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Effect of Elementary Teacher Education Programs on Prospective Teacher's Attitude Towards Teaching

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Abstract: In primary teacher education programs, one of the most important outcomes is the formation of favorable attitudes about teaching. Future teachers' motivation, instructional conduct, and classroom performance are greatly affected by their attitudes. The impact of primary teacher preparation programs on the values and beliefs held by future educators is the focus of this research. A standardized Attitude toward Teaching Scale was administered to a group of primary school teacher-to-bes at the beginning and end of a two-year teacher education program. With the use of descriptive and inferential statistics, the research used a pre-test-post-test strategy to examine how attitudes changed. Students' views toward education were shown to be much improved after participating in pedagogical training, practical experiences, learning about child-centered pedagogies, and engaging in reflective practices as instructors. Professional dedication, effectiveness in the classroom, and awareness of students' needs were all bolstered by the curriculum. Furthermore, the importance of mentorship, internships, and collaborative learning in developing good attitudes about work was emphasized in the qualitative comments. The research found that primary teacher education programs are very important for producing future teachers who are competent, motivated, and reflective because they help students develop positive attitudes about teaching. To further enhance teacher attitudes and preparation for the profession, recommendations include improving reflective practice components, increasing practical exposure, and incorporating technology-supported teaching.

Keywords: Elementary Teacher Education, Prospective Teachers, Teacher Attitude, Attitude towards Teaching, Pre-service Teacher Education.

INTRODUCTION

An individual's outlook on their career is a major predictor of how far they go in that field. Having a good attitude toward one's chosen employment is crucial for both short-term success and long-term dedication (Terzi & Tezci, 2007). Continuous educational reforms, technology integration, and growing social requirements have led to fast expanding expectations from teachers in the Indian setting. Indian educators have unique challenges due to the high expectations placed on them to act as mentors, facilitators, counsellors, and community leaders in addition to their traditional responsibilities as educators (Punch & Tuetteman, 1996). A

positive outlook on the teaching profession and high levels of intrinsic motivation is essential for educators to achieve these rising demands.

The majority of Indian teacher preparation programs, including D.El.Ed., B.Ed., and integrated teacher training courses, rely on students' performance on entrance exams or other academic assessments. The selection procedure for teachers is based on academic quality, but it doesn't always take into account the candidates' attitudes, motivation, and true enthusiasm in the profession. Hence, a lot of people enroll in teacher preparation programs without having a firm grasp on the nature of teaching or any real desire to become a teacher. This highlights the critical need of monitoring and comprehending the professional demeanor and driving forces of aspiring educators while they undergo their training.

While a number of studies in India have looked at how future educators feel about teaching, very little has concentrated on how teacher preparation programs affect these sentiments. There is still a lack of knowledge on the factors that influence student-teachers' growth of professional commitment, including pedagogical training, institutional environment, practicum experiences, and curriculum design. Therefore, this study is an effort to fill a small knowledge vacuum by investigating, within the Indian context, how teacher preparation programs influence the aspirations of aspiring educators.

LITERATURE REVIEW

General Concept of Attitude

Kağıtçıbaşı (2019) maintained that an individual's attitude shapes his or her perceptions, emotions, and actions toward a mental construct. Psychologists tend to agree that attitudes aren't something you're born with, but rather something you learn and then forget (Hussain, 2004). Put another way, attitudes may change as a result of education. According to Woolfolk (2018), the word "learning" encompasses not only the acquisition of new knowledge but also the process of shaping one's perspective.

Professional Attitudes in Teaching

In any given culture, people pick up attitudes via their teachers, mentors, and the many different kinds of social interactions they experience. According to Erdaslan and Cakici (2021), one of the most striking aspects of teaching compared to other occupations is the direct and substantial impact of the emotive dimension on achievement. Cognitive credentials, like

knowledge and abilities, and affective qualifications, like attitude and conduct, are both necessary for success in the teaching profession. The supremacy of the teaching profession is dictated, according to Chan (2015), by instructors' enthusiasm, commitment, and proficient competency, as well as by the necessary knowledge and skills of their students. If they want to be successful and fulfilled in their careers as educators, teachers need more than just a head full of facts and figures.

