

Teachers' Perception about Effectiveness of Technical and Vocational Education at Secondary Level as a Tool for Poverty Alleviation in Pakistan

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Abstract

The major goal of this study was to learn about teachers' opinions on the efficiency of secondary technical and vocational education as a strategy for poverty reduction in Pakistan. Gender, locality, education, and age were chosen as sub-components of teachers' features after significant literature analysis and discussion. Punjab was the focus of the research. With the use of the TEVTA list, a five-point Likert Scale questionnaire was designed and polled on 250 instructors of technical and vocational education at the secondary level from all over Punjab in 2013, 2014, and 2015. Expert opinion and Chronbach Alpha were used to determine the instrument's validity. The instrument's reliability was assessed using the test. According to the findings, there is a significant positive association between teachers' perceptions of the effectiveness of secondary technical and vocational education and poverty reduction. As a consequence of the findings, course objectives, physical facilities, administrative facilities, curriculum, and social factors all significantly and positively predicted the outcome variable poverty reduction for the success of secondary technical and vocational education

Keywords: perception, technical and vocational education, secondary level, tool, poverty.

Introduction

Poverty is a noteworthy risk to humankind in present times particularly in the rising world. Globally, 2735 out of 6150 million of people are living in absolute poverty (Morgan, 2010). First time the term “poverty line” was introduced by Mollie Orshansky in 1963 based upon family expenses for three times adequate basic needs i.e. food, health facility, shelter and safety (Bradshaw, 2006). It is significant to know that necessity may be dissimilar from one person to another according to social definition and past experience.

World Bank (2010) states that person is a poor if he/she cannot meet daily intake 2350 calories or has income lower than 2 US \$ a day. Miankhail (2014) says that majority of the people in world are living in low income. There are 29.19 % population with income less than 2 US \$ per day in Pakistan.

With the passage of time, several changes in the globe occurred. However, we are now in an era of competency, skills, and competition. There is a sufficient share of education for skill as well as technical education all throughout the world. Any good employment requires TVE with knowledge and attitudes to succeed (Olaitan, 2012).

TVE improves the skills, knowledge, and approaches that are required for employment. It is adopted to meet the difficult and innovative technological requirements of contemporary industry (Pauline, 2008).

Pakistan, as a developing country has also an appropriate setup of industry. In this context it is of great importance to provide TVE from secondary schooling to meet the problem of shortage of skilled force (Khwaja, 2009). In Pakistan TVE has been structured at provincial as well as federal level i.e. NAVTTC is responsible at federal level whereas at provincial level TEVTAs is performing its role (Tushar, 2013).

LITERATURE REVIEW

There are three perspectives on poverty. On the surface, poverty is defined as a lack of access to some basic necessities of life, which can usually be measured in terms of money (Edward, 2006). Second, poverty encompasses not only the denial of fundamental necessities, but also secondary needs such as health, literacy, communication, lack of future danger, employment, access to clean water, and ownership of rights and independence (Cristovam et al. 2006). Finally, poverty is subjective, with physical and psychological effects on those who are affected by hunger, insecurity, violence, crime, prejudice, political repression, and victimisation (Aliyu & Abu, 2013).

According to Haroon (2017), poverty is widespread in Pakistan and is particularly visible in rural areas. Agriculture is a major source of income for most people, but it lacks basic necessities such as clean water, basic health care, education, and other social services. Pakistan's poverty rate is 29.19 percent, according to the Asian Development Bank.

Roberts (2011) and Ozturk (2011) highlight that without investing in education; none of countries can achieve constant prosperity. According to Omoniyi (2013), education benefits society, but only if the country receives TVE. According to Goran (2010); Audu, Kamin, and Balash (2013), practical education can help males become more productive and self-reliant. According to Keith (2006) and William (2002), TVE gives not only knowledge but also

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practical competency and conduct for better job performance. The basics for qualitative skills training, according to Okon, Eminue and Leema (2016), adequate equipment, tools, material, and text books, as well as properly qualified and experienced trainers. According to Saunders and Zuzel (2010), for students' employability in TVE, guidance and counselling based on their expertise and interests is critical.

The fact that some of the courses are gender-specific is also a problem (Comyn & Barnaart, 2010). According to Hillage and Pollard (2012), the efficacy of TVE is linked to teacher competency in terms of theoretical knowledge, practical and pedagogical abilities, and knowledge of new technologies. Anil (2008) believes that an institution may create skilled and competent people in an effective and efficient manner. However, there are other factors that can influence an institution's efficacy directly or indirectly (Sangeeta, 2007).

