

## **Standard Based Three Dimensional Capacity Development of In-Service Secondary School Teachers**

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### **Abstract**

Pakistan being a developing country is up against multifaceted problems in the field of education; and quality enhancement is one of them. The government is committed to addressing these problems, for which many reforms have been introduced over the decade. One of the reforms in this direction was the launch of National professional standards for teachers. This article focuses on the fourth professional standard i.e. instructional planning and strategies which is used as a benchmark for the capacity development of in-service teachers who were trained before the launch of these standards. This professional standard is one of the factors that contribute towards quality teaching. According to the standard teachers are trained not only to plan instruction and strategies but also to implement them in classrooms. The key aim of the study was to determine where on each dimension i.e. knowledge, attitude and skills of instructional planning and strategies do the secondary school teachers stand; and to identify the indicators of each dimension of this professional standard that require remedial actions. A gap analyses was carried out to compare the difference between the current situation of instructional planning and strategies and the expected quality according to the professional standard. The study was conducted in the four provinces and the capital territory. A sample of 400 secondary school teachers was drawn through multistage sampling. A questionnaire, Teacher Behaviours Inventory and a rating scale was developed by assigning arbitrary values to the five points on each scale, for data collection related to indicators of all the three dimensions. The indicator wise analyses of each dimension revealed the gap between expected and existing situation of instructional planning and strategies in the country. The findings identified the areas of instructional planning and strategies that desired remedial actions. On the basis of these findings it was recommended that the capacity development of in-service secondary school teachers may be carried out in the identified areas for improving the quality of instructional planning and strategies at secondary school level.

**Keywords:** Teacher Education and professionalism, Capacity Development, Secondary Education

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## Introduction

Quality is always desired in every aspect of life; education being an integral part of life is no different. In the present era of knowledge explosion the field of education is striving for quality in the teaching learning process; no matter how good an education system there is always room for improvement. Rao (2004) was of the opinion that for the creation of a sophisticated and cultured nation the teachers need to be experienced and visionary. No doubt there are many other factors involved in the creation of nations but still the teachers are known as nation builders thus this responsibility lies on their shoulders. Darling (2000) supports the positive relationship between increased achievement of students and effective teaching. Further Stronge (2002) propagated that an entire range of teachers' personal and professional qualities are linked with higher levels of achievement of students.

Wilkins (2008) presented a theoretical model linking teacher knowledge, attitude, and belief to their instructional practice. It showed that teachers' knowledge, attitude and belief are influenced by their background characteristics. The background characteristics involve teachers' experience, education, training and environment. As suggested by the model, teachers' knowledge, attitude and beliefs have a direct relationship with their behavior in instructional practices. Campbell and others (2014) reported that various studies have supported this model and showed the associations between teachers' knowledge, attitude and beliefs towards their behavior, which reflects in their daily instructional practices (Campbell, Nishio, Smith, Clark, Conant & Rust, 2014). The findings of these studies may seem self-evident, but still work in these areas provided empirical evidence.

Capacity development must offer ways to teachers through which they can directly apply what is learnt in their daily classroom teaching. Darling-Hammond (2012) defined quality teaching as "instruction that enables a wide range of students to learn", it is one of the strongest factors related to school that can enhance the learning of students and add to their achievements. Hanushek and Rivkin (2012) recognized that professional development linked with national academic standards direct teacher's work; evaluate measures that appraise their success lead to improved teaching and enhanced student learning.

In the present study, the existing knowledge of content, attitudes and skills related to instructional planning and strategies possessed by the in-service teachers are studied in comparison with the three dimensions of instructional planning and strategies as stated in the professional standards for teachers.

