

Attitudinal correlates of academic performance of teacher trainees in distance and face-to-face mode

By

Dr Mamta Garg

Assistant Professor

USOL, Panjab University, Chandigarh, India

Abstract

The quality of the attitude of the teacher reflects his or her occupational understanding of teaching (Can, 1987). Thus, attitude drives performance. The purpose of the present study was to explore the two attitudinal variables, namely, attitude towards teaching and perception about Bachelor of Education (B.Ed.) of secondary teacher trainees and to see the effect these two variables on their academic performance. The findings revealed that performance of distance trainees in theory papers as well as in aggregate is related significantly with their perception about relevance of course content of theory papers, overall perception about Bachelor of Education (B.Ed.) course and attitude towards teachers. But their performance in skills in teaching can be predicted by all the seven measures of attitude towards teaching and also by overall perception about B.Ed. course. Among on-campus trainees, only two attitudinal measures (i.e. overall perception about B.Ed. course and attitude towards teaching profession) has emerged as significant correlates of marks in theory and only one variable i.e. attitude towards teaching profession is correlated with skills in teaching. None of the attitudinal variable is correlated with the overall performance of these trainees.

Keywords: *Attitude towards teaching, perception about B.Ed. course, academic performance, secondary teacher training*

Introduction

The word attitude (from Latin aptus) is defined within the framework of social psychology as a subjective or mental preparation for action. It defines outward and visible postures and human beliefs.

Attitude is a "readiness of the psyche to act or react in a certain way" (Jung, [1921] 1971:par. 687). Attitudes are positive, negative or neutral views of an "attitude object": i.e. a person, behavior or event. People can also be "ambivalent" towards a target, meaning that they simultaneously possess a positive and a negative attitude. Attitudes come from judgments. Attitudes develop on the ABC model (affect, behavioral change and cognition). The *affective* response is a physiological response that expresses an individual's preference for an entity. The *behavioral*

intention is a verbal indication of the intention of an individual. The *cognitive* response is a cognitive evaluation of the entity to form an attitude. (Wikipedia, 2006). Social psychologists distinguish and study three components of the responses: (a) *cognitive component* refers to the knowledge about an attitude object, whether accurate or not; (b) *affective component* involves feelings towards the object and (c) *conative or behavioral component*, include the action taken towards the object. Most of the attitudes in individuals are a result of *social learning* from the environment. The link between attitude and behavior exists but depends on attitude specificity, attitude relevance, personality, social constraints and timing of measurement. Several things play a role for an attitude to cause a behavior

The three components of attitude interact through an explicit structure and process. Thus an attitude is psychophysical structure that stores related bits of affective, cognitive, and psychomotor learning in a manner that allows instantaneous, subconscious access by its owner. This structure functions as a tool that allows its owner to respond quickly and effectively to environmental situations related to the satisfaction of fundamental personal needs (Kamradt & Kamradt, 1999).

On the basis of above discussion it may be inferred that.

- Attitude is disposition to respond favorably or unfavorable towards objects of the environment.
- Attitudes are dynamic in nature. They change with the change in values, beliefs mode of living and thinking.
- They are innate rather acquired and formed.

Attitudes determine what each individual will see, hear, think and do. They are rooted in experience and do not become automatic routine conduct. Development of positive attitude rather than a negative one helps in achieving the goals. Generally a person having a desirable attitude towards various situations and experiences will be found getting success and happiness in various fields of life.

Teaching attitude is a readiness of a teacher to become motivated with subject to an object. Under certain conditions such as when we are in presence of the subject or when the value which it has for us can be enhanced or defended, we are likely to become appropriately motivated.

Attitude towards teaching is an enduring perceptual organization of teacher's belief and learned tendency to react favorably or unfavorably in different degrees that determine his actual or potential responses towards teaching. According to

Nemser-Feinman and Floden (1986) teachers go through three stages when they start teaching: adequacy, mastery and impact awareness of the effect of their teaching on the students. Pre-service courses should prepare the future teacher for adequacy and mastery. In-service programs should help the teacher to actualize their knowledge with the acquisition of adequate instruments and methodologies to solve problems. Barros and Elia (1998) suggested a model which depicts that a strong interaction existing between teaching attitudes and competencies, school and society.

