

COMPARISON OF SELF- EFFICACY AND ITS IMPACT ON PERSONALITY BETWEEN CLASSROOM BASED AND WEB-BASED LEARNERS

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ABSTRACT

The current research aims to compare the self-efficacy of learners and its effect on personality in classroom based and web-based learning environments. It was a cross sectional survey. Non-probability, purposive sampling was used. The effect of self-efficacy on student's personality is determined by parson's coefficient of correlation and linear regression analysis. Results reveals that there is significant difference in learner's self- efficacy in classroom based and web- based learning environments. Results also illustrated that self-efficacy has significant positive impact on learner's personality (openness to experience, extroversion in classroom based learners than web-based learners. It will help managers to identify suitable job applicant as per job requirement and for training and development plan recognition as well as it can be implement in curriculum development. Study is unique in itself, there is not a study at Pakistan that compare educational environment, with respect to personality development with above stated variables, so it's a good contribution in educational psychology as well as for human resource management decision making.

Key Words: Self-efficacy, Learner's personality, Web-based education, Face to face education, HRM decision

INTRODUCTION

As innovations in technology have rapidly redefined how humans communicate, these changes have also modified how generations of students learn. With the help of internet, now access to most of the information only a click away, physical trips to a library are no longer required, courses can be registered over the internet, assignments being e-mailed to professors, and whole social networks can be logged onto thus connecting students not only with each other but with the entire world become very easy. Along with these changes, students spend a substantial amount of their time typing on keypads, staring at screens, and multi-tasking, thus crafting generations that have different expectations and requirements from their scholastic environments. Institutes not only transfer knowledge and skills explicitly, as described in the officially published curricula but they also instill attitudes and values implicitly what we call as hidden curriculum or personality development of the students. It's the collective effect of student's exposure to teachers, fellow students and the classroom environment which affects the student's ability to communicate, understand, express and present what has been taught or

or learned. Online courses, as such are becoming the norm at numerous universities. By the fall of 2006, 20% of college students were having a minimum of 1 online course (Allen & Seaman, 2011). Online education system rising at fast pace since last two decades (Lee, 2015). But researchers have some reservations about online education system. In distance or online learning there is lack of face to face interaction. One's job related capabilities i.e. self-efficacy have a significant impact on an individual's effective negotiations for challenging life changes (Chemers, Hu, & Garcia, 2001). In various studies conducted on online education, self-efficacy is recognized as a significant predictor of achievement, learners motivation and outcome expectations (Bates & Khasawneh, 2007) perceived satisfaction (Wang, Shannon, & Ross, 2013) and actual performance (Yukselturk & Bulut, 2007). Important questions are, is there any difference among two systems (face to face, web-based) with respect to student's personality development? If yes, then which education system is best for student's personality development? There is need to compare online learning with face to face education with respect to learner's self- efficacy and personality. The aim of current study was to compare the traditional face to face education environment with online education for student's self-efficacy and its impact on student's personality (extroversion/ introversion and openness to experience). Study is novel in it sense because web-based education is an emerging field in Pakistan and not much explored yet, hence this is contribution in existing literature on education. Study also helps us for wise decision making with respect to human resource management. Study was intended to meet following objectives.

- To compare learner's self-efficacy among class-room based and web based students.
- To compare students personality traits in face to face and web-based education environments.
- To compare impact of self-efficacy on student's personality in face to face and web-based learning environments.

LITERATURE REVIEW

Jobs complication are increasing and demanding for superior knowledge ,skills and capabilities (Goldstein, 1993). Face to face learning environment is criticized for its ignorance about learners need and personality differences (Neuhauser, 2002). A number of studies showed that learning style appeals to particular types of pupils (Barnes, Preziosi, & Gooden, 2004). Learner's interest, requirements and anticipation in internet based learning environments are relatively different from regular system (Frith & Kee, 2003). established that students register in the online courses inclined to be more autonomous, and were driven by more inherent intention, at the other hand learners in the conventional classroom based system, were more reliant and want to interact with fellows and the lecturer. find that students who have excellent in cognitive, social, and communication abilities are more successful in web based learning environment from

those who are weaker in these areas.

