SELF REGULATED LEARNING AND ACADEMIC ACHIEVEMENT OF HIGHER SECONDARY STUDENTS

Dissertation submitted to Tamil Nadu Teachers Education University, Chennai, in partial fulfillment of the requirements for the degree of

MASTER OF EDUCATION

by

SREEDEVI.M

Reg.No. M1511556

under the guidance and supervision of

Dr. DEEPA, R.P.

N.V.K.S.D.COLLEGE OF EDUCATION

(Reaccredited by NAAC with A grade)

ATTOOR, KANNIYAKUMARI DISTRICT

2015-2017

Sreedevi.M.,

M.Ed. Student,

N.V.K.S.D.College of Education,

Attoor, Kanniyakumari District.

DECLARATION

I declare that the dissertation entitled SELF REGULATED LEARNING AND ACADEMIC ACHIEVEMENT OF HIGHER SECONDARY STUDENTS submitted by me for the degree of Master of Education is the record of research work carried out by me during the period from 2015-2017 under the guidance of Dr.Deepa.R.P. and has not formed on the basis for the award of any Degree, Diploma, Associateship, Fellowship, Titles in this university or any other university or other similar Institution of high learning.

Place: Attoor Signature of the Candidate

Date:

Dr.Deepa,R.P.,

Assistant Professor,

N.V.K.S.D.College of Education,

Attoor, Kanniyakumari district.

CERTIFICATE

I certify that the dissertation entitled SELF REGULATED LEARNING AND ACADEMIC ACHIEVEMENT OF HIGHER SECONDARY STUDENTS submitted for the degree of Master of Education by SREEDEVI.M is the record of research work carried out her during the period from 2015-2017 under my guidance and supervision and that this work has not formed the basis for the award of any Degree, Diploma,Associate ship, Fellowship, Titles in this university or any other university or other similar Institution of higher learning.

Place: Attoor Signature of the supervisor

Date:

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Place: Attoor SREEDEVI.M

Date:

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CHAPTER-I

INTRODUCTION

Learning occupies the central place in the process of education. The behavior of an individual is changed through direct or indirect experiences of learning. According to Hill (2002), learning occurs when experience causes a relatively permanent change in an individual's knowledge or behavior. The change may be deliberate or unintentional for better or for worse, correct or incorrect and conscious or unconscious. To qualify as learning, this change must be brought about by experience by the interaction of a person with his or her environment. Lachman (1997) defines learning as a change in behavior that is due to experience. Learning is any relatively enduring change in potential behavior that results from experience (Baron, 1995).

Cognition is a general term used to denote thinking, decision making, language and many other aspects of our higher mental processes. The term cognition means knowledge or understanding, but more broadly refers to all the processes by which we know about the world, especially perception, memory and thinking. In education, metacognition plays an important role and it is closely related to the learning styles of the learners. Metacognition refers to higher order thinking that involves active control over the thinking process in learning. Metacognitive knowledge is used to monitor and regulate cognitive processes such as reasoning, comprehension and problem solving. Metacognition is the strategic application of the declarative, procedural and conditional knowledge to accomplish goals and solve problems. Metacognition refers to "what we know about what we know" (Simon& Bjork, 2001).

Tailor (1999) defines metacognition as “an appreciation of what one already knows, together with a correct apprehension of the learning task and what knowledge and skills it requires combined with the ability to make correct inferences about how to apply one’s strategic knowledge to a particular situation and to do so efficiently and reliably.” The concept of metacognition includes two components namely knowledge of cognition and regulation of cognition. Linder and Harris (1992) suggested that the self-regulated learner is “organized, autonomous, self-motivated, self-monitoring, self-instructing, in short, behaves in ways designed to maximum the efficiency and productivity of the learning process.

Self Regulated learning refers to the learning in which students are independent, self initiative and self monitor one’s own learning. Self regulated learning results in higher student’s achievement. Self regulated learners are self motivated to achieve their goals. It enables the students to develop a set of constructive behaviors that can positively affect their learning.

Zimmerman (2001) defines self-regulated learning as the degree to which students are metacognitively, motivationally and behaviorally active in their own learning processes. Self-Regulation is essential to the learning processes (Jarvela & Jarvenoja, 2011; Zimmerman, 2008). It helps the students to create better learning habits and strengthen their study skills (Wolters, 2011). It applies various learning strategies to enhance academic outcomes and monitor their performance (Harris etal. 2005) and evaluate their academic progress (De Bruin, Thuide & Camp, 2011).

Self Regulated learning is a cognitive, motivational and contextual element. Self-Regulated Learning is essential for the higher secondary students

is one who learned to plan, control and evaluate their cognitive, motivational, effective, behavioral or contextual process towards the academic achievement. Zimmerman (1986) defined self-regulated learners as, those who are metacognitively, motivationally and behaviorally active participants in their own learning process.

Academic Achievement has been considered as an important factor in the process of learning. In this rapidly changing world and with the growing advancement in science and technology the role of education has become vital. At the time of admission, for entrance in job, for scholarship for further studies academic achievement is the only criterion. The world is becoming more and more competitive. Quality of performance has become the key factor for personal progress.

Good(1945) defined academic achievement is the knowledge attained or skills developed in school subjects usually designated by the test scores or by marks assigned by the teacher. One of the important characteristics of higher secondary students who self regulate their learning is the control of their motivation and emotion towards their academic achievement. If self-regulated learning and its various components are used effectively by higher secondary students, there exists an unprecedented opportunity to further academic achievement.

NEED AND SIGNIFICANCE OF THE STUDY

Self- regulated learning is an important aspect of student learning and academic achievement in the classroom context. Self-regulated learning includes student's metacognitive strategies of planning, monitoring and modifying their cognition. It is a process through which students activate and sustain cognition, behavior and that will tends a student to attain the goals.

Zimmerman & Kitsantas (1999) considered that students' self-reflection-phase is a source of motivation to improve their writing skill, self-efficacy and task interest or valuing.

Lie & Tanjia (2002) viewed that high achiever's self regulation ability was higher than that of low achievers. The importance of self-regulated learning lied in providing students with successful experience in order to enhance their intrinsic motivation and promote their self-regulation ability (Boekaerts, Pintrich & Zeidner, 2000). Zimmerman & Pons (1986) had reported that self-regulation ability was the best predictor of student's learning performance.

Kumari & Chamundeswari (2015) reported that academic achievement of students could be improved by enhancement of their self- regulated learning. Mutua (2014) revealed that there was a significant relationship among academic motivation, self-regulated learning and academic achievement.

The higher secondary student's period is a very crucial period. Most of the development takes place during this period. All the three domains are very active during this period. Broadly speaking, it refers to learning that is guided by metacognition (thinking about one's thinking), strategic action (planning, monitoring, and evaluating personal progress against a standard), and motivation to learn.

The self regulatory learning plays a major concern in the academic achievement of the higher secondary students in their future life. So the investigator made an attempt to study the correlation between the self-regulated learning and academic achievement of higher secondary school students.

STATEMENT OF THE PROBLEM

The problem selected for the study was entitled as SELF REGULATED LEARNING AND ACADEMIC ACHIEVEMENT OF HIGHER SECONDARY STUDENTS.