Insert Figure 1

Even though the attitudes are generally assumed within the scope of competency, they should be analyzed separately in terms of their effect on the learning of knowledge and skills because there is a correlation between the attitudes of individuals while attempting to do a job and completing that job successfully. As Sozer (1991, p. 4) states, in a learning environment where attitude formation is not taken into account, the possibility of having great difficulties in the occurrence of learning experiences and realization of teaching activities should not be forgotten. Attitude can be defined as tendencies pushing the individual to perform particular behaviors against particular people, objects, and situations (Demirel & Un, 1987, p. 173). In this respect, the attitude of the teacher towards his or her profession can be considered as the determinant of his or her behaviors in the profession. On the other hand, the quality of the attitude of the teacher reflects his or her occupational understanding of teaching (Can, 1987, p. 160).

Perception about Bachelor of Education (B.Ed.) course

The word *perception* comes from the Latin *perception-*, *perceptio*, meaning "receiving, collecting, action of taking possession, apprehension with the mind or senses." In Psychology and the Cognitive sciences, perception is the process of acquiring, interpreting, selecting, and organizing sensory information (Wikipedia, 2006).

Perception is process by which organisms interpret and organize sensation to produce a meaningful experience of the world. *Sensation* usually refers to the immediate, relatively unprocessed result of stimulation of sensory receptors in the eyes, ears, nose, tongue, or skin. *Perception*, on the other hand, better describes one's ultimate experience of the world and typically involves further processing of sensory input. In practice, sensation and perception are virtually impossible to separate, because they are part of one continuous process (Encyclopedia of Human-Computer Interaction)

Brentano (1874) attempted to analyze the initial conditions of perception. The beginning of perception is the image in the mind which arises when something interests the person. This image requires a mental act to present that image to the mind. There are two other components as well. There is a judgment about the image, and a feeling towards the image. The mental act that presents the image to the mind has three components associated simultaneously with it:

- The image itself, which is the content of the perception.
- A judgment which refers to the image.
- A feeling of pleasure or displeasure which we feel towards the image.

The process of perception has two parts to it. The sequence from passive observation to foreground content is the unconscious part. Then the continuation, from judgment to the loop of projection and introjections, is the subconscious part since it deals with the hidden intentions and expectations of the person. The stages of perception are given in the diagram. The arrows indicate the change from one stage to the next one. The sequence ends in the loop of projection and introjections.

Insert Figure 2

Thus, Perception is way of seeing or understanding a thing, phenomenon or process etc. Perception denotes an insight of an individual that can be expressed overtly in the form of opinion. Perceptions of learners for their course means how do learners take their course of study in terms of their interest in the course and ultimately about the effectiveness of the curriculum for practical implementation. The perception of the trainees about the relevance of the curriculum, mode of transaction of the curriculum, behavior of their teachers, relevance of the practice teaching, development of teaching skills and attitudes during then course, evaluation techniques, and importance of the course in their personal development is to be observed. The trainees in distance education mode are teachers thus have a more realistic picture about the field of action (i.e. schools) whereas their counterparts in face-to-face B.Ed. course have still to face the realities of teaching in schools, thus latter may have different perception about the field. Thus the trainees in two groups may have different perceptions about the relevance of B.Ed. course for becoming effective teachers.

Most of the learning in distance education occurs independently from the existence of teacher depending on the teaching materials prepared in advance (Evans, 1994, p. 16). In other words, the majority of the efficacies that are the resultant of the knowledge, skills, and attitudes that students will gain can only be provided with teaching materials. However, in formal education, since students go through the

learning process face-to-face, they gain the necessary efficacies within the interaction between both the teacher and other students.

In this respect, determining the attitudinal variables of teacher trainees i.e. attitude towards teaching profession and their perception for the teacher training programme are of great importance. The attitudes of teacher candidates regarding teaching profession and their perception levels of teaching give some clues in a way concerning the effectiveness of the program implemented. Secondary teacher trainees in face-to-face and distance education are assumed to be joined the teacher training course willingly so may have favorable attitude towards teaching. But the distance trainees due to their direct association with teaching and having knowledge about every aspect of teaching profession may differ from their counterparts in face-to-face system in their attitude towards teaching.