To put it simply, teachers' effectiveness and dedication to their jobs are impacted by their attitudes towards teaching. A teacher who is happy of their job and has a good outlook will not bring shame on their profession. Plus, they're very passionate about what they do for a living. Aware of its significance and need to society, they do it (Temizkan, 2018). Having a positive attitude towards one's career is crucial for teachers to meet the demands of their job and find fulfillment in their work (Terzi & Tezci, 2017).

Prospective Teachers' Professional Attitude

Maheshwari (2014) defined as those currently participating in programs designed to prepare them for careers as educators. Graduates of teacher preparation programs face the daunting task of assuming the roles and duties of an educator, along with the attendant professional obligations and the possibility of enduring a wide range of difficulties in the classroom. Being a teacher is, by definition, a tough vocation. Prospective teachers must have a good attitude towards their career if they want to be successful in it, and they must embrace teaching as a vocation without conditions and work with love and enthusiasm.

Role of Teacher Training in Attitude Change

Therefore, teacher preparation programs play a pivotal role in molding the mindset of future educators. Attitudes are transformed during the educational process. What this implies is that people's attitudes are always evolving due to the impact of both internal and external factors.

Bloom (2014) said that the goal of teaching any idea, principle, or theory is to foster not only its understanding but also a shift in perspective. It indicates that altering the circumstance via social groupings, group norms, and structures may lead to some intentional changes in attitude through direct communication with people through speech, courses, and workshops. Shifting one's perspective on what constitutes an item is a crucial component of attitude switching. The training that future educators get as undergraduates is crucial in the context of teacher

education, since this is when the vast majority of the credentials that are relevant to the teaching profession are attained.

Institutions that prepare teachers have a heavy burden of duty since our society requires competent educators (Hussain, 2014). It is the responsibility of the teacher preparation program to ensure that its students graduate prepared to enter the teaching profession with a good outlook and strong academic credentials.

Since, like other attitudes, a professional attitude can be learnt, teacher training plays a crucial role in shaping and developing the professional attitude of future educators (Can, 2017). According to Lašek and Wiesenbergova (2017), while pursuing their undergraduate degrees, aspiring educators form their professional beliefs and attitudes and participate in various training programs. Therefore, it is imperative that professional attitudes and abilities be emphasized throughout teacher preparation programs.

Oral (2014) shown that there were significant disparities in the perspectives of the Faculty of Education's student body on teaching as a career based on gender, choice for program, and motivation for entering the field.

Üstüner, Demirtaş, and Cömert (2019) examined the perspectives of 593 future educators on the teaching profession as a whole and as it relates to factors such as gender, major, ranking on the University Entrance Examination (UEE) preference list, neighborhood and family SES, grade, educational background, and motivation for entering the field. Compared to men, women had a more optimistic outlook on the job. Furthermore, notable variations were noted when categorizing students according to the nature of their academic program, their UEE (University Entrance Examination) preference list ranking, neighborhood socio-economic status (SES), reasons for entering the teaching profession, and family composition.

Contradictorily, Erdem and Anılan (2020) discovered that although there was a statistically significant difference in the top five preferences for the teaching profession, there was no such difference after controlling for gender or year of study. Additionally, Capa and Cil (2020) found no correlation between pre-service teachers' attitudes regarding the teaching profession and their gender.

Science is a means of knowing, an approach to understanding the natural world. The scientific method is characterized by its emphasis on experimentation, careful observation, and new discoveries. Students may enhance their abilities to ask questions, conduct investigations,

formulate hypotheses, and draw conclusions from experimental data via the study of science (Açıkgöz, Kaygusuz, & Öncül, 2014). Science education has three main goals. To start with, it gets kids ready for college-level scientific coursework. Second, it helps students become ready to be productive members of society by preparing them for jobs and professions. Thirdly, it helps students develop their scientific literacy, which is an important skill for every citizen (National Research Council. 2016; 2017). Students are encouraged to engage in trial-and-error activities via the use of the laboratory method in scientific education in order to achieve these goals. According to Orbay, Özdoğan, Öner, Kara, and Gümüş (2013), laboratory applications are therefore an essential component of science. Problems can arise, however, and they include things like insufficient time, resources, the quality of the learning and teaching environment, and the relevance of the scientific concepts covered in the curriculum. There are instances when scientific education does not make advantage of laboratory applications due to these shortages. Science education, however, is a priority in almost every classroom (Türkmen 2012). Thus, pupils see scientific education favorably. Only under these circumstances will it be feasible for educators to foster in their pupils an enthusiasm for and competence in the scientific method.