Some of the important factors are as below:

- Administration
- Infrastructure
- Teaching effectiveness
- Students
- Interaction with industry and society
- Curricular and co-curricular activities
- Research and development

Management and administration, according to Benavot (2010), are critical to the functioning of a technical institution. A technical institution must have a structure, a fully equipped lab, a library, a canteen, dorms, workshops, halls, and a play area. In this way effective teaching learning process is possible (Beynon, Hallak & Postlethwaite, 2007).

Curriculum has been linked to prosperity, economic well-being, and long-term progress from generation to generation throughout history (Finch & Crunkilton, 2002).

Tirmazi (2006) believes that television is the best way to educate people, improve the economy, and ultimately reduce poverty. Now is the moment for specialisation, skill development, and industry. Pakistan has embraced this truth as well, and has created an excellent TVE framework from secondary to higher education levels (Mustafa, Abbas & Saeed, 2005). At the national level, Pakistan has 327 TVE institutions under the authority of the NVTTC. Different courses are available, depending on the individual's and market's needs. TVE was provided at the secondary level in sixty institutions from 2013 to 2015. A total of 268 teachers were involved.

Objective of the Study

The major objective of the study was to:

1. Investigate the perception of teachers regarding the effectiveness of technical and vocational education at secondary level as a tool for poverty alleviation in Pakistan.

2. Trace the relationship between technical and vocational education and poverty alleviation.
3. The research was also aimed to find the difference of perceptions of teachers regarding gender, locality, age and education.

Research Questions

The following research questions were developed in the light of objective of the study.

1. Is there a substantial difference in course objectives, physical facilities, academic facilities, curriculum, assessment and evaluation, and social variables of technical and vocational education as a tool for poverty reduction between male and female teachers?
2. Is there a substantial difference in course objectives, physical facilities, academic facilities, curriculum, assessment and evaluation, and social variables of technical and vocational education as a tool for poverty reduction between urban and rural teachers?
3. Is there a major variation in course objectives, physical facilities, academic facilities, Curriculum, assessment and evaluation, and social variables of technical and vocational education as a tool for poverty reduction between age groups of teachers?
4. Is there a major variation in course objectives, physical facilities, academic facilities, curriculum, assessment & evaluation, and social variables of technical & vocational education as a tool for poverty reduction among academic qualification groups of teachers?
5. Is there a substantial difference in course objectives, physical facilities, academic facilities, curriculum, assessment & evaluation, and social variables of technical & vocational education as a tool for poverty alleviation among institution groupings of teachers?
6. Do course objectives, physical facilities, academic facilities, curriculum, assessment & evaluation, and social variables of technical & vocational education have any substantial impact on the poverty alleviation scale as predicted by teachers?

Research methodology

The type of the study was descriptive. A co-relational survey, type of descriptive research, and cross-sectional research design was employed to achieve the objectives of the study. The co-relational survey design was used to define and describe the relationship between poverty elevation and technical and vocational education in the perspective of teachers who are teaching in TEVTA. Furthermore, the cross-sectional design was used to divide teachers in four sections on the grounds of gender, age, locality and education. These sections were used to find the differences of perceptions among teachers regarding gender, age, locality and education. Above mentioned sections were further divided into categories i.e. section of gender was divided into two categories (male and female), section of age was divided into four age ranges (≤ 25 , 26-35, 36-45 and >46), section of locality was divided into two categories (urban and rural) and the section of education was divided into three categories (DAE, BS/B. Tech and masters). These sections were formulated to find out the differences of perceptions of teachers regarding aspects of course objectives, curriculum, assessment, evaluation and academic facilities. A five point Likert scale questionnaire was developed to

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find out the teachers' perception about effectiveness of technical & vocational education as a tool for poverty alleviation in Pakistan. A survey was conducted to collect the data.

Population of the Study

Teachers of Punjab Province were selected as population of the study (250 teachers working in TVE at secondary level during the years 2013, 2014 and 2015). All the teachers of technical and vocational education were considered as population.

Sample Design

All 250 teachers (100%) were taken as sample of the study. The division of districts by TEVTA was used in which Punjab has been divided into three zones. Sixty institutions were offering technical and vocational education at secondary level.

Table 1. Breakdown of Teachers by Gender

Gender	Frequency	Percentage	Cumulative Percent
Male	11	4.4	4.4
Female	239	95.6	100.0
Total	250	100.0	

Table 1 shows that total respondents were 250. Further it showed that 11 teachers (4.4 %) were male and 239 (95.6 %) were female.

