

## **Emotional Intelligence and Self Regulation Enhance the Physics Teacher's Effectiveness**

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### **Abstract**

A teacher has to face innumerable challenges and play different roles in his/her institution. In the domain of education, it has been reported that teachers who are more self-regulated and emotionally intelligent can better manifest teaching effectiveness. The sample chosen for this study included male and female 60 higher secondary physics teachers from different type of schools namely twenty physics teachers each from government, government aided and self finance higher secondary schools. The findings revealed that both the male and female physics teachers are similar in their emotional intelligence, self regulation and teacher effectiveness. Moreover, there is no significant relationship among the emotional intelligence, self regulation and teacher effectiveness of physics higher secondary teachers.

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### **INTRODUCTION**

A teacher has to face innumerable challenges and play different roles in his/her institution. He/she not only plan lessons but also organize activities, maintain necessary records, make purchases, administer time-table, prepare oral and aural teaching aids, adopt new techniques of communication and motivate the students by words and deeds. A teacher should be motivational, able to adapt to changing circumstances and to relate their subject to everyday life. An effective teacher should be able to display fairness and respect, enthusiasm, enjoyment of social interaction and a caring attitude. In addition, they should have emotional intelligence and self regulation.

### **THEORITICAL BACKGROUND**

Effective teachers cannot reliably be identified based on where they went to school, whether they're licensed, or (after the first few years) how long they have been taught. The best way to assess teachers' effectiveness is to look at their on-the-job performance, including what they do in the classroom and how much progress their students make on achievement tests. For a better understanding of teacher effectiveness, we need to combine information from tests with other measures, such as classroom observations and evaluation from students. Looking at many aspects of a teacher's contribution gives us the best chance to understand it fully. It is a known fact that students are the actual recipients of the teaching and learning process and thus, are in a better position to assess lecturers' teaching excellence. According to Nakpodia (2011), student evaluation is considered as the best approach to evaluate lecturers' teaching effectiveness.

Emotional Intelligence refers to an ability to recognise the meanings of emotions and their relationships to reason and problem solving on the basis of them. Researchers have found that our emotional awareness and ability to handle feelings rather than our I.Q will determine one's success and happiness in all walks of life. A teacher with high emotional intelligence is able to respond appropriately to workplace stress and to

emotional behavior of his co-teachers and students. These abilities greatly enhance job satisfaction [Dong: 2006], lead to high job performance, long term mental health, better outcomes in work groups and leadership qualities [Lopes, Cote and Salovey, 2006], and organizational success [Mount, 2006], protect people from stress and lead to better adaptation, moderates depression, hopelessness etc., Thus, it is concluded that the study of emotional intelligence was quite important as it enabled human beings to respond appropriately to a variety of situations.

According to Delfino, Dettori, and Persico (2010) learning to be self-regulated is crucial for teachers in order to deal with the complexity of the teaching role, which encompasses individual and social aspects. From personal perspective, teachers should equip themselves with self-regulation skills in order to not only follow various goals and tasks, but also sustain and foster their motivation, commitment and effectiveness. From social perspective, self-regulation assists teachers to construct instructional strategies based on students' specific goals, and "to adjust to the ever more frequent curricular revisions required by the fast pace of technological and cultural change" (Delfino, Dettori, & Persico, 2010, p. 300). To create opportunities for insightful instruction, teachers not only need a solid base of content area knowledge along with classroom management skills, but also have to scrutinize their beliefs, motivation, and self-regulatory factors associated with teaching and learning (Dembo, 2001). Indeed, as Randi (2004) pointed out from social cognitive perspective, effective teachers are self-regulated agents who can activate their beliefs to take appropriate actions leading to successful accomplishment of their professional tasks. Viewing from another perspective, it seems plausible to presume teachers who lack self-regulatory skills will find it difficult or even impossible to construct the self-regulation of their students.

## **PURPOSE OF THE STUDY**

Students' assessment or evaluation on teaching effectiveness was introduced as early as the 1915

(Wachtel, 1998). For many decades, the outcome of students' evaluation of teaching effectiveness is seen as an important tool to measure the effectiveness of teaching quality (Spooren & Mortelmans, 2006). It would reflect on qualities associated with good teaching such as lecturers' knowledge, clarity, classroom management and course organization. Besides being a measurement tool on teaching excellence, the results of the evaluation is beneficial in helping the lecturers and learning institution identify the specific areas for improving the teaching effectiveness of the teacher concern (Yeoh, Ho and Chan, 2012). In the domain of education, it has been reported that teachers who are more self-regulated and emotionally intelligent can better manifest teaching effectiveness. In other words, teachers' self-regulatory skills and emotional intelligence tend to have a positive role in successful accomplishment of their professional tasks. Ghonsooly and Ghanizadeh (2011) revealed that the more effective Physics teachers equip themselves with self-regulatory skills and emotional intelligence by having emotional maturity/balance the more capable they judge themselves in their teaching practice.