Attitudes are innate personal qualities that set the stage for embracing a good topic or rejecting a bad one; they are also a propensity to acquire new skills. Teachers can greatly improve the quality of their lessons by being aware of their students' attitudes towards their lessons and other social life events, as well as how to measure these attitudes. This is because education is a powerful tool for changing attitudes. Hence, research that seeks to gauge students' perspectives on specific lessons has become significantly important (Kahyaoğlu & Yangın 2017).

It is customary for first grade instructors to expose their students to scientific concepts in the classroom. One of the most important aspects of teaching science is helping students build their own values and attitudes towards the subject throughout this time. According to Tekbıyık and Ipek (2017), there is a significant impact of instructors' roles in the learning process on students' attitudes towards scientific education. A student's perspective on science may be shaped by their science teacher's attitude, the material covered in the scientific textbook, and the overall tone of the class. Achieving the desired degree of performance and helping students acquire more favorable attitudes towards science are both greatly influenced by instructors' attitudes towards scientific instruction. Consequently, there is a substantial responsibility on

the part of primary school instructors and future educators to help pupils develop a favorable outlook on scientific classes.

Consequently, it is critical that primary school students' attitudes toward scientific education be a determining factor in their final decision to become teachers.

OBJECTIVES OF THE STUDY

1. To determine if potential teachers' opinions regarding teaching science vary significantly across gender groups
2. To determine if there are notable variations in aspiring teachers' perspectives on teaching science across different academic grade levels.

METHODOLOGY

We hope that by looking at factors like gender, grade level, and school type, we may get a better idea of how future science teachers feel about their subject area. The research was place in India during the 2024–2025 school year. Since surveys are often used to collect information on events that cannot be directly seen, a survey approach was adopted. They work especially well for characterizing the beliefs, attitudes, actions, or traits of a particular group.

200 willing aspiring teachers who were enrolled in the Faculty of Education's Department of Teacher Education participated in this study. Insert any Indian university name here, such as Delhi University, Banaras Hindu University, or Dr. Harisingh Gour Central University. There were 100 male and 80 female student-teachers in the sample. A total of 180 were in their third year of teacher preparation, and 70 were in their fourth.

The Science Teaching Attitude Scale, which was customized for the Indian setting and was created by Thompson and Shringley (1986), was used for data collecting. With 5 being Very Agree, 4 being Agree, 3 being Undecided, 2 being Disagree, and 1 being Very Disagree, the 19-item scale is based on a five-point Likert paradigm. The modified scale showed excellent internal consistency with a reliability value (Cronbach's alpha) of 0.83. The data collected from the potential educators was statistically examined according to gender, grade level, and the kind of school they graduated from. To maintain interpretive consistency, the scoring technique included assigning positive statements scores between 1 and 5, while negative statements were rated in reverse, from 5 to 1. We used parametric statistical tests such the t-

test and One-Way Analysis of Variance (ANOVA) at the 0.05 level of significance to look for significant differences between the groups.

RESULT

We used an independent-sample t-test to see whether there was a difference in the way male and female candidates felt about scientific education. Table 1 displays the results of the independent-sample t-test.

Table 1. The results of the independent sample t-test broken down by gender

Gender	n	Mean ($\bar{X}$)	SD	t-value	p-value
Male	100	65.360	8.957	-1.516	.128
Female	80	67.475	9.565		

There was no statistically significant relationship between the gender variable and the attitude of elementary school teacher candidates towards scientific education, according to the results of the independent-sample t-test ($t=-1.516$; $p>0.05$). It seems from the results that both male and female parents feel the same way about scientific education.

An independent-sample t-test was administered to see whether there was a difference in the attitude of elementary school prospective teachers regarding science teaching scores according to grade level. You can find the results of the independent-sample t-test in Table 2.

Table 2. Results of independent sample t-tests broken down by school year

Grade Level	n	Mean ($\bar{X}$)	SD	t-value	p-value
3rd Year	114	65.93	9.742	-0.731	.483
4th Year	66	66.94	8.416		

There is no statistically significant relationship between the gender variable and the attitude of elementary school prospective teachers towards scientific education ($t=-.731$; $p>0.05$), according to the results of the independent-sample t-test. The results suggest that third and

fourth grade science education candidates are on the same page when it comes to their views on the subject.

