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Teaching Efficiency and Accountability of Secondary School Teachers Exposed to Samarthya Programme of Odisha

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ABSTRACT

In-service training aims updating professional knowledge and skills of teachers. The integrated training “Samarthya” comprising of content and theme based modules is one of such training programme designed by School and Mass Education Department of Odisha to develop teaching efficiency and other professional behaviour of the school teachers. The present study examined the teaching efficiency and accountability of the secondary school teachers exposed to Samarthya training. The objectives of the study were (i) To study the teaching efficiency of trained secondary school teachers with a variation in terms of their gender, academic stream, and job status of teachers and locality of schools and (ii) To study the relationship between teaching efficiency and accountability of trained secondary school teachers. The study was conducted on 100 secondary school teachers exposed to Samarthya training. They were selected randomly from four districts of Odisha i.e. Angul, Cuttack, Dhenkanal and Khordha. A descriptive survey method was followed. Two self-developed tools i.e. on teaching efficiency and accountability of teachers were used in the study. The major findings of the study are: (i) moderate but positive correlation exist between accountability and teaching efficiency of secondary school teachers (ii) No significant difference was evident between male and female trained secondary school teachers in teaching efficiency (iii) significant difference was evident between arts and science secondary school teachers, (iv) There exists no significant difference between regular and contractual trained secondary school teachers and (v) significant difference exist between rural and urban trained secondary school teachers in their teaching efficiency. The study has implications for continuing professional development of secondary school teachers in the state of Odisha and the country. The training modules need to incorporate contents on accountability and school management apart from content and pedagogic enrichment.

Keywords: Teaching Efficiency, Accountability, Professional Behaviour, Samarthya

INTRODUCTION

Education should strive for academic excellence and progress of the society as well as nation and accountability has been an increasingly important ‘watch-word’ in education. Teachers are the member of learning communities, are committed to doing what is right and good for the students’ development. Teachers set high standards and expectations for their work and they aspire to meet the standard in all aspect of their lives and their profession (Mondal & Roy 2013). Teaching is a noble profession that involves artistic features as well as professional skills. It requires creativity and having different perspectives and being able to inspire different perspectives. As teachers’ behaviour affect students’ performance directly (Brophy & Good, 1986), students’ academic and behavioural achievements or failures depend on the teachers’ holistic personality and teachers are accountable for students’ all round development. “Due to this strong impact on students’ learning, teachers must modify their behaviour accordingly. Accountability is an ethical concept – it deals with proper behaviour, and responsibilities of individual teachers towards their work. Accountability involves responsibility, authority, evaluation and control” (Heim, 1995). “Teachers should be responsible for the academic achievement and all-round development of the students. If teachers are held accountable and perform accordingly, it results in higher academic achievement, improvement in pupil attitudes, and generally gives better educational results” (White, 1977).

Another factor that contributes to student success is teaching efficiency. The efficiency of a teacher's teaching operation refers to how he organizes and implements teaching techniques in the classroom under various conditions, as well as how he manages people, materials, and time. The degree to which he or she develops alternative solutions to the possibilities and ideal ways of integrating the teaching methods, based on an analysis of the strengths and limitations of these possibilities, is also a factor in teaching performance. The National Educational Policy (2020) envisages a progressive, flexible, multidisciplinary, technology and skilled focused education system which have the capabilities to produce creative, competent skilled an ethical learner. And the factor which helps in developing such an education system is “teacher”. The most significant factor which influences the education system is quality, competence and character of the teachers. The NEP 2020 also exhorts, ‘Teachers truly shape the future of our children – and, therefore, the future of our nation’ thereby implying that teachers play the most important role in nation-building by creating high quality of human resource in their classrooms.

Teaching Efficiency and Accountability: Conceptual framework

Accountability in education has been a perennial topic of discussion among policymakers, educators, parents, community members, and even among student populations. According to Oxford Dictionary and Thesaurus, accountability refers to responsible; required to account for one’s conduct, accountable for one’s actions (Gishey, 2013). United Nations Development Programme (UNDP) defines accountability as conducting work in accordance with agreed rules and standards and reporting roles or plans and performance results fairly and accurately (UNDP, 2018).

