



SECONDARY SCHOOL SCIENCE TEACHERS' LEADERSHIP AND CURRICULUM IMPLEMENTATION

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ABSTRACT

Looking to the changing scenario of education to meet the growing demands in the education system not only administrators and principals but teachers also need leadership qualities. This paper presents a meta analysis of various work carried out on leadership qualities of secondary school science teachers and its requirement for curriculum implementation. Emphasis is being given to the study of various characteristic of leadership and the ways in which it helps the secondary school science teachers for bringing, adapting and implementing the curricular changes. It provides suggestive measures that it is the need of the hour for teacher educators, administrators, as well as for the teachers in general and secondary school science teachers in particular to inculcate leadership qualities within themselves to meet the changing scenario of curricular needs. Finally, the paper concludes that though various work has been carried out on leadership qualities of principals, administrators and curriculum framers, secondary school science teacher's leadership qualities and its influence on curriculum implementation has remained an unexplored area and needs research attention.

KEYWORDS: Leadership qualities, Secondary school, Science teacher, curriculum implementation

1. INTRODUCTION:

Leadership is the art of motivating a group of people to act towards achieving a common goal. Even more simply, the leader is the inspiration and director of the action. While there are people who seem to be naturally endowed with more leadership abilities than others, people can learn to become leaders by improving particular skills. The best estimates offered by research are that leadership is about one-third born and two-thirds made, although having inborn qualities such as being assertive, extroverted, empathic and having the degree of social intelligence that allows a person to accurately size up social situations and understand social processes does make it easier to learn how to be a good leader. This paper present a Meta analysis of various work carried out on leadership qualities of secondary school science teachers and its requirement for curriculum implementation. It focuses on various characteristic of leadership and how it helps a secondary school science teacher to bring, adapt and implement curricular changes. It also provides suggestive measures that it is the need of the hour for teacher educators, administrators, as well as for teachers in general and secondary school science teachers in particular to inculcate leadership qualities within themselves to meet the changing scenario of curricular needs.

However, the teacher development becomes a critical factor in the paradigm shift being promoted in science education (Bell and Gilbert, 1996). Some studies also confirm that one of the most common reasons given for liking or disliking the subject were teacher-related (Haladyna et al, 1982; Hadden and Johnstone, 1983). As per the study conducted by Woolnough (1994) one of the strongest factor affecting students choice or non choice of science as a subject is in class activity i.e the quality of science teaching. As secondary stage is considered to be a preparatory period for the adolescent to grow as better human resource, capable of contributing to economic, social, national development, good science education to the young ones at secondary stage can laid a strong foundation in science and can motivate young minds to choose science as a major subject in higher studies and to take part in scientific and technological development of our country. According to NCF2005 at secondary stage student should be engaged in learning science as a composite discipline in working with hands and tools to design more advanced technological modules then upper primary stage and in activities and analysis of issues surrounding environment and health.

From the study of the various literatures it is clear that the global and local scenario of science education is changing. Efforts have been made to bring these changes globally and locally to curriculum. Studies also reflect that however strong a curriculum may be and what ever changes may be brought to it its successful implementation is teacher dependent. Many studies also confirm implementation of curricular reform is possible when a teacher make sense of the changes, understand it and implement it. To meet the challenges coming from the changing curricular needs and to implement it teachers need to understand, adapt and to implement the changes and for that it is required that every teacher should develop leadership qualities with in them and embrace the change.

2. LEADERSHIP QUALITIES OF TEACHERS:

Teachers have various levels of school leadership qualities. Some are learned and some are part of their personality. Great teachers possess a combination of leadership qualities that are respected by the students, parents, peers and the community. Some of the important characteristics of leadership qualities with teach-

ers are commitment to the students, Passionate about teaching and learning, Collaboration with others, Communication and rapport, embracing change, working beyond classroom .To meet the expectations of NCF (2005) and every teacher must possess a combination of different leadership qualities.