*Professional Standards in Pakistan*

The provision of 'Education for all' is the prime responsibility of the government, therefore the government of Pakistan is working towards the country wide quality enhancement programs of teacher education and training. The draft of National education policy 2009 published in April 2008 chapter 7, focused on "Raising the quality of Education" and clauses 139 and 140 were particularly related to "Improving Teacher Quality". The policy actions stated 'Teacher training arrangements, accreditation and certification procedures shall be standardized and institutionalized' (Draft National Education Policy 2009, 2008, p. 38). To address this policy action in 2009 the government in collaboration with the provinces and federal capital introduced professional standards for teachers; which defined specific expectations from teachers on the basis of three dimensions i.e. knowledge, attitudes and skills which they possess. It further provides a framework for improvement in the programs of teacher education in Pakistan.

The National Professional Standards for Teachers (NPST) provide the foundation for consistency and equality which result in effective teaching by focusing on knowledge, values and skills of teachers. They also aim at uplifting the present status of teachers in the society, and make them compete professionally.

These standards precisely define professional knowledge, attitudes and skills which are expected of a teacher as the outcome of teacher education and training. This requires the use of multiple strategies incorporated in teaching to facilitate the process of knowledge transfer which presented a base for including 'Instructional planning and strategies' in the professional standards for teachers.

*Instructional Planning and Strategies*

Instructional planning bridges the gap between curriculum and instruction and fosters an environment conducive for learning; as a result it affects the teaching in daily classroom. The instructional planning done by the teacher not only benefits him/her personally but also results in the implementation of educational reforms (Hoogveld, Paas, Jochems, & Van Merriënboer, 2002).

Ehinder (1990) reported that teaching depends upon a teacher's level of pedagogical knowledge, which is quite different from the knowledge of subject matter he/she possess. He stressed that pedagogical knowledge and subject matter knowledge are two different things, yet closely linked because teacher's ability to use pedagogy in the classroom specifies the depth of his/her knowledge of subject matter which is being taught.

Another trait of a teacher is his/her attitude. According to Joseph and Kipkoech (2014) teachers possess positive attitude towards the use of instructional media, but still much is to be desired in producing, acquiring and benefiting from different instructional resources which provide teachers easy access and relevant choice of media for use in daily lessons.

According to Cohen and Hill (2001) teachers whose learning is focused directly on the curriculum mostly implement the skills they were taught during their professional development. Moreover they discussed that students of those teachers who took part in this kind of curriculum-focused capacity development had sound assessment results. It is also essential to align substantive training with the curriculum and actual work experiences of teachers.

Jackson and Davis (2000) recognized that the mode of lesson delivery, material and skills in the classroom depends on the choice of teachers. Although, the school curriculum, state or national standards of a country express the students learning outcomes but the absolute responsibility lies with the teacher who plans the instruction in such a way that maximizes students learning outcomes. Daily planning is an intentional effort on the part of the teacher to be well prepared before entering the actual classroom (Wharton-McDonald, Pressley, & Hampston, 1998). Teaching may prove effective if significant consideration is given to the preparation of teaching material before teaching and realistic time allotment procedure. Effective teachers develop the teaching plan, act upon it by continuously making adjustments according to the requirements of the diverse learners in the class.

Martin (2013), in his research on teachers' belief about teaching in classroom, their knowledge and approaches of teaching reported the beliefs about classroom teaching of middle and secondary school professionally qualified and unqualified teachers. The results indicated that the beliefs of teachers related to their classroom pedagogy and approaches of teaching do not change with their professional qualification.

Pössel, Rudasill, Adelson, Bjergc, Wooldridge, and Black (2013), reported that the emotional health of students is connected to the teaching behavior of teachers.

Another supporting research by Atta, Aziz, Hassan, and Ahmad (2012), about classroom practices and national professional standards for teachers in Pakistan indicated that the public sector teachers possessed subject matter knowledge but required training in lesson planning. The study recommended that public school teachers may be given awareness about National professional standards and instructional planning should be obligatory for them.

The review of literature shows that in order to meet the demands of the global society teachers need to have innovative approach, flexible attitudes, analytical and intuitive intellect, and latest knowledge of skills prevalent in the field of education. Professionalism requires quality teaching which is related to the proficient upbringing of teachers through capacity development programmes; that may be run on continuous basis so the in-service teachers can be updated with the innovations in the educational field.