Teacher accountability is regarded as an individual disposition. Accountability is a more abstract and more subjective concept of responsibility. While responsibility involves inner commitment to one’s obligations, accountability is a more concrete notion, necessarily involving commitment to meeting standards and reporting to stakeholders. Unlike responsibility, accountability is regarded as the adhesive among components, where one is answerable to others which are most essential for an educational institution. For Lerner and Tetlock (1999,) accountability is the “implicit or explicit expectation that one may be called on to justify one’s beliefs, feelings, and actions to others.” Stenhouse (1977) emphasizes the importance of transparency while attempting to strengthen educational provisions and programmes for students, as well as the pitfalls. Accountability must be linked to feelings of responsibility: when people feel responsible, they work diligently to improve their own performance, which in turn increases the performance of the students and the institution as a whole.

Teaching is a profession which involves various professional skills and artistic features. Education that aims at exploitation of potentialities and resources, preparation for efficient living and enlightenment of mankind requires dynamic teachers. Teachers' quality and their efficiency matters a lot for the overall development of educational system. It is an important school related factor that influence student achievement. Teacher's attributes affect their performance across different teaching contexts that can be helpful in determining their efficiency level. Teachers' most important task is teaching which is complex and many sided and demands a variety of skills, knowledge and abilities. It is most complex because it involves helping the learners to exploit their potentialities and acquire knowledge and facts from culture and assist them in understanding themselves. It is therefore an obligation of education to obtain capable and efficient teachers. Education based on the most appropriate objectives and an efficient organisation of schools and facilities may fail or be ineffective and largely wasted if the teachers are inefficient, incompetent or are indifferent to their responsibilities. It is often cited that the schools are only as good as their teachers, for nothing can make the school and its pupils better than their teachers who influence the pupils for good. Having realized the need for devoted, skilled and efficient teachers, their preparation is becoming a matter of great national and social concern all over the world. Every nation depends greatly on the quality of its teachers for its progress and hence, gigantic steps and measures have been taken in recent years to improve efficiency of teachers. Pupils' education at the secondary level has to widen its scope and cater to the entire range of the pupils' interest and capacities including intellectual, physical, emotional, aesthetic and social aspects for his life. This clearly indicates the necessity of a broadly conceived curriculum, which can provide free room for the development of different types of innate potentialities of the pupils through studies and activities congenial to such development. However, such dynamic educational programme can be safely and efficiently manipulated only by efficient and competent teachers.

Everyone concerned with the quality education and students and institution development agrees that the improvement of teaching efficiency and teacher effectiveness are high priority in any educational programmes. It is assumed that pre-service teachers could not be equipped with effective teaching skills (Stein and Stein, 2016). Nevertheless, the process of training teachers has always remained on the agenda and become the subject of many regulations, criticisms and discussions. To ensure quality education in a safe environment, it is essential that all teachers are aware of their professional qualities. The teachers have a great responsibility to ensure that students gain sufficient knowledge and skills to become an effective learner and ultimately a responsible citizen and to understand and appreciate the values and beliefs as a good human being. They also have a responsibility to meet the high standards of professional and ethical behaviour required by the institution, the public, parents and the profession itself. An accountable teacher engages in adequate ongoing professional development to foster excellence in curriculum development, implementation, and assessment, classroom management, and teaching skills, as well as to conduct their duties efficiently and effectively while maintaining authenticity, dignity, and fairness. Although there has been little research on personal manifestations of accountability, some studies have found a connection between employee sense of accountability and job performance. Cheng and Tsui (1999) have shown that accountability is a major criterion for teachers' effectiveness. So, accountability became one of the most important means to determine whether all the resources for teaching have used efficiently.