OPERATIONAL DEFINITION OF THE KEY TERMS

Self Regulated Learning

Pintrich (2000) described self-regulated learning as, "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate and control their cognition, motivation and behavior guided and constrained by their goals and the contextual features in the environment".

Here the investigator means the scores obtained by the higher secondary school students in the self regulatory inventory having the dimensions of metacognition, motivation and behavior.

Academic Achievement

Academic Achievement is an outcome of the instruction provided to the students in schools, which is determined by the scores secured by the students in the examination. Here the investigator means the scores obtained by students in their quarterly examination.

Higher Secondary Students

In this study, the higher secondary students means the students who are studying in class XI of various higher secondary schools in KanyaKumari District, following TamilNadu State board syllabus, during the academic year 2016-2017.

Objectives of the Study

1. To construct and validate a self-regulated learning inventory for higher secondary school students.
2. To study the level of self-regulated learning of higher secondary school students.
3. To study the level of academic achievement of higher secondary school students.
4. To study the correlation between the self-regulated learning and academic achievement of higher secondary school students.
5. To study whether there exists any significant difference in the mean scores of self-regulated learning of higher secondary school students with respect to-
    i. Gender
    ii. Locale of the school
    iii. Type of Family
    iv. Religion
    v. Community
    vi. Medium of Instruction
    vii. Type of Management
    viii. Nature of School
    ix. Educational qualification of father
    x. Educational qualification of mother

6. To study whether there exists any significant difference in the mean scores of academic achievement of higher secondary school students with respect to-
    i. Gender
    ii. Locale of the school
    iii. Type of family
    iv. Religion
    v. Community
    vi. Medium of Instruction
    vii. Type of Management
    viii. Nature of School
    ix. Educational qualification of father
    x. Educational Qualification of Mother

Hypotheses framed for the study

1. There exists significant correlation between self-regulated learning and academic achievement of higher secondary students.
2. There exists significant difference in the mean scores of self-regulated learning and academic achievement of male and female higher secondary students.
3. There exists significant difference in the mean scores of self-regulated learning and academic achievement of urban and rural schools of higher secondary students.
4. There exists significant difference in the mean scores of Self-Regulated learning and academic achievement of Nuclear and Joint family higher secondary students.

5. There exists significant difference in the mean scores of self-regulated learning and academic achievement of Hindu, Christian and Muslim higher secondary students.
6. There exists significant difference in the mean scores of self-regulated learning and academic achievement of Forward Caste, Backward Caste, Most Backward Caste, Scheduled Caste and Scheduled Tribe higher secondary students.
7. There exists significant difference in the mean scores of self-regulated learning and academic achievement of English and Tamil Medium higher secondary students.
8. There exists significant difference in the mean scores of self-regulated learning and academic achievement of higher secondary students of Government, Aided and Private higher secondary school.
9. There exists significant difference in the mean scores of self-regulated learning and academic achievement of higher secondary students of Boys, Girls and Co-Education.
10. There exists significant difference in the mean scores of self-regulated learning and academic achievement among higher secondary students whose father having different educational qualification.
11. There exists significant difference in the mean scores of self-regulated learning and academic achievement among higher secondary students whose mother having different educational qualification.

Methodology in brief

Normative survey method was employed for the study The Sample for the study consisted of higher secondary students studying in the class XI of various

higher secondary schools in Kanniyakumari district following state board syllabus during academic year 2015-2016. The sample size of the study is limited to 400 higher secondary school students. Simple random sampling technique is used for collecting the data.

Tools

The following tools are used for collecting the data.

a. Self-Regulated Learning Questionnaire (Sreedevi and Deepa, 2016).
b. Academic Achievement (Scores obtained by students in their quarterly examination)
c. General Data Sheet

Statistical Techniques

The data collected was analysed using the following statistical techniques

1. Arithmetic Mean
2. Standard deviation
3. t test
4. ANOVA followed by scheffee procedure.
5. Pearson's product moment method of Correlation Co-efficient

Delimitation of the study

The scope of the study is limited in following ways.

1. The sample size is limited to 400 higher secondary students.
2. The sample is limited to KanniyaKumari district only.

Organization of the report

The present investigation is reported under five chapters.

Chapter I

Deals with introduction, need and significance of the study, statement of the problem, operational definitions of the key terms, objectives of the study, hypotheses formulated, methodology in brief and delimitations of the study.

Chapter II

Deals with the theoretical overview of the various concepts related with self regulated learning and academic achievement and related studies conducted in the area.

Chapter III

Describes the development of the self regulated learning questionnaire for higher secondary students, plan and data collection procedure and statistical techniques used.

Chapter IV

Includes the details regarding the analysis of data, results and their interpretation.

Chapter V

Deals with study in retrospect, major findings of the study, conclusions, educational implications and suggestions for further research in this area.

CHAPTER-II

REVIEW OF RELATED LITERATURE\

Review of related literature is nothing but looking for sources of information relevant to research project. It is the task that begins with a research for a suitable topic that continues throughout the duration of the research project which necessarily shows how the problem under investigation relates to previous research studies.

According to Good, Barr and Scats “A survey of related literature helps to show whether the evidence already available to solve the problem adequately without further investigation and thus avoid the risk of duplication”. Review of related literature, besides allowing the researcher to acquaint himself with the current knowledge in the field or area in which an investigator is going to conduct research. The survey of related studies implies locating studying and evaluating reports of the relevant researchers, study of the public articles, going through related portions of encyclopedia and research abstracts.

Lehman says the review of literature is a very significant aspect of the research process. It helps the researcher by giving him some information about the status of knowledge in the area he intends to study. It should provide the researcher with ideas of the type of study or the type of design that he may eventually use in conducting his research. According to Mouly, “the survey of the literature is a crucial aspect of the planning of the study and invariably is a wise investment”.

SELF REGULATED LEARNING

Self Regulated learning refers to the learning in which students are independent, self initiative and self monitor one’s own learning. According to

Heikkila & Lonka,(2006), Self Regulated Learning can be defined as an active process in which students establish the objectives leading their learning, trying to monitor, regulate and control their cognitions, motivation and behavior. Self regulated learning results in higher student's achievement. Self regulated learners are self motivated to achieve their goals. It enables the students to develop a set of constructive behaviors that can positively affect their learning.

Zimmerman (2001) defines self regulated learning as the degree to which students are metacognitively, motivationally and behaviourally active in their own learning processes. Self-Regulation is essential to the learning processes (Jarvela & Jarvenoja, 2011; Zimmerman, 2008). It helps the students to create better learning habits and strengthen their study skills (Wolters, 2011), It applies various learning strategies to enhance academic outcomes. (Harris, Friedlander, Sadler, Frizzelle& Graham 2005), monitor their performance and evaluate their academic progress (De Bruin, Thuide & Camp, 2011).

Zimmerman **(**1989) defined self regulated learning strategies as "actions and processes directed at acquiring information or skill, purpose and perceptions by learners". According to Zimmerman and Schunk (1989) self regulated learning as student's self-generated thoughts, feelings and actions which are systematically oriented towards the attainment of their goals. Pintrich (1995) says that self regulated learning is a self-initiated action that involves goal–setting and regulating one's efforts to reach the goal, self-monitoring, time management, physical and social environment regulation. Boekaerts (1999) views self-regulated learning as a series of reciprocally related cognitive and affective processes related cognitive and affective processes that operate together on different components of the information processing system. According to Pintrich (2000) ,

self-regulated learning as an active, constructive process whereby learners set goals for their learning and attempt to monitor, regulate and control their cognition, motivation and behaviour, guided and constrained by their goals and contextual features in the environment. Zimmerman (2000) said that self-regulated learning refers to self-generated thoughts, feelings and actions that are planned and cyclically adapted to the attainment of personal goals.