### **Research Objectives**

The study aimed to achieve the following objectives:

1. To determine where on each dimension i.e. knowledge, attitude and skills of Instructional planning and strategies do the secondary school teachers stand.
2. To identify the indicators of each dimension of Instructional planning and strategies those require remedial actions for the capacity development of secondary school teachers.

### **Research Questions**

The following research questions provided the basis for the study:

1. What is the position of secondary school teachers on each dimension of instructional planning and strategies?
  - 1.1 What knowledge of content related to instructional planning and strategies do secondary school teachers have?
  - 1.2 What is the attitude towards instructional planning and strategies of secondary school teachers?
  - 1.3 Which skills of instructional planning and strategies do secondary school teachers engage in?
2. Which indicators on each dimension of instructional planning and strategies need remedial actions for the capacity development of secondary school teachers?
  - 2.1 Which indicators of knowledge dimension related to instructional planning and strategies are secondary school teachers lacking?
  - 2.2 In which indicators of attitudes towards instructional planning and strategies do secondary school teachers need modification?
  - 2.3 In how many indicators of instructional planning and strategies' skills dimension do secondary school teachers require remedial action?

## **Research Methodology**

The methodology of the study was as follows:

### **Research Design**

The study was quantitative in nature. Across section snapshot survey research design was used for data collection.

### **Population and Sample of the study**

All the secondary school teachers belonging to federal capital and the four provinces of Pakistan were the population of the study.

*Area of study:* The capital territory and one district from each province were conveniently selected. Furthermore, one Tehsil (administrative unit) from each selected district was selected randomly, together with the capital territory.

Multistage sampling was used to draw the following sample:

1. In the first stage, 80 secondary schools were selected through proportionate stratified sampling.
2. At second stage 400 teachers were selected; five teachers randomly selected from each school  $5 \times 80 = 400$ .

The response rate was 86%. Responses were received from 345 participants.

### **Instruments**

For the collection of data from secondary school teachers three tools were developed i) questionnaire for collecting data about knowledge of content related to instructional planning and strategies, ii) Teacher Behaviours Inventory for data about the behavior towards instructional planning and strategies and iii) rating scale for data about engagement in skills of instructional planning and strategies.

For the purpose of validation a group of experts was requested to determine the content and face validity of all the tools in the light of research objectives. The items were refined accordingly. The reliability was checked by using SPSS.

*Dimension 1:* Knowledge (50 items on 7 indicators): Reliability of the questionnaire was  $\alpha = .90$ .

*Dimension 2:* Attitudes (42 items related to 3 indicators): Reliability was  $\alpha = .87$ .

*Dimension 3:* Skills (20 items for 8 indicators): Reliability of the scale was  $\alpha = .85$ ,s

The participants gave informed consent and all the ethical procedures and technical requirements obligatory in researching human participants were fulfilled by the researcher.

## Data Analysis and Results

### 1) Knowledge dimension

The questionnaire related to knowledge dimension was scored on never=1, rarely=2, sometimes=3, often=4 and always=5; always is the minimum benchmark which secondary school teachers should achieve. To determine where on each dimension of instructional planning and strategies do secondary school teachers stand, the analysis is presented in the form of frequency and percentage on the basis of responses given by the secondary school teachers (345) on each item of knowledge (50 items); total responses on knowledge dimension were  $50 \times 345 = 17250$ .

**Table 1**

*Scoring of knowledge dimension of instructional planning and strategies*

Dimension	⇒	Knowledge	
Score	↴	<i>f</i>	%
Never		519	3
Rarely		1175	7
Sometimes		4024	23
Often		6034	35
Always		5498	32
Total		17250	100

Table1 reveals the instructional planning and strategies according to the dimensions. In knowledge dimension 35% teachers often had the knowledge of content of instructional planning and strategies whereas, 32% always had the knowledge of content of instructional planning and strategies which reflects that only 32% secondary school teachers were at minimum benchmark of Knowledge dimension.

