

Professional Competencies of Residential School Teachers: A case in Ashram Schools of North Coastal Andhra Pradesh

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ABSTRACT

The present study demonstrates the behavior of thermal oxidative and non oxidative decomposition of polystyrene.

Tribal Welfare Residential Schools are called Ashram schools in Andhra Pradesh, playing a crucial role in shaping the tribal children and brings them in the mainstream of social transformation. Professional competencies of a teacher include pedagogical, cultural, communicational, personal, intellectual, etc. which are needed for effective teaching-learning.

The present paper is a study on the professional competencies of teachers in Tribal welfare schools and is grouped into nine areas such as (i) supporting for learning (ii) Maintaining an effective learning environment, (iii) Organizing subject matter for student learning, (iv) Planning for teaching (v) Assessment (vi) Professionalism (vii) Co-curricular & extracurricular activities (viii) Teaching-learning material (ix) Parent/community co-ordination in line with the guidelines of NCERT. The presented study has paramount importance in the quality of teaching-learning and students achievements.

Keywords: Professional competencies, residential school, tribal welfare, Ashram schools

1. INTRODUCTION

According to the 2011 census, the Scheduled Castes (SC) and Scheduled Tribes (ST) comprise about 16.6% and 8.6%, respectively, of India's population. The Constitution lists 1,108 castes across 29 states in its First Schedule and the Constitution (Scheduled Tribes) Order, 1950 lists 744 tribes across 22 states in its First Schedule. The population of STs in India and decade growth rates of STs from 1961 to 2011 is shown in Table.1. Further, the population of STs in the state of Andhra Pradesh is given in Table.2 and one can observe that their growth in urban areas is also significantly increasing.

In Andhra Pradesh, irrespective of many developmental activities and schemes for tribal welfare, they are still in vulnerable conditions due to many reasons. Providing quality school education together with other developmental activities will bring them into the mainstream of the society.

In the last decade, there have been many researchers worked in the area of professional competences of teachers. Zaragoza, M. C et.al.(2019) stated that a teacher's professional development follows a progression in which both social-emotional competencies and sound classroom management [1]. Kaiser, G.,(2017), developed Teacher Education and Development Study in Mathematics (TEDS-M) and its follow-up study, TEDS-FU, compared cognitive and situated approaches to professional competencies of teachers [2]. Mohammadi, M et.al.(2018) developed a Practical Guide to meta-synthesis method for identifying professional competencies of teachers in teaching the Nature of Science. The model suggests that teachers should have knowledge, skills, and attitudes competencies to be able to teach nature of science properly [3].

Wu, L. C., Chao, and his group (2018) developed Math/Science Teachers' Professional Development Questionnaire and used in a nationwide survey in Taiwan. The study has been done to probe the differences of perceived professional teaching competence between elementary school math/science teachers in Taiwan who are majored in math/science and those who have not majored in math/science course [4]. Seidel, T et.al.(2017) analyzed the changes in the professional vision of pre-service teachers within university-based teacher education and developed approaches to connect professional vision with teaching action in the classroom [5]. Garcia, M. R et.al (2017) developed the professional competency approach in Education for Sustainability (ES) from the perspective of complexity and assessment of their proposed competencies [6]. Sharma, A., & Gupta, S. (2017) presented a doctoral dissertation on Techno-Pedagogical Competencies among Teachers concerning Professional Commitment [7].

Strohmer, J., & Mischo, C. (2016) studied the development of prospective early childhood teachers' competencies during teacher education and worked on the assessment of early childhood teachers' beliefs about the relevance of competencies, their competence-related self-concept and objective measures of knowledge regarding language and language development [8]. Nurhadi, D., & Lyau, N. M. (2017, July) developed a conceptual framework for the development of Twenty-First century vocational teachers' professional competencies [9].