Dimensions of Self-Regulated Learning

Zimmerman (1990) argues that the three dimensions of self-regulated learning are metacognitive processes, motivational processes and behavioural processes.

Metacognitive Processes

In terms of metacognitive processes, self-regulated learners plan, set goals, organize, self-monitor and self-evaluate at various points during the process of acquisition. People with high level of metacognition possess

- Divergent thinking
- Problem solving Ability
- Creative thinking
- Decision Making
- Planning

Motivational Processes

In terms of motivational processes, these learners report high self-efficacy, self-attributions and intrinsic task interest (Borkowsi etal, Schunk 1986; Zimmerman, 1985). To observers, they are self-starters who display extra ordinary effort and persistence during learning. Highly motivated students possess,

- Setting Goals
- Innovative method of learning
- In-depth knowledge about particular concept
- Active involvement in learning

Behavioural Processes

In their behavioural processes, self-regulated learners select structure and create environments that optimize learning (Henderson, 1986: Wang& Peverly, 1986: Zimmerman & Martinez- Pons, 1986). They seek out advice, information and places where they are most likely to learn; they self-instruct during acquisition and self-reinforce during performance enactments (Diaz & Neal, Rohrkemper 1989). Students with good behavior possess,

- Self-Confidence
- Help Seeking
- Time Keeping
- Goal oriented
- Self-evaluation

Characteristics of self-regulated learners

The following characteristics differentiate students who self-regulate their learning from those who do not (Corno, 2001; Weinstein, Husman and Dierking, 2000; Winne, 1995; Zimmerman, 1998, 2000, 2001, 2002);

i) They are familiar with and know how to use a series of cognitive strategies (repetition, elaboration and organization) which help them to attend to, transform, organize, elaborate and discover information.

ii) They know how to plan, control and direct their mental processes towards the achievement of personal goals

iii) They show a set of motivational beliefs and adaptive emotions such as high sense of academic self-efficacy, the adoption of learning goals, the development of positive emotion towards tasks, as well as the capacity to control and modify these, adjusting them to the requirements of the task and of the specific learning situation.

iv) They plan and control the time and effort to be used on tasks, and they know how to create and structure favourable learning environments, such as finding a suitable place to study and help-seeking from teachers and classmates when they have difficulties.

v) They show greater efforts to participate in the control and regulation of academic tasks, classroom climate and structure.

vi) They play a series of volitional strategies and avoid external and internal distractions, in order to maintain their concentration, effort and motivation while performing academic tasks.

Self-Regulated Learning strategies for students

To promote Self-regulated learning in the classroom teachers must teach students the self-regulated processes that facilitate learning. These processes often include; Goal setting (Winne& Hadwin, 1998; Wolters, 1998), Planning (Zimmerman, 2004; Zimmerman & Risemberg, 1997), Self- Motivation (Corno, 1993; Wolters,2003; Zimmerman, 2004), Attention control (Harnishferger,1995; Kuhl,1985; Winne,1995), Flexible use of strategies (Van den Broek,Lorch, Linderholm& Gustafson; Winne,1995), Self-Monitoring(Butler &

Winne, 1995; Carver& Scheier, 1990), Appropriate Help-seeking (Butler,1998; Ryan, Pintrich& midgley,2001) and Self- evaluation (Schraw & Moshman,1995). The following are the strategies for promoting self-regulation among the learners.

i) Goals can be thought of as the standards that regulate an individual action (Schunk, 2001). Teachers should set smart goals to earn good grade in the examination.

ii) Planning occurs in three stages, setting a goal for a learning task, establishing strategies for achieving the goal and determining how much time and resources will be needed to achieve the goal (Schunk, 2001). Teacher should insist the importance of planning for detailed understanding of the task.

iii) Self-Motivation is an important process in self-regulation because it requires learners to assume control over their learning (Corno, 1993).

iv) Teachers could help the students to control their attention to become self-regulate learners (Winne, 1995). Attention control is a cognitive process that requires significant self –monitoring (Harnischfeger, 1995).

v) Successful learners are able to implement multiple learning strategies as needed to facilitate their progress towards their desired goals. (Paris& Paris, 2001).

vi) To become strategic learners, students must assume ownership for their learning and achievement outcomes (Kishner etal. 2010). Self-regulated learners take on this responsibility by monitoring their progress towards learning goals.

vii) Teachers can promote positive help seeking behaviours by providing students with on-going progress feedback that they can easily

understand and allowing students opportunities to resubmit assignments after making appropriate changes (Ryan etal, 2001).

viii) Students are more likely to become self-regulated learners when they are able to evaluate their own learning, independent of teacher-issued summative assessments (Winne& Hadwin, 1998). So students self evaluation could be promoted.

ix) Students with identities consistent with intellectual curiosity may be more apt to engage in Self-regulated learning (Wang & Holcombe, 2010). Ultimately, student's social identities can influence their academic behaviours and educational goals (Montalvo & Torres, 2008). Therefore the intellectual curiosity could be raised through some thought provoking situations.

Theories of self–regulated learning

Self-regulated learning does not occur automatically; rather, students approach learning with goals and the extent to which they self-regulate depends on motivational factors such as their commitment to their goals, their beliefs about the likely outcomes of their action, and their self-efficacy or personal beliefs about their capabilities to learn or perform actions at designated levels. Although there are various cognitive self-regulated learning theories, three that have been applied extensively to school learning are information processing, social constructivists and social-cognitive theories.

Information Processing Theory

Information processing theory stresses cognitive functions such as attending to perceiving, storing and transforming information which are the basic elements for self-regulation.

Vygotsky's Social constructivist theory

Vygotsky's theory of development provides a social constructivist account of self-regulation. Lev Vygotsky (1896-1934) believed that people and their cultural environments constitute an interacting social system.

Social-cognitive theory

According to Bandura's (1977) social-cognitive theory, individuals possess a self-system that enables them to exercise a measure of control over their thoughts, feelings, motivation and actions. This self-system encompasses one's cognitive and affective structure and provides reference mechanisms and a set of sub-functions for perceiving, regulating and evaluating behaviour. It results from interplay between the self and environmental variables and personal factors.

Rohrkemper & Corno's intrinsic motivation theory

Rohrkemper and Corno (1988) suggested that teachers can set the stage for the development of self-regulated learning by emphasizing classroom features that foster intrinsic motivation to learn, use of a variety of activities and teaching methods and frequent provision of student choice to accommodate individual differences in preferences and interests, students discussion of the content, pursuance of topics in depth through related activities that build towards understanding and application of significant networks of knowledge and provision of feedback that is timely, informative, encouraging and oriented towards private support of learning rather than public comparison of performance, within this context, teachers then can promote self-regulated learning more directly by,

i) Clarifying goals, modelling strategies and otherwise working to ensure that the students learning is meaningful and strategic and

ii) Withdrawing these learning supports when they are no longer needed and providing opportunities for students to work with increasing autonomy on tasks that challenge them to integrate and apply what they are learning. Corno and Rohrkemper ideas about self-regulated learning are useful extensions of intrinsic motivation theory because they suggest that in addition to finding ways to capitalise on students exciting intrinsic motivation to engage in other activities, teachers can model and encourage the development in students of intrinsic motivation to engage in academic activities.

