LOOK ACADEMIC PUBLISHERS
OPEN ACCESS

INTERNATIONAL JOURNAL OF ENVIRONMENTAL & SCIENCE EDUCATION
2017, VOL. 12, NO. 7, 1623-1632

Impact of Self-Regulated Learning on Teaching-Learning Process among Teacher Educators in Tiruvannamalai District

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ABSTRACT

Self-regulation is a comprehensive concept includes a number of interdependent aspects. It includes both affective capacities (i.e. moods, feelings and emotions) and cognitive capacities (i.e. beliefs, perceptions and knowledge). Learning and attainment are best understood when we acknowledge the interactions between affective and cognitive processes. The purpose of this study is to explore the impact of impact of self-regulated learning on teaching-learning process among teacher educators in Tiruvannamalai District. This study followed descriptive research design. The primary data of the research was collected through structured questionnaire. The main study was conducted among the sample of 110 teacher educators working in ten different Teacher Training Institute located at various part of Tiruvannamalai District. The quota sampling technique was adopted to select samples from population (i.e. from each training institute 11 teacher educators were chosen as sample). The descriptive statistical tools and inferential statistical tools were used for primary data analysis. The results of the study proved that there is a significant attitudinal difference among the teacher educators based on their gender and age group, however, the mean difference among them very nominal and at the same time their mean score is high, which indicates that they accepts self-regulated learning has positive impact on teaching-learning process through use of latest teaching pedagogics and sharing latest information happening in education sector.

KEYWORDS
Self-regulated learning, Teaching-Learning Process, Teacher Educators, Teaching Education

ARTICLE HISTORY
Received 10 January 2017
Revised 19 March 2017
Accepted 11 April 2017

Introduction

The education sector in India is poised to witness major growth in the years to come as India will have world's largest tertiary-age population and second largest graduate talent pipeline globally by the end of 2020. In FY 2015-16, the education market was worth about US$ 100 billion and reached US$ 116.4 billion in FY 2016-17. Currently, higher education contributes 59.7 per

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cent of the market size, school education 38.1 per cent, pre-school segment 1.6 per cent, and technology and multi-media the remaining 0.6 per cent. Education is a vital aspect for the economic and social development of the country. Education refers to the process by which the society through its different institution deliberately transmits its cultural heritage from one-generation to another. Education is viewed as a product of experience, which helps for the manifestation of the personality of an individual. Education is indispensable for the wellbeing and survival of mankind. It is a means of meeting the lifelong needs of the people. It is emphasized that "the end of all education, all training should be man - making. The end and aim of all training is to make the men grow. The training by which the current knowledge and expression of will are brought under control and become fruitful is called education". The main function of our present educational system is towards promotion of quality and excellence, in order to meet the challenges of science and technology, providing wider opportunities for vocational education and the development of human resource potential to its fullest extent. The primary aim of this study is to explore the impact of self-regulated learning on teaching-learning process among teacher educators in Tiruvannamalai District.

Theorıtıcal Framework of the Study

Teacher education involves professional preparation of teachers. The concept of teacher education is undergoing a rapid change throughout the world. It is no longer mere training as conceived earlier. It means the acquisition of that type of knowledge or information, skill and ability which helps a teacher to discharge his/her professional duties and responsibilities effectively and efficiently. Good's Dictionary of Education defines teacher education as "All formal and informal activities and experiences that helps to qualify a person to assume the responsibility as a member of the educational profession or to discharge his/her responsibility most effectively".

Self-Regulated Learnıng

This review explores the concept of self-regulation – which includes the ability to concentrate, become involved in group activities, restrain disruptive and impulsive behaviour, and work autonomously – and its impact on learning and attainment. Self-regulation refers to 'thoughts, feelings and actions that are planned and adapted to the attainment of personal goals' (Zimmerman, 2000). Self-regulation is one of the key concepts in Bandura's *Social Learning Theory* and is described by Senemoglu (2005) as "an individual's influence, orientation, and control over his/her own behaviors. According to Ido Roll and Wine (2015), Self-regulated learning is an ongoing process rather than a single snapshot in time. Self-regulated learning includes setting goals for learning, concentrating on instruction, using effective strategies to organise ideas, using resources effectively, monitoring performance, managing time effectively, and holding positive beliefs about one's capabilities (Schunk and Ertmer, 2000).