Kulshrestha, A. K., & Pandey, K. (2013) discussed teacher training, development professional competencies of teachers [10] and Ilanlou, M., & Zand, M. (2011) analyzed Professional competencies of teachers and the qualitative evaluation process [11]. Warin, B et.al. (2011) proposed a methodological framework to integrate the acquisition of high-level cognitive skills and professional competencies using educational psychology aspects of behaviorism, cognitivism, constructivism, and social constructivism [12]. Mustafa, M. N. (2013) analyzed the levels of professional competency among high school teachers as well as to identify the differences based on gender and work experience [13].

The main objective of the present work is to study the professional competencies of teachers in Ashram schools of north coastal Andhra Pradesh.

Table.1 Population data of Scheduled Tribes in India: 1961-2011

Year	Population			The growth rate in the decade		
	Total	Rural	urban	Total	Rural	Urban
1961	3,01,30,184	2,93,57,790	7,72,394	-	-	-
1971	3,80,15,162	3,67,20,681	12,94,481	26.2	25.1	67.6
1981	5,16,28,638	4,84,27,604	32,01,034	35.8	31.9	147.3
1991	6,77,58,380	6,27,51,026	50,07,354	31.2	29.6	56.4
2001	8,43,26,978	7,73,39,335	69,87,643	24.5	23.2	39.5
2011	10,42,81,034	9,38,19,162	1,04,61,872	23.7	21.3	49.7

(Source: Census of India 2011-Scheduled Tribes in India as revealed in Census 2011 by Registrar General & Census Commissioner, India)

Table.2 Growth rate of Scheduled Tribes (ST) of A.P. based on census data

Year	Total ST population in AP		% of Growth rate in the decade	
	Rural	urban	Rural	Urban
1961	12,67,287	57,081		
1971	15,72,627	85,030	24.09	48.96
1981	29,78,593	1,97,408	89.4	132.16
1991	38,80,254	3,19,227	30.27	61.71
2001	46,46,923	3,77,181	19.76	18.15
2011	24,01,876	3,38,043	10.69	13.98

Table.3 Details of the tribal group and their population across A.P. based on 2011 census

Tribal Area under ITDA	Major Tribal Group	ST Population	%
Seethampeta (Srikakulam)	Savara, Jatapu	74280	78
Parvathipuram (Vizianagaram)	Jatapu, Kondadora, Savara, Gadaba	153897	81
Paderu (Visakhapatnam)	Kondadora, Bagata, Kondh, Valmiki, Porja	524914	88
Rampachodavaram (East Godavari)	Kondadora, Koya	154562	67
Kotarmachandrapuram (West Godavari)	Koya, Yerukula, Kondareddi	52592	47

(Source: <http://giripragati.ap.gov.in/>)

2. STATUS OF TRIBAL WELFARE SCHOOLS OF ANDHRA PRADESH

In Andhra Pradesh, there are 184 educational institutions are functioning under the control of AP Gurukulam. Out of which 82 are residential institutions funded by the Government of AP. In addition to this 12, Mini Gurukulam schools meant for low literacy areas funded by Govt. of India and 80 newly converted Hostels into Tribal Welfare Residential schools are also functioning under Gurukulam. There are 10

Ekalavya Model Residential Schools (EMRS) stated in 2018. Classification of the Tribal Welfare schools is as below