As Ozer (1993, p. 11) states, the most important issue in teacher training programs carried out through distance education is the effectiveness of the program; in other words, whether the content has been learned, or whether the behaviors aimed have been gained by the teachers or not. Moreover, examining the student attitude is also important in terms of providing an effective teaching-learning environment and developing functional education programs (Yasar, 1985, p.5). In teacher training programme, the attitude of trainees towards teaching and their perception about B.Ed. course may to some extent determine their success.

Previous Researches

A lot of research has been done to predict the success of teacher trainees in formal education. Pertaining to teaching attitude, the findings are not conclusive. Vyas (1982) found that attitude towards teaching contribute to the prediction of total practical assessment and aggregate marks. Tharyani (1986) identified that teachers' attitude towards pupil did not show any significant relationship with teacher behavior in case of high achievers. Budhisagar and Sansanwal (1991) illustrated that their attitude towards teaching had no effect on their achievement. Sabharwal (1991) confirmed in their study that attitude towards teaching were significant predictors of assessment in practice theory. Diwan (1992) revealed that attitude of student teachers towards teaching had significant high positive relationship with the marks in total as well as in theory and practical. Baland (1999) reported that out of the total variance in achievement of pre-service teachers explained, 14% was due to attitude towards teaching. Reddy (2002) said that attitude towards teaching of DIET trainees significantly influence their scholastic achievement.

Purpose of the study

The present investigation has been designed to ascertain the predictive efficiency of two attitudinal variables, namely, attitude towards teaching and perception about B.Ed. course towards three variables of academic performance, namely, performance in theory papers, performance skills in teaching, and overall academic performance.

Methodology

Suited to the nature of the study, the investigation was conducted by using descriptive survey method. A sample of 200 distance teacher trainees and 200 on-campus trainees who were doing B.Ed. course was selected by random sampling technique. The purpose of the study was told to the participants and their consent was taken. The instruments used for data collection included Teacher Attitude Inventory (Ahluwalia, 1978) and a locally constructed and standardized scale to assess the perception of trainees for B.Ed course. The academic performance of the trainees was determined by their final examination marks in theory papers, skills in teaching and aggregate marks. The data had been analyzed by employing t-test to know the significant difference between two groups of trainees on the two attitudinal variables and product moment correlation was used to determine the relationship of each of the two attitudinal variables with the academic performance of trainees in distance education as well as face-to-face mode. Principal Component method of Factor analysis was used to identify the constellation of different measures of two attitudinal variables of the distance and face-to-face teacher trainees with their three measures of academic performance. Thereafter, multiple regression technique was employed to find the predictive efficiency of various sub-measures of two attitudinal variables for explaining variance in measures of academic performance of two groups of teacher trainees.

Findings

The significance of differences between the means of scores on attitudes towards different aspects of teaching of B.Ed. trainees in distance and face-to-face education was tested by using t-test, the results of which are shown in Table 1:

Insert Table 1

In different aspects of attitude towards teaching, i.e. attitude towards teaching profession ($t= 3.01, p<.01$), child centered practices ($t= 3.41, p<.01$) and attitude towards teachers ($t= 5.11, p<.01$), and in overall attitude towards teaching ($t=2.71, p<.01$), the on-campus trainees has significantly more favorable attitude as compared

to distance trainees. No significant differences exist between these two groups of trainees on remaining three sub-variables.

The attitudinal differences among face-to-face and distance teacher trainees may be due to the fact that during the B.Ed. course, on-campus trainees have a regular associations and interaction with the teacher-educators who keep on working for formation of their attitudes towards teaching on day to day basis. Even if one agrees that the teaching as a profession has certain constraints and is generally rated lower in economic status as compared to some other professions, these trainees yet have not experienced these factors personally. In contrast to this, the B.Ed. students of distance mode themselves are teachers and thus well-versed with the strengths and weakness of teaching as a profession and as reflected by the results of the present study, they do not seem to as favorably inclined to the teaching profession as those who have yet to enter in this profession.