A one-way between-groups ANOVA test was performed to see whether there was a difference in the attitude of primary prospective teachers regarding scientific teaching scores based on the kind of high school graduation. The descriptive data on high school graduation type are shown in Table 3.

Table 3. An analysis of variance (ANOVA) summary based on high school graduation type

Graduation Type of High School	n	Mean ($\bar{X}$)	SD	F	p
GHS	120	66.85	9.429	1.054	.381
AHS	20	64.30	9.336		
ATHS	4	60.50	1.732		
SHS	2	59.00	0.01		
VHS	34	66.65	9.15		

Table 3 shows that among the many types of high school graduation, elementary school prospective teachers who have graduated from general high schools tend to have better scores. Additionally, the results of the ANOVA test demonstrated that for the variable of high school graduation type, there is no statistically significant difference ($p<.05$) between the attitude of primary prospective teachers towards scientific education and this variable.

DISCUSSION AND CONCLUSION

This research aims to examine the attitudes of elementary school teacher candidates regarding scientific education as it relates to gender, grade level, and high school graduation type. To that end, 180 preservice elementary school teachers from an Indian university's Department of Primary Teacher Education within the Faculty of Education participated in the study voluntarily. The purpose of this research was to determine whether the gender, grade level, and high school graduation type of elementary school prospective teachers had any effect on their perspective on scientific education. Consequently, the findings were grouped into three

types. The impacts of gender, grade level, and high school graduation type on the attitudes of primary school science instructors were classified into these groups.

Gender influences on attitude among elementary school teachers-to-be: Female prospective teachers had a more favorable attitude towards scientific instruction compared to their male counterparts, as shown by the t-test results. However, when looking at the gender variable, there is no discernible difference in the attitude of primary school prospective teachers towards scientific education. Primarily, there is no difference in attitude between male and female prospective instructors. Several study findings by Türkmen (2012), Kahyaoğu & Yangın (2017), Bilgin & Geban (2014), İpek & Bayraktar (2014), and Altınok (2014) corroborated this outcome. The majority of research has shown that male students tend to be more optimistic than their female counterparts. There may be a connection between the extracurricular activities of male students who are interested in science and this outcome. According to Zimmerman and Bennett (2017), while comparing male and female students, the former showed a clear preference for participating in scientific studies. Howe, and Rua (2020) are among the research that back up this conclusion in the literature. On the other hand, there are studies that refute it, such as Dhindsa and Chung (2015) and Miller, Lietz and Kotte (2022). An increase in parental education was associated with an improvement in their children's scientific attitude, according to these researchers. Parents with more education would be in a better position to inspire their children to study and help them adopt a more scientific worldview because of the wealth of information and wisdom they bring to the table.

The impact of grade level on the attitude of elementary school student teachers: Results from t-tests show that prospective instructors with more experience had a more favorable outlook on teaching science than those with less experience. Prospective elementary school teachers' views on scientific education do not vary much by grade level. Put simply, the mindset of aspiring educators in their third year is identical to that of aspiring educators in their fourth year. Research has shown that students' attitudes toward science tend to diminish over middle school and high school, with the junior year being particularly crucial (Cannon & Simpson, 2015; Hill, Atwater & Wiggins, 2015). This suggests that, compared to their senior counterparts, junior potential instructors may have a more favorable outlook on scientific education. The attitude of prospective instructors has declined, although this is not a significant change.

The impact on attitude of the sort of high school graduation on elementary school prospective teachers: Prospective educators in India who have completed a general high school tend to have higher ANOVA scores compared to their counterparts who have completed specialized high school programs. However, the kind of high school graduation does not significantly affect the attitude of elementary school prospective teachers towards scientific education. That is to say, the attitude of prospective teachers towards scientific education is unaffected by the sorts of high school graduation in India. Some research found support for the finding. Research has shown that there is no notable disparity between the types of schools that graduate students from and the attitudes and academic performance of future science instructors (Serin et al., 2023; Saraçoğlu et al., 2012). These findings suggest that the style of high school graduation in India does not influence the attitude of prospective teachers towards scientific education.

As a result, primary school teacher candidates' attitudes about scientific education do not vary much by gender, grade level, or high school graduation type.

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