- **Residential Schools**
There are 174 Residential institutions and in which 4 schools of excellence (SoE). The entry point of these schools is 5th class except the SoE category where the classes are from 8th -12th class. The total strength of the school from the 5th-10th class is 480 with English is the medium of instruction. Each class in these schools consisting of two sections with each section is limited for 40 students. Moreover, in schools of excellence each class consists of 90 students in three sections and 40 students for 11th and 12th class. The major courses offers are mathematics, physics, and chemistry (MPC) and botany, zoology, and chemistry (BZC) for classes from 11th -12th.
- **Primitive Tribal Group (PTG) Residential Schools**
There are about 12 residential schools are functioning category out of the total residential schools wherein 2 schools are only for girl students. The distribution of seats will be done, proportionately to the population of different PTG communities in the concerned area but admissions will not be given to other tribal students in these PTG institutions. The schools are with classes 3rd -10th class was in the medium of instruction is Telugu till 4th class and from 5th class onwards English is only the medium of instruction.
- **Ekalavya Model Residential Schools (EMRS)**
Ekalavya Model Residential Schools have been started with the support from Government of India with the main objective of providing quality education to Scheduled Tribe (ST) students in remote areas thereby enabling them to achieve admissions in premier higher education institutions. Also, it facilitates the students to get jobs in both private and public sectors on par with other non-ST population. In the schools, the selection is based on merit and some reservation is given to first-generation primitive group students. The size of each class is only 60 students with two sections preferably 30 students per section and education is completely free of cost.
- **Residential Junior Colleges**
About 32 institutions are providing Intermediate Education (11th -12th class) and the medium of instruction is English, and in which 11 colleges only for girl students.
- **Schools of Excellence (Co-Education) (SOE)**
These centers for excellence are evolved to bring out the innate abilities of brilliant students to accelerate them as aspirants of IIT, IIIT, NITJEE, and MBBS, etc. The teachers are providing special attention right from the 8th class to the intermediate level with more commitment.
- **Mini Gurukulam**
The Government of India sanctioned 12 Educational Complexes for the benefit of ST Girls in Low Female Literacy pockets in Andhra Pradesh from class 1st standard to 5th class.

3. METHODOLOGY

In the present work, to study the impact of demographic variables on the professional competencies of teachers especially in Ashram Schools (Tribal welfare residential schools) in north coastal Andhra Pradesh, primary data has been collected using a suitable questionnaire and is thoroughly analyzed using statistical methods to determine if there is any variation in the teachers (respondents) opinion on it. The degree of variation of the respondent's opinion, the corresponding independent variables are obtained through statistical methods. Assessment of the respondent's equilibrium opinion has been done through nine sets of parameters.

Objectives:

- i. To collect the opinion of the sample respondents on professional competencies of teachers in Tribal welfare residential schools in North coastal Andhra Pradesh.
- ii. To identify the significant professional competencies resulting in student achievement in Tribal welfare residential schools of north coastal Andhra Pradesh.

Hypothesis:

The influence of all the independent variables on the Teaching Competencies has been studied

H₀: No significant influence of the Demographic variables on the Teaching Competencies

H₀: No significant influence of the gender variables on the Teaching Competencies

Sample:

The population of the present study is the teachers working in the tribal welfare residential schools located in the north coastal Andhra Pradesh topographical area and the sampling frame selected randomly for the study covers 97 teachers working in tribal welfare residential schools in Visakhapatnam district of Andhra Pradesh. The sample includes principal/ Headmasters, PGTs (Post Graduate Teachers), and TGTs (Trained Graduate Teachers).

Tools of the study:

The data are necessary to carry out the present research and are collected with the questioner and are prepared by the researcher using the existing literature. However, in the present work, the questioner is customized to meet the research objectives based (i) Professional competencies by NCTE (1998) document, Professional competencies by suggested by Bürgener, and his team (2018) and from other existing literature. The reliability of the tool is validated using Croanbach's Alpha coefficient.

It is observed as 0.865 and is more than 0.75 so one can conclude that the tool is reliable for collecting data, the format and language of the tool have been taken care of by the researcher.

Variables for the Study:

Main independent variables are (i) supporting for learning,(ii) Maintaining an effective learning environment, (iii) Organizing subject matter for student learning, (iv) Planning for teaching (v) Assessment (vi) Professionalism (vii) Co-curricular & extracurricular activities (viii) Teaching-learning material (ix) Parent/community co-ordination and which are used to survey the professional competencies of the teachers.

Analysis of the respondent's opinion:

Investigator applied a survey method to tackle this problem as it is suitable for the presented work and is a very popular approach to solve these kinds of educational problems. Analysis of the data has been done through descriptive analysis, t-test, and statistical tools with 0.05 significant levels.