ACADEMIC ACHIEVEMENT

The dictionary of education defines achievement as "Accomplishment of proficiency of performance in a given skill or body of knowledge'. The success of an individual in his later life is not determined by high academic achievement. It is only by developing self-reliance in school and becoming self adjusted in home that one can hope to be successful individual in future.

According to Dennis Bason and Harold V. Bernard (1980). The concept of achievement involves the interaction of three factors viz. Aptitude for learning, readiness for learning, opportunity for learning.

Academic achievement is the knowledge attained or skills developed by the test score or by m arks assigned by the teacher or both. It also the achievement of pupils in their academic subjects such as writing, arithmetic and history as contrasted with skills developed in such areas as arts and physical education. The academic achievement most likely seems to be one of the predictors of pupil's success in general and pupil's success in their career in particular.

Academic achievement is a very board term which indicates generally the learning outcome of pupils. Achievement of the learning outcomes requires a series of planned and organized experiences, hence learning is called a process. Learning affects major areas of behaviour of pupils such as cognitive, affective and psychomotor domains.

Academic achievement of the learner is the primary concern of all types of educational endeavours. Particularly at the secondary school stage, great emphasis is laid on achievement right from beginning of formal education.

According to Good (1945), " Academic achievement is the knowledge attained or skills developed in school subjects usually designated by the test scores or by marks assigned by the teacher or by both". The word achievement is generally applied to the academic status of the student in different subjects or as a whole. It just means what pupil has learnt in different subjects achievement means one's learning attainment; accomplishment, proficiencies etc. Achievement is directly related to pupil's growth and development in educational situations.

In Schools mostly three types of examinations are conducted. They are Quarterly Examination, Half yearly Examination and Annual Examination. Besides these examinations other tests like unit test, midterm test, class test etc are also conducted in almost all the schools. The marks obtained by the higher secondary students during the quarterly examination were taken as academic achievement scores for the present study.

Studies related to Self- regulated learning and Academic achievement

Sen Senol (2016) conducted a study on the relationship between Secondary school students Self Regulated Learning Skills and Chemistry achievement. The main objective of the study was to examine the relationships

between Self Regulated learning skills and Chemistry achievement in Turkish secondary school students. The Sample of 481 Secondary School Students was taken. The instruments used were Achievement Goal Questionnaire, Motivated Strategies for Learning Questionnaire and Electro Chemistry concept test. The results showed that student's task value, performance approach goals, time and study environment management significantly positively correlated with achievement. Path analysis demonstrated that metacognitive learning strategies, mastery approach goals and effort regulation were predictors of student's time and study environment management. Moreover effort regulation, metacognition learning strategies and mastery approach goals were found to have indirect effects which are mediated by time and study environment management.

Archana & Chamundeswari, (2015) conducted a study on Parental involvement, Self-Regulated learning and Academic Achievement of students. The objectives were i. To study the parental involvement of the student. ii. To study the self-regulated learning and academic achievement of students. iii. To find out the relationship between parental involvements, self-regulated learning and academic achievement of students. Survey method was used to select a sample of 300 students at the higher secondary level. The Parental Involvement Inventory (Chopra and Sahoo, 2006) was used to study the parental involvement. Self regulated learning scale was used to assess self-regulated learning of students. Marks scored by students in their quarterly examination were taken for academic achievement. They found that there was a significant correlation between parental involvements; self regulated learning and academic achievement of students. A significant difference was found between the students at the higher secondary

level in state, matriculation and central board schools, pertaining to parental involvement; self regulated learning and academic achievement.

Daniela Popa (2015) conducted a study on The relationship between Self-Regulation, Motivation and performance at Secondary school students. The main objective of the study was to find out the identification of the motivational factors and self-regulated learning that influence the level of school performance of secondary school students. Sample of 270 secondary school students selected by random methods. The instruments used were the Academic Self-Regulation Questionnaire and Motivational Strategies for Learning Questionnaire. The result of the study revealed that the competence of self-regulated learning had a strong impact on the level of attainment achieved by students enhancing the relationship between motivation and performance.

Chika, et al (2015) studied the effect of Self-Regulated Learning Approach on Junior Secondary Students Achievement in Basic Science. Sample of 100 students from two co-educational schools were drawn for the study through random sampling technique. Basic Science Achievement Test (BSAT) was the instrument used to collect data. The findings of the study revealed that the Self-regulated learning strategy enhanced higher student's achievement in basic science than the conventional method.

Mofrad, & Pourghaz (2015) examined the role of Self Regulated Learning Strategies in Students Academic Performance. The tool used was Motivated strategies for Learning Questionnaire (MSLQ). The samples of 475 students were selected through cluster stratified random sampling. The findings of the study revealed that the self- regulated learning strategies and academic performance variables were compared according to demographic characteristics of gender and

grade there was only significant differences in gender and grades of academic performance, but there was no significant difference in other variable.

Tunde (2014) conducted a study on Self Regulated Strategies on Academic Performance of Students in Senior Secondary School Chemistry, Ondo State, Nigeria. The main objective of this study was to find out the effects of self-regulated learning strategies on student's learning and understanding of chemical concepts. The sample of 200 senior secondary school students from four coeducational institutions in Nigeria. The instruments used were Chemistry Achievement Test (CAT) and Self Regulated Learning Questionnaire (SRLQ). The findings of the study show that metacognitive, time study environment and help seeking as self-regulated strategies improve the performance of students in chemistry achievement test.

Mutua Samuel (2014) conducted a study on Academic Motivation and Self Regulated learning as predictors of Academic Achievement of students in public secondary schools in Nairobi country, Kenya. The main objective of this study was to find out the relationship between academic achievement and self-regulated learning and to determine the relationship between academic motivation and academic achievement. The sample consisted of 938 students selected from 10 public secondary schools. Purposive, Stratified and Simple random sampling procedures were used. Academic Motivation and Academic Self-Regulated Learning Scales were used. Students Academic achievement was measured by use of examination records obtained from school. The results provided evidence that there was a significant relationship among academic motivation, self-regulated learning and academic achievement.

Sharirfi et al (2014) conducted a study on comparing the scores of students in academic achievement, self-efficacy, self-regulation and creativity. The main objective of this study was to compare the scores of boys and girls in academic achievement, self-efficacy, self-regulation and creativity of students. Sample of 300 students of undergraduate were selected using simple random sampling technique. The instruments used were Self efficacy test, Self Regulation and Creativity test. The findings of the study revealed that there was a significant difference between the academic achievement of students, between mean scores of self-efficacy, self-regulation and creativity, there is no difference between girls and boys.

