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## "Effectiveness of Associate Degree in Education (A.D.E) Program Offered by Teachers Training Institutions in Khyber Pakhtunkhwa. A Mixed Methods Approach"

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KEY WORDS	ABSTRACT
Associate Degree	Teacher Education (TE) Programs provide opportunities to prospective
in Education	teachers in order to obtained professional skills to become good teachers.
Regional Institute	Teacher Education Programs based on the national policy and it is careful
for Teacher Education Teacher Education, Teacher Training Institutions	designed and reshaped in 2009. So, Associate Degree in Education (A.D.E) program was introduced across country to uplift the standard of teachers with general, pedagogical knowledge skills and disposition as required by National Professional Standards for Teacher in Pakistan (NPSTP). The main purpose of the study was exploring the views of stakeholders regarding the effectiveness of A.D.E program. Mixed Methods Research (MMR) was used in the study. A sample of 609 individuals (14 Principals, 87 instructors, 189
	prospective teachers and 319 alumni students) selected through multistage sampling technique whereas twenty (20) participants were selected for qualitative phase through purpose sampling method. Three research instruments used i:e Questionnaire, Checklist and semi-structure interview. Quantitative data instruments were validated through index of Item- Objective Congruence (IOC) and reliability was estimated through Cronbach's Alpha. One sample t-test and ANOVA was used to assess the stakeholder views regarding effectiveness of A.D.E program while thematic analysis was used to assess the qualitative data. The findings of the study indicate that A.D.E program is effective as perceived by the stakeholders. The findings of Qualitative data indicate that A.D.E is an effective program and successful program which produced \competent teachers who professional equipped with multiple skills.

## Introduction

There is no doubt that a good teacher makes a difference. The role of teacher is very crucial and significant in teaching learning environment. In fact, there is not possible to produce competent teachers without quality teacher education programs (Chong & Ho, 2009). More broadly, quality education depends upon quality of teachers and quality teachers depend upon quality teachers training programs. So, teachers would competent, skillful and well versed in art of teaching. For this purpose, it is necessary that teacher should be well-trained and wellequipped with different skills such as teaching methods, assessment strategies, students' guidance and grip over subject matter knowledge. To strengthen teachers with such skill, it is obligatory that teacher training Intuitions must be equipped with facilities, competent Trainers, updated curriculum innovative teaching and methods. More precisely, a competent teacher can made possible through effective teacher training programs (Yogesh & Nath, 2008).

Teacher Education or Pre-service training focuses on the development of mental capabilities of prospective teachers and better understanding regarding subject knowledge. More broadly, teacher education covered different skills such social life, character formation, psychological knowledge of students, evaluation strategies and students' guidance and counseling (Irving, 1999). Teacher Education refers all kind of programs related to prepare teachers in which different competencies are learned in order to develop their knowledge and acquisition of professional behavior. It is a process in which prospective teachers learned professional with equal blend of theory and practice (Mule, 2006).

Effectiveness in education refers an output of specific analyses that measure the achievement of a specific educational goal or the degree to which a higher education institution can be expected to achieve desired objectives (Vläsceanu, Grünberg & Pârlea, 2004). At global level, every nation emphasized on the effectiveness of teacher education programs. United State System of Education reported in 1986 that certificate or license is necessary for teachers to teach at elementary and secondary stage. The duration of teacher training programs comprised of 4 to 5 years (Reba, 2012). France started two years teacher education program at all levels in 1989 with focused on professional and content courses (Katitia, 2015). In the same way, various countries like New Zealand, Holland, Portugal, Italy and Australia introduced two years teacher education programs after the completion of 14 years of education (Reba, 2012). In Pakistan, there are different teacher training programs introduced since independence such as Junior Vernacular Teacher (JVT), Senior Vernacular Teacher (SVT), Primary Teacher Certificate (PTC), Certificate of teaching (CT). From 1980 to 2009, three teacher training programs include PTC, CT and B.Ed offered in teacher training institutions (Ahmed, 2009). There were many drawbacks in old certification programs such as outdated curriculum, duration of program, lack of physical resources in Teacher Training Programs (TTIs) and undue emphasis on quantitative

