). Similarly, Kramer and Seeber (2009) highlighted the generic competence as a component of academic program design, as well as its expression in both face-to-face and online classrooms (Gvaramadze, 2012). De ductions of the present study indicated that there was a significant difference in learner's learning experiences in the face-to-face classroom and online classroom. Supporting the argument of current study, it is showed that learning methods have a direct impact on and significantly improve students' learning experiences (Poon, 2013). Since the 1970s, systematic and substantial research has been conducted on the quality of students' learning experiences in higher education.

The findings of this study have supported to discover how students' learning experiences are greater in a face-to-face classroom than in online classroom (Biggs & Tang, 2011). Precisely in this study, we compared the university students' generic competence and learning experience in face-to-face and in online classroom. Norberg (2017) also pointed out that online classroom learning was not a new concept. The mode can be traced back to the medieval period when textbook technology was introduced into the classroom.

This study was aimed to "compare the university students' generic competence and learning experience in face-to-face to that of in online classroom". The results of the study showed that there was a significant difference in learner's generic competence in the face-to-face classroom and online classroom. Moreover, results of present study revealed that there was a significant difference in learner's learning experiences in the face-to-face classroom and online classroom. Based on obtained results, its concluded that face-to-face classroom learning is considered better than online classroom learning.

RECOMMENDATIONS

Following are the recommendations.

- Results showed that generic competence were improved in traditional face-to-face classroom than online classroom, if institutions will provide the better understanding about generic competence in online classroom, the success rate of students' success may increase in online classroom.

- Students learning was better in face-to-face classroom as compared to online classroom. With the passage of time, online learning environment becomes an important part of our learning system. If we will focus on online learning environment, then we may increase ratio of students' learning experiences in online classroom environment.

- To cope with the changing world situation, educational institutions may conduct training programs for improvement of online education. In this way we may overcome the challenges related to online classroom programs.

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