Chalachew & Lakshmi (2013) conducted a study on Factors influence students self -regulated learning towards their academic achievement in undergraduate programs in Ethiopia. The main objective of the study was about assessing the factors that mainly influence student's self-regulation learning towards their overall academic achievement in undergraduates programs in Ethiopia. To attain these objectives, different qualitative techniques of survey open-ended questions, focus group discussion items to the group of undergraduate students and interview format were prepared and used. They found the main factors that influence students use of self-regulated learning towards their overall academic achievement in Ethiopian universities are the method of classifying and placing undergraduate students to different colleges and departments, the lack of study place and conducive environment, students lack of confidence, students inadequacy of planning to their academic tasks and also due to lack of using various teaching methods by the instructors.

Effency et al (2013) conducted a study on Self Regulated Learning: Key Strategies and their sources in a sample of adolescent males". The main objective of the study was to identify the key Self-regulated learning strategies and their sources for nine school aged adolescent males aged 15 to 17 years. The sample of the study was nine adolescent male high school students aged from 15 to 17 years and their parents participated in this study. The instruments used for the study was Self-Regulated Learning Interview Schedule (SRLIS). The result obtained was the more academically capable participants are more advanced in their progression through the developmental sequence of SRL Strategies outlined in Social Cognitive models of SRL development.

Morgan (2013) conducted a study on Self Regulation and Cultural orientation on the academic achievement of university students on distance education in Kampala, Uganda. The main objective of the study was to find out the relationship between self-regulation and cultural orientation on the academic achievement. The tools used were the self-regulation and cultural orientation questionnaire. The samples of 467 students were selected randomly. The findings of the study revealed that there was no significant difference in the extent of self regulation, degree of cultural orientation and level of academic achievement between gender, type of university and among nationalities and there was a significant correlation between the extent of self-regulation and degree of cultural orientation on the level of academic achievement.

Gonzalez Martha (2013) conducted a study on Learning goals and Strategies in the Self Regulation of learning. The main objective of this study was to examine the interactions between the classroom goal structure, goal orientation and the use of volitional and metacognitive strategies in the 4^{th} grade secondary

school students. Stratified random sampling method was used to select the sample of 268 4th grade secondary students from public and private schools. The instruments were PALS (Patterns of Adaptive Learning Survey), AVSI (Academic Volitional Strategy Inventory), and MSLQ (Motivated Strategies for Learning Questionnaire). The major findings of the study revealed that the perception of a classroom learning goal structure related significantly to a personal learning goal orientation and the later related positively to the use of metacognitive strategies .The use of volitional strategies had a mediating effect between a learning goal orientation and the use of metacognitive strategies.

Banu (2013) studied the relationship between Self regulated learning of the students in an EFL programme and their academic achievement. Sample of 240 participants were selected from public University in Turkey by Simple random sampling technique. The instrument used was Self Regulated Learning Scale. The result of the study revealed that there was a significant positive correlation between the self-regulated learning and the academic achievement of students in a Turkish EFL setting.

Suthar and Khooharo (2013) examined the effect of Mathematical beliefs and self-regulated learning strategies on achievement in Mathematics". The sample consisted of 86 undergraduate students who completed a self-reported questionnaire related to student's belief on three dimensions namely, beliefs about Mathematics, beliefs about importance of mathematics and beliefs about one's ability in Mathematics. They found that there was a positive relationship among students Mathematical beliefs, self-regulated learning and Mathematics low and high ability outcomes. In addition overall binary logistic regression equation which assessed the joint contribution of one aspect of beliefs and self-regulated

learning variables was significant. In addition it was found that 8.1% of the variance in Mathematics ability could be explained by beliefs and self-regulated learning variables.

Augustiani & Cahyad (2013) examined the relationship among self-efficacy and self-regulated learning and academic achievement. The study comprised of 101 students from the undergraduates program in the faculty of Psychology at Padjadjaran University. The instruments used were Academic Self-Efficacy Questionnaire, Self-Regulated learning Questionnaire and Academic Performance (Marks obtained in the first semester examination). The findings of the study revealed that Self-efficacy, Self-regulation of learning and academic achievements were positively correlated which implied that if one of the three variables experience a positive or negative change, the other two would also experience change.

Carson Elaine (2012) conducted a study on Self directed learning and Academic Achievement in Secondary Online Students. The main objective of the study was to find out the significant difference in Self-directed learning according to gender, ethnicity and grade level and whether significantly different online course completion, online final grade or Grade Point Average were associated with Self Directed Learning class membership. Sample of study was about 360. The instrument used was Self Directed Learning Inventory (SDLI). The result of the study revealed that the completion of online course associated with self-directed learning class membership was significantly different by Self-directed learning class membership. Although there was a significant difference in academic achievement as expressed by final online course grades.

Tinajero et al (2012) conducted a study on Cognitive style and Learning Strategies as Factors which affect academic achievement of Brazilian University students. The main objective of this study was to find out whether there was any influence of the cognitive style and learning strategies has the mediating effect on the academic achievement of university students. The sample selected for the study was 313 first year University students. Self-report questionnaire and Academic marks for the academic achievement. The findings of the study revealed that planning strategies mediated the influence of cognitive style on achievement.

Barzegar Majid (2012) conducted a study on the relationship between Goal Orientation and Academic Achievement – The mediation Role of Self-Regulated Learning Strategies-A Path Analysis. The main objective of this study was to investigate the mediation role of self-regulated learning strategies in relationship between goal orientation and academic achievement. The samples of 260 first year psychology students are taken. They were assessed on achievement goal orientation using Achievement Goal Questionnaire devised by Elliot and Church (1997) and the self-regulated learning strategies using the Motivated Strategies for Learning Questionnaire (MSLQ) devised by Pintrich et al (1991). The results showed positive effects of mastery and performance approach goals on the use of metacognitive and deep cognitive strategies. The performance approach goals positively affected the use of surface cognitive and resource management strategies. The use of metacognitive and resource management strategies had a positive effect and the use of surface cognitive strategies had a negative effect on academic achievement.

Cleary & Platten (2012) conducted a study on examining the correspondence between Self regulated learning and Academic achievement: A Case Study Analysis. The main objective of this study was to find out the correspondence between shifts in student's strategic regulated behaviours with their performance on classroom based biology tests. Sample of 14 students from nineth grade students enrolled in an urban high school located in a large public school district in the Midwestern region of the US. The findings of the study revealed that there was a positive relationship between the self regulated learning and academic achievement of the nineth grade students.

Sardareh et al (2012) conducted a study on Self Regulated Learning Strategies and Academic Achievement in pre-University EFL learners. The main objective of the study was to find out the self-regulated learning strategies of pre-university EFL learners and also to study the relationship between the use of self-regulated learning strategies and academic achievement among the students. The subjects under study were a group of male (40) and female (42) pre-university students randomly selected from two schools in Tehran, Iran. The instruments used to gather data were a translated version of the Motivated Strategies for Learning Questionnaire (MSLQ) and an academic achievement test. The major findings are there was a strong relationship between the use of Self-Regulated Learning Strategies and Student's Academic Achievement and also there was a significant difference between males and females as to the use of Self-regulated learning strategies.

Yargas Martha (2012) examined the relationship between self regulated learning and academic achievement of English language learning students. The samples of 130 students from the 7th and 8th grades were taken. The tool used

was Motivated Strategies Learning Questionnaire (MSLQ). The major findings of the study revealed that Self-regulated learning was related to the academic achievement of students in reading, writing and mathematics.

