

A Study on the Instructional Leadership for the Secondary Mathematics Teachers in India

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Abstract

Instruction is the system by which people secure data aptitudes, affinities, characteristics, or airs. The word training is in like manner used to portray the delayed consequences of the informational system. Guidance should help people with getting to be significant people from the overall population. It should in like manner help them with creating vitality about their social inheritance and live all the more satisfying lives. Preparing incorporates both learning and teaching. Sometimes, people learn by instructing themselves. The instructional initiative is an informative authority that stresses on the inside duty of a school, to be explicit teaching and learning by describing the school vision, mission, and goals. Instructional pioneers go past the standard occupation of school supervisors and contribute fundamentally more vitality focusing on progression data and use of the instructive modules. To identify the higher secondary Mathematics teachers' demographic factors gender, age, teaching experience, educational background, type of school at Dindigul District South India. To identify the level of Higher Secondary Mathematics Teachers instructional leadership at Dindigul District South India. To compare the Higher Secondary Mathematics Teachers instructional leadership according to their demographic gender, age, teaching experience, educational background, type of school factors at Dindigul District South India. To determine the effects of Higher Secondary Mathematics Teachers' demographic factors gender, age, teaching experience, educational background, type of school on their instructional leadership at Dindigul District South India. The main benefactors are students, mathematics teachers, administrator and parents. Specially this study going to help secondary mathematics teachers' instructional leadership style.

Keywords: Instructional leadership, Secondary mathematics teachers.

Introduction

Based on Indian Education System, Instructional Practices are given more important for students learning. A student's academic achievement is based on teacher's instructional practices. In India, technology-based education system is still being under developed. Teachers are using the traditional method of teaching like chalk-board method to the students. They are not well trained on the instructional practices due to their interest (Nathan, 2006).

Mathematics Teachers are having only the practice of book knowledge instead of application based knowledge and new innovative methods to teach their students. They are not encouraging students to learn from outside instead of book. They are not using the proper instructional method to teach mathematics. Teachers are not capable for their subject knowledge due to their learning skills (Priya & Singaravelu, 2014). Teachers should have more

knowledge when they are teaching mathematics to the higher secondary level. The mathematics teaching knowledge should be application and applied oriented. Also, teachers should possess more experiences to teach higher secondary students. Students are learning initial stage of mathematics in this level. So teachers are very careful to teach. If, teachers are wrong in teaching, students also learning wrong things (Lloyd, Parry, Lynn, & Giles, 2005).

In the national level, competent teachers are considered as the most important element of the education system. They play pivotal role in student achievement in nation building. They are regarded as the great contributors in uplifting the quality of education in the country. The Mathematics Leadership Corps (MLC) is an instructor administration show that recognizes and creates educator pioneers by joining forces with K-12 school areas to give

explore educated proficient advancement to math educators. Actualized over a three-year range, MLC trains K-12 math instructors to mentor their companions for information driven guidance and make a culture of shared administration and constant enhancement inside the locale. Exercises for instructors incorporate one-on-one and group training, group training workshops, exercise co-arranging, and perception of model math guidance by companions and specialists.

The exploration on the impacts of instructional initiative in connection to understudy accomplishment has concentrated strongly on the important. The essential obligation regarding building up successful schools and raising understudy accomplishment has been given from the government level to the states. The states depend regions to take care of business. Regions have embraced this need to building level executives. This winds up hazardous since principals need to invest more energy specifically keeping up the physical security of the understudies and staff than they do straightforwardly supporting understudy learning. With the heap of duties on the central's plate it is difficult to straightforwardly impact understudy accomplishment. Thus, a great part of the examination looks at aberrant instructional administration systems, for example, assigning assets, advancing school atmosphere, and central instructor connections with an end goal to impact educator conduct and instructional viability. Principals endeavor to impact understudy learning through the endeavors of others as opposed to specifically affecting the understudy themselves. Directors focused on executing direct instructional initiative practices see their obligations in an unexpected way. These principals are effectively occupied with significant associations with individual understudy learning. These people much of the time visit classrooms, screen understudy work, meet with understudies, examine understudy advancement and issues, openly and secretly adulate singular scholarly accomplishment, and give assistance to battling instructors and understudies. Pundits contend coordinate instructional administration is troublesome in complete vast secondary schools (Surtam, 2004).

Statement of the Problem

Indian mathematics teachers were not teaching in an appropriate method. They were just teaching the book oriented mathematical problems and based on the

solutions. They didn't know how to compare the problems with real life example. Also, they didn't know how to explain and teach mathematics in practical way. The teachers had limited knowledge and not had proper basic mathematics education. They were lacking in proper teaching experiences. They found difficulty to solving unlearning problems. The teachers were asked students to memorize the formulae and problems instead of explaining how it was derived. Also, they were failed to apply these formulae in real time application. So students were lost their interest towards mathematics and it affects their higher education.

Research Questions

1. What are the demographic factors of the higher secondary mathematics teachers at Dindigul District South India?
2. What is the level of higher secondary mathematics teachers' instructional leadership at Dindigul District South India?
3. What are the differences between Higher Secondary Mathematics Teachers' Instructional leadership and the demographic factors at Dindigul District South India.