## 2) Attitudes dimension

The Teachers Behavior Inventory related to the attitudes dimension of instructional planning and strategies was scored on almost never=1, rarely=2, sometimes=3, often=4 and almost always=5; almost always is the minimum benchmark desired of secondary school teachers. To determine where on attitudes dimension of instructional planning and strategies secondary school teachers stand, the analysis is presented in the form of frequency and percentage on the basis of responses given by the secondary school teachers (345). Attitudes (42 items); total responses on this dimension were  $42 \times 345 = 14490$ .

**Table 2**

*Scoring of attitudes dimension of instructional planning and strategies*

Dimension $\Rightarrow$	Attitudes	
Score $\Downarrow$	f	%
almost never	195	1
Rarely	584	4
Sometimes	2691	19
Often	5099	35
almost always	5921	41
Total	14490	100

Table 2 indicates the attitudes dimension of instructional planning and strategies where 41% secondary school teachers almost always valued instructional planning and strategies which indicates that 41% secondary school teachers are at minimum benchmark of attitudes dimension.

## 3) Skills dimension

The rating scale about the skills dimension of instructional planning and strategies was rated on 1 to 5 scale with 1= minimum and 5= maximum rating; rating 5 is the minimum benchmark which the secondary school teachers should obtain. To determine where on skills dimension of instructional planning and strategies secondary school teachers stand, the analysis is presented in the form of frequency and percentage on the basis of responses given by the secondary school teachers (345). Skills dimension (20 items); total responses were  $20 \times 345 = 6900$ .



**Table 3***Rating of skills dimension of instructional planning and strategies*

Dimension $\Rightarrow$	Skills	
Rating	f	%
1	61	1
2	327	5
3	1620	23
4	2581	37
5	2311	34
Total	6900	100

Table 3 highlights the skills dimension of instructional planning and strategies, where 37% secondary school teachers rated themselves 4 on the scale. It indicated that more than one third secondary school teachers involve themselves in designing and creating learning opportunities related to skills of instructional planning and strategies at the second highest scale 4 rating and only 34% were rated maximum on scale 5 which is the minimum benchmark for skills dimension.

**Table 4***Dimension wise training needs related to instructional planning and strategies of secondary school teachers.*

Dimensions	% minimum benchmark	% need training
Knowledge	32	68
Skills	34	66
Attitudes	41	59

Table 4 indicates the current status on all the dimensions of instructional planning and strategies at minimum benchmark. The gap is identified in terms of training needs in descending order for each dimension of instructional planning and strategies in order to achieve the minimum benchmark which is the required standard.

*Top Priority:* 32% knowledge of content related to instructional planning & strategies is possessed by the secondary school teachers; the gap is the rest of 68% who require capacity development in this dimension to achieve the required standard.

*Second Priority:* In skills dimension 34% secondary school teachers engaged in activities of instructional planning & strategies; hence 66% secondary school teachers need training in this dimension at varying degree according to the rating in Skills dimension to achieve the desired standard.

*Third Priority:* In attitudes dimension 41% secondary school teachers valued instructional planning and strategies according to minimum benchmark; whereas 59% secondary school teachers need training in this dimension at varying degree with respect to the score to achieve the minimum benchmark.

Standards are considered the minimum benchmarks to be achieved; therefore the instructional planning and strategies standard indicates dimension wise minimum benchmarks to be achieved. The following analyses are done on the basis of these benchmarks.

### *i. Knowledge dimension*

Training needs of secondary school teachers for capacity development as per the knowledge dimension indicators. The minimum benchmark for each indicator of knowledge dimension was calculated in percentages on the basis of ‘always=5’ response of the secondary school teachers on each item of the indicator.

