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Determining the Association between the Impact of Education and Changing Institutional Network

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ABSTRACT

Aim of the Study: The core objective of this research was to determine the association between the impact of education and changing institutional network while controlling gender as a background variable at a multivariate level.

Methodology: The study was carried out in district Swat and the sampled respondents (n=250) were chosen from the seven tehsils of the study locale based on a non-probability sampling procedure. The data were processed and analyzed on quantitative grounds at bivariate and multivariate levels using a questionnaire based on a five-point Likert scale. Further, the data was indexed and results were drawn through the Chi-square test coupled with Gamma (γ) statistics at the bivariate level and Kendall Tau-C (T^c) at the multivariate level respectively.

Findings and Conclusion: The results revealed a significant relationship between the impact of education and changing institutional networks. Furthermore, the values of Kendall Tau-C and Chi-Square depicted spurious relationships among the impact of education and change in institutional network while controlling gender. The study concludes that the role of education in bringing change in the institutional network is significant whereas, about gender, the tendency of modernization was noticed higher in males than females.

Keywords: Impact of Education; Changing Institutional Network; Modernization; Gender.

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Introduction

The significance of education can be understood from the fact that all modernizing societies are inclined to stress the universalization of education and the modernized cultures have already achieved it. In the olden days, education was focused on one specific group. But with the modernization of education, nowadays everyone has an admittance to education, irrespective of their religion, caste, economic background, and culture. The effect of modernization may also be apparent in the educational institutions. Contemporary schools are fully armed with all technical strategies that benefit children to grow their expertise in a more coherent way. Operative facilities provide open access for persons with disabilities unrestricted from environmental and health hazards, are equipped with appropriate equipment for

classroom and teaching usage, and offer ample space for pupils and instructors, modernization by tapping into these assets and learning more about the issues surrounding school facilities. The valuable existence of an educational building is affected by how teachers and students work together for education. As instruction procedures change, structures might also be essential to alteration to accommodate them. Present instruction strategies need extra elasticity in class spaces rather than a single classroom mechanism (Aggarwal and Sachar, 2016).

Tarman (2011) examined the historical papers/documents to know the growth of the social studies syllabus in Turkey and Dewey's impact on the modernization of social studies courses and the Turkish educational system. Results display that Dewey had a substantial influence on the change of the Turkish education system from an old style to a modern one. From the past to the present, the social studies syllabus was altered occasionally according to the socio-economic and political requirements and prospects of the period of its time. These variations were made chronically in 1924, 1926, 1930; 1932; 1936, 1948, 1962; 1968, and lastly in 2005.

The series of learning processes that interact with technological and scientific knowledge to meet societal demands is known as modern education. Modernity is normally linked with the educational system and educational policy. In a knowledge-oriented society, especially education is considered a catalyst for urbanization and modernization. In Hong Kong, women with more education have fewer children than those of uneducated women and work skillfully in industrialized entities (Wu and Zhang, 2010). In Beijing, it is suggested that there is an inverse relationship between education and the fertility rate (Pan and Tang, 2005). When we talk of modernization, the importance of education cannot be ignored as it is one of the main pillars that cultivate the seeds of modernization in any society. The essence of education depends on the way of teaching. Teachers are the disseminators of knowledge in schools, colleges, universities, and *madrasas* (schools). The overall development and performance of students are interlinked with the performance of their teachers. The dream can be materialized if the teachers are well equipped and have command over their subject(s) and they know how to teach the contents of a particular subject in a particular manner.

Literature Review

The twenty-first century is considered the era of technology. It plays a very important role in our lives and is considered a base for growth in a country. A poor economy cannot grow without technological advancement. The impact of technology can be seen in our everyday life including education. The use of ICT is positively associated with an increase in access to education and it's improving its relevance and quality (Raja, 2018).

