A comparative study on academic self-efficacy among tribal and non-tribal pre-service teachers

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Abstract

Multicultural societies have historically existed in India. The socio-economic development of marginalized sections, specifically scheduled tribes have focused attention in educational research. Indian tribal communities represent a broad spectrum of eco-cultural, socio-economic and geographic bases. Examining the demographic differences in self-efficacy belief is a significant area of investigation. As the tribal teachers face multi–level problems in educational processes due to socio-cultural, linguistic, habitual practice and geographically isolation, it is important to examine their self-efficacy in academic perspectives. This study investigates differences in academic self-efficacy between tribal and non-tribal pre-service teachers. The academic self-efficacy of pre-service teachers was measured with a five-point likert rating survey scale. The instrument measures teachers' self-efficacy in four domains i.e. academics, examination, teaching practice and classroom management efficacy belief. Data was collected from 110 (55 tribal and 55 non-tribal B.Ed trainees) pre-service teachers. Analysis of data revealed most of the tribal and non-tribal pre-service teachers have a high level of academic self-efficacy. Further, it was found that there is no significant difference between tribal and non-tribal pre-service teachers in relation to academic self-efficacy. The finding contributes to the Self-Efficacy Theory by identifying that academic self-efficacy construct function independently in pre-service teachers with social diversity.

Keywords: self-efficacy, learning self-efficacy, teacher self-efficacy, teacher candidates, education

Introduction
The main concern of today's education system is to bring equity in education. India is a country with diverse religions, languages, cultures, and traditions. It is difficult to attain equity in the social, economic, and political spheres of life. There are different tribes in India having distinct cultures, values, languages, and habit practices. According to article 30 and 350 (A) of Indian Constitution, the state is responsible to establish and administer educational institutions at primary stage for minorities and schedule tribes considering their language, scripts and cultures. As tribal population constitutes one-fourth of the total Odisha state population, the linguistic and cultural aspect of tribal need to be incorporated in the educational system. The role of teachers in fostering knowledge, skills, attitude and values in students is significant for promotion and preservation of culture and values for the development of society. Teachers are the agents who can bring desirable changes in society. As a result, it can be possible to integrate tribal values and culture in our social mainstream. To integrate tribal values and beliefs in the social mainstream, teacher education programmes should be designed in such a way that it should incorporate the tribal culture and tradition. To provide quality education, different pre-service and in-service teacher education programmes have been designed to equip teachers with knowledge and skills considering the need of the 21st century. The State Council for Educational Research and Training (SCERT), Odisha offering pre-service teachers education programmes through two-year Bachelor of Education (B.Ed), two-year Master of Education (M.Ed), two-year Diploma in Elementary Education (D.El.Ed.), two-year Bachelor of Physical Education (B.P.Ed) and two-year Bachelor of Hindi Education (B.H. Ed).There are reservation provisions for admission into the pre-service teacher education by students belonging to the Schedule Tribe (ST) social category. This paper is based on research conducted in academic self-

efficacy of tribal and non-tribal pre-service teachers of Odisha.

Theoretical Background: Self-Efficacy Theory
Self-efficacy is based on Albert Bandura's social cognitive theory. Researchers stated that self-efficacy theory is one of Bandura's most enduring contributions to the field of learning, academic achievement, and motivation. (Pajares, 1996, 2004; Schunk, 1991). In social learning theory, Bandura defined self-efficacy as *"People's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances"* (Bandura, 186). Self-efficacy refers to an individual's belief in his or her ability to carry out an assigned course of action, rather than what skills and abilities a person possesses.

There are four sources from which an individual attains efficacy belief. Mastery Experience is the most influential source of efficacy beliefs. Mastery experience is related to individuals' past success. The past success experience of the individual develops positive belief about his/her ability. Successful past experience can help an individual to become successful in similarly associated situations. The result of failure efficacy largely depends on an individual's existing efficacy, and subsequent failures may not have the same adverse effect on efficacy beliefs as earlier failures. Mastery experience is considered as the most influential source among four efficacy information and it provides direct and authentic personal past experience the individual. Another important source of self-efficacy is *Vicarious Experience,* observing success of others in completing a task. It includes the learning by observing success and failures of others. Mastery experience is the more reliable source of efficacy belief than vicarious experience. The third source of efficacy is belief *Verbal persuasion;* it states that the encouragement and discouragement (positive and negative appraisal) by others have an impact on an individual's self-efficacy belief. Verbal persuasion helps to develop positive efficacy belief in students that they can complete difficult tasks in their academic perspectives. The verbal feedback by the teacher like "Very good", "Excellent", can develop efficacy beliefs in students about their skills and capabilities. The fourth source of efficacy belief is *Emotional and psychological state*. It describes both emotional and psychological feedback that individuals experience while performing specified tasks. Continuous physical and emotional efforts to complete a task may have negative impact on an individual's performance, however those who are not overcome by their stress reaction, develops efficacy belief about their capabilities.

