



TEACHING COMPETENCY OF MATHEMATICS TEACHER AT SECONDARY LEVEL

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Abstract:

Mathematics is one of the subjects in science that has the function of developing students' skills, knowledge, attitude and values towards solving problems and satisfaction of real needs in life. Thus, learning Mathematics has become a necessity for an individual's full development in today's complex society. Technological advances and the growing importance of the means of communication make it necessary for people to adapt to new situations that are arising out of social change. Mathematics is a tool and language of commerce, engineering and other sciences. The objectives for teaching Mathematics at senior secondary school level are to: generate interest in Mathematics and to provide a solid foundation for everyday living; foster the desire and ability to be accurate to a degree relevant to the problem at hand; develop and practice logical and abstract thinking; develop the ability to recognize problems and to solve them with related Mathematical knowledge; provide necessary Mathematical background for further education; stimulate and encourage creativity.

Key Words: Mathematics; Teacher; Competency; Technology; Knowledge

Introduction:

Indian Education Commission (1964-66) rightly remarked, "The destiny of India is being shaped in her classroom". Similarly Chattopadhyaya Commission, 1985 says "No country can go beyond the level of her teachers". The Teachers have great responsibility in moulding the character of children by giving quality education in the school. The performance of a good teacher depends upon the specialization of the subject or fields to be taught and professional knowledge, understanding of educational processes and teaching skills. It is very necessary on the part of the teacher to perform effectively in order to bring out the desired outcomes of the pupils and this requires effective and appropriate use of teaching skills in classroom.

Teaching is the point of contact between the societies' educational system and the learner. Teachers are the schools' greatest assets. They stand at the



interface of the transmission of knowledge, skills and values. Teachers will only be able to fulfill their educational purpose of teaching if they are well prepared for the profession. A degree in education is accepted as a required qualification for teachers at the school stage and is recognized as an integral part of our educational system.

Teachers will be able to full fill their educational purpose of teaching if they are well prepared for the profession. It is not enough if they are highly enriched with subject matter and aware of all modern methodologies of teaching but they need to have positive attitude towards teaching, Attitude towards teaching profession play important role in determining teaching skills. The main function of the teacher is to create good learning environment in the class.

Competencies are specific and demonstrable characteristics or attributes inevitable for teaching professionals to create a convincing and learner friendly environment.

Teaching competency is the skill, ability and capability possessed by the teacher so as to make the teaching -learning effective and productive there by realizing the full potential of teacher as well as students and in turn achieving the goals of education (Anisha, 2008: 305). Teaching competencies are defined as an integrated set of personal characteristics, knowledge, skills and attitude that are needed for effective performance in various teaching contexts.

Competence is a personality trait (characteristic), which becomes a characteristic, and the minimum experience in this area (Yoon et al., 2020) . Source competence is a set of general (universal) methods of action that allow a person to understand the situation, achieve results in personal and professional life in the context of specific professional and social partnerships. Basic competencies are multifunctional over disciplinary and interdisciplinary, multidimensional and include cognitive components (Zeer & Symaniuk, 2005) . Competence is a general readiness to establish a connection between knowledge and a situation and to form a procedure for solving a problem; some kind of separate requirement for the educational readiness of the student. Educational competence is the student's readiness to use the acquired knowledge, skills and abilities in life or his ability to carry out practical activities.

Teacher competency in Mathematics is a factor that is also considered as essential as the competency in other subjects. Mathematics teachers are usually considered strict with respect to student discipline and their performance, appear like perfectionist and invariably expect excellent performance from all students



in mathematics. Mathematics is a tool of science and technology, not only through computational aids, but by enabling scientists to explore concepts with idealized models before trying them in the real world.

Teachers are the key to improving mathematics education. What teachers know how to do, and what they choose to do, when delivering instruction in their classrooms determine what content students learn and which students learn that content? The preparation, certification, and ongoing professional development of teachers define what they are able to do with the students.

Mathematics is a fundamental part of human thought and logic, and integral to attempts at understanding the world and ourselves. Mathematics provides an effective way of building mental discipline and encourages logical reasoning and mental rigor. In addition, mathematical knowledge plays a crucial role in understanding the contents of other school subjects such as science, social studies, and even music and art. On the contrary, in the 21st century, students require to have a comprehensive understanding of the fundamental ideas of mathematics, they need to be able to transform a new condition or problem they face into a form that renders the relevance of mathematics, make the problem open to mathematical treatment, identify and use the relevant mathematical knowledge to solve the problem, and then evaluate the solution in the original problem context.

Imelda Magnaye Flores (2019) examine that Mathematics Teaching Competencies of Senior High School Teachers in the Lone Districts in the Province of Batangas City, Philippines: Basis for Direction on Continuing Education for the K to 12 Curriculum. found when mathematics teachers were grouped according to their profile variables where they were found to be more competent in monitoring student progress and potential but less competent in terms of knowledge of subject matter.

Xinrong Yang (2020) explore The impact of mathematics teachers' professional competence on instructional quality and students' mathematics learning outcomes. Many empirical studies have been conducted in this field to investigate the impact of teacher professional competence on instructional quality and student mathematics learning outcomes. With this review, we intend to provide a synopsis of the state-of-the-art in this topic and outline new research perspectives.

S Surekha (2023) studied A Study on Teaching Competency of Mathematics Teachers With Respect to Location of the School and Type of Management. it



was found that it was found that locality has significant impact on teaching competency of mathematics teachers; urban School teachers were found more competency as compared to rural school teachers.

Teaching Profession is noble profession among all professions. Teachers are like guide, philosopher, sculptor, above all he or she like a beacon to show the correct path to the students. So, a teacher should be highly competent to impart knowledge and values to the students. If the teacher is talented and has good teaching competency in delivering knowledge, skills, values, then the students will be highly talented and they will gain knowledge.

Several studies have focused on characteristics of the development of mathematics teachers' professional competence, influencing factors, and effective promotion strategies. Researchers have identified various achievement levels of the three facets of teacher noticing. Attending/perceiving is considered the easiest activity, especially for preservice teachers. It is more challenging to make reasonable interpretations, and even more difficult to respond adequately or develop reasonable decisions. The responding phase of noticing seems to be the most difficult competence component for teachers to develop.

Conclusion

Based on professionally-oriented teaching in mathematics, we mean the organization of such content of educational material and its assimilation in forms and types of activities that correspond to future specialists system logic to construct a mathematics course and simulate the philosophical and practical tasks for the professional activity. Our developed model of the mathematical competence formation in university students needs to determine the criteria for its effectiveness, which understand its special features and allow us to talk about its achievements. Formation of mathematical competencies in university students determines their advancement to a higher level. In this regard, we have identified the following level of mathematical competence: low, medium, high.

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