Hale (2016) expressed that a modern system of education has added a new trait i.e. skill development and vocational education**.** The number of public sector educational institutions is less in comparison to the private sector vocational and technical educational institutions. Taking quality standards often leads to a pointless discussion because it is not an abstract concept rather it is subjective (Canning et al., 1999).

In the era of globalization, several states in Asia, South America, and Africa struggle to be modernized. Determination and drive to apply and develop scientific information and skills for improved health, human betterment, and poverty reduction are some of the features of modernization (Gallagher, 2001). In the process of modernization of drugs/medicine and the globalization of medical learning the training of physicians is no longer his / her option but rather a compulsory one in order to practice (Krause, 1996). In today's globalized world where modernization is capturing almost every aspect of human life, medical practice is judged and carried out in a more systematic manner like proper planning based on scientific shreds of evidence and formalized competencies (Frank, 2005; Frank & Danoff, 2007). For those who are concerned with medical education; understanding and knowing the application of modern methods and techniques has become an important element of their academic career and livelihood (Harden, 2006).

A principle of the universal strong emphasis in medical learning on the regulation of teaching designs, techniques, and capability-focused evaluation approaches is supposed that medical instruction is traditionally apathetic and that a collection of collective values establishes the background from which the effective execution and spread of novelties in medical education universally take place (Schwarz, 2001). Firstly, this looks reasonable, as what could be more culturally neutral than applying improved methods of equipping upcoming generations of doctors? Confidently, there is a reasonable quantity of agreement on the fundamentals of academic strategy, approaches, and medical capability. But simultaneously, grave variances lie underneath what educationalists consider, and pupils and doctors notice, to be effective. Cultural and social structural context cannot be kept isolated while dealing with universal standards, best evidence medical education, and the preclinical teaching and medical training of wellbeing experts for the forthcoming (Hawthorne et al., 2004). The most important question that seems to be ignored most often is whether modernization and globalization of health education is just merely the export and importation of instructional strategies and techniques (technology transference) or whether it also contains the acceptance and adoption of Western models of social organization applicable to health education (Gallagher & Subedi, 1995). Similarly, Reynolds (1980) examined that 'certain nations have foregone the depth of their culture to obtain the tools of Western technology. We need the tools but not at the cost of thrashing one's cultural and Islamic values.' In addition, Hodges et al. (2009) query if worldwide endorsement may be measured without returning to colonization and overall difficulties linked to homogeneity and supremacy of culture. The clear balancing query is to what degree health institutions in non-western states still have the chance to grow and nurture their home-grown counterparts.

It is pertinent to highlight that many countries are still in the process of modernization or have just started it (Grinin, 2013). Education and technological development have developed by leaps and bounds recently and it leads to modernization. It also brings a positive look into urban areas' standard of life, customs, tastes, and traditions. Furthermore, modernization also created many social problems due to a lack of proper social planning. It also caused social, ethical, cultural, and traditional conflict among people in communities (Turar, 2022).

In the era of today's globalized world, an information-centered society blows to a modern life pattern from traditional society through the emergence of new technological tendencies. It stresses a comprehensive and detailed understanding and knowledge regarding technology. Technical education puts stress on the growth of an information economy. Technical education plays a vigorous part in emerging competence and work experiences to acclimatize to the alterations brought around by this improvement of chances caused by the borderless interchange of monetary action (Majumdar, 2010). Organizations like UNEVOC and UNESCO with the teamwork of other organizations such as the International Labor Organization; World Bank, and Inter-regional groups are working to achieve more advantages of Technical education as a way to advance the lives of the folks. In the current times, the acquisition and development of skills is perceived as critical to labor market inclusion, scholastic development, and economic development (Majumdar, 2008).