2.1 Commitments to the students:

Committed teachers are dedicated to providing each student the best possible environment and tools for learning. Good teachers were also sympathetic and willing to spend time, both in and out of lessons, talking with the students about science, careers and individual problems. Subject specialization of 'science teachers' influence quality teaching (Dillon et al, 2000). Moreover, teacher subject knowledge is a determinant of effective teaching. The net result of teachers' lack of content knowledge in high school classes was an emphasis on learning of facts and a sewing of seeds for the development or reinforcement of misconceptions.

2.2 Passionate about teaching and learning:

As a leader, teachers are always practicing how to improve their techniques. These teachers watch their peers and learn from their teaching styles. Studies have pointed towards the influence of classroom environment as a significant determinant of attitude of students towards science Positive attitudes were associated with a high level of involvement, very high level of personal support, strong positive relationships with classmates, and the use of a variety of teaching strategies and unusual learning activities. Similar evidence that variety is the spice of science education comes from the work of different workers (White and Roesch, 1993; Campbell and David, 2008).

2.3 Collaboration with others:

Teacher's ability to communicate with the students, understanding their learning difficulties, acknowledging the individual student, trustworthiness of the teacher, student friendly approach, i.e the teacher's social competence influence the quality of teaching Teacher's quality is related to students achievement (Darling-Hammond, 1997; Buskist et al, 2002).

2.4 Communication and rapport:

Teacher's quality is related to students achievement. Studies also reveal that attributes of teachers characteristic like caring, encouraging, approachable enthusiastic, knowledgeable, empathetic, passionate, having a sense of humor, impart good science teaching (Campbell et al, 2003).

2.5 Curriculum Specialist:

Curriculum material helps to design students' activities to accomplish particular aims while knowledge about curricular purpose and structure help the teacher to fulfill the designers' intention (Ball and Cohen, 1996; Cohen and Ball, 1999).

Recent research on teachers' professional development, learning and change processes have demonstrated the important roles teachers play, not just in curriculum implementation but also in curriculum design (Clarke and Hollingsworth, 2002). Successful implementation is dependent on the implementing agent, the teacher. Several qualitative studies were carried out to explore factors affecting implementation of curriculum (Blumenfeld et al, 2000; Atkin and Black, 2003)

3. DISCUSSION:

Leadership is a quality by virtue of which a person not only achieve the set goal but also motivate his fellow being to attain this goal. Leadership may be a born quality with some but it can also be developed by effort and awareness. This particular research study analyses different components of leadership qualities in teachers in general and secondary school science teachers in particular. For example committed and dedicated service, bringing changes to teaching learning strategy as per individual need in classroom situation, communications skill, social skill, rapport with parents and community members, students, colleagues, etc. Along with all these qualities teachers need to be masters of their content as well as curriculum. While analyzing various literature regarding different qualities of teachers in general and secondary school science teacher in particular researcher found that though studies have been made on individual leadership qualities of teachers and its influence on teaching learning process but an integrated approach to leadership quality and its influence on curriculum implementation is missing.

4. CONCLUSION:

This research study suggest that though various work has been carried out on leadership qualities of principals, administrators and curriculum framers, secondary school science teacher's leadership qualities and its influence on curriculum implementation has remained an unexplored area and needs research attention. From the literature it is very clear that leadership quality is not only confined to school principals, administrators, curriculum framers but to implement any change in curriculum, science teachers also need leadership qualities to adapt, understand and implement the curricular change as well as motivate other teacher to implement curriculum. The research literature suggests that there are different leadership qualities and social skills that teachers possess and it helps them to perform their job satisfactorily. The meta-analysis of literature on various areas like science education, curriculum implementation, individual qualities of teachers facilitating science education suggest that a gap remains in taking an integrated approach to find out influence of leadership qualities in secondary school science teachers on curriculum implementation. So there is an ample opportunity and scope in this area for further research.

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