Insert Table 2

Entries in Table 2 reveal that no significant ($t=1.02$, $p>.05$) difference was found on the variable of overall perception of on-campus and off-campus teacher trainees. Further, it can be seen that these two groups of trainees differ significantly from each other on three of the seven sub-areas of B.Ed. course, namely, perception of relevance of course content of theory papers ($t= 3.73$, $p<.01$), development of teaching skills and attitude ($t= 4.87$, $p<.01$), and personality development ($t= 2.09$, $p<.05$). The trends of mean in these aspects show the trainees in B.Ed. correspondence course have better perception for relevance of course content of theory papers than on-campus trainees who in turn are superior in their perception of the sub-area (a) development of teaching skills and attitude and (b) personality development in comparison to their counterparts.

The results indicated towards a more positive perception of distance trainees about the relevance of course content of theory papers than on-campus trainees. Possibly in-service teachers can relate the theory with practice in respect of their first hand experience in teaching whereas on-campus trainees are still not well-versed with the real teaching situations, therefore may not be able to relate the theory taught during B.Ed. course to actual teaching thus have lesser positive perception of relevance of theory. Moreover, Personal Contact Programmes for distance trainees focus primarily on theory papers which are taught by the best of the experts in their respective fields. Exposure to other aspects is not as strong as on theory papers. B.Ed. course in terms of the development of teaching skills and attitude aspects have been perceived better by on-campus trainees than distance trainees. As already stated that during regular B.Ed., teachers have the opportunity for interaction with trainees over the year and they consistently and persistently put

great emphasis on developing favorable attitudes and skills of teaching in and outside classroom by organizing different activities like daily classes for skills in teaching, special lectures for developing teaching skills, various teaching competitions etc along with their usual efforts of teachers to develop attitude in classrooms. Contrary to this, in case of B.Ed. through correspondence, trainees come in contact with their teachers only for short duration (i.e. PCP), within this period it is not possible to organize such activities and also teachers are more concerned with completing the syllabi. The differences in the third area of perception about the B.Ed. course between the two groups of trainees is in relation to the scope for personality development wherein also B.Ed. regular students submitted better scores than the distance trainees. This may be understood in view of the fact that regular B.Ed. trainees participate in a variety of co-curricular activities that are organized throughout their course along with the classroom teaching that go a long way in development of the personality of the on-campus trainees as a person and as a teacher. These opportunities generally are provided to distance trainees in a very meager form.

Correlation between attitudinal variables and academic performance

Insert Table 3

In case of distance teacher trainees, performance in theory papers is correlated positively with only one measure, which is, attitude towards teachers where as their performance in skills in teaching has significant positive relationships with all the seven measures of attitude towards teaching. As far as their overall academic performance is concerned, none of the seven measures of attitude towards teaching has come out as a significant correlate.

A different picture of correlation of attitude towards teaching with variables of academic performance has emerged for the teacher trainees in face-to-face education, as only two significant relationships have been observed. These relationships are between attitude towards teaching profession of on-campus trainees with their performance in theory papers as well as performance in skills in teaching.

Insert Table 4

For trainees in distance education, there exist positive and significant relationships between their overall perception about B.Ed. course and performance in theory papers ($r=.168$, $p<.05$) and as well as their achievement in respect of aggregate marks ($r=.179$, $p<.05$). The performance in skills in teaching is not significantly correlated with the overall perception of these trainees about their B.Ed. course. Among its sub-measures, just one measure i.e. relevance of course content of theory papers is positively and significantly correlated with their

performance in theory ($r=.151$, $p<.05$) and also with overall academic performance ($r=.141$, $p<.05$). Non-significant relationships have been reported between remaining measures of perception about B.Ed. course with each of the three variables of academic performance among distance trainees.

The results show that the B.Ed. correspondence student who feel the theory papers in their course have application in actual classroom situations, have a tendency to obtain higher marks in theory papers and in aggregate. These results are understandable in view of the fact that the distance trainees being teachers can relate the theory with practice. Those trainees, who draw out the relevance of theory taught to them with actual classroom teaching, are likely to absorb the pedagogical concepts so as to link these with pedagogic practice these in real situations. Thus, this linkage possibly helps them to achieve higher marks in theory papers. Wang (2007) stated that learning among adult learners is relevancy-oriented. In other words, adult learners tend to focus on learning that can be applied to their work and lives. Adult learners may not be willing to learn anything new if their instructors fail to demonstrate a relationship between coursework and “real life (Bash, 2003). In other words, adult learners want their instructors to address relevancy to learning. Adult learners may not be interested in knowledge for its own sake. Instead, they focus on the aspects of a lesson most useful to them in their work or personal life. Vermunt (1992) states that students who are using meaning directed learning, that is who are critical and who are relating various aspects of learning content, have been found to receive higher grades in higher education.