Modernization sensitized people of the present-day limited educational institutions and therefore advanced the notion of privatization to the various educational institutions. While previously several had to wave their ideas due to the deficiency of educational institutes; privatization – one of the approaches of modernization provided the opening to pursue learning which is the impact of modernization (MHRD, 2014). E-learning (electronic learning) is nowadays the important term that denotes the course of modernization of education beneath which the definition of the American Society for Trainers and Development (ASTD) in ten years 2001 means the procedure by which education content or activities of education are carried by electronic technology. The substances that are used in education have been produced or can be found in nature, and embody the last word of the technique. With the assistance of modern instruction utilities like instructive software and the electronic workroom for teaching via multimedia may meaningfully augment teaching. At the same time, chances are provided for educators and students to be liberated of numerous routine responsibilities, to express a higher degree of creativity

and that education receives the characteristics of a constructivist attitude towards knowledge are the propensity of modern teaching arrangements (Robertson & Good, 2005; Abdul, Nagy & Blanchard, 2008). The commencement and use of the media in education cover at least two prospects: first, learning is becoming more reachable, the physical barricades of the distance of time and space are overwhelmed, and secondly, the media permits the upgrading of the quality of education in didactic terms (Blazic, 2007; Stanojević et al., 2018). The usage of skills through technology is to improve educational results and encourage social inclusion in education. Information and Communication Technologies (ICTs) have long been upheld as a mainly appropriate means of letting people play vigorous parts in augmenting academic projections and, critically, proposing means in which previously disregarded folks might improve participation in education (Clark, 2003).

Materials and Methods

The study was designed and executed with a quantitative approach. In this research, we used the following research methodology.

Sampling Process

The data was collected from different sampled groups i.e. lawyers, politicians, community leaders, literary persons, and intellectuals. Further, the information was obtained from seven Tehsils of district Swat, Khyber Pakhtunkhwa, Pakistan. A sample size of n=250 opted through quota sampling to ensure equal representation of all stakeholders respectively. The data from these segments was collected via a multistage sampling procedure by using a stratified random sampling technique as it is considered an appropriate one to obtain consistent and reliable requisite information.

Tool of Data Collection

A questionnaire was used as research instruments based on a five-point Likert scale i.e. strongly agree, agree, neutral, strongly disagree, and disagree. The research tool was pre-tested by the researchers in the field. The reliability of the data was ensured through running Cronbach's Alpha (α). The sampled respondents were selected through a non-probability sampling procedure. The collected data was put into a statistical software i.e. SPSS (Statistical Package for Social Sciences).

Data Analysis

We analyzed the collected data at bivariate and multivariate levels. Further, the data was indexed and results were drawn while using the Chi-square test coupled with Gamma (γ) statistics at the bivariate level and Kendall Tau-C (T^c) at the multivariate level respectively. In addition, the researchers focused on ensuring the required ethical considerations during the research process.

Results and Discussion

The results and discussion comprised two sections i.e. bivariate and multivariate analysis. The results of each section followed by subsequent discussion are illustrated in the following lines.

Bivariate Analysis

In bivariate analysis, the association between the independent variable [Modernization (Impact of education)], and the dependent variable [Pakhtun Social Structure (changing institutional network i.e. family, marriage, political and educational)] was determined through cross-tabulation technique. The association between the two variables was measured in terms of its significance / non-significance and direction along with the parameters of change i.e. low change, moderate change, and high change in the institutional network as a result of modernization. The results of the above-mentioned variables through test statistics i.e. Chi-Square & Gamma are presented in the following lines.

Table-1: *Association between Impacts of Education and Changing Institutional Network*