The results of earlier studies revealed that there is a positive overall relationship between self-regulation and academic achievement. Children and young people with more adaptive personal skills and learning resources are more likely to succeed academically (Duncan *et al.*,2007; McClelland *et al.*, 2000). Individual elements of self-regulation – e.g. attitudes towards learning, attention and persistence – are also related to academic achievement (Yen *et al.*,

2004). Although the size of the effect of self-regulation is small compared to that associated with prior attainment, it exists independently of prior attainment. Aspects of self-regulation such as attention, persistence, flexibility, motivation and confidence can all be improved as a result of effective teaching and learning practices (Diamond *et al.*, 2007).

3.1. The Self-Regulated Learning Process

Self-regulated learning is a cyclical process, wherein the learner plans for a task, monitors their performance, and then reflects on the outcome. The cycle then repeats as the learner uses the reflection to adjust and prepare for the next task. The process is not one-size-fits-all; it should be tailored for individual learners and for specific learning tasks (Zimmerman, 2008).

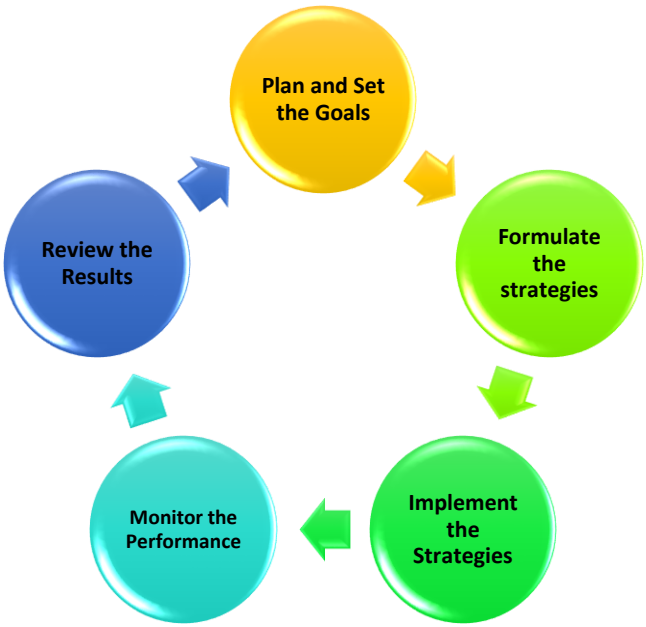

Figure 1. Self-regulated learning Process

The figure 1 presents the major steps in self-regulated learning process. These steps are performed by the student, but instructors play a vital role in guiding and coaching students through each step. The bullet points below provide additional information, and are drawn from Zimmerman (2002) and Zumbrunn et al. (2011).

Self-regulated learning and motivation mediate the effects of emotions on academic achievement. Moreover, positive emotions foster academic achievement only when they are mediated by self-regulated learning and motivation Carolina et.al, (2014). Self-Regulated Learning involves motivational decision about the goal of an activity the perceived difficulty and value of the task, The Self-perception of the learner's ability to accomplish the task the potential benefit of success or liability of failure. Self-Regulated Learning helps the teacher educators to be aware of their own thinking to be strategic and to direct their motivation towards valuable goals. The goal is for teacher educators to learn to be their own teachers.

Research & Methods

This section of the paper describes the methodology of the research. This study followed descriptive research design. It describes the impact of self-regulated learning on Teaching-learning process among Teacher educators in Tiruvannamalai district. The primary data of the research was collected through structured questionnaire. The structured questionnaire has three sections namely personal details section (7 items), self-regulated learning scale (15 items), and teaching-learning process scale (15 items). The attitude towards self-regulated learning and its impact on teaching learning process were assessed through Likert five point agreement scale from 1 – Strongly Disagree to 5 – Strongly Agree. The researcher has developed the questionnaire and verified its reliability and validity through the pilot study before the main study with a sample of 20 teacher educators (i.e. 4 teacher educators from five Teacher training institute at Tiruvannamalai district). The reliability of the questionnaire was verified through Cronbach alpha coefficient which measure internal consistency of the questionnaire. The researcher also verified content validity, discriminant validity and convergent validity of the data collection instrument.