Table 2. Qualification-Wise Breakdown of Teachers

Qualification	Frequency	Percent	Cumulative Percent
DAE	66	26.4	26.4
BS/B.Tech.	109	43.6	70.0
Masters	75	30.0	100.0
Total	250	100.0	

Table 2 reveals the education-wise breakdown of teachers of 250 sampled teachers. DAE, BS/B.Tech and were in the ratio of 66 (26.4 %), 109 (43.6 %) and 75 (30.00 %) as reflected in table 3.

Table 3. Age Wise Breakdown of Teachers

Age Range	Frequency	Percent	Cumulative Percent
<=25	74	29.6	29.6
26-35	84	33.6	63.2
36-45	72	28.8	92.0
>46	20	8.0	100.0
Total	250	100.0	

Table 3 showed age ranges of teachers from 250 teachers. A total of 74 (29.6%) were of age 25 years, 84 (33.6 %) were from 26-35 years age, 72 (28.8 %) were from 36-45 years age and 20 (8.0 %) were from 46 years or above age in the study.

Instrumentation

The goal of the study was to find out how instructors in Pakistan felt about the effectiveness of TVE at the secondary level. To obtain the necessary data for the study, a self-created multilingual questionnaire was aggressively used as a research method.

The questionnaire was divided into three sections: demographics, effectiveness of TVE at the secondary level, and perspectives on poverty alleviation. To make the questionnaire more user-friendly, it was also translated into Urdu.

A booklet with the study's history and foundations, objectives, research questions, and constructed questionnaire was created and given to the research experts for validation. Expert replies were divided into four categories: essential, necessary, relevant, and irrelevant. Expert guidelines were used to modify the instruments when necessary. Finally, five-point Likert scale surveys were deployed in the field. For measuring the responses, the response options were Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD) and were coded 5, 4, 3, 2, and 1 correspondingly.

For teachers, the Chronbach's Alpha was 0.901. The teachers' Chronbach's Alpha scale and construct were both more than 0.70. It showed that the data set was consistent and trustworthy at an appropriate level, and that it was safe to proceed.

Data analysis and interpretation

The statistical design for data analysis was created in accordance with the study's research questions. Statistical software was used to do quantitative analysis. Inferential statistical analysis included descriptive analysis, frequencies, percentages, and cumulative frequencies; one-sample t test, Pearson test, Mean score, and linear regression test were utilised.

Table 4. *Pearson product moment correlation coefficient between secondary school teachers' perceptions of the efficiency of technical and vocational education and poverty reduction*

Variable	'r'	'p'
Effectiveness --- Poverty Alleviation	.815	.000

Table 5 depicts the link between instructors' perceptions of technical and vocational education effectiveness and poverty reduction. The findings demonstrated a considerable positive association between instructors' perceptions of the effectiveness of technical and vocational education and poverty reduction ($r = .815, p.05$).

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Table 5. One-Sample t-test

Poverty alleviation

(H0): The sample mean scores on the 'poverty alleviation' aspect from teachers and the cut-point score are not significantly different.

(H1): The sample mean scores on the 'poverty alleviation' factor from teachers and the cut-point score differ significantly.

	N	M(S.D)	t-value	df	'p'
Poverty Alleviation	250	95.40(10.69)	28.68	493	0.00

*Population cut point 88

The t-value is 28.68, and the p-value is 0.00, which is less than the 0.05 level of significance. The alternative hypothesis is accepted and the null hypothesis is rejected. Teachers are satisfied with 'poverty alleviation' for poverty reduction through TVE, according to the findings.

Table 6 shows the effect of technical and vocational education elements on poverty alleviation as expected by teachers.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.878	.771	.763	5.203

a. Social elements, assessment and evaluation, staff development, academic facilities, course objectives, curriculum, administrative facilities, and physical facilities are all predictors.

$F(5,493) = 139.559, p < .001$

Model	Unstandardized Coefficients		Standardized Coefficients		'p'
	B	Std. Error	Beta	t	
1 (Constant)	13.436	10.008		1.343	181
Course Objectives	.631	.165	.176	3.817	000
Physical Facilities	.440	.106	.203	4.157	000
Academic Facilities	.038	.096	-.017	.394	694
Administrative Facilities	1.028	.150	.292	6.855	000
Curriculum	.784	.076	.379	10.262	000
Staff Development	.164	.120	-.043	1.363	174

Assessment and Evaluation	.127	.108	.036	1.170	243
Social Aspects	.714	.114	.219	6.283	000

a. Dependent Variable: Poverty Alleviation

Table 6 shows the robustness of the association between technical and vocational characteristics and teacher poverty alleviation, with an adjusted R² of .763. This means that 76.3 percent of the difference in teachers' poverty alleviation was due to course objectives, physical facilities, academic facilities, administrative facilities, curriculum, staff development, assessment & evaluation, and social elements. The model is accurate and useful.