expansion (Reba, 2012). Therefore, radical reforms in teacher education sector are made by the Government of Pakistan after 2009 policy in order reshaping and strengthen the teacher education programs. All certification courses (PTC & CT) phased out and started new program named Associate degree in Education program with financial assistance of United State Agency for International Development (USAID). This two year degree program introduced in all Regional Institution for Teacher Education (RITEs) in all over Pakistan. The main purpose of this program is uplifting the standard of teachers in the light of National Professional Standards for Teacher in Pakistan (NPSTP) and to improve the pedagogical skills with practicing in actual classrooms (Huma, 2013). Teachers' training plays a vital role to produce competent teachers. Therefore, Teacher Education becomes an issue in recent years. In fact, teacher education enduring serious issues that negatively effect on the performance of teachers. Such problems in teacher education include lack of facilities, low funding and poor recourses, outdated curriculum, disproportion between theory and practice, poor teaching methods, vague objectives and undue emphasis on quantitative expansion (Huma, 2013). As a result, quality of education both at elementary and secondary education is affected in term low student achievement and ineffective teaching. So, revolutionary reforms were required in teacher education in Pakistan. Therefore, A.D.E (2 years) and B.ED (4 years) were started by the Ministry of Education with financial assistance of USAID. So, the present paper was aimed to examine the effectiveness of A.D.E program

offered by TTIs in Khyber Pakhtunkhwa (K.P). The objectives of the study

- To examine the views of stakeholders about Effectiveness of A.D.E program offered by TTIs in Khyber Pakhtunkhwa.
- 2. To find out the strengths and weaknesses of the A.D.E program.

## **Research Questions**

Following research questions were made: -

**RQ1**: What are the views of stakeholders regarding A.D.E program offered by TTIs in Khyber Pakhtunkhwa?

**RQ2:** What are the strengths and Weaknesses of A.D.E Program?

## **Research Methodology**

# Philosophical Approach and Research Design

The present research followed Pragmatist philosophical approach. As a nature of the study, Mixed Methods Research (MMR) was used. According to Creswell and Plano-Clark (2007) Mixed Methods Research is process of gathering, analyzing and merging both quantitative and qualitative method in one study in order to understand the research problem. There are different research designs of MMR but researcher used Explanatory Sequential Design (ESD). The reason behind the selection of the ESD that priority is given to quantitative method and qualitative approach comes second in the sequence.

## **Population and Sampling Method**

A.D.E Program was started in all 10 male and 10 female RITEs in KP. Therefore, principals, Trainers, trainees and alumni students were comprised the population of

the study. There were 20 Principals, 134 Trainers, 392 Prospective teachers/trainees and 1893 alumni students constituted the population of the study (DCTE, 2016). Multistage sampling method was used. In first stage, Cluster sampling method was used in order to determine the sample size of Principals, Instructors and Teachers. The cluster sampling is appropriate when population is scattered over the wide geographical area (Al-Shahomee, 2012). So, Clusters were made on the basis of Divisions (Region). At least two RITEs were located in every division. Therefore, All 14 Principals, 87 Trainers and 189 Prospective teachers were selected in all Seven Divisions (Clusters). In the second stage, 319 alumni students were selected by using Krejcie and Morgans (1970) sample table. Twenty individuals (5 principals, 5 Trainers, 5 Prospective teachers and 5 alumni students) were selected through purposive sampling for qualitative phase. According Guest et al. (2006) minimum 15 individuals are enough for qualitative research study.

## **Research Instruments**

Multiple research instruments were used for data collection. Self-developed questionnaire based on 5-Point Likert scale with five dimensions which include General item about A.D.E, Curriculum, Teaching Methods. Assessment strategies and practicum. Research's Diary used to kept all record obtained on-the-spot observations during data collection. Semi-Structured Interview was developed for qualitative data collection having five leading questions about A.D.E program and one leading question related to the strength and weaknesses of this Pre-Service training.

## Validity and Reliability of the Instruments

After pilot study, the validation of questionnaire was done through index of Item Objective Congruence (IOC). Item Objective Congruence is a process where experts rated the items on degree which listed by the test developer. The cutoff criteria for IOC falls between 0.5 to 1.0 (Lindell & Brandt, 1997). For validation, the questionnaire was based on three point Likert score (-1=not clear measuring, 0=vague item, 1= clear measuring) for content validity.