## **OPERATIONAL DEFINITION OF THE VARIABLES**

### **Teacher Effectiveness**

Salami(2010), consistent and constructive feedback from students, colleagues and school authorities facilitates a teacher in better self-evaluation of his/her abilities.

### **Emotional Intelligence**

Mayer and Salovey and their colleagues defined emotional intelligence as the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate teacher emotions so as to promote emotional and intellectual growth in students.

### **Self Regulation**

Self-regulation is defined as "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2000, p. 14). In other words Self-regulation strategies refer to awareness, knowledge and control of cognition and include planning, monitoring, and regulating.

## **FORMULATION OF RESEARCH QUESTIONS**

- Is there any significant difference between male and female physics teachers in emotional intelligence, self regulation and teacher effectiveness (in terms of Student Evaluation)?
- Are there any significant differences between/among government, government aided and self finance schools physics teachers in emotional intelligence, self regulation and teacher effectiveness (in terms of Student Evaluation)?
- Is there any significant relationship among emotional intelligence, self regulation and teacher effectiveness (in terms of Student Evaluation)?

## **METHODOLOGY**

Normative Survey method was adopted in the present study. Sixty higher secondary physics teachers of Tamil Nadu, in the districts namely, Salem, Dharmapuri and Vellore were used as a sample for the study. In today's competitive world effective teachers are required to build competitive students for this 21<sup>st</sup> century. Hence, a dire necessity is felt to study the teacher effectiveness which is assessed through the student's evaluation, emotional intelligence and self regulation of the Physics teacher's. Therefore, the sample chosen for this study included 60 higher secondary teachers consist of male (33) and female (27) selected in such a way that twenty physics teachers each from government, government aided and self finance higher secondary schools.

**Table- 1**

**Mean difference between Male and Female higher secondary teachers in the Variables of Emotional Intelligence, Self Regulation and Teacher Effectiveness**

Variables	Gender	N	Mean	Standard Deviation	t-value	P-value
<b>Emotional Intelligence</b>	Male	33	113.21	28.843	0.744	0.456 NS
	Female	27	118.56	26.195		
<b>Self Regulation</b>	Male	33	48.06	5.994	1.020	0.308 NS
	Female	27	49.59	5.528		
<b>Teacher Effectiveness – Student Evaluation</b>	Male	33	66.12	5.067	0.687	0.479 NS
	Female	27	65.33	3.453		

NS – Not Significant

It could be inferred from the table that both male and female physics teachers do not manifest significant difference in the selected variables of emotional intelligence, self regulation and teacher effectiveness assessed through student evaluation. It is therefore concluded that in this study both the male and female physics teachers are similar in their emotional intelligence, self regulation and teacher effectiveness assessed through student evaluation.

**Table- 2**

**Mean difference among Government, Government Aided and Self Finance higher secondary teachers in the Variables of Emotional Intelligence, Self Regulation and Teacher Effectiveness**

Variable	Sources of Variation	Sum of Squares	df	Mean Square	F - Value	Level of significance
<b>Emotional Intelligence</b>	Between Groups	1100.133	2	550.067	0.716	NS
	Within Groups	43786.050	57	768.176		
	Total	44886.183	59			
<b>Self Regulation</b>	Between Groups	70.300	2	35.150	1.050	NS
	Within Groups	1908.950	57	33.490		
	Total	1979.250	59			

<b>Teacher Effectiveness – Student Evaluation</b>	Between Groups	206.933	2	103.467	6.316	<b>S</b>
	Within Groups	933.800	57	16.382		
	Total	1140.733	59			

It is inferred from the above table that there is significant mean difference among the teacher effectiveness assessed by students in Government, government aided and self finance. The mean difference thus obtained comparing different type of schools with respect to teacher effectiveness assessed by students identity necessitated further analysis using mean difference. Hence, the difference paved way for the computation of critical ratio between different type of school for physics teachers, which is presented in succeeding table.