S.#	Attributes	Response	Changing Institutional Network of Pakhtun Society			Total	Test Statistic (Chi-Square & Gamma)
			Low Change	Moderate Change	High Change		
1.	Increased schooling breaks down traditional values and norms, including family values.	Strongly Disagree	2(50)	2(50)	0(0.0)	4(100)	$\chi 2$=25.368 P=0.001
		Disagree	1(12.5)	4(50)	3(37.5)	8(100)	γ = 0.364
		Neutral	3(9.7)	19(61.3)	9(29.0)	31(100)	
		Agree	8(6.5)	62(50.4)	53(43.1)	123(100)	
		Strongly Agree	0(0.0)	42(50)	42(50)	84(100)	
2.	Education is one of the important indicators of modernization in Pakhtun society.	Strongly Disagree	2(66.7)	1(33.3)	0(0.0)	3(100)	$\chi 2$=49.548 P=0.000
		Disagree	0(0.0)	1(100)	0(0.0)	1(100)	γ = 0.500
		Neutral	0(0.0)	6(50)	6(50)	12(100)	
		Agree	8(5.6)	92(64.3)	43(30.1)	143(100)	
		Strongly Agree	4(4.4)	29(31.9)	58(63.7)	91(100)	
3.	Modernization led to the emergence of different types of education systems in Pakistan.	Strongly Disagree	1(33.3)	2(66.7)	0(0.0)	3(100)	$\chi 2$=24.259 P=0.002
		Disagree	0(0.0)	2(100)	0(0.0)	2(100)	γ = 0.335
		Neutral	3(12.0)	20(80)	2(8.0)	25(100)	
		Agree	7(5.3)	66(50.4)	58(44.3)	131(100)	
		Strongly Agree	3(3.4)	39(43.8)	47(52.8)	89(100)	
4.	Education equipped people with the use of modern technologies.	Strongly Disagree	2(50)	2(50)	0(0.0)	4(100)	$\chi 2$=36.751 P=0.000
		Disagree	1(25)	3(75)	0(0.0)	4(100)	γ = 0.338
		Neutral	3(6.7)	29(64.4)	13(28.9)	45(100)	
		Agree	2(1.7)	66(57.4)	47(40.9)	115(100)	
		Strongly Agree	6(7.3)	29(35.4)	47(57.3)	82(100)	

Table 1 depicts the association between the impacts of education and the changing institutional network of Pakhtun society in the study area. The response of the respondents regarding the statement that 'increased schooling breaks down traditional values and norms, including family values' was observed as agree i.e. 62(50.4 percent) to moderate change and 53(43.1 percent) to high change occurred in institutional network. Similarly, of those who strongly agree, among those the response of 42(50 percent) respondents strongly agreed with moderate change, while 42(50 percent) respondents opined strongly agreed toward accepting the impacts of modernization as high change. The inferential statistics indicated a significant association (P=0.001) between the above-mentioned variables in a positive direction as reflected by the Gamma value (γ = 0.364). It is evident from these results that a major chunk of the respondents believed that traditional customs and traditions including family norms are under the influence of the modern education system which results in an alteration in the social fabric of the society.

Further, responding to another statement that 'education is one of the important indicators of modernization in Pakhtun society' was treated as agreed i.e. 92(64.3 percent) to moderate change and 43(30.1 percent) to high change occurred in the institutional networks. Similarly, those who strongly agree, among those the response of 29(31.9 percent) respondents strongly agreed with the moderate change, while 58(63.7 percent) respondents opined strongly agreed with accepting the impacts of

modernization as a high change. The inferential statistics indicated a highly significant association (P=0.000) between the aforesaid variables in a positive direction as divulged by the Gamma value (γ = 0.5000).

In addition, the opinion of the respondents regarding the statement that 'modernization leads to the emergence of different types of education systems in Pakistan.' was detected as agree i.e. 66(50.4 percent) to moderate change and 58(44.3 percent) to high change occurred in the institutional network. Subsequently, of those who strongly agree, among those 39(43.8 percent) respondents responded as strongly in favor of moderate change, while 47(52.8 percent) respondents opined as strongly in favor of accepting the impacts of modernization as high change. The inferential statistics unveiled a significant association (P=0.002) between the aforesaid variables in a positive direction as reflected by the Gamma value (γ = 0.335).