#### **Table 1 IOC Score**

Dimensions	No. of Items	IOC score	Cronbach's Alpha
General Items of	13	0.5-0.8	.831
A.D.E			
Curriculum	17	0.6-0.9	.845
Teaching	12	0.5-0.9	.902
Method			
Assessment	12	0.7-1.0	.792
Practicum	20	0.5-1.0	.859

The table 1 indicates that value of IOC for each dimension meet the cutoff criteria. Thus, all items are accepted and retained in the questionnaire. Reliability is the second most important phase of instrument development. In the present study, reliability of the questionnaire was estimated through Cornbach's Alpha by using SPSS (21.0). The table 1 also shows that the reliability score of each dimension is above from the standard criteria which indicates that questionnaire is valid as well as reliable.

The validity of qualitative data is often assessing through the trustworthiness of the findings. In MMR, validity of qualitative data is assessing through triangulation, accuracy and credibility of the respondents (Gal et al., 2007; Zohrabi, 201). In the present study, researcher used triangulation in order to ensure the validity by using different sources for data collection. Second strategy for validity of quality data was accuracy. For this purpose, researcher collected data from different respondents in order to arrive at conclusions with a consensus among stakeholders from different angles in relation to the program.

## **Data Analysis**

Researcher got the views of stakeholders through questionnaire. Thus, one Sample ttest and ANOVA applied as inferential statistics in order measured the Mean difference among stakeholders' views. The data received from interview was analyzed by using thematic analysis. Thematic analysis is process of identifying, arranging, transcribing and interpreting themes identified within the data set. According Cresswell and Plano-Clark (2007) to There are many ways of mixing or merging qualitative and quantitative data but most widely approach is to describe the quantitative and qualitative data side by side in the discussion stage

## **Result and Discussion Findings of Quantitative Phase**

Table 2 $H_{01}$ : The A.D.E program is notsuccessful as viewed by Heads ofInstitutions.

(Test value=3)
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	n	Mean	S.D	t	Sig.
A.D.E Prg:	14	4.13	.347	13.50	.002
D . 05					

P<.05

The table 2 indicates effectiveness of A.D.E program perceived by the Heads of institutions by using one sample t-test. The table indicates that Sig. value is less than Alpha level of significance ( $\bar{x}$ =4.13, P=.002<.05). Thus, H<sub>01</sub> is rejected and it reveals that A.D.E is a successful program viewed by the Heads of Institution.

Table 3 $H_{02}$ : The A.D.E program is notsuccessful as viewed by Trainers

(Test value=3)						
	n	Mean	SD	't'	Sig.	
A.D.E	87	3.97	.454	11.41	.003	
prg:						
P<.05						

The table 3 shows that indicates successfulness of A.D.E program viewed by the trainers by using one sample t-test. The table indicates that Sig. value is less than Alpha level of significance ( $\bar{x}$ =3.97, P=.003<.05). Thus, H<sub>02</sub> is rejected and it reveals that A.D.E is a successful program viewed by the trainers.

Table4	H <sub>03</sub> : The	A.D.E	program	is not
successful	as viewed	l by Pros	pective Te	achers
	(Tes	st value=	3)	

		(			
Variable	n	Mean	SD	ʻt'	Sig.
A.D.E	189	3.86	.805	13.29	.000
prog:					

P<.05

The table 4 indicates effectiveness of A.D.E program is viewed by the prospective teachers by using one sample t-test. The table indicates that Sig. value is less than Alpha level of significance (P=.000<.05). Thus,  $H_{03}$  is rejected and it reveals that A.D.E is a successful program viewed by the prospective teachers.

Table 5  $H_{04}$ : The A.D.E program is notsuccessful as viewed by alumni students(Test value=3)

(Test value=5)					
	n	Mean	S.D	't'	Sig.
A.D.E	319	3.74	.724	13.26	.000
prg:					

#### P<.05

The table 5 indicates successfulness of A.D.E program perceived by the alumni students by using one sample t-test. The table indicates that Sig. value is less than Alpha level of significance

 $(\bar{x}=3.74, P=.000<.05)$ . Thus, H<sub>04</sub> is rejected and it reveals that A.D.E is a successful program viewed by the alumni students.