**Table- 2 (a)**

**Mean difference between Government and Government Aided higher secondary teachers in the Variables of Emotional Intelligence, Self Regulation and Teacher Effectiveness**

Variables	Type of School	N	Mean	Standard Deviation	t-value	P-value
<b>Emotional Intelligence</b>	Government	20	109.75	25.602	0.862	0.394
	Government Aided	20	117.25	29.313		NS
<b>Self Regulation</b>	Government	20	47.45	6.143	0.643	0.524
	Government Aided	20	48.70	6.148		NS
<b>Teacher Effectiveness – Student Evaluation</b>	Government	20	63.90	4.667	3.075	0.004**
	Government Aided	20	68.30	4.378		S

(\*\* - significant at 1% level; NS – not significant)

It is inferred from the results presented in the above table that physics teachers of government aided schools have significantly higher mean (68.30) in the teacher effectiveness when compared to government school physics teachers (63.90). Hence, it is concluded that government aided physics teachers are more effective than the government physics teachers.

Further, it is also inferred from the table that both government and government aided school physics teachers do not manifest significant difference in the selected variables of teacher’s emotional intelligence and self regulation. It is therefore concluded that in this study both the government and government aided physics teachers are similar in their emotional intelligence and self regulation.

**Table- 2 (b)**

**Mean difference between Government and Self Finance higher secondary teachers in the Variables of Emotional Intelligence, Self Regulation and Teacher Effectiveness**

Variables	Type of School	N	Mean	Standard Deviation	t-value	P-value
<b>Emotional Intelligence</b>	Government	20	109.75	25.602	1.188	0.242
	Self Finance	20	119.85	28.104		NS
<b>Self Regulation</b>	Government	20	47.45	6.143	1.497	0.143
	Self Finance	20	50.10	4.994		NS
<b>Teacher Effectiveness – Student Evaluation</b>	Government	20	63.90	4.667	0.980	0.333
	Self Finance	20	65.10	2.864		NS

NS – Not Significant

It could be inferred from the table that both government and self finance physics teachers do not manifest significant difference in the selected variables of teacher emotional intelligence, self regulation and teacher effectiveness assessed through student evaluation. It is therefore concluded that in this study both the government and self finance school physics teachers are similar in their emotional intelligence, self regulation and teacher effectiveness assessed through student evaluation.

**Table- 2 (c)**

**Mean difference between Government Aided and Self Finance higher secondary teachers in the Variables of Emotional Intelligence, Self Regulation and Teacher Effectiveness**

Variables	Type of School	N	Mean	Standard Deviation	t-value	P-value
<b>Emotional Intelligence</b>	Government Aided	20	117.25	29.313	0.286	0.776
	Self Finance	20	119.85	28.104		NS
<b>Self Regulation</b>	Government Aided	20	48.70	6.148	0.790	0.434
	Self Finance	20	50.10	4.994		NS
<b>Teacher Effectiveness – Student Evaluation</b>	Government Aided	20	68.30	4.378	2.736	0.009**
	Self Finance	20	65.10	2.864		S

(\*\* - Significant at 1% level; NS – Not Significant)

It is inferred from the results presented in the above table that government aided school physics teachers have significantly higher mean on the teacher effectiveness when compared to self finance school physics teachers. From the above it is found that government aided school physics teachers (68.30) have better teacher effectiveness than the self finance school physics teachers (65.10). Hence, it is concluded that government aided school physics teachers are having more effective than the self financeschool physics teachers.

Further it is also inferred from the table that both government aided and self financeschool physics teachers do not manifest significant difference in the selected variables of emotional intelligence and self regulation. It is therefore concluded that in this study both the government aided and self financeschool physics teachers are similar in their emotional intelligence and self regulation.

Table – 3

**Correlation among Emotional Intelligence, Self Regulation and Teacher Effectiveness of thePhysics Higher Secondary Teacher’s.**

Variables	Emotional Intelligence	Self Regulation	Teacher Effectiveness – Student Evaluation
Emotional Intelligence	1	0.847**	0.036
Self Regulation	X	1	-0.033
Teacher Effectiveness – Student Evaluation	X	X	1

It is inferred from the above table that there is significant and high positive correlation between the emotional intelligence and self regulation of the physics higher secondary teachers. Whereas, it is also inferred there is no significant relationship between the variables like emotional intelligence and teacher effectiveness, self regulation and teacher effectiveness of physics higher secondary teachers.