Self-Efficacy:

One's job related capabilities i.e. self-efficacy has a significant impact on an individual's effective negotiations for challenging life changes (Chemers et al., 2001). Self-efficacy theory refers to persons feeling and belief towards a specific feature (Sun, Tsai, Finger, Chen, & Yeh, 2008). Efficacy beliefs are usually, about one's self. They are established in speech and belief with reference to I and me, which is all we visualize our personality (Neisser, 1997). The variety of result people expect depend mostly on conclusion of how much capable, they are, to execute in given environment (Bandura, 2002). Self-efficacy is students confidence to complete a task, is a personal characteristics that account for why an individual involve in a job (Puzziferro, 2008). This theory has significant association with online learning but there are a few studies, which focus upon online learning and self-efficacy. Self-efficacious learner accepts complex tricky tasks more readily than inefficacious. Wadsworth, Husman, Duggan, and Pennington (2007) proved that self-efficacy is an integral actor of learning's and achievements but it was slightly towards achievement online learning. Researchers have study the probable usefulness of lot of construct to envisage the preference process, with personality dissimilarity measures of traits, interests, and self-efficacy commonly connected to academic and career preference (Rottinghaus, Lindley, Green, & Borgen, 2002). According to people obtain evidence about their self –efficacy in a given domain of activity via practices, social interaction and interpretations from physiological states. In establishing efficacy assessment, students take into account factors such as ability, task difficulty, situational circumstances and pattern of success among other members (Schunk, 1984). In classroom based learning students should have higher level of self-efficacy (Blickle, 1996; Lounsbury, Sundstrom, Loveland, & Gibson, 2003) as they work on task ,experience success and failure rate among peers and are much social (Schunk, 1984). Hence we argue that level of self-efficacy is high in classroom based learning environment.

H1: Level of Self- efficacy is high in classroom base students than web- based students.

Openness to Experience:

Openness to experience, characterize as being unprejudiced, having a full of life thoughts and favor diversity, it's also linked with scholastic attainment. Openness to experience, can also defined as, variety hunter, flexible, active imagination. It's also connected with academic accomplishment (Blickle, 1996; Lounsbury, Sundstrom, Loveland, & Gibson, 2003). stated that openness to experience clarify much variance for study loyal Individual, who have tendency toward openness to experience and can recognize stress as challenge from beginning to end. Pachucki, Lena, and Tepper (2010) discovered perceptions of students about their creative contribution.

They observed that openness to experience and social interactions are major factors affecting creativity at class room. While at other hand Wadsworth et al. (2007) proved that self-efficacy is an integral actor of learning's and achievements but it was slightly towards achievement, at online learning environment. Chemers et al. (2001) in a longitudinal study proved that self-efficacy was highly associated with openness to experience ,had direct effect on academic performance, and indirectly related with coping of expectations in performance at class room based learning environment. Based upon available literature we claim that Self-efficacy has a higher positive relationship with openness to experience in class room based students.

H2: *Self-efficacy has a higher positive impact on openness to experience in class room based students than web based students.*

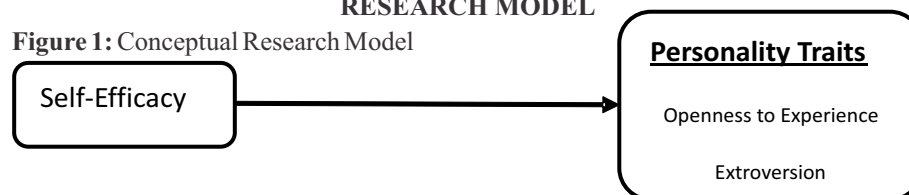
Extroversion:

initially devised the term extrovert, persons with this personality were described as sociable and easily reached people who have good relation with the world. It is possible that web based scheme attractive much, for introverts, those are not interested in customary teaching system, and have constructive attitude towards online system (Bishop-Clark, Dietz-Uhler, & Fisher, 2007). Research has revealed that introverted persons are much inclined to online learning than extroverts (Moore & Kearsley, 1996). Chamorro-Premuzic, Moutafi, & Furnham (2005) stated, it's hard to discover a reliable connection among extroversion and intelligence and that is weaker or dependent on context. Biner, Bink, Huffman, & Dean(1995) set up, learner are introverted, and practical in online system as opposed to traditional education method. Introvert students had superior outcome in web based system (Overbaugh & Lin, 2006). and Introverts students are excessive vulnerable to web based style (Moore & Kearsley, 2011). While Shaheen , Shaheen, & Shaheen explored self-efficacy and personality factors in relation with mental health in students of university. Results showed that self-efficacy had meaningfully positive correlation with extroversion and conscientiousness. Hence two things become clear from literature, that in online education system mostly students are introvert and self-efficacy is positively associated with extroversion .So based upon these arguments we claim that Self- efficacy has a higher positive relationship with extroversion in class room based students than web- based students.

H3: *Self-efficacy has a higher positive impact on extroversion in class room based students than web based students.*

RESEARCH MODEL

Figure 1: Conceptual Research Model



METHODOLOGY

Sample Selection:

Population is defined as large collection of elements, peoples or things that are main focus of some scientific study (Sandifer & Sekaran, 2000). It is unmanageable to inspect each and every one in particular population, due to time and financial constraints. Hence we identify a sample and collect data from that sample. For this purpose Non-probability (Sarwar, Hameed, & Aftab, 2013), purposive sampling method used. It permit the researcher to employ his judgment (Whitley & Kite, 2012). Researchers have agreement on purposive sampling, that this method is trustworthy and provide healthy data (Lewis & Sheppard, 2006). Sample size of 534 students (267 in each group) was calculated by WHO manual with 80% power of test and 95% confidence level with expected satisfactory performance to be 92.3% in CBE and 84.6% in WBE (Garland, 2010) using following formula from (Malhotra, 2008).

$$n = \frac{(Z_{\alpha/2} + Z_{\beta})^2 * (p_1(1-p_1) + p_2(1-p_2))}{(p_1 - p_2)^2}$$

where $Z_{\alpha/2}$ is the critical value of the Normal distribution at $\alpha/2$ (e.g. for a confidence level of 95%, α is 0.05 and the critical value is 1.96), Z_{β} is the critical value of the Normal distribution at β (e.g. for a power of 80%, β is 0.2 and the critical value is 0.84) and p_1 and p_2 are the expected sample proportions of the two groups.

Studying Organization:

Population frame was students at COMSATS Vehari & Lahore, Education University Vehari & Lahore campuses; UMT Lahore and CFE Lahore Campus for CBE and Virtual University Vehari, Multan and Lahore campus for WBE were identified. Students enrolled in Master program at these campuses, having completed at least first 2 semesters (minimum 1 year of education) were enrolled. List of student names and addresses was sought per list frame. The unit of analysis the present study was the student.

Instrument Development:

The following research instruments were identified from literature. These questionnaires were used in the form of paper surveys. General Self-Efficacy Scale by Schwarzer & Jerusalem (1995) for self-efficacy has been used for assessment. The Big Five Inventory (BFI) scale was used for the assessment of Personality, scale was devised by John & Srivastava (1999). A structured, self-administered questionnaire was used because it reduces researcher's biasness and data become much reliable. Seven point Likert scale was used for response items, because Seven point Likert scale provide more reliable data (Dawes, 2008). Questionnaire contained options strongly disagree to strongly agree including neutral item.

DATA ANALYSIS TECHNIQUES

The questionnaires concluded by the students were collected, and the collected data entered into SPSS version 19. Mean±SD were calculated for quantitative variables. A pilot study was conducted to check reliability of scales. Pearson coefficient correlation was used to identify relationship among independent and dependent variable. T-test was applied to compare the two groups in terms of quantitative variables. A p value < 0.05, support statistically significant results. The effect of self-efficacy on student's personality was determined by simple linier regression analysis (Sarwar et al., 2013). It helped us to predict the value of dependent variable with our independent variable.