Table 1. Reliability statistics

S. No	Scale	Cronbach Alpha	Result
1	Self-regulated Learning	0.827	Good
2	Teaching-Learning process	0.839	Good

Table 1 describes the reliability statistics of the scales in the questionnaire, since the Cronbach alpha coefficient value falls in the range of 8.0 – 0.9, it indicates questionnaire has good reliability.

Table 2. Discriminant and Convergent Validity

S. No	Indices	Value	Recommended value	Result
1	Construct Reliability / Composite Reliability (CR)	0.74	CR > 0.7 (Nunnally, 1978) and CR > AVE	Good
2	Average Variance Extracted (AVE)	0.67	AVE > 0.5 (Fornell and Larker, 1981)	Good
3	Maximum Shared Variance (MSV)	0.78	MSV > AVE (Hair et al, 2010)	Good
4	Average Shared Squared Variance (ASV)	0.69	ASV > AVE (Hair et al, 2010)	Good

Table 2 summarizes the indices of the discriminant validity and convergent validity of the questionnaire, which ensures the validity of the questionnaire.

The primary data gathered was codified, organized and tabulated in IBM SPSS 23.0 software for data analysis. The descriptive statistical tools and inferential statistical tools were used for primary data analysis. However, the secondary data gathered from various sources such as newspapers, books, and online sources.

The main study was conducted among the sample of 110 teacher educators working in ten different Teacher Training Institute located at various part of Tiruvannamalai District. The quota sampling technique was adopted to select samples from population (i.e. from each training institute 11 teacher educators were chosen as sample).

Hypothesis Testing & Results Discussion

1.1.Demographic background of respondents

This section of the paper discusses about the primary data analysis and results. The demographic profile of the respondents was tabulated in table 3.

Table 3. Demographic profile of the respondents

S. No	Category	No. of Respondents	Percentage
1	**Sex**		
	Male	72	65.45
	Female	38	34.55
2	**Age Group**		
	Up to 30 Years	23	20.91
	30 – 40 Years	56	50.91
	More than 40 Years	31	28.18
2	**Designation**		
	Juniour Grade	27	24.55
	Middle Grade	47	42.73
	Senior Grade	36	32.73
4	**Teaching Experience**		
	Up to 5 Years	26	23.64
	5 – 10 Years	37	33.64

	10 – 20 Years	31	28.18
	More than 20 Years	16	14.55
	Total	**110**	**100**

The majority (65%) of the respondents were male and remaining (35%) were female. 21% of the respondents were belong to the age group of 30 years, whereas 51% of them falls under the age group of 30-40 years and rest (28%) of them comes under the age group of more than 40 years. 25% of the respondents were working in junior grade, 43% of them working in middle level grade, and 33% of them working in Senior grade. With regard to teaching experience, 24% of them were having up to 5 years, 34% of them were having 5-10 years, 28% of the respondents were having 10-20 years and rest (15%) of them were having more than 20 years of teaching experience in Teacher training institutes located at Tiruvannamalai District.

1.2.Independent samples t test : Gender Vs. Self-Regulated Learning

Ha1: Significant attitudinal difference subsists between male and female teacher educators with regards to Self-regulated learning.

Table 4. Independent T Test : Gender Vs. Self-Regulated Learning

Dimensions	Department	N	Mean	Std. Deviation	t statistic	Significance value
Self-Regulated Learning	Male	72	52.56	7.648	3.563	0.002**
	Female	38	49.38	6.232		

** symbolizes the significant at 0.01 level

Inference:

Table 4 shows the results of the independent test for gender vs attitude towards self-regulated learning. The significance value of self-regulated learning was significant at 1% level of significance. Therefore, it results that Ha1 hypothesis is accepted, which means the significant attitudinal difference subsists between male and female teacher educators with regards to self-regulated learning, which indicates that male teacher educators were having higher level of attitude towards self-regulated learning rather than female teacher educators.

1.3. Independent samples t test : Gender Vs. Impact of self-regulated learning on Teaching Learning Process.

Ha2: Significant attitudinal difference subsists between male and female teacher educators with regards to impact of self-regulated learning on Teaching Learning Process.