**DISCUSSION**

In the present study it is reported that both the male and female physics teachers are similar in their emotional intelligence, self regulation and teacher effectiveness assessed through student evaluation. This present finding corroborate with the findings of Pachaiyappan and Ushalaya Raj (2014), were it was found that the male and female

school teachers do not differ significantly in their teacher effectiveness; Umeder Malik and Dinesh Kumar Sharma (2013), in their study it reveals that gender of teachers does not bear any difference with their teaching effectiveness. But the present finding contradicts with the findings of Anju Kalita (2012), which reveals that female teachers are more effective than male teachers in secondary schools; Vivekkohli and Sahah Chand (2012), found that male teachers are more effective than the female teachers; Susanta Roy Chawdhury (2015), Sujit Bordhan (2015), and Kamalpreet KaurToor (2014), reported as male secondary school teachers are more emotionally intelligent than female secondary school teachers.

In the present study it is reported that the self financeschool physics teachers are more effective followed by government aided school and then by government higher secondary teachers. This finding corroborate by the findings of Pachaiyappan and Ushalaya Raj (2014), which indicates that the private school teachers were more effective in their teaching followed by government aided, government and corporation school teachers. But it contradicts with the findings of Kamalpreet KaurToor (2014), reported in the study that government secondary school teachers are more emotionally intelligent; Ajay Babu and Mandakini Kumari (2013), reported that maximum number of effective teachers are in government schools than the private school teachers.

In the present study it is reported that there is no relationship among emotional intelligence and teacher effectiveness, self regulation and teacher effectiveness of the higher secondary physics teachers. This finding line-up with **Mohammad Tagi Monstu Toussi and Afsaneh Ghanizadeh (2012)**, illustrated that teacher efficacy had no significant impact on the relationship of self-regulation. But the present finding contradict with Andrea Penrose, Chris Perry and Ian Ball (2007), Kappagoda (2011), and Elizabeth Hebert (2011), Varughese Peter (2012), Mehdi Sarkhosh and Abbi Ali Razaee (2014) and Narehan Hassan et al., (2015) reveals that there is a positive correlation between teacher effectiveness and emotional intelligence.

## EDUCATIONAL IMPLICATIONS

- ✓ For enhancing teacher effectiveness of higher secondary school teachers, there should be change in managerial ideology, a good level of personal relationships and democratic school environment should be provided.
- ✓ Government should take appropriate steps for securing, nurturing and retraining professional teachers, with ultimate goal of keeping their position in the education to deliver goods in effective manner.
- ✓ It is true that emotional intelligence is inherited but still some part of it can be acquired also. In the schools, teachers should be engaged in higher order mental exercises, so that their intellect is further polished and enhanced. They should be free to express their views in all decision-making activities in schools. The school teachers should be encouraged to use the discovery method in their teaching.
- ✓ Efforts should be made to ensure the emotions of teachers are not suppressed rather channelized through various activities like sport, games, stage performances etc. They must learn the power of humour and beauty of emotional and physical wellbeing.

- ✓ Teachers should attend training, workshops and seminars on personality development. Reading books and articles related to emotional intelligence, self regulation and value education are quite helpful for development of the teacher effectiveness.
- ✓ In order to achieve improvement in self-regulation strategies by using diaries, the physics teachers should not be only asked to report their learning activities daily but also maintain diaries some additional training program should be arranged for them regarding self-regulation strategies.
- ✓ Teachers should be encouraged to embark on regular professional development.
- ✓ Teachers should bring their wealth of experience in teaching to the level of the students' aptitude to make classroom interactions more interesting so as to arouse the interest of the students to academic excellence. This would assist in solving the problem of poor academic performance of public higher secondary school student's especially in the subject of physics.

## CONCLUSION

From the present study, the investigator could derive the conclusions that caring teachers who are enthusiastic individual use classroom management skills to share knowledge of subject matter in a manner that links learning objectives to instructional activities using a range of instructional strategies while considering student interests and perceptions. If teacher's emotional intelligence and self regulation are increased in positively using appropriate strategies then teachers may experience less burnout and greater job satisfaction, remain in the profession longer, and be more effective in the classroom. Thus, this study can help a lot in improving the system of education as teachers are the main pillars of education system. The teachers who have good self regulation and emotional intelligence can make teaching interesting and effective and help build better citizens of the nation.

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