

## Development of a Scale to Identify Teaching Practices among Pre-University Teachers

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### Abstract

Teaching Practices followed by teachers have been studied repeatedly by many researchers as an important factor that determines the quality of teaching and learning process as well as student achievement. It is vital to understand this aspect in order to improve the quality of an educational program as well as the faculty development programs. The objective of this study is to develop a standardized scale to identify the teaching practices followed by Pre- University. The scale consisted of demographic variables along with 23 items of the closed ended type to identify the teaching practices followed. 98 data sheets were selected for study after data cleansing. Statistical procedures were applied to the collected data in order to establish the reliability and validity of the scale. The development of the scale has been discussed in this study.

**Keywords:** Teaching practices, Pre- University, standardization, scale development

**JEL Classification:** A21 – Pre-college

### 1. Introduction

Pre- University education offered by the Pre- University colleges also known as Junior Colleges, is the two years ( First Pre- University and Second Pre- University level) of the higher secondary or senior secondary education, provided by the state government of Karnataka. The end of Pre- University education is marked by the state level exams, passing of which enables students to apply for higher education. According to (Victor & Srinivasan, 2013) Pre-University education is a critical stage as it provides further opportunities of higher education or placement in a suitable field of work. The importance of Pre University education is also supported by Reddy (2006) who stated that Pre- University education is the bridge between secondary and higher education providing the knowledge and skills bases essential for general education, higher education and professional education. The importance of Pre-University education must be taken into serious consideration and the quality of education must be researched upon. One of the major factors that influence quality of education at any level is the teacher. A teacher is mainly responsible for the implementation of the educational process at any stage (NCTE, 1998) and it is they who stand in the interface of the transmission of knowledge, skills and values that is required for the development of students (Pandey, 2011).

As reported by Victor and Srinivasan (2013) previously Pre- University teachers required only a post graduate degree in the subject they are teaching till a new rule by the Cadre and Recruitment (C&R) made it mandatory that Pre-University teachers require an undergraduate degree in education (B.Ed) along with a post graduate degree in the subject that they teach. Though B.Ed was made mandatory there have been issues relating to the quality of the course, such as, the course did not cater to training teachers teaching at senior secondary level, the quality of teacher educators was a concern and that these schools of education were inadequate and poorly managed (National Council for Teacher Education [NCTE], 2010; Knowledge Commission, 2008; Forum Of Karnataka Retired Education Officers [F-KARE], 2012; Ministry of Human

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Resource and Development[MHRD], 2009). It is thereby important to understand the different teaching practices followed by teachers to develop knowledge and skills within students.

### **Teaching Practices**

Various research studies have been conducted relating to teaching practices all over the world as an important factor influencing the process of teaching and learning and student achievement. Burrell (2005) defined teaching practice as “the art and science of teaching, the activities of instruction and the behaviours use to facilitate learning”. Teaching practice as studied by Burrell (2005) and Cole (2012) consisted of teaching strategies and techniques relating to classroom instruction or classroom management as the subsets of teaching practice. 6 broad areas of teaching practices included by Garet et al.(2000) (as cited by Stewart, 2003, p. 20) were selection of content, selection of activities, instructional methods, assessments, technology use, and provision for diversity of student needs. Yoder (2014) expressed that specific teaching practices have been identified to increase social emotional competencies among students which will help them build necessary skills to meet college or career readiness. Stewart (2003) reported that several studies suggested professional development for developing teacher knowledge and skills might lead to changes in teaching practices which in turn might impact student achievement. Likewise suggestions supported that professional development could significantly influence class room practices and lead to improved student achievement when focus was given on how students learn particular subject matter; instructional practices that are specifically related to the subject matter and how students understand it; and strengthening teachers’ knowledge of specific subject- matter content(“Southern Poverty Law Center” [SPLC], n.d ).

For the present study the teaching practices is defined as all the activities carried out by the teacher in order to bring about effective teaching and learning that can be measured through student outcomes. Teaching practices were divided into 3 phases namely pre- active, inter- active and post- active phase. Pre-active phase includes the process of planning and organising activities for a class. Inter- active phase includes all planned activities executed by the teacher in a class hour and post- active phase includes the evaluation of the planned activities.

### **Purpose of the Study**

There are various researches conducted on evaluating teacher competency (Mohanakumari & Magesh, 2014; Bakhru, Gandhi & Medury, 2013; Bhargava, 2010; Shukla, 2014; Nirmala, 2010), teacher effectiveness (Prakashan , 1986; Joseph , 2013; Mittal, 2013; Pachaiyappan & Raj, 2014; ), teachers’ attitudes (Lal & Shergill, 2012; Matoo & Bichoo, 2014; Chakraborty & Mondal, 2015; Belagali, 2011; Trivedi, 2012) in India in relation to primary school teachers, secondary school teachers, senior school teachers as well as higher education but there are not many studies related to evaluating teaching practices followed by teachers of the Pre- University level. Though Pre- University level of education is a part of senior secondary school the board controlling the level is different and the provisions are different as already stated in this article.