Table 6H<sub>04</sub>: There is no significantdifference among the respondents' viewsregardingA.D.EProgrambyApplyingANOVA

Status	n	Mean	S.D	F	Sig
Principal	16	4.03	0.42		
Instructor	119	3.77	0.88		
Trainees	243	3.83	0.76	0.973	.143
Alumni	291	3.88	0.67	0.915	.145
Students					
p>.05					

Table 6 depicts the stakeholders' views regarding the Pre-service program. The table shows that value of F=0.973 failed to provide evidence to reject the null hypothesis. The score of P=.143>.05 which reveals that there is no significant difference among the stakeholders' views regarding A.D.E program.

## **Findings of Qualitative Part**

The recorded data from interview was transcribed into research language. Following collected text transformed into codes and developed themes. Pseudonyms were used instead of participants' real name for the purpose of anonymity and confidentiality.

## **Theme 1: Job-Oriented Program**

The Principals of the RITEs favored this program and agreed that this program is a good step taken by the government towards uplifting the standard of TE. One of the Principal stated that:-

"A.D.E program is a mile stone in TE Sector. The main purpose of this program is to equip trainees with different skills such as innovative teaching methods, assessment strategies, students counseling, establish learning environment and command over subject matter knowledge in order to cope the challenges of the  $21^{st}$  century. Most of the alumni students are selected as teachers in Government sector which is one of the precedents that A.D.E program is effective". (**P-3**)

## **Theme 2: Advanced Curriculum**

The role of Curriculum in quality education is significant and crucial. Therefore new curriculum approved Higher Education Commission, Pakistan which shift learning from teacher centered to student

centered. One of the Instructors expressed his opinion in the following words:-

"I think it is first time that Government developed curriculum under the supervision across the country and of experts implemented uniform curriculum in all regional institutions. It is an excellent document which has the capacity to equip prospective teachers with professionally skills. The professional subjects include innovative teaching as well as assessment approaches which improve the competencies of trainees" (T-4). When researcher asked a question to Prospective teacher that whether A.D.E curriculum is marker oriented or not? then one of the prospective teacher stated that "majority of selected alumni students in Govt. Sector share their experience that 70% MSCQs were related to the new Curriculum which shows that A.D.E curriculum is market oriented and fulfill the future needs"(PT-2).

## **Theme 3: Students-Centered Teaching**

As for students learning is concerned, teaching methods play a vital role. All stakeholders emphasized that students' centered approach should be adopted in teaching learning process. One of the Instructors shared his viewed that:-

"Teacher mostly used teacher-centered methods in old certification program (PTC and CT) and research evidence indicates that teacher-centered methods are not effective. But the new A.D.E curriculum change this trend from teacher centered to student centered, because this new curriculum demands innovative teaching methods. Therefore, teachers are trained in different areas such as students' centered teaching methods and assessment strategies by foreign stakeholders like USAID and CIDA (**T-4**)."

# An interviewee shared her expressed in the given words:-

Generally, our teachers apply activity based teaching methods. Our participation in daily lesson is one of the main concerns in teaching learning process. Mostly, they use bridge language (Urdu) as mode of communication. Teachers encourage us for questioning in the class (**PT-1**).

## **Theme 4: Formative Assessment Strategy**

Students' assessment is one the important part in A.D.E program. The traditional assessment of students was replaced with new assessment strategies in this program. The annual system of old certification program was phase out and semester system was introduced which bring changes in assessment structure of the program. One of the Instructors stated that:-"Mostly we focus on formative assessment because semester system appeals formative type of assessment. Both individual and group assignments were given to assess the students' performance. For this purpose, Marks Distribution Sheet (MDS) and Rubrics were developed in order to assess the students' performance. Marks distribution Sheet contained attendance, students' behavior, individual assignments, group assignments and portfolio. The proportion marks is 80:20 which mean 20 marks allotted to subject teacher while 80 marks associated with external exam (T1 & AS2). "