Literature on pre-service teacher' self-efficacy
Teachers' self-efficacy in previous studies defined as the belief of teachers about their abilities to make the unmotivated students to be actively engaged in learning (Tschannen-Moran et al., 1998, p.202) [16]. Existing body of research underlined a positive relationship between self-efficacy and the attitude of pre-service teachers towards teaching profession (Demirtas et al., 2011) [9]. Experimental studies involving one-group pre-test and post-test investigated the effectiveness of teacher-themed movies on perspective teachers' self-efficacy in practice teaching. It was observed that the mean score of self-efficacy in post-test is found to be higher than the mean score in pre-test. The significant difference indicates that pre-service teachers who watched teacher-theme based and inspiring educational movies enhanced the self-efficacy belief among pre-service teachers to teach successfully (Halim et al., 2019) [13]. The finding underlines the significance of observational learning emphasized by the Behaviorism school of psychology.

Research on learner autonomy, academic motivation and self-efficacy was conducted with 776 pre-service teachers. Regression analysis reveals that pre-service teachers' academic motivation and academic self-efficacy were found to be significant predictors of autonomous learning (Alkan and Arslan, 2019) [1]. Enhancing academic motivation and self-efficacy among pre-service teachers most likely increase their learning autonomy. It is stated that positive attitude, need for achievement, sense of effectiveness, high motivation and self-efficacy are the considerable characteristics identified among autonomous learners (Oxford, 2003) [14]. Further, correlational researches have concluded that teaching-learning conception is positively correlated with academic self-efficacy of pre-service teachers enrolled in sports teacher education department and physical education. In addition, it was reported that constructivist teaching-learning perception of pre-service teachers is positively associated with academic self-efficacy (Certel et al., 2015) [8]. Demographic analysis of a psychological construct is a significant area of research. In relation to demographic variable e.g. gender, age and department, there exists significant difference in self-efficacy of pre-service teachers (Demirtas et al., 2011; Saricoban, 2014) [9, 15].

Objective of the Study
The existing literature reveals that academic self-efficacy is positively correlated with teaching attitude among pre-service teachers. Instructional efficacy as an important aspect of teaching must be equipped by the teachers for teaching practice. Research can be conducted to measure the self-efficacy of tribal pre-service teachers. There is a lack of empirical research measuring academic and teaching self-efficacy of tribal pre-service teachers. The aim of the study was

1. To study the level of academic self-efficacy among tribal and non-tribal pre-service teachers
2. To study the significant difference in academic self-efficacy between tribal and non-tribal pre-service teachers

Methodology
The present study used quantitative research design to study significant differences in self-efficacy of tribal and non-tribal pre-service teachers of Odisha. A number of 110 (55 tribal pre-service teacher (50%), 55-non tribal pre-service teacher (50%) participants enrolled in Two-year B.Ed (Bachelor of Education) programme under SCERT, Odisha were selected using random sampling method. There were 28 (50.90%) number of male participants in tribal and non-tribal social category and 27 (49.10%) participants were female in both tribal and non-tribal category. The table-1 depicts the number and percentage of the participants in relation to demographic variables.

Table 1: Frequencies and percentage of participants in relation to social category and gender

Pre-service Teacher	Male		Female		total
	F	%	f	%	
Tribal	28	50.90%	27	49.10%	55
Non-tribal	28	50.90%	27	49.10%	55
Total	56	50.90%	54	49.10%	110

Data Collection

The study involved quantitative data collection using a five-point likert rating scale ranging from Strongly Agree (5) to Strongly Disagree (1). The survey scale consists of 40 items with four dimensions i.e. Academics, Examination, Internship Teaching and Classroom Management. There are 11 negative items which have reversed scoring. Demographic data i.e. gender, social category, stream of education etc were incorporated in survey questionnaire. The *Cronbach alpha coefficient* of self-efficacy scale was .902, which indicates a higher internal consistency of the scale. The survey scale was administered among 110 pre-service teachers in classroom setting. Responses of the participants on self-efficacy scale are summed together and data are organized in MS Excel for statistical analysis.