Hence, there is a requirement to understand the teaching practices followed by the teachers and in turn help them to enhance their abilities by providing different training programs catering to their enhancement and thereby improving the quality of education.

The purpose of this study is to develop a standardized scale to identify the teaching practices

## **2. Methodology**

Normative survey was employed for the study.

### **Scale Development**

The scale on teaching practices was constructed based on review of literature, discussion with experts and practitioners in the field of study. Scale was constructed based on 3 identified components namely pre-active phase, inter- active phase and post- active phase. Based on the components further sub components

were identified to formulate the items of the scale. A total number of 111 items were framed by the investigators during an initial draft.

The initial draft was given for validation to the experts. The scale included 2 parts. The first part consisted of the demographic variables required for the study such as gender, age, designation, qualifications, years of experience teaching in Pre- University, subject handled, levels handled, combinations handled, locale and type of management. The second part consisted of the questions pertaining to the practices followed by the Pre- University teachers. Further, to strengthen and enrich the scale, the researchers organised a Brainstorming session among the faculty of School of Education, Christ University. Acknowledging the suggestions given by the experts and the constructive inputs obtained from the brain storming session, the investigators discussed and selected only appropriate and relevant items for the final scale. The modified and restructured scale was given for validation to the five teacher educators of School of Education, Christ University. Minor changes identified were rectified and a final scale was developed based on the feedback from the experts after validation.

### **Scoring**

The final scale comprised of demographic variables in the first part and 23 questions of the close ended type to assess the teaching practices followed by the teachers in the second part. The closed ended questions were of the Likert Scale type with the ratings 0(never), 1(to a minimal degree), 2(to a moderate degree) and 3(to a great degree) indicating the degree to which the teachers follow the practices.

### **Sample and Data Collection**

The scale developed was administered to 150 Pre- University teachers of Bangalore South district, out of which only 98 data sheets were used for the study following data cleansing. The scale was administered and collected by the researchers themselves.

The instructions to the teachers were printed in the scale and further doubts were clarified with the researchers present. The teachers were representatives from government, aided and unaided colleges and the sample of distribution is as shown below in Table 1.

**Table 1: Indicating the Distribution of Sample across Type of Management**

<b>Type of Management</b>	<b>N</b>	<b>Percent</b>
Government	18	18
Aided	52	53
Unaided	29	29
<b>Total</b>	<b>98</b>	<b>100</b>

### **Item Analysis**

In order to assess the degree of internal consistency among all sets of items Cronbach's Alpha was calculated. The Cronbach Alpha for the scale was found to be 0.837. Only items with 'r' values greater than 0.5 were selected. All the 23 closed ended items had values above 0.5 as shown in table 2. The scores in the final scale had a range of 0-115 in the direction of increasing frequencies of practices followed.

**Table 2: Showing the Communalities of 23 Items**

<b>Item</b>	<b>Initial</b>	<b>Extraction</b>
PA1	1.000	.701
IA1	1.000	.748
POA1	1.000	.511
PA2	1.000	.666

IA2	1.000	.659
POA2	1.000	.700
PA3	1.000	.585
IA3	1.000	.582
POA3	1.000	.615
PA4	1.000	.771
IA4	1.000	.633
POA4	1.000	.768
PA5	1.000	.727
IA5	1.000	.605
POA5	1.000	.653
PA6	1.000	.581
IA6	1.000	.752
POA6	1.000	.661
PA7	1.000	.678
POA7	1.000	.645
PA8	1.000	.640
PA9	1.000	.729
PA10	1.000	.690

### Reliability and Validity

The scale had the 'Universe of Content' as it included the items from all the 3 phases of teaching namely, Pre- Active (PA), Inter- Active (IA) and Post- Active (POA) phases. 10 items ( PA1, PA2, PA3, PA4, PA5, PA6, PA7, PA8, PA9, PA10) from Pre- Active phase, 6 items (IA1, IA2, IA3, IA4, IA5 and IA6) from Inter- Active and 7 items (POA1, POA2, POA3, POA4, POA5, POA6, POA7) from Post- Active phase. The reliability of the split half test was found to be 0.659 by the use of Guttman coefficient and 0.665 by the use of Spearman - Brown prophecy formula. The reliability of the whole test was found to be 0.837.

The scale was found to have both content and face validity and measures what the scale tends to measure.

### 3. Conclusion

Teaching practices followed by teachers need to be effective in order to bring about an effective generation. The instructional activities chosen and performed along with their behaviours in classroom, affect the students learning. It is thus necessary to understand the teaching practices followed by the teachers in order to help develop required skills and competencies among teachers through professional development. This scale will help identify the different practices followed by teachers and in turn help provide the required training and also ensure a widespread use of successful teaching practices thus enhancing student learning and outcomes.

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