Alharbi etal (2011) investigated the learning styles and self regulated learning Strategies of Computer Science students. An index of Learning Styles and Self-regulated learning strategies Questionnaires were administered to second year students studying programming languages concepts and paradigms. Result showed that aspects of student's preferred learning styles had a significant impact on academic performance in the midterm examination. Further, consideration of the self-regulated learning strategies used by students provide evidence that meta-cognitive strategies were the least popular strategies among students.

Hla & Phyu (2011) conducted a study on Self regulated learning of High School students. The main objective of this study was to find out the effect of self-regulated learning on student's academic achievement and also to find out whether there would be direct relationship between student's demographic factors and their self-regulation in learning or not. A sample of 339 high school students was taken for this study. The data were collected using the Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich etal. The findings of the study revealed that the high school student's self-regulated learning was significantly related to mother's occupation and their academic ambitions, the student's self-regulated learning and skill acquisition depend on the type of goal they set. The multiple comparisons among different schools showed that schools with students being poor in academic achievement were lower in metacognition and intrinsic goal orientation those other schools with students being high in

academic achievement. Along with that female students were higher in extrinsic goal-orientation than the male students.

Cheng, C.K. (2011) conducted a study on The Role of Self-Regulated Learning in Enhancing Learning Performance. The main objective of this study was to find out the relationship between student's self-regulation ability and their learning performance. Sample of 6524 student's form 20 aided secondary students in Hong Kong were selected. Survey method was adopted. The findings of the study revealed that student's learning motivation, goal setting, and action control and learning strategies played a significant role in their learning performance.

Matuga, J.M. (2009) conducted a study on Self Regulation, Goal-Orientation and Academic Achievement of Secondary School Students in Online University Courses. The main objective of this study was to explore the changes in self-regulation and goal orientation of students enrolled in the online courses and the relationship between these factors and student's achievement. Sample of 100 students were selected using random method. The tool used was Motivation Strategies for Learning Questionnaire (MSLQ) collected before and after students completed the online course and achievement measures. The findings of the study revealed that there was a significant difference in the self-regulation, goal orientation and academic achievement of secondary school students in online university courses.

Valle et al (2008) conducted a study on Self regulated profiles and Academic achievement. The main objective of this study was to find out the relationship between self-regulated profiles and academic achievement. Sample of 489 students from different degrees in the public University in the Northern Spain. MSLQ (Motivated Strategies Learning Questionnaire) was used. The findings of

the study revealed that the difference in academic achievement indicate that there existed a statistically significant positive relation between the self regulated learning and academic achievement. This means that a higher Self Regulated learning level leads to higher academic achievement while a low Self Regulated Learning level is connected with lower achievement.

Kosnin (2007) studied the relationship between the self regulated learning and academic achievement of Malaysian Students. The sample for this study was about 460 second year engineering undergraduates from the University of Malaysia. The instruments used were Motivated Strategies for Learning Questionnaire (MSLQ) and Academic Achievement was measured on the basis of the student's Grade Point Average (GPA) scores for the semester. The major findings of this study were there existed a significant relationships between self regulated learning and academic achievement were found, nevertheless differences in the composition of significant predictor sub-scales were also found between achievement groups. Self reregulated learning was found to have a significant effect on Malaysian University students' academic achievement.

Jeffrey, S. Judd (2005) studied the correlation between Self Regulatory Learning Strategies and the Academic achievement of high school chemistry students. The sample of 61 male high school students was selected. The instruments used were Self-Regulatory questionnaire and for academic achievement the marks obtained in the chemistry test. The findings of the study revealed that high test scorers used more self-regulatory processes to enhance their test preparation and performance compared to low test scores, self-regulation positively affected test performance and self regulatory skill and self-efficacy

belief predicted subsequence test performance. There was no significant difference between high and low self-regulator's perceived task value.

Esther (2005) conducted a study on Self regulated Learning and Academic achievement of Hong Kong secondary school students. The main objective was to find out the level of self-regulated learning in Hong kong secondary school students and also to find out the relationship between self-regulated learning and academic achievement of secondary school students in Hong Kong. The findings of the study revealed that the self-regulated learning constructs were positively related to academic achievement in reading, Mathematics and Science domain among Hong Kong students. The results particularly showed that control strategies and self-efficacy appear to be the two most important learning strategies associated with performance in all three domains, but on the contrary instrumental motivation and memorization had negative associations with mathematical and scientific literacy performance.

Dermitzaki & Kiosseoglou (2004) conducted a study on Self Regulation during Problem Solving in second graders; Relations with students performance and goal orientation. The main objectives of this study was to find out the second-graders self-regulative behaviour during task engagement and its relation to performance and also to find out the relations of self regulation to student's academic abilities and goal orientation towards learning. The tools used were self-regulation and goal orientation questionnaire to collect the data. The sample of 311 second graders from different Greek state schools. The findings of the study revealed that the various aspects of student's self-regulatory effort were significantly and differently related to their task specific performance and to their academic achievement. And also the second graders self-regulatory skills have

already established significant relations with their performance and their academic abilities but not yet with more motivational factors such as goal orientation.

Pintrich and Groot (1990) conducted a study on Motivational and Self-Regulated learning as components of Classroom Academic Performance. The main objective of the study was to find out the correlation between motivational orientation, self-regulated learning and classroom academic performance for 8th Science and 7th English classes. The sample of 173 seventh grade students from 8th science and 7th English courses were taken. The tool used was Motivated Strategies for Learning Questionnaire (MSLQ). The result obtained was the self-efficacy and intrinsic values were positively related to cognitive engagement and performance. Intrinsic value did not have a direct influence on performance but was strongly related to self-regulation and cognitive strategy use regardless of prior achievement level.

CRITICAL REVIEW

The investigator reviewed of 31 studies related to self-regulated learning and academic achievement. Most of the studies have employed survey method. In many of the studies random sampling techniques has been used for selecting sample. There was few literature available in the self-regulated learning and academic achievement. Most of the study revealed that there was a positive relationship among self-regulated learning and academic achievement. Most of the studies related to self regulated learning and academic achievement are foreign studies and only 2 Indian studies were reviewed. The present study differs from the above studies in terms of area, population and sample. Hence the researcher made an attempt to find out the influence of self regulated learning on academic achievement of higher secondary students in Kanniyakumari District.

CHAPTER-III

METHODOLOGY

Research is an intellectual activity undertaken to bring out something new or unknown to learned members of the society. According to Grinnell (1993), Research is a structured inquiry that utilizes acceptable scientific methodology to solve problems and creates new knowledge that is generally applicable. Burns (1994) defines "Research is a systematic investigation to find answer to the problem". Research comprises of defining and redefining problems, formulating hypothesis or suggested solutions, making deductions and reaching conclusions and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis. (Clifford Woody)

Educational Research is that activity which is directed towards the development of a science of behavior in educational situations. The ultimate aim of such a science is to provide knowledge that will permit the educator to achieve his goals by the most effective methods. (Travers, M.W).