Moreover, regarding another statement i.e. 'education equipped people with the use of modern technologies' the response was noticed as agree i.e. 66(57.4 percent) to moderate change and 47(40.9 percent) to high change occurred in the institutional networks. Along with this, those who strongly agree, among 29(35.4 percent) respondents answered strongly agreed in favor of a moderate change, while 47(57.3 percent) respondents strongly agreed with accepting the impacts of modernization as high change. The inferential statistics have shown a highly significant association (P=0.002) between the aforementioned variables in a positive trend as revealed by the Gamma value (γ = 0.338).

Multivariate Analysis

Multivariate-level analysis depicted the association between the impact of education and changing institutional networks while controlling gender. A detailed account of the results is stated below.

Table 2: *Association between the Impact of Education and Changing Institutional Network while Controlling Gender as a Background Variable*

Type of Gender	**Impact of Education**	**Changing Institutional Network**			**Total**	**Test Statistics $\chi 2$ (P-Value), Kendall's tau-c (T^c)**	**Level of Significance for Entire Table**
		Low Change	**Moderate Change**	**High Change**			
Male	No Impact of Education	1(50)	1(50)	0(0.0)	2(100)		
	Moderate Impact of Education	6(9.4)	45(70.3)	13(20.3)	64(100)	$\chi 2$= 25.807 P= 0.000	
	High Impact of Education	2(3.4)	22(37.3)	35(59.3)	59(100)	T^c = 0.321	$\chi 2$= 33.731 P= 0.000
	Total	9(7.2)	68(54.4)	48(38.4)	125(100)		T^c = .274
Female	No Impact of Education	0(0.0)	2(100)	0(0.0)	2(100)		
	Moderate Impact of Education	3(5.4)	36(64.3)	17(30.4)	56(100)	$\chi 2$= 11.516 P= 0.021	
	High Impact of Education	2(3)	26(38.8)	39(58.2)	67(100)	T^c = .221	
	Total	5(4)	64(51.2)	56(44.8)	125(100)		

Table 2 reveals the multivariate results which portray the association between the impact of education and institutional network while controlling gender as a background variable of the study. The nature of change has been measured in different levels like low change in institutional network, moderate change in institutional network, and high change in institutional network with reference to no impact of education, moderate impact of education, and the high impact of education. Further, it is evident from the above

table-2 that out of the total 250(100 percent) respondents; 125 were male whereas out of 125 respondents, 13(20.3 percent) agreed that there is a moderate impact of education on the institutional network which resulted in high change, followed by 35(59.3 percent) who believed in the high impact of education and high change in the institutional networks in Pakhtun society. Subsequently, the Test Statistics i.e. $\chi 2$= 25.807 & P= 0.000 depicted a highly significant and positive relationship. On another hand, out of the total 250(100 percent) respondents, 125 respondents were female whereas out of 125 respondents, 17(30.4 percent) agreed that there is a moderate impact of education on changing the institutional network which resulted in high change, followed by 39(58.2 percent) who believed in the high impact of education and high change in the institutional network in Pakhtun society. Subsequently, the Test Statistics i.e. $\chi 2$= 11.516 (P= 0.021) showed a significant and positive relationship. Similarly, the overall test statistics of the above table-5.27 indicated a highly significant, positive, and spurious relationship. The values of Kendall Tau-C and Chi-Square depicted a spurious relationship between the impact of education and changing institutional network while controlling gender. The results highlighted that education has a significant impact on institutional network whereas the trend of modernization is higher in males as compared to females as indicated in the above table.

Conclusion

Education is considered a crucial constituent for bringing change in society. It shapes the mental horizons of people to understand their social relationships and move toward advancements in their lives. The impact of education on changing institutional network was evaluated by the researchers through responses obtained from the respondents using a quantitative approach. It was noticed that increased schooling breaks down traditional values and norms, including family values. It was also revealed that education is one of the important indicators of changing institutional network which resultantly modernizing *Pakhtun* society.

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Conflict of Interest

Authors have no conflict of interest.

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