Table 4. The respondents opinion on the Professional Competencies of teachers

Independent Parameter	Strongly Agree	Agree	No Opinion (Neutral)	Disagree	Strongly Disagree
Supporting for learning (P1)	49.1579	33.6006	9.0617	7.9390	0.2405
Maintaining an effective learning environment (P2)	49.4415	33.6559	8.4139	8.2650	0.2233
Organizing subject matter for student learning (P3)	54.8498	22.8637	21.5935	0.3464	0.3464
Planning for teaching (P4)	44.2129	32.9861	22.1064	0.3472	0.3472
Assessment (P5)	47.7083	31.2500	20.1041	0.5208	0.3125
Professionalism (P6)	49.7916	30.1041	19.4791	0.3125	0.3125
Co-curricular & extracurricular activities (P7)	46.7147	37.9807	14.8237	0.2403	0.2403
Teaching-learning Material (P8)	42.4479	40.9722	16.0590	0.2604	0.2604
Parent / community co-ordination (P9)	33.3042	43.5048	8.9799	9.1543	5.0566

The percentages of respondents' opinions on various parameters of the professional competencies are displayed in Table.4. It is observed that on average 46.6% of respondents are strongly agreed and 34.1% agreed for all the parameters of the professional competencies of teachers as given in Fig.1.

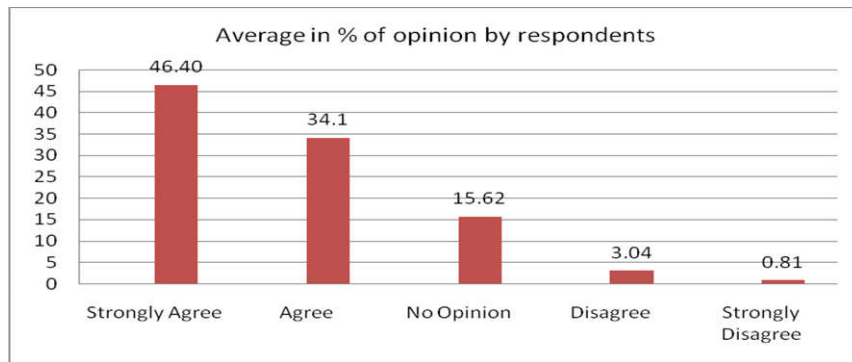


Figure.1 Average percentage of respondents opinion for all dependent parameters

Fig.2 shows the Radar plot shows the % of respondents opinion on the Professional Competencies of teachers in Ashram schools of tribal welfare in north coastal Andhra Pradesh.

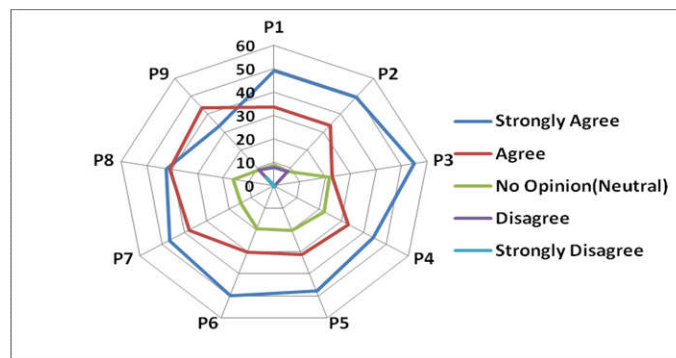


Figure.2 Radar plot shows the % of respondents opinion on the Professional Competencies

Moreover, the influence of demographic parameters on professional competencies is shown in Table.5 and is done by performing a descriptive analysis for all independent parameters. It is noted that respondents felt that all the independent parameters constitute the professional competencies of the teachers.

Table.5 Influence of demographic factors on professional competencies

Parameter	Mean	Standard Deviation	Sample Variance
Supporting for learning (P1)	4.2341	0.7726	0.7015
Maintaining an effective learning environment (P2)	4.2605	0.2998	0.1183
Organizing subject matter for student learning (P3)	4.3127	0.3385	0.1437
Planning for teaching (P4)	4.20164	0.3326	0.1407

Assessment (P5)	4.2525	0.38398	0.1822
Professionalism (P6)	4.28735	0.3345	0.1392
Co-curricular & extracurricular activities (P7)	4.2835	0.3362	0.1420
Teaching-learning Material (P8)	4.2482	0.3235	0.1296
Parent / community co-ordination (P9)	4.0953	0.6307	0.4179