Methods can be defined as a systematic and orderly procedure or process for attaining some objective. Methodology means the study or description of methods (Basker Ville, 1991). A methodology is instantiated and materialized by a set of methods, techniques and tools. Research methodology is a scientific and systematic way to solve research problems. The methodology may differ from problem to problem. Thus the scope of research methodology is wider than research methods. In a way, research methodology deals with the research methods and taken into consideration the logic behind the method we use (Gupta A.K). Research methods are the methods or techniques employed by researcher in conducting research operations.

METHOD ADOPTED FOR THE PRESENT STUDY

The present study attempts to find out the relationship between the self-regulated learning and academic achievement of higher secondary students. The problem selected is concerned with the current condition. The investigator selected the normative survey method for conducting this study.

Normative Survey Method

The normative survey method of educational research describes and interprets what exists at present. In this method, we concerned with conditions or relationships that exists, practices that prevail, beliefs, point of view or an attitude that are held, processes that going on influence that are being felt and trend that are developing.

The sample

The sample for the present study consisted of higher secondary students studying in class XI of various higher secondary schools in Kanyakumari district following state board syllabus during academic year 2015-2016. The sample size of the study was 400 class XI students. Simple random sampling technique was adopted**.**

Details of the Sample Distribution

Table 3.1

List of schools and the number of sample selected

Sl.No	Name of the School	Number of the students
1	Govt.Hr.Sec.School. Kadayal	35
2	St. Mary's Hr.Sec.School, Kaliyal	35
3	Govt. Girls.Hr.Sec.School.Marthandam	35
4	Govt. Boys.Hr.Sec.School. Marthandam.	40
5	V.K.P.Hr.Sec.School. Colachel	40
6	Sree Rama Krishna. Matric.Hr.Sec.School. Paraicode	30
7	Govt. Hr.Sec.School.Kannattuvilai	35
8	Govt.Hr.Sec.School. Kattathurai	35
9	Govt. Hr.Sec.School. Vilavancode	35
10	Yettacode. Hr.Sec. School. Yettacode	30
11	N.V.K.S. Hr.Sec.School. Attoor	50

Distribution of sample

Distribution of sample based on Gender

Table 3.2

Percentage of higher secondary students based on Gender

Sl.No	Gender	No. of Students	Percentage
1	Male	183	45.75
2	Female	217	54.25
	Total	400	100

From the table it is found that the sample consists of 183 boys and 217 girls' students. The percentages corresponding to boys and girls students are 45.75 and 54.25 respectively.

Distribution of sample based on locality

Table 3.3

Percentage of higher secondary students based on Locality of school

Sl.No	Locality of school	No.of Students	Percentage
1	Rural	342	85.50
2	Urban	58	14.50
	Total	400	100

From the above table, it is found that the sample consists of 342 rural students and 58 urban students. The percentages corresponding to rural and urban students are 85.50 and 14.50 respectively.

Distribution of sample based on Type of family

Table 3.4

Percentage of higher secondary students based on Type of family

Sl.No	Type of family	No. of Students	Percentage
1	Nuclear	354	88.50
2	Joint	46	11.50
	Total	400	100

From the above table, it is found that the sample consists of 354 nuclear family students' and 46 joint family students. The percentages corresponding to nuclear and joint family students are 88.50 and 11.50 respectively.

Distribution of sample based on Religion

Table 3.5

Percentage of higher secondary students based on Religion

Sl.No	Religion	No. of Students	Percentage
1	Hindu	211	52.75
2	Christian	155	38.75
3	Muslim	34	8.50
	Total	400	100

From the above table, it is found that the sample consists of 211 Hindu, 155 Christian and 34 Muslim higher secondary students. The percentages corresponding to Hindu, Christian and Muslim higher secondary students are 52.75, 38.75 and 8.50 respectively.

Distribution of sample based on Community

Table 3.6

Percentage of higher secondary students based on Community

Sl.No	Community	No of Students	Percentage
1	FC	38	9.50
2	BC	297	74.25
3	MBC	34	8.50
4	SC/ST	31	7.75
	Total	400	100

From the above table, it is clear that the sample consisted of 9.5% (38) forward community students, 74.25% (297) backward community students, 8.5% (34) most backward students and 7.75% (31) of students belong to scheduled caste and scheduled tribe.

Distribution of sample based on Medium of Instruction

Table 3.7

Percentage of higher secondary students based on medium of instruction

Sl.No	Medium of Instruction	No of Students	Percentage
1	Tamil	85	21.25
2	English	315	78.75
	Total	400	100

From the above table, it is found that the sample consisted of 21.25% Tamil medium and 78.75% English medium higher secondary students. The percentages corresponding to Tamil and English medium higher secondary students are 21.25 and 78.75 respectively.

Distribution of sample based on Type of Management

Table 3.8

Percentage of higher secondary students based on type of management

Sl.No	Type of Management	No of Students	Percentage
1	Government	213	53.25
2	Private	84	21.00
3	Aided	103	25.75
	Total	400	100

From the above table, it is found that the sample consists of 36 Boys, 42 Girls and 322 Co-Education higher secondary students. The percentages corresponding to Boys, Girls and Co-Education higher secondary students are 9.00, 10.50 and 80.50 respectively.

Distribution of sample based on Father's Educational Qualification

Table 3.9

Percentage of higher secondary students based on their father's educational qualification

Sl.No	Father's Educational Qualification	No of Students	Percentage
1	Below SSLC	116	29.00
2	SSLC	214	53.50
3	Graduate	70	17.50
	Total	400	100

From the above table, it is found that the sample consisted of 29% of higher secondary students whose father's educational qualification below SSLC, 53.5% of higher secondary students whose father's educational qualification SSLC and 17.5% of higher secondary students whose father's educational qualification graduate.

Distribution of sample based on Mother's Educational Qualification

Table 3.10

Percentage of higher secondary students based on their mother's educational qualification

Sl.No	Mother's Educational Qualification	No of Students	Percentage
1	Below SSLC	76	19.00
2	SSLC	225	63.75
3	Graduate	69	17.25
	Total	400	100

From the above table, it is found that the sample consisted of 19% of higher secondary students whose mother's educational qualification below SSLC, 63.75% of higher secondary students whose mother's educational qualification SSLC and 17.25% of higher secondary students whose mother's educational qualification graduate

TOOLS USED FOR THE PRESENT STUDY

Collection of relevant data is one of the most important steps in any research especially in the field of education. An appropriate instrument or tool is

very essential to serve this purpose. For collecting the data required for the study the investigator used the following tools for the present study,

1. Self-Regulated Learning Questionnaire (developed and validated by the investigator and the guide, 2016).
2. Academic Achievement (Scores obtained by students in their quarterly examination will be taken).
3. General Data sheet

1. **Self regulated learning questionnaire**

Self regulated learning questionnaire was constructed by the investigator. The tool was prepared to measure the self regulated learning of higher secondary students. There are 60 statements in the questionnaire which consists of positive statements alone. The dimensions included in the self regulated learning questionnaire are metacognition, motivation and behaviour. For each statement three choices were given Yes, Neutral (N) and No. The responders have to tick any one of the choice.