As far as the perception of on-campus trainees for B.Ed. course is concerned, a positive and significant correlation ($r= .197$, $p<.01$) is obtained between overall perception and their performance in theory papers. Non-significant relationships are seen between sub-measures of their perception of B.Ed. course and all the three variables of academic performance (vide Table 5).

Perry (1997) reported that instructor expressiveness and lecture content had a significant effect on student ratings of instruction and on student achievement. According to Lizzio et al (2002), students’ perceptions of their learning environment have a strong influence on study outcome.

Factor Analysis and Multiple Regression

Hotelling’s (1935) Principal-component method was used to analyze the factor structure underlying the academic performance and attitudinal variables (attitude towards teaching and perception about B.Ed. course). The rotation of factors was accomplished by using a computer program of varimax rotation devised

by Kaiser's (1964). For determining the number of factors to be retained for the purpose of rotation, the factor loadings were subjected to Scree Test (Kaleskis, 1972).

The results of factor analysis (Table 5) reveals that all the seven measures of attitude towards teaching of distance trainees shared communalities with the only one variable of academic performance i.e. skills in teaching on original factor as well as rotated factor. The two measures of Perception about B.Ed. course of these trainees, namely, curriculum transaction and relevance of school experience programme constellated together with performance in skills in teaching on original Factor I and relevance of school experience programme and overall Perception about B.Ed. course shared significant loadings with performance in skills in teaching on rotated Factor I. On original as well as on rotated factor III, one measure of perception, i.e. relevance of course content of theory papers

In case of trainees in face-to-face mode (Table 6), none of the measure of Attitude towards Teaching came together with the criterion variables on any of the original or rotated factor. The variable of overall Perception about B.Ed. course shared significant loadings with all the three measures of Academic Performance i.e. in theory, skills in teaching and overall performance on rotated Factor I and also on original Factor II. Besides this, one measure, namely, personality development also constellated with performance in skills in teaching on original Factor III.

The findings of stepwise multiple regression show that no significant attitudinal predictors for marks in theory papers as well as overall performance of distance trainees has surfaced out. The predictors for their performance in skills in teaching included attitude towards teaching profession, attitude towards pupil, overall attitude towards teaching and towards education process which explained 14.7% 4.0% by, 3% and 1.3% variance in the marks.

Among face-to-face trainees, significant predictors that have emerged for performance in theory papers with predictive efficiency of 3.7% and 1.8% are Overall perception of on-campus trainees and their attitude towards teaching profession respectively. Whereas, 6.7% variance in marks in skills in teaching of these trainees is due to their attitude towards teaching profession.

Discussion of Results

The finding of the study revealed that for performance of distance teacher trainees in theory papers as well as in aggregate, only two significant correlate, namely perception about relevance of course content of theory papers and overall

perception about B.Ed. course has been found. But their performance in skills in teaching may be predicted to some extent by various measures of attitude towards teaching and also by overall perception about B.Ed. course. In case of on-campus trainees, only two attitudinal measures (i.e. overall perception about B.Ed. course and attitude towards teaching profession) has emerged as significant correlates of marks in theory and skills in teaching. None of the attitudinal variable is correlated with the overall performance of these trainees though their overall perception about B.Ed. course may have some underlying effect on it. Overall, it may be said that the performance in skills in teaching may be determined more than in theory and in aggregate by attitudinal variables of teacher trainees.