Table 5. Independent T Test : Gender Vs. Teaching Learning Process

Dimensions	Department	N	Mean	Std. Deviation	t statistic	Significance value
Teaching Learning Process	Male	72	56.15	4.124	5.171	0.003**
	Female	38	54.98	5.239		

** symbolizes the significant at 0.01 level

Inference:

Table 5 expresses the results of the independent test for gender vs attitude towards self-regulated learning. The significance value of self-regulated learning was not significant at 1% level of significance. Therefore, it results that Ha2 hypothesis is rejected, which means the significant attitudinal difference subsists between male and female teacher educators with regards to impact of self-regulated on Teaching Learning Process, which indicates that male teacher educators perceive highest level of attitude with a mean score of 56.15.

5.4. One-Way ANOVA- Age Group Vs. impact of self-regulated learning on Teaching Learning Process

Ha3: Significant difference of perceptions exists based on the age group of teacher educators with regards to impact of self-regulated learning on Teaching Learning Process.

Table 6. One-Way ANOVA Descriptive– Age Group Vs. Impact of self-regulated learning on Teaching Learning Process.

Age Group	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Up to 30 Years	23	49.38	10.633	0.613	39.51	53.35
30 – 40 Years	56	46.21	13.287	0.621	31.04	52.89
More than 40 Years	31	42.44	9.570	0.496	30.07	48.63
Total	110	44.22	10.443	0.316	25.62	52.82

Inference

The one-way analysis of variance (ANOVA) test was conducted to examine the differences in age group of teacher educators with regards to their perception towards impact of self-regulated learning on Teaching Learning Process and the mean and standard deviations of all the subgroups were summarized in Table 6. From the table, it is ostensible that the teacher educators belongs to the age group of up to 30 years perceive highest level of attitude towards impact of self-regulated learning on Teaching Learning Process with a highest mean score of 49.38, which is trailed by 30-40 years (46.21), and more than 40 years (42.44).

Table 7. One-Way ANOVA Results– Age Group Vs. Impact of self-regulated learning on Teaching Learning Process.

Variables		Sum of Squares	df	Mean Square	F-statistic	Sig.
Age Group	Between Groups	2137.923	2	248.081	12.682	0.002**
	Within Groups	21453.123	107	39.126		
	Total	23591.046	109			

** implies significant at 99% confidence level.

Table 7 condenses the results of One-way ANOVA test performed to examine and compare the Age group differences with regards to perception of impact of self-regulated learning on Teaching Learning Process. The results sufficiently exposed that there is a significant variation exists in perception of impact of self-regulated learning in teaching learning process among the different age group of teacher educators, Therefore Ha3 hypothesis is accepted and it is significant at 99% confidence level.

Table 8. Post Hoc test using Tukey HSD – Impact of self-regulated learning on Teaching Learning Process.

Dependent Variable	(I) Age group	(J) Age group	Mean Difference (I-J)	Std. Error	Sig.
Impact of Self-regulated learning on Teaching Learning Process	Up to 30 Years	30-40 Years	3.17*	0.125	<0.001**
		More than 40 Years	6.94*	0.255	<0.001**
	30-40 Years	Up to 30 Years	-3.17*	0.715	<0.001**
		More than 40 Years	3.77*	0.238	<0.001**
	More than 30 Years	Up to 30 Years	-6.94*	0.545	<0.001**
		30-40 Years	-3.77*	0.328	<0.001**

** signifies the mean difference is significant at 0.01 level respectively.

Table 8 condenses the results of the Posthoc test performed using Tukey HSD. From the results so far, it is understood that there are statistically significant differences between the groups as a whole. The **Multiple Comparisons** table mentioned above presents which groups differed from each other. It is understood from the table that there is a statistically significant

difference in the age group of the teacher educators' perceptions towards impact of self-regulated learning towards teaching learning process. The teacher educators of up to 30 years age group significantly differ from the other categories with respect to overall perception towards impact of self-regulated learning on teaching-learning process.

Conclusion

Self-Regulated learning practices is not only required for students, teachers, and teacher educators, it is need of the hour for everyone, those who want to shine in their profession and reach their dream position in their career. Due to hyper competition in the market lot of changes are happening because of innovation and technological advancement, so even the people in industry should practice self-regulated learning to keep themselves updated in their respective profession. The results of the study proved that there is a significant attitudinal difference among the teacher educators based on their gender and age group, however, the mean difference among them very nominal and at the same time their mean score is high, which indicates that they accepts self-regulated learning has positive impact on teaching-learning process through use of latest teaching pedagogics and sharing latest information happening in education sector.

Disclosure statement

The Authors reported that no competing financial interest.

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