Results and Discussion

To study the level of academic self-efficacy of teachers, three level was determined by dividing the highest possible score ($40 \times 5 = 200$) of survey instrument i.e academic self-efficacy measure in to three ranges e.g. Low Academic Self-Efficacy, Medium Academic Self-Efficacy and High Academic Self-Efficacy. Table 3, indicates the frequencies and percentage of pre-service teachers with their level of efficacy belief.

Table 2: Level of academic self-efficacy in relation to social category

Social category	N	Low (1-66)	Medium (67-132)	High (132-200)
Tribal	55	-	2 (3.63%)	53 (96.36%)
Non-tribal	55	-	4 (7.27%)	51 (92.72%)
Total	110	-	6 (5.45%)	104 (94.54%)

It can be observed that about 96.36% of pre-service teachers belonging to tribal category were having high academic self-efficacy, whereas 92.72% pre-service teachers from non-tribal groups were having high self-efficacy. It was also found that 3.63% pre-service teachers from tribal and 7.27% of pre-service teachers from non-tribal sections possess medium level academic self-efficacy.

To determine significant differences in academic self-efficacy of pre-service teachers in relation to their social category, an independent t-test was employed. Table 2 describes the *mean scores and standard deviation* for academic dimensions measuring efficacy belief among pre-service teachers.

Table 3: Difference in academic self-efficacy among tribal and non-tribal pre-service teacher

Social Category	Academics		Examination		Practice Teaching		Classroom Management	
	M	SD	M	SD	M	SD	M	SD
Tribal	45.09	4.87	24.21	2.99	72.03	6.44	24.03	2.81
Non-tribal	45.65	6.17	23.27	4.16	71.32	7.58	23.54	3.66
Independent t-test								
Variable	Social Category		Mean	SD	df	t	Result	
Academic Self-Efficacy	Tribal pre-service teachers		165.38	14.07	108	0.610	Not significant	
	Non-tribal pre-service teachers		163.91	18.23				

*0.05 level of significance

As seen in Table 3, the mean of tribal perspective teachers was 165.38 was found to be high than the mean score i.e. 163.91 of non-tribal teachers on academic self-efficacy. However, it was found that the obtained t-ratio i.e. 0.610 is less than the table value of 1.660 at 0.05 level with the df 108. The findings indicate no significant differences in the mean scores of tribal and non-tribal pre-service teachers' self-efficacy.

Conclusion

The study revealed high academic self-efficacy among tribal and non-tribal pre-service teachers. This finding indicates that high academic self-efficacy might bring positive self-judgments among tribal and non-tribal pre-service teachers about their academic abilities and teaching skills to deliver instruction effectively at school level. Literature underlined that a high sense of teacher' self-efficacy is related to their collective responsibility towards teaching effectiveness (Berry, Daughtrey, & Wieder, 2010) [7]. This finding also supports the empirically established results that high self-efficacy and expectations about teaching ability among teachers contributes to high academic achievement of students in school (Dilekli & Tezci, 2020; Unlu *et al.*, 2017) [10, 11]. It has been shown that teachers' self-efficacy contributes to the success of their instructional practice. Investigating the academic and teaching efficacy of pre-service teachers at the initial stage of their professional career has immense importance in educational research. In line with the study findings, pre-service and in-service teacher education programmes should pay more attention to the development of academic self-efficacy among tribal teachers. This study is limited to quantitative self-reported

data on academic self-efficacy of schedule tribe and non-tribal B.Ed trainees. It is essential to investigate academic and teaching efficacy beliefs of prospective teachers in a classroom environment. Future research can be taken to address the mediating role of factors contributing to teacher's self-efficacy and student's academic performance. Qualitative studies can be conducted on self-efficacy of tribal pre-service teachers in using non-tribal languages as the medium of instruction. Their role should be assessed in terms of education of tribal students in mainstream education.

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