The findings with regards to performance in skills in teaching may be explained in terms that performance in skills in teaching requires ability to display various teaching skills but skills development is not only related to the cognitive domain but also to the affective domain as in the due course of the development of skills both attitudinal and motivational variables act as latent factors. The memory, motives, interests, needs, make an individual acquire, retain and reproduce whatever they learn. The attitudes may be analyzed in terms of their effect on the learning of knowledge and skills because there is a correlation between the attitudes of individuals while attempting to do a job and completing that job successfully. According to McComb and Marzano (1990) also, achievement outcomes have been regarded as a function of “skills’ and “will”. For mastering the skills, it is necessary to create such conditions which could serve as a specific background to intensify the activity of the learner and in this way to allow him / her to broaden the ability of governing his / her learning process (the mastering of the subject and new material, retaining it at the same time). To such inner factors and conditions belongs also the learner’s attitude with its three constituents: cognitive, mnemonic and communicative (to render information to other people, to persuade somebody, etc.), their memory, motives, interests, needs, making an individual acquire new and very important for him / her information, reproduce and retain it. Yip (2007) reported that the attitude and motivation were two major factors that differentiated high academic achieving students from low academic achieving students.

The results pertaining to correlation of attitude with academic performance are different from correlation of perception with academic performance in both the groups. It may be stated here that perception can be differentiated from attitude. ‘Attitudes’ are more enduring in nature and relatively stable, not easily changeable whereas ‘Perception’ involves giving meaning to and organizing the immediate experiences in the learning environment (both in class and out of the class). Moreover, the attitude that is often used in conjunction with motivation to achieve is self-efficacy, or how capable people judge themselves to be to perform a task

successfully (Bandura, 1977). In case of perception of teacher trainees about their B.Ed. course, it has been observed that only overall perception of trainees have emerged as a correlate of their performance in theory as well as in aggregate. Perception involves judgment about the all the aspects of B.Ed. course, broadly course content, transaction of content, teachers' behavior, evaluation and outcome (in terms of development of teaching skills and overall personality). Favorable perception leads towards satisfaction with the course which may further directs towards better performance and ultimately good grades. Rickinson and Rutherford (1995) reported that dissatisfaction with course of study was the reason most commonly endorsed for leaving the university. Moreover, mastery goals for personal development were correlated positively attitudes towards the course. Strong relationships were found with achieving-deep strategies and attitudes towards the course (Ng, 2000).

Implications of Research Findings

The findings of the present investigation have implication for both course planner and employers. The recruitment of teachers in government as well as in public schools is based on aggregate marks in B.Ed. The results reveal that overall performance (aggregate marks) of the teacher trainees is not determined by their attitude towards teaching. It means that those trainees who get in to the profession may or may not have favorable attitude towards teaching. Can (1987) says that the quality of the attitude of the teacher reflects his or her occupational understanding of teaching. The teacher attitude has serious implications for the learners. Teachers are said to be effective when their teaching can lead to students' learning. Nothing has been taught until it has been learnt and this happens when the teacher succeeds in causing a change in behaviour in the learner. Lacking desirable attitude among teachers may lead to job dissatisfaction that may impact the performance and behavior of the students. Therefore, besides, marks, the attitude of teaching candidates must be assessed at the time of recruitment.

Success in any academic endeavor is very important same is true for teacher trainees who join the B.Ed. course to achieve high so that they may get good job. Rathvon (1999), improvement in on-task behavior does not necessarily lead to increases in academic performance (p.114). One must gain knowledge or understand the concept to improve, not just behave in a manner conducive to learning. Only getting good marks is not sufficient for these would be teachers as their attitude towards teaching matters more after joining the profession.

Keeping this in view, attempts must be made during B.Ed. course to bring attitudinal changes, if so required by organizing various activities. Also, some

innovative evaluation techniques must be devised and introduced in which along with cognition and skills, attitudinal aspects may be assessed and weighed. Tracy (1993) says that people have skills and talents that are developed with education and experience. These can improve with study and practice. With the correct attitude, one can make deliberate, conscience efforts to make improvements.