# Theme 5: Seminars and students' Portfolio

Practicum is one of the essential dimensions of A.D.E program which link theory into practice. Prospective teachers' displayed their competencies during practicum phase. Practicum is an importance stage in which students put theory into practice. One of the interviewee shares his experience regarding practicum in following words:-

"Practicum has significant role to flourish the prospective teacher's professional competency. So, we carefully planned this academic activity. Observational tools in the  $3^{rd}$ semester were distributed among students. So, they observe each and every activity which performed in the practicum schools. Three seminars are conducted i:e orientation seminar, during practicum and final seminar. Guidelines are given to the students in the orientation seminar about practicum whereas different issues are discussed in the second and final seminar. During practicum, university supervisor also participate and he/she assesses the students' performance in the final lesson (T-3)". When researcher asked a question that what kind of activities are performed in the practicum then one of the Alumni student replied " cooperating teacher engage us in different activities such as maintaining different school registers (Attendance, admission, withdrawal and log book), classroom visits and teaching and maintain out portfolio which assessed at the end of the practicum (AS-2)."

Theme 6: Advanced Curriculum and<br/>Practicum (Strength)/Lack of<br/>Coordination between TTIs and E & SE<br/>department (Weakness)

Every program has strengths and weaknesses. Different strengths and weaknesses are explored during interview session. One of the Interviewee highlight strengths and weaknesses of the A.D.E program in the following words:-

This program is much better than old certification program (PTC and CT) because of different features like duration of the program (2 years), HEC approved curriculum, Practicum and equal proportion of theory and practice. In contrast, there are few weaknesses/Problems of this program which need to resolve. There is lack of coordination between Department of Elementary and secondary Education of Khvber Pakhtunkhwa and Teachers Training Institutions. The higher authorities have no interest in this newly program. Almost 40% Trainers who are trained by USAID and CIDA are transferred is another weaknesses. Resultantly, newly arrived Trainers are not familiar about this program. There is lack of subject specific teachers posted in teachers training institutions which is the main issue of the program (P-2)."

## **Discussion and Conclusion**

The beauty of Mixed Methods Research (MMR) is the mixing of Quantitative and Qualitative data. There are many ways of mixing qualitative and quantitative data but most widely approach is to describe the quantitative and qualitative data side by side in the discussion stage. The result of the present study indicates that A.D.E program is successful is viewed by Participants. The qualitative data confirmed the quantitative findings. The qualitative

results explored that A.D.E program is mile stone in teacher education. This program is much better than certification courses. Same result was mentioned by Akbar et al. (2013). They explored that majority of participants affirmed that A.D.E program is better in term of some salient features like innovative methods, HEC teaching approved Curriculum and Practicum. The result of study is consistent with result explored by Khan and Saeed (2009). They found that pre-service program is effective in term of different dimensions such teaching and assessment strategies, practicum duration and updated curriculum.

The result of the study indicates that A.D.E program is successful as viewed by the participants. So, it is concluded that A.D.E program is effective to produce competent teachers who professional equipped with different skills such as communication, innovative teaching approach, assessment skills and students' counseling skills. Trainees have command over professional as well as content subjects. It is also concluded that this program develop attitude of students towards teaching profession. Majority of alumni students are selected in secondary Elementary and Education department which depicts that A.D.E program is successful as compared to certification courses (PTC & CT). The present study concluded that lack of coordination between E& SE department and Teacher Education Institutions which one of the major weaknesses of this program. Most of trained Trainers are transferred and fresh appointment in RITEs creates issue because they are unfamiliar to this program.

## Recommendations and Research Implications

The study recommended that Government may take interest in A.D.E program. For this purpose, E & SE department may coordinate with all RITEs regarding recruitment of alumni students. The study recommended that subject specific teachers may appoint in RITEs to success this program. It also recommended that trained instructors may not be transferred from RITEs, so they can better deliver their skills.

The present study provides empirical evidence regarding the effectiveness of A.D.E program. There is very limited empirical evidence available regarding A.D.E program.so, this paper contributes evidence to fulfill the literature gape. One of the major implications of this study is to provide guideline to policy makers. Government eliminated this program due to new induction policy. The present study also provides strong evidence about the success of this program, so A.D.E program may continue to produce skillful teachers.

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