The course aims factor is a significant predictor with a positive relationship with poverty alleviation (value = 0.631, p = .000). As illustrated by the unstandardized coefficient B, an increase in one unit of instructors' course objectives will enhance their poverty alleviation by 0.631 units. It is concluded that curriculum has a considerable favourable impact on teachers' poverty alleviation.

Physical facilities component is a significant predictor with a positive correlation with poverty reduction, with a value of 0.440 and a p value of .000. As illustrated by the unstandardized coefficient B, an increase in one unit of instructors' course objectives will enhance their poverty alleviation by 0.440 units. Physical facilities, it is claimed, have a favourable significant effect on teacher poverty alleviation.

The administrative facilities factor is a significant predictor with a positive association with poverty alleviation (value = 1.028, p = .000). As illustrated by the unstandardized coefficient B, an increase in one unit of instructors' course objectives will enhance their poverty alleviation by 1.028 units. Physical facilities, it is believed, have a considerable positive impact on

The β value = .784, p = .000) indicates that curriculum factor is significant predictor which has a positive association with the poverty alleviation. This means that an increase in one unit of teachers' curriculum will increase their poverty alleviation by 0.784 units as indicated by unstandardized coefficient B. It is concluded that curriculum has a positive significant effect on the poverty alleviation of teachers.

The social aspects component is a significant predictor with a positive correlation with poverty alleviation, with a value of 0.714 and a p value of .000. As illustrated by the unstandardized coefficient B, an increase in one unit of teachers' social features will improve their poverty alleviation by 0.714 units. It is determined that social factors have a good and considerable impact on teachers' poverty alleviation.

Findings and Discussion

Pearson product moment correlation coefficient found between teachers' perceptions of TVE efficacy and poverty reduction. The findings demonstrated that there is a strong positive link between teachers' perceptions of TVE efficacy and poverty alleviation (r = .815, p = .05).

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Gender-based

When it comes to course objectives, physical facilities, academic facilities, administrative facilities, assessment & evaluation, curriculum, staff development, and social aspects considerations, female teachers have more favourable perceptions than male teachers.

Geographically

On course objectives, physical facilities, academic facilities, curriculum, assessment & evaluation, and social related elements, rural teachers had more favourable perceptions than urban teachers. However, metropolitan instructors have a more positive attitude toward staff development.

Age wise

Teachers with an age range of 26-35 years are more positive about the 'course objectives component' than teachers with an age range of less than and equal to 25 years. Teachers between the ages of 26 and 35 have higher perceptions of the 'academic facilities element' than teachers between the ages of 26 and 35.

Teachers' perceptions of physical facilities, administrative facilities, curriculum, staff development, assessment and evaluation, and social component variables, however, did not differ.

Academic qualification wise

On the academic facilities factor, teachers with better qualifications have a more favourable image than teachers with lower qualifications. Course objectives, physical facilities, administrative facilities, curriculum, staff development, assessment & evaluation, and social aspects elements, however, revealed no academic qualification differences.

Institute wise

Teachers' perceptions of 'course objectives factor,' 'physical facilities factor,' academic facilities, administrative facilities, curriculum, staff development, assessment and evaluation, social aspects, and overall poverty alleviation factor differed significantly across institute.

Effectiveness of TVE factors on poverty alleviation

It was shown that instructors' perceptions of the effectiveness of technical and vocational education and poverty reduction have a significant positive association. As a consequence of the findings, course objectives, physical facilities, administrative facilities, curriculum, and social factors all significantly and positively predicted the outcome variable poverty reduction for the success of secondary technical and vocational education.

Recommendations

Based on the findings, the following recommendations are made:

- i. The specialization in each trade may be informed to all students prior to enrollment
- ii. Continuous professional development for teachers must be provided as well as essential for effective teaching-learning process.
- iii. Latest teaching methodologies may be introduced for effective teaching.
- iv. Teachers should use Audio visual aids in the classrooms.
- v. Labs must be used by all students equally.
- vi. Lab equipment must be utilized to enhance the practical skills of students.
- vii. Course outline must be completed to achieve pre-determined objectives.
- viii. Teachers must be focused on development of skills among students as per needs and job requirement.
- ix. The academia and industry linkages must be developed.
 - x. There must be sharing of expertise and resources of TVE at secondary level among various agencies and partners.
 - xi. The teachers must perform their effective role in interaction between institution, civil society and other stakeholders about sensitizing the importance of linkage between technical & vocational education at secondary level and poverty alleviation.
 - xii. Teachers must emphasize to improve their students' verbal and non-verbal communication techniques to foster the valuable interaction in society.
- xiii. There must be appointment of employer advisor council for better coordination with industry.

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