From the above research findings and reports it is clear that accountability of teachers plays a crucial role in teaching efficiency. As increased students' performance is determined by teachers' efficiency, it is essential to study the components or elements which improve teaching efficiency. Well designed teacher training programme like Samarthya is implemented by RMSA to improve the quality of teacher training. Since the teacher is the most important factor in school education it is necessary to upgrade the teaching quality of teachers through continuous professional development programme. In this connection question arises how far Samarthya programme is improving the teaching efficiency and accountability of teachers? Thus the present study focuses on teaching efficiency and accountability of secondary school teachers trained through Samarthya programme.

Samarthya: Programme for Professional Development of Teachers at Secondary Level in Odisha

The Rastriya Madhyamik Sikshya Abhiyan (RMSA) organizes the in-service teachers' training "Samarthya" in various venues across the state. The programme is meant to provide training to high school teachers in five subjects of class X including mathematics, English, Physical Science, Life Science and Odia. RMSA has already conducted various training programmes in 2012, 2013 and 2015 and 2017. Teacher effectiveness depends on their knowledge in content and pedagogy. To enhance their capacity, training of secondary teachers is one of the prime objectives of Rastriya Madhyamika Sikshya Abhiyan to provide good quality education by equipping teachers with latest technology of class room transaction. With this vision, for teachers training, modules have been developed by OMSM, RMSA in last years for class -IX and X under the title "Samarthya " in each subject in light of National Curriculum Framework(NCF) - 2005. The present study is an endeavour to find out whether secondary school teachers trained through Samarthya have developed accountability and teaching efficiency. Hence the problem is stated as: "Teaching Efficiency and Accountability of Secondary School Teachers Exposed to Samarthya Training Programme of Odisha."

Teaching efficiency in the present study is conceived in terms of creating learning environment in the class by motivating the students in learning and using appropriate methodology. Teachers' accountability refers to the professional accountability of teachers which imply responsibility of teachers towards improvements of pupils' achievement. It refers to those teachers teaching in Class IX and class X only. Samarthya is an in service training programme meant for secondary school teachers. Here it refers to Samarthya training programme organized under RMSA in the state of Odisha.

Objectives of the Study

1. To study the teaching efficiency of trained secondary school teachers with a variation in terms of their gender, academic stream pursued, job status and locality of school.
2. To study the correlation between teaching efficiency and accountability of trained secondary school teachers.

Research Questions

1. Is there any significant difference in teaching efficiency of teachers in relation to their demographic variables?
2. Is there any significant relationship between teaching efficiency and accountability of trained secondary school teachers?

METHODOLOGY

Design: The purpose of methodology was to provide the research plan for this study on accountability and teaching efficiency of secondary school teachers exposed to Samarthya training of RMSA. Descriptive survey design has been adopted in the present study.

Participants: Teachers who had been enrolled into a professional development programme designed to "provide an intellectually stimulating and nurturing environment for both personal and professional growth" were selected as the population. The population in this study were the secondary school teachers of the state Odisha exposed to "Samarthya" training of RMSA. Further a sample of 100 secondary school teachers were selected randomly (25 from each district) out of 791 teachers trained (during the session 2018-19) from four districts Odisha i.e. Angul, Cuttack, Dhenkanal and Khordha.

Tools: Two numbers of tools were used in the study. A Teaching Efficiency Scale (Teaching Efficiency Scale for Samarthya trained Secondary School Teachers) was standardized by the researchers and used for collection of data for the study. Another tool named Teacher Accountability Scale (rating scale on Accountability for Samarthya trained Secondary School Teachers) was also standardized by the researchers and used for collection of data for the study

RESULTS

A. Teaching Efficiency of Secondary School Teachers

The first objective of the research was to study of teaching efficiency of trained secondary school teachers with a variation in terms of their gender, academic stream, and job status of teachers and locality of schools. Teaching efficiency of secondary school teachers in relation to gender, academic stream and job status have been explored and presented below.