**Table 5**

*Indicators of knowledge dimension according to the training needs of secondary school teachers*

Indicators	Statements	% Minimum benchmark	% need training
2	Acquisition of principles of reading, writing.....2 items	13	87
3	Accessibility to suitable resources....12 items	27	73
1	The targets of education...5 items.	28	72
7	Teaching methodology.....13 items	33	67
4	Planning strategies according to students...8 items	34	66
5	Develop and use different resources.....6 items	40	60
6	Co-curricular activities....4 items	43	57

Table 3 specifies indicators of knowledge dimension arranged in ascending order according to the percentages at minimum bench marks. It reflects indicator wise percentage of knowledge dimension where training is required to achieve the minimum benchmark.

### *ii. Attitudes dimension*

Indicators wise training needs for capacity development of secondary school teachers in attitudes dimension. The minimum benchmark for each indicator of attitudes dimension was calculated in percentages on the basis of ‘almost always=5’ response of the secondary school teachers on each item of the indicator.

**Table 6***Indicators of attitudes dimension according to the training needs of secondary school teachers*

Indicators	Statements	% minimum benchmark	% need training
3	Collaboration teaching and cooperative learning	40	60
2	Develop critical thinking and problem solving	41	59
1	Achieve the curriculum objectives	42	58

Table 4 depicts the indicators of attitudes dimension arranged in ascending order according to minimum benchmark percentages; the training needs on each indicator of attitudes dimension are given in descending order of percentages to achieve the minimum benchmark.

### *iii. Skills dimension*

Indicators wise training needs for capacity development of secondary school teachers in skills dimension. The minimum benchmark for each indicator of skills dimension was calculated in percentages on the basis of 'maximum=5' scoring on each item of the indicator by secondary school teachers.

**Table 7***Indicators of skills dimension according to the training needs of secondary school teachers*

Indicators	Statements	% minimum benchmark	% need training
7	Assessment methods	24	76
8	Interdisciplinary learning	26	74
6	Organize activities	30	70
4	Planning homework	30	70
3	Evaluate teaching resources	36	64
1	Designing instruction	36	64
2	Know the culture of community, classroom and school	39	61
5	Create learning opportunities	47	53

Table 5 reflects indicators of skills dimension arranged in ascending order according to minimum benchmark percentages; the training needs on each indicator of skills dimension are given in descending order of percentages to achieve the minimum benchmark.

## **Discussion**

The findings of the study addressing the indicator wise dimensions of instructional planning and strategies for the capacity development of secondary school teachers may enlighten teacher education and capacity development.

The study considered the standard of instructional planning and strategies as the minimum benchmark to be achieved by the professional teachers. The results showed lack in knowledge of the content related to instructional planning and strategies, comparatively better results were in skills of engagement and use of instructional planning and strategies, whereas among the three dimensions attitudes of valuing and showing commitment towards instructional planning and strategies were relatively enhanced. These results illustrated the need of capacity development in knowledge of the content of instructional planning and strategies as the first priority, use and engagement in instructional planning and strategies as second priority and value and commitment towards instructional planning and strategies as third priority. The capacity development of secondary school teachers may be according to the hierarchy of indicators in which they need training in all the three dimensions of instructional planning and strategies. The findings of the study were in accordance with that of Atta, Aziz, Hassan and Ahmad (2012), who proposed that instructional planning on the part of teachers should be declared mandatory in the light of National professional standards.

### **Conclusion**

It was concluded that secondary school teachers required maximum capacity development in knowledge of content related to instructional planning and strategies, then in engaging in Skills of instructional planning and strategies. Their attitudes towards instructional planning and strategies were better than their knowledge and skills of the standard. Moreover, all the indicators of each dimension i.e. knowledge, attitudes and skills of instructional planning and strategies necessitate capacity development in order to achieve the minimum benchmarks set by the standard.

### **Recommendations**

The capacity development of in-service secondary school teachers may focus on the three dimensions of instructional planning and strategies in which the teachers lack expertise. Knowledge of content related to instructional planning and strategies may be given primary importance; further skill based practical training may be provided for using instructional planning and strategies in daily teaching. For this purpose the provincial Directorate of Staff Development and Federal Directorate of Education may conduct capacity development workshops which focus on the dimension wise gaps between the current situation and minimum benchmark of instructional planning and strategies.

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