RESULTS AND DISCUSSION

There were 214 male (50.2%) and 212 female (49.8%) who were included in final analysis. The majority of respondents 374 (87.8%) fall in age bracket 20-25 year old and it was followed by 39 respondents (9.2%) with age bracket of 26-30 years old. Only 8 respondents (1.9%) were from age bracket 31-35 year old and 5 respondents were with age bracket 36-40 years old that comprise only 1.2% of the total respondents. There were 212 students (49.8%) from classroom based and 214 students (50.2%) from web-based learning environment. All students (100%) were enrolled in master degree program and there were 153 students (35.9%) who completed two semesters. It was followed by 160 students (37.6%) who completed three semesters. There were 82 students (19.2%) who complete four semester and only 31 (7.3%) were with compilation of fifth semester of their study program. All students were unemployed.

Procedure:

This cross-sectional survey (Arbaugh & Duray, 2002) involved 534 students to who questionnaires were distributed. Out of 534 questionnaires, 471 questionnaires were returned (88%). Out of these 471 questionnaires 45 incomplete/ inappropriate questionnaires were rejected thus giving a final number of 426 (79.7 % of sample size) questionnaires for final analysis. It consisted of response from 214 WBE and 216 CBE students.

Descriptive Analysis:

Table 1: Descriptive Statistics for various study variables

	N	Minimum	Maximum	Mean	Median	Std. Deviation
	Statistic	Statistic	Statistic	Statistic		Statistic
Self-efficacy	426	1.60	7.00	4.9765	5.20	1.24944
Openness	426	1.70	6.90	4.8434	5.00	1.10729
Extroversion	426	1.13	7.00	4.5684	4.62	1.17595
Valid N (list wise)	426					

The mean score for Self-efficacy 4.98 ± 1.25 , for Openness to experience it was 4.84 ± 1.11 and for Extroversion it was 4.57 ± 1.18 as shown in table 1. All of which are near to scale Median. All these suggest that most respondent were high on Self-efficacy openness to experience but little bit low average score on extroversion scale, but it was also near to Median score. Comparatively high variation was observed in self- efficacy score and little bit low variations in personality scores. It can be due to variations in face to face and web- based students responses.

Reliability Analysis:

Table 2: Reliability coefficient (Crone Bach's Alpha)

Ser. #	Variable	Total Items	Alpha
1	Extroversion	8	.758
2	Openness to Experience	10	.810
3	Self-efficacy	10	.867
4	Whole Questioner	33	.917

The Crone Bach's Alpha value was determined for internal consistency. Extraversion 8 item scale Alpha value was .758 it was find.77(. Openness to experience 10 item scale Alpha value was established to be .810. It range from .75 to .89(). Self-efficacy (GSE) 10 item scale Alpha value was found to be .867. The GSE scale yield Alpha between .75 and .91 (Scholz, Doña, Sud, & Schwarzer, 2002). For whole questioner the value .917 of Crone Bach Alpha signifies a high level of internal consistency for this particular sample. Bubil(2012) stated that a scale is highly reliable if the Crone Bach's Alpha internal consistency coefficient is between .80 and 1.00 ($.80 \leq \alpha < 1.00$). Hence our all scales are reliable and consistent with previous studies on variables of interest. These findings have been summarized in table2.

Correlation Analysis

Table 3: Correlation Test

Pearson Correlation	Self-efficacy
Extroversion	.481
Openness to Experience	.557

Note: Correlation was significant at the level 0.01(2-tailed) or 99% Confidence level

Pearson's coefficient of correlation (r) was used to test out self-efficacy relationship with personality traits extraversion and openness to experience. The relationship between Self-efficacy and extroversion found to be moderately strong .Correlation value ($r=.481$) shows a moderate positive relationship for self-efficacy and extraversion. In the same way the coefficient of correlation value ($r=.557$) show a

moderate positive correlation among Self-efficacy and openness to experience. These findings have been summarized in table 3.