Table 1: Teaching efficiency of secondary school teachers in relation to their gender

Gender	N	Mean	SD	df	't' value	Remarks
Male	50	254.76	27.56	98	1.40	Not significant at 0.05 level of confidence
Female	50	247.32	25.36			

As shown in the Table:1, the mean value of male group is 254.76 and the mean value of female group is 247.32. The mean value indicates that both male and female teachers have good teaching efficiency as per the data revealed. Rather female secondary school teachers have more teaching efficiency than their male counterpart. Further the calculated 't' value of the study was 1.40 which is much lower than the critical table value at 0.05 level of confidence. This indicates that there are no significant differences exist between male and female Samarthya trained secondary school teachers in their teaching efficiency. Hence it may be concluded that gender has no impact in determining teaching efficiency of the secondary school teacher.

Table 2: Teaching efficiency of secondary school teachers in relation to their academic stream

Academic stream	N	Mean	SD	df	't' value	Remarks
Arts	50	258.18	18.57	98	2.83	Significant at 0.01 level confidence
Science	50	243.6	31.3			

As shown in the Table: 2, the Mean value arts group is 258.18 and Mean value of science group is 243.6. The mean value indicates that both arts and science teachers have good teaching efficiency as per the data revealed. Rather arts secondary school teachers have more teaching efficiency than their science counterpart. Further the calculated 't' value of the study was 2.83 which is higher than the critical table value at 0.01 level of confidence. This indicates that there are no significant differences exist between arts and science Samarthya trained secondary school teachers in their teaching efficiency. Hence it may be concluded that academic stream has some impact in determining teaching efficiency of the secondary school teachers.

Table 3: Teaching efficiency of teachers in relation to their job status of teachers

Job status of teachers	N	Mean	SD	df	't' value	Remarks
Regular	50	255.6	19.6	98	1.73	Not Significant 0.05 level of confidence
Contractual	50	246.5	31.6			

As presented in the Table: 3 the mean value regular group is 255.6 and mean value of contractual group is 246.5. The mean value indicates that both regular and contractual teachers have good teaching efficiency as per the data revealed. Regular secondary school teachers have more teaching efficiency due to their experience than contractual counterpart. Further the calculated 't' value of the study was 1.73 which is lower than the critical table value at 0.05 level of confidence. This indicates that there are no significant differences exist between regular and contractual Samarthya trained secondary school teachers in their teaching efficiency. Hence it may be concluded that job status has no impact in determining teaching efficiency of the secondary school teacher.

Table 4: Teaching efficiency of teachers in relation to their locality of the schools

Locality of schools	N	Mean	SD	df	't' value	Remarks
Rural	50	248.68	29.5	98	0.907	Not Significant 0.05 level of confidence
Urban	50	253.5	23.3			

As shown in the Table: 4 the mean value rural group is 248.68 and mean value of urban group is 243.6. The mean value indicates that both rural and urban teachers have good teaching efficiency as per the data revealed. urban secondary school teachers have more teaching efficiency than rural teachers due to more facilities and awareness of the parents. Further the calculated 't' value of the study was 0.907 which is lower than the critical table value at 0.05 level of confidence. This indicates that there are no significant differences exist between rural and urban Samarthya trained secondary school teachers in their teaching efficiency. Hence it may be concluded that locality of school has no impact in determining teaching efficiency of the secondary school teacher.

B. Correlation between Teaching Efficiency, Accountability of Trained Secondary School Teachers

Table 5: Teaching efficiency and accountability of trained secondary school teachers

Variables	N	Coefficient of correlation	Interpretation
Teaching efficiency	100	0.51	Moderate positive correlation
Accountability	100		

The Table-5 depicts the correlation between teaching efficiency and accountability of Samarthya trained secondary school teachers. The investigator wished to measure that those who were already participated in the Samarthya training programme have developed their teaching efficiency and accountability; and whether teaching efficiency have some relationship with accountability of those teachers. From the above table it is observed that the coefficient of correlation between teaching efficiency and accountability is 0.51. Hence, a positive moderate correlation was evident from the present study. Therefore, we may conclude that teaching efficiency increases with the accountability of teachers.