Table.6 Variation of professional competencies based on gender using t-test at 0.05 level of confidence

Parameter	Mean		t-value	p-value	Decision
	Male	Female			
Supporting for learning	4.500	4.333	2.3259	0.0121	NS
Maintaining an effective learning environment	3.892	3.775	2.2844	0.0127	NS
Organizing subject matter for student learning	3.746	3.514	3.7721	0.0001	NS
Planning for teaching	4.327	4.205	1.8131	0.0374	NS
Assessment	4.270	4.187	1.6638	0.0489	NS
Professionalism	4.236	4.112	2.1061	0.0189	NS
Co-curricular & extracurricular activities	4.135	3.973	2.0594	0.0215	NS
Teaching-learning Material	4.362	4.076	2.9688	0.0019	NS
Parent / community co-ordination	3.939	3.952	-0.2172	0.4142	S

The details of the t-test are shown in Table.6 wherein one can observe that the "p" value is less than the 0.05 value and hence all the parameters that are considered are non-significant (NC) and one can conclude that there is no much statistically difference between male and female teachers except parent/family co-ordination among the teachers. In this case, female teachers have a better average score as

compared to male teachers and hence this parameter P9 is significant(S) as shown in Table.6. Hence the all null hypotheses are mentioned can be rejected.

Findings:

It is a fact that as like other professions, the teaching profession has a specific body of knowledge, skills, and attitude. The quality of school education majorly depends on the professional competencies of teachers.

Most of the teachers in Ashram schools in Andhra Pradesh accepted that the parameters are related to professional competencies of teachers are valid and about 75% of the respondents agreed for the current practices. It comprises the average of 46.40% is strongly accepted and 34.1% accepted for their current practices. However, very few members disagreed (about 3%) some of the issues related to the teaching-learning process done by the teachers. Many of the respondents agreed that some of the competencies like usage of modern computing tools, teaching, the pedagogical method need to be updated through continuous professional development courses.

The respondents are opinioned that content pedagogical knowledge, maintaining a good learning environment and other professional skills of instruction are basic professional competencies a teacher should possess and update. The respondents were asked to present their viewpoint on the aspects of parent/community coordination in terms parent-teacher coordination, information sharing to the parents, the participation of teachers and parents in school development, conduction and active participation of teachers and parents in a school meeting, community coordination in school development, teachers involvement social development of students, etc. The teachers felt that continuous developments of professional competence are essential in the 21st century.

Suggestions:

The teachers are considered to be the important stakeholders in school education and they should feel responsible for improving their professional competencies through continuous professional development courses.

Just like other professions .teaching has its own body of knowledge, skills, attitude, and other competencies. In Ashram schools of Andhra Pradesh are well equipped with modern facilities like digital classrooms, computers, overhead projectors, etc., and they should facilitate the self-learning.

Teachers need to collaborate with peers in the other schools in the urban areas for sharing the information, knowledge, skills, and successful pedagogical content knowledge.

The continuous and life-long learning is a part and parcel for any teacher and therefore teachers of these schools need to attend workshops, training programs, refresher courses during summer/winter vacations. Teachers should self-reflect and suggested take continuous and periodic feedback from the students on various aspects of teaching-learning.

The teachers should be more proactive in sharing information about their students attendance and formative assessment results through mobile communication. They should invite the parents to discuss the progress of their ward and maintain good

parent/community coordination in the school. Teachers should exhibit professionalism in and outside of the school.

4. CONCLUSION

The results of the present work demonstrated significant influence by all the proposed independent variables. However, the involvement of the parents in achieving the retention, improving the enrolment, and parent/teacher coordination is needed to be improved. The continuous development programs, workshops, and other training programs are necessary to improve professional competencies. Some special training programs are to be arranged in digital learning, usage of MOOC courses for improving the knowledge base. Most of the respondents felt that the parameters of professional competencies are significant for achieving better learning outcomes.

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