Research Methodology

In this study, helps the teachers to improve instructional leadership practices for higher secondary school mathematics teachers. It leads an in-depth understanding and new insights knowledge. This study is the quantitative and the survive method is used to collect the data analysis. And the sample sizes are 120 teachers. The research will ensure that research, methodology is followed to meet the objectives of the research study:

1. To identify the higher secondary Mathematics teachers' demographic factors gender, age, teaching experience, educational background, type of school at Dindigul District South India.
2. To identify the level of Higher Secondary Mathematics Teachers instructional leadership at Dindigul District South India.
3. To compare the Higher Secondary Mathematics Teachers instructional leadership according to their demographic gender, age, teaching experience, educational background, type of school factors at Dindigul District South India.

Research Instrument and Data Collection

The research instrument is questionnaire. It has two parts, the first one demographic factors, and the second is instructional leadership practices questions. Demographic factors are gender, age, teaching experience, educational background, and type of school. Instructional leadership questions are framed by based on the Weber (1996) five factors. 1. Part 1 be the demographic factors of the participants.

Demographic factors are gender, age, teaching experience, educational background and type of school. Gender is male and female, Age group is started from 25-30 up to 50, Teaching experience starts from 2-5 years up to 17 years, Educational background is bachelor in Science and arts, Master in Science and arts, Bachelor in education, and master in education, Type of school is public school, private school. The participants have to choose any of the following responses. 2. Part 2 be the instructional leadership of the participants

Instructional leadership questions are framed by based on the Weber (1996) five factors. The five factors are defining the school mission, managing the instructional progress, promoting positive learning, observing and improving instruction and assessing the instructional program. The participants have to choose any of the following five response responses 1. Strongly agree, 2. Disagree, 3. Undecided, 4. Agree, 5. Strongly Agree.

Data Analysis

1. **Frequency and Percentage:** to identify the Teachers demographic factor of gender, age, teaching experience, educational background, type of school in Dindigul District South India.
2. **Mean and Standard Deviation:** to identify the instructional leadership of teachers.
3. **MANOVA:** to determine the significant difference on the instructional leadership of the teacher's gender, age, teaching experience, educational background, type of school in Dindigul District South India.
4. **Regression:** to find the significant effects on the instructional leadership of teacher's gender, age, teaching experience, educational background, type of school in Dindigul District South India.

Results and Findings

Based on the research objectives and analyzed data from instrument, this study had the following findings:

Part one: Demographic data from the secondary school mathematics teachers in Dindigul district South India. There were more male respondents than female. According to the age 25-30 were high and the lowest were 31-42. Based on the teaching experience 9-12 respondents were high and the lowest respondents was 17up. Educational background respondents were B.Sc. high and the lowest was M.Ed. Based on the type of the school, public aided school was high and the lowest was public school.

Table 1
Demographic Factors Frequency and Percent

Demographic Factors	Variables	Frequency	Percent
Gender	Male	64	53.3
	Female	56	46.7
Age	25-30	29	24.2
	31-36	21	17.5
	37-42	21	17.5
	43-49	27	22.5
	50 up	22	18.3
Teaching Experience	2-5	23	19.2
	6-8	25	20.8
	9-12	26	21.7
	13-16	25	20.8
	17 up	21	17.5
Educational Background	BSc	33	27.5
	MSc	29	24.2
	B.Ed.	30	25.0
	M.Ed.	28	23.3
Type of School	Public school	32	26.7
	Private school	39	32.5
	Public Aided	49	40.8

Part two: Dependent variable of instructional leadership styles are Managing the instructional Program, Promoting Positive learning, Observing and Improving Instruction, Assessing the Instructional program. And the mean standard deviation was give below. But finding the standard deviation, managing the instructional leadership skill is high and the program, promoting positive learning is lower.

Table 2
Mean and Standard Deviation

Dependent Variable	Mean	Standard Deviation
DSM	14.875	.257
MIP	14.837	.314
PPL	14.956	.271
OII	15.151	.286
AIP	15.285	.292
Total	75.104	.613

Table 3
MANOVA

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1. Gender	.559	1.220	.402	.458	.648
2. Age	.587	.433	.128	1.354	.178
3. Teaching Experience	.805	.446	.166	1.806	.074
4. Educational Background	-.846	.565	-.143	-1.498	.137
5. Type of School	.774	.767	.094	1.008	.315

There was a factually noteworthy distinction in instructional authority style dependent on the auxiliary science instructors as $p < .05$.

Discussion

The examination investigates the circumstance of instructional initiative in broad daylight helped schools, which assumes various jobs in dealing with the instructional program as the fundamental level, trailed by watching and improving guidance, surveying the instructional program. Instructional authority can be prepared through giving different chances to the instructors to try this educating theory. More straightforward instructional activity rehearses are urged to execute to build up an agreeable and intelligent study hall climate. Under this condition, it is important to express the reason for guidance initiative and the ideal results. The blend of instructional administration and goal arranged teaching method can be incorporated into the national instructing procedure to guarantee the instructive quality. It is beneficial to make further investigation of progressively persuasive variables of instructional authority separated

from the segment factors. Extraordinary consideration ought to be paid as far as imaginative showing philosophy, propelled showing innovation, understudies' inspiration to learn, viable information frameworks, and helpful substance. All the exertion and commitment plan to make understudy progress by building up the instructional fitness and administration of educators.

Conclusion

In view of the discoveries in this investigation, the rundown of the ends drawn from this examination is as per the following. This examination uncovered that there is no critical connection between the gender orientation of auxiliary science educators and their instructional authority style. We at that point found that there is a noteworthy relationship between the age of the optional arithmetic instructors and the instructional authority style. Relationship of instructional administration style and training knowledge of the auxiliary arithmetic instructors have a relationship between the showing background and the statistic factors. There is no relationship between the kind of school and their instructional administration style.

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