DISCUSSION

This section presents the results and discusses the findings as per the research questions. The first research questions stated as is there any significant relationship exist in teaching efficiency with regard to their gender, academic stream, job status and locality of schools. The data revealed that gender has no role in determining teaching efficiency of the trained teachers and academic stream has some impact on teaching efficiency though not differ much and it was also found that job status and locality has no impact on teaching efficiency. Through community cooperation is much less in rural areas and also use of advanced technology in rural school is a dream till date.

The second research question revealed that is there any significant relationship exist between teaching efficiency and accountability of trained secondary school teachers. And the study revealed that there is positive and moderate relationship exists between teaching efficiency and accountability. Many studies revealed that accountability is an important factor in ensuring quality teaching. Brundrett & Rhodes (2011) states that high-quality teaching and learning can be possible through the development of a culture of quality and accountability. Responsibility should be given to the teacher to plan for his student. Most of the studies revealed that there exists a positive relationship between accountability of teachers and quality education. But maintaining this positive relationship is challenging task because teachers do not always receive the necessary resources, capacity building training, motivation from the experienced teachers & school leaders, and information (Smith & Benavot, 2019). Government of Odisha attempts to provide training very often, but this training may be insufficient to develop accountability and quality teaching. In this context continuous professional development programme and refreshers courses must be organized to develop skills of the teachers. Samarthya training organized by RMSA is hope in this regard. This has implications for organization of Samagra Sikshya.

Research continues to show that at the school level teacher quality and efficiency has the biggest effect on the performance of students (Bae, 2018). But most of the time teachers in Odisha blame the system and administration. Teachers' casting blame rather than taking responsibility creates

a problem because there is increasing pressure from the general public for accountability in education (Smith & Benavot, 2019). Teachers tend to perform better when they have professional freedom to determine their classroom strategies and resources (Bedard, 2015). A balance between autonomy and accountability must be found, because both are vital in education (Chitpin & Jones, 2015). Use of local resources may be helpful and proper time management should be done to complete course and Even though teachers may prefer a degree of professional freedom, they must remember that they are accountable for continuously improving their instruction. They have a responsibility to provide the best possible instruction. This could necessitate the acquisition of new pedagogies, techniques, or tests. When teachers' professional learning is directly linked to student learning, it leads to better professional practice. (Killion et al, 2016). Teachers are creatures of habit, but they will change their ways if the necessary improvements are expected and enforced in a reasonable and consistent manner. (Copp, 2019). Teachers must remember their own responsibility for learning to enhance their practice and performance, whether it stems from assessment, mandates, or expectations. The teacher is the focal point of teaching learning process. Both the teacher and learner should remain accountable for success and failure of the whole system. Both should be accountable for the development of education.

CONCLUSION AND EDUCATIONAL IMPLICATIONS

Teachers truly shape the future of the nation because nation is being built within the four walls of the classroom. It is because of this noblest role that the teacher in India was the most respected member of society. The quality of teacher and their empowerment should be improved for the quality improvement of students' performance. Motivation of teachers is also an important factor to reach the desired standards. The high respect for teachers and the high status of the teaching profession must be restored so as to inspire the best to enter the teaching profession. Therefore, accountability for teacher learning is the responsibility of all levels of the education. The government must provide meaningful learning opportunities in order to develop professional accountability and teaching efficiency. Administration needs to be held accountable for standard performance of the teachers. Provision of all facilities in the schools such as ICT labs, internet facilities, and other useful resources along with autonomy to the teachers will be helpful. Finally, teachers must accept their obligation to improve professionally in a way that benefits their students. One of the most effective ways to improve student learning is to improve teacher practice. To improve results for schools, students, and teachers, each level of the education system must be accountable for improving teacher practice and efficiency. Teachers will be given continuous opportunities for self-improvement and to learn the latest innovations and advances in their professions. Online training programme should be developed and organized so that teachers may share their ideas and best practices. Last but not the least, teachers should believe in themselves to bring quality in education. They should attend time to time professional trainings sessions to improve their professionalism. They need to accept other teachers' suggestions and critics humbly and try to correct themselves in order to improve their teaching learning skills and to grow professionally.

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