CONSTRUCTION OF SELF REGULATED LEARNING QUESTIONNAIRE

The major steps are followed in the construction of self regulated learning questionnaire are given below,

a. Planning of the test
b. Item writing
c. Item editing
d. Rough draft
e. Preliminary try out
f. Scoring
g. Item analysis

h. Item selection

i. Final format of the tool

j. Establishing reliability and validity

k. Final tryout

a. Planning of the test

The questionnaire prepared by Sreedevi with the guidance of Deepa aimed to measure self regulated learning having dimensions namely metacognition, motivation and behaviour of higher secondary students in Kanniyakumari District.

b. Item Writing

Writing of the suitable items is one of the important steps in the construction any research tool. Statements are collected related to self regulated learning of higher secondary students. . The statements were collected on the basis of the detailed review of literature related to the problem. The investigator collected ideas from magazines, journals, newspaper, educational reports, textbooks, web resources etc. Along with that consultations and discussions were also made with my guide and experts in the field of education.

c. Item Editing

Item editing means checking and scrutinizing the written items**.** Then the questionnaire was submitted to the guide and experts to judge the suitability of the statements. All the statements were thoroughly screened and edited according to the suggestions given by them. The statements which seemed overlap with one another were critically examined and revised.

d. Rough Draft

Rough draft was prepared by printing the item with provision to mark the response. The items are printed in English with necessary instruction. A sample copy of the draft form of the tool is given in appendix ii.

e. Preliminary try out

After preliminary screening and editing of items, the questionnaire was pre-tried out on 30 higher secondary students, in order to find out the accuracy, relevance and weakness of each statement. The difficulties in responding the items and a rough estimate of the time limit for responding the items were noted. This step helps the investigator to modify certain statements which are vague and questionable. Careful changes were made out in the language based on the suggestion and practicability of the test items.

f. Scoring

The scoring key was prepared for the self-regulated learning questionnaire. For each statements a score of 3, 2, 1 was given to the categories namely; Yes, Neutral (N) and No.

g. Item Analysis

Item Analysis is an important step in a test construction. Item can be analysed qualitatively in terms of their content and quantitatively in terms of their statistical properties. Qualitative analysis includes the consideration of content validity and the evaluation of items in terms of effective item writing procedures. Quantitative analysis on other hand includes the measurement of item difficulty and item discrimination power. Both the variability of any test depends ultimately on the characteristics of its items. High reliability and validity can be built to a test is advance through item analysis.

The method of item analysis used in the case of present investigation is one developed by Mathew (1982) called the "Mathew Item Analysis Procedure". This table gives items, were correlation (Phi-Co efficient) and percentages of test marking the keyed answer. One of the advantages of Phi-Co efficient is that any convenient tail proportion can be made use of in order to use the same table. It is recommended regarding of the sample size.

According to Guilford (1965) the difficulty value of an item is defined as the proportion or percentage of the examinees who have answered the item correctly.

The response sheets were arranged in the order of the criterion score. The criterion score is the total sheets having the highest criterion were taken and it constitutes the upper tail. Similarly hundred response sheets having the lowest scores were taken from the lower tail.

In the "Mathew Item Analysis table" indices for the same value of the P_L have been grouped together. So in order to read the indices for the same value item, the P_L value of the given item was located first them in that section the P_U value of the items along the left margin was located and the corresponding 'Phi' and 'P' values were noted. Whenever the P_L value was larger than the P_U value, P_L and P_U values are interchanged while reading the indices and then a negative sign was attached to the Phi-Co efficient when $P_L$and the P_U are equal, Phi is zero.

Phi = $\frac{PL-PL}{2\sqrt{pq}}$ where P= $\frac{PU+PL}{2}$ and q= 1-P

PL = percentage of individuals in the lower tail marking the keyed answer.

PU = percentage of individuals in the upper tail marking the keyed answer.

h. Items Selection

From the total item having higher correlation values phi-value above 0.09 and medium p value was selected. Items with phi value below 0.08, the level of significance is not considered usually. When 'phi' values of most items were high and number of items larger, items with some spread of 'p' values would be describe. It may be maintained here that 'phi' values were computed for every combination of P_L and P_U values by means of Guilford (1954) formula.

Table 3.11

SELF-REGULATED LEARNING QUESTIONNAIRE-ITEM SELECTED

Items	P_U	P_L	Phi	P	Selected items
1	25	15	0.13	20	Selected
2	24	20	0.05	22	-
3	25	12	0.17	19	Selected
4	24	19	0.06	22	-
5	23	16	0.09	20	Selected
6	21	19	0.03	20	-
7	25	18	0.09	22	Selected
8	23	14	0.12	19	Selected
9	25	15	0.13	20	Selected
10	24	13	0.14	19	Selected
11	23	17	0.08	20	-
12	23	17	0.08	20	-
13	24	15	0.11	20	Selected

14	22	16	0.08	19	-
15	21	17	0.05	19	-
16	22	12	0.13	17	Selected
17	24	13	0.14	19	Selected
18	25	17	0.10	21	Selected
19	24	17	0.09	21	Selected
20	24	22	0.02	23	-
21	25	22	0.04	24	-
22	25	18	0.09	22	-
23	24	14	0.13	19	Selected
24	24	14	0.13	19	Selected
25	25	13	0.15	19	Selected
26	24	18	0.07	21	-
27	22	17	0.06	20	-
28	25	18	0.09	22	-
29	25	12	0.17	19	Selected
30	23	16	0.09	20	Selected
31	22	14	0.10	18	Selected
32	25	20	0.06	23	-
33	25	19	0.07	22	-
34	25	14	0.14	20	Selected
35	21	15	0.08	18	-
36	23	12	0.15	18	Selected
37	21	14	0.09	18	Selected

38	26	13	0.16	20	Selected
39	22	17	0.06	20	-
40	23	19	0.05	21	-
41	25	16	0.11	21	Selected
42	24	15	0.11	20	Selected
43	25	20	0.06	23	-
44	23	11	0.16	17	Selected
45	24	15	0.11	20	Selected
46	22	19	0.04	21	-
47	25	21	0.05	23	-
48	24	15	0.11	20	Selected
49	25	17	0.10	21	Selected
50	24	21	0.04	23	-
51	24	20	0.05	22	-
52	23	17	0.08	20	-
53	25	16	0.11	21	Selected
54	24	15	0.11	20	Selected
55	23	15	0.10	19	Selected
56	23	17	0.08	20	-
57	24	20	0.05	22	-
58	24	21	0.04	23	-
59	25	17	0.10	21	Selected
60	24	21	0.04	23	-

i. The final format of the tool

The final form of the self-regulated learning questionnaire contains 60 items. After the item analysis, 32 items were selected. A specimen copy of the final form of questionnaire is given in appendix iii.

j. Establishing reliability and validity of the questionnaire

Reliability of the questionnaire

Reliability is the degree of consistency that the instrument or procedure demonstrates whatever it is measuring, it does so consistently. Reliability of the self regulated learning was measured using split half reliability test.

For calculating the split half reliability of the test, the scores obtained by a sample of 100 higher secondary students. The scores on odd items and even items were taken separately and correlation was calculated. The coefficient of correlation indicates the reliability of half test the self correlation coefficient of whole test was estimated by Spearman Brown Prophecy formula. The reliability of coefficient was found to be 0.78. Hence the tool is highly reliable for measuring self-regulated learning of higher secondary students.

Table 3.12 Reliability Analysis

Variable	Correlation between odd half and even half	Reliability coefficient of the whole scale
Self Regulated Learning	0