HYPOTHESES TESTING

Table 4: Comparison of Self-efficacy between the Groups

	Mode of Study	N	Mean	Std. Deviation	Std. Error of Mean	P value
Self-efficacy	Class-room Based	212	5.3000	1.05170	.07223	.000
	Web Based	214	4.6561	1.34606	.09201	

The t test was performed to compare the self- efficacy level between two groups. The mean score for self-efficacy (5.30 ± 1.051) was higher in class-room based students as compare to mean score (4.66 ± 1.35) of self-efficacy in web based learners. Difference was statistically significant as shown in table 5. Our first hypothesis proposed that level of self-efficacy is high in class room based students than web-based students. A significant difference ($p = .000$) in mean score of self-efficacy level between two groups, support our hypothesis.

Table 5: Results of linear regression

Model	Mode of Study	Dependent Variable	Adjusted R Square	Standardized Coefficients Beta	P value
1	Class-room Based	Openness	.461	.681	.000
	Web Based		.188	.438	
2	Class-room Based	Extroversion	.280	.532	.000
	Web Based		.160	.404	

Our 2nd hypothesis was proposed that self-efficacy has a higher positive impact on openness to experience in class room based students than web based students. A regression analysis coefficient beta (.681 vs. .438; $p = .000$) and adjusted R square (.461 vs. .188; $p = .000$) value in class room based students is significantly higher as compare to web-based students. Results revealed that one unit change in self-efficacy has significantly higher positive impact on openness to experience in classroom based learners as compared to web-based learners. Hence our 2nd hypothesis proved. Results are compiled in model 1 in table 5.

Our 3rd hypothesis proposed that Self-efficacy has a higher positive impact on extroversion in class room based students than web based students. Regression analysis revealed that Self-efficacy have significantly higher adjusted R square

(.280 vs. .166; $p=.000$) and beta value (.532 vs. .404; $p=000$) in classroom based learners as compared to web-based learners as shown in model 2 in table 5. It is also confirmation of exploration that, Self-efficacy is positively correlated with extraversion()

CONCLUSION AND RECOMMENDATION

In these section empirical findings, direction of future research on class room based learning and web-based learning with respect to student's personality development is discussed. The purpose of this exploration was to contrast the traditional classroom-based education with web-based education in terms of student's self-efficacy and its effect on student's personality in terms of extroversion/ introversion and openness/ closeness to experience. For this purpose a model was devised and tested. Results supports the proposed hypothesis that level of self- efficacy is high in class room based students than web-based students. Specifically impact of self-efficacy on student's personality was tested and compared between two groups. Results were significant when it was compared for level of self-efficacy in two groups. Mean score for student's self-efficacy was high in classroom based students (cf. Table4). An examination of simple linier regression models (cf. Table 5) suggest that self-efficacy has higher positive significant effect on students personality in class room based students as compare to web-based students. Thus it established from this study that class room based learning environment is batter for student's self-efficacy development. Results reveal that self-efficacy is good predictor for student's personality traits (openness to experience and extroversion). Finley we can conclude that if learner's self-efficacy is high, they also have high tendency toward openness to experience and extroversion. Even if personality's traits are comparatively established across time but it can be a turning point for mangers decision about hiring and development of employees.

Managerial Implications:

Study can help out in HRM decisions. Whenever there is a change being implemented, organizations needs peoples with high self-efficacy (Gist, 1987) and high on openness to experience score (LePine, Colquitt, & Erez, 2000) hence managers should take in account educational background. It can help them to develop person job fit. Mangers can easily identify group of workers who need training and development in these aspects.

Educational Sector Implications:

Although web based education is a good tool but yet it need many improvements. Now much need to focus personality development aspect of web based education system. Hence it's recommended that there should be some face to face workshops, seminars on regular basis for web based students to make them capable in this aspect.

Study Limitations

Current study has a major limitation; it doesn't take in account socioeconomic variable. In future research this variable should be used as a moderator. Secondly data was collected from southern and central Punjab only; in future research sample should be collected from large area. Finally all other traits from Big Five Model of Personality should include in model it will help to better understanding of phenomena.

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