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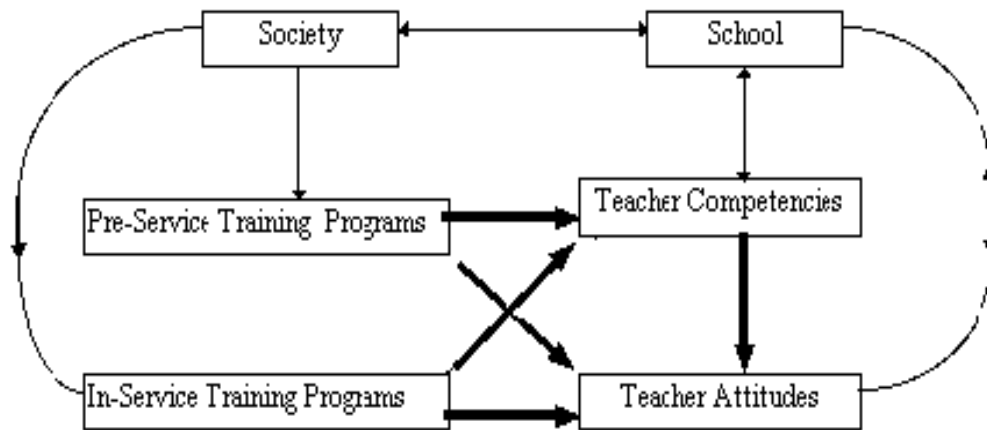
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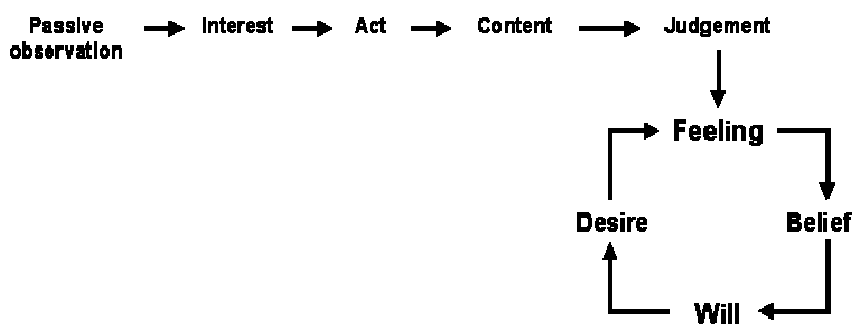
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FIGURE 1



A Model Proposed by Baros & Elia

FIGURE 2



(Source: <http://discover-your-mind.co.uk/1e-perception%20diagram.htm>)

Table 1: t-values for significance of difference between means on attitude towards teaching of secondary teacher trainees in distance education and face-to-face mode:

Aspects of Attitude towards Teaching	Trainees in Distance Education		Trainees in Face-to-Face mode		S.E. _D	t-value
	Mean	S.D.	Mean	S.D.		
Teaching Profession	41.94	6.13	43.89	6.84	.648	3.01**
Classroom Teaching	38.46	5.86	39.61		.647	1.78
Child-centered Practices	40.89	7.64	43.48	7.55	.759	3.41**
Educational Process	38.32	5.59	38.55	7.46	.658	0.5
Pupils	41.49	6.87	42.58	8.44	.769	1.53
Teachers	41.29	5.14	44.02	5.53	.534	5.11**
Overall Attitude towards Teaching	242.4	30.79	252.13	40.41	3.59	2.71**

* significant at .05 level (1.96), ** significant at .01 level (2.58)

Table 2: t-values for significance of difference between means on perception about B.Ed. course of secondary teacher trainees in distance and face-to-face education:

Areas of Perception about B.Ed. course	Teacher Trainees in Distance Education		Teacher Trainees in face-to-face mode		S.E. _D	t-value
	Mean	S.D.	Mean	S.D.		
Relevance of Course content of Theory papers	43.56	6.85	41.23	5.54	.623	3.73**
Curriculum Transaction	47.31	7.02	46.61	6.93	.697	1.00
Development of Teaching skills and attitude	31.32	4.79	33.62	4.65	.472	4.87**
Teachers' Behavior	33.91	5.62	34.19	5.21	.542	.517
Relevance of School Experience Programme/ Practical work	25.4	3.91	26.09	4.34	.413	1.67
Evaluation Procedure	21.42	4.11	21.22	3.86	.399	.526
Personality Development	18.53	3.97	19.34	3.76	.387	2.09*
Overall Perception	221.46	16.82	223.3	19.01	1.79	1.02

Table 3: Product moment correlation between attitude towards teaching of trainees in distance and face-to-face education with three variables of academic performance

Sub measures of Attitude towards teaching	Distance Teacher Trainees			On-Campus Teacher Trainees		
	AP1 'r _{d1} '	AP2 'r _{d2} '	AP3 'r _{d3} '	AP1 'r _{f1} '	AP2 'r _{f2} '	AP3 'r _{f3} '
Teaching Profession (AT ₁)	-.078	.383*	-.121	0.148*	.246**	0.067
Classroom Teaching (AT ₂)	.002	.233*	.030	0.129	0.115	0.059
Child-centered Practices (AT ₃)	.060	.315*	-.023	-0.02	0.03	-0.083
Educational Process (AT ₄)	-.027	.244*	-.107	0.024	0.061	0.004
Pupils (AT ₅)	.116	.323*	.038	0.131	0.102	0.054
Teachers (AT ₆)	.205**	.303*	.096	0.01	0.07	0.045
Overall Attitude towards Teaching	.037	.336*	-.028	0.06	.102	0.009

Table 4: Product moment correlation between perception about B.Ed. course of teacher trainees in distance and face-to-face education and academic performance

Variables	Distance Teacher Trainees			On-Campus Trainees		
	AP1	AP2	AP3	AP1	AP2	AP3
Relevance of Course content of Theory papers	.151*	.099	.141*	.129	.010	.078
Curriculum Transaction	.121	.066	.103	.098	-.056	.093
Development of Teaching skills and attitude	.078	.018	.045	.112	.048	.074
Teachers' Behavior	.131	-.066	.086	.104	.081	.090
Relevance of School Experience Programme/ Practical work	.129	.106	.119	-.056	.025	.068
Evaluation Procedure	.102	.091	.118	.081	-.097	.072
Personality Development	.045	.053	.033	.105	.031	.074
Overall Perception (OPR)	.168*	0.103	.179*	0.197**	.091	0.137

Table 5: Significant factor loadings on un-rotated Factor and rotated Factor (Distance Teacher Trainees)

ORIGINAL FACTOR I		VARIMAX FACTOR I	
Variables	Loadings	Variables	Loadings
Overall Attitude towards Teaching (OAT)	.908	Overall Attitude towards Teaching (OAT)	.973
Attitude towards Teaching Profession (AT ₁)	.829	Attitude towards Pupils (AT ₅)	.896
Attitude towards Pupils (AT ₅)	.807	Attitude towards Teaching Profession (AT ₁)	.847
Attitude towards Child centered practices (AT ₃)	.761	Attitude towards Child centered practices (AT ₃)	.846
Attitude towards Teachers (AT ₆)	.761	Attitude towards Teachers (AT ₆)	.823
Attitude towards Classroom practices (AT ₂)	.714	Attitude towards Classroom practices (AT ₂)	.654
Attitude towards Education Processes (AT ₄)	.582	Attitude towards Education Processes (AT ₄)	.634
Relevance of School Experience Programme/	.369	Relevance of School Experience Programme/	.383

Practical work (PR5)		Practical work (PR5)	
Curriculum Transaction (PR2)	.318	Overall Perception about B.Ed. course (OPR)	.443
Performance in skills in Teaching (AP ₂)	.417	Performance in skills in Teaching (AP ₂)	.300

ORIGINAL FACTOR III		VARIMAX FACTOR III	
Variables	Loadings	Variables	Loadings
Performance in Theory papers (AP ₁)	.723	Overall Academic Performance (AP ₃)	.945
Overall Academic Performance (AP ₃)	.669	Performance in Theory papers (AP ₁)	.912
Relevance of Course content of Theory papers (PR1)	.312	Performance in skills in teaching (AP ₂)	.571
		Relevance of Course content of Theory papers (PR1)	.322

Table 6: Significant factor loadings on un-rotated Factor and rotated Factor (On-campus Teacher Trainees)

VARIMAX FACTOR I	
Variables	Loadings
Overall Perception about B.Ed. course (OPR)	0.322
Performance in Theory papers (AP ₁)	0.825
Overall Academic Performance (AP ₃)	0.786
Performance in skills in Teaching (AP ₂)	0.701
ORIGINAL FACTOR II	
Variables	Loadings
Performance in Theory papers (AP ₁)	0.605
Overall Academic Performance (AP ₃)	0.589
Performance in skills in Teaching (AP ₂)	0.443
Overall Perception about B.Ed. (OPR)	0.302
VARIMAX FACTOR III	
Variables	Loadings
Performance in skills in Teaching (AP ₂)	-0.46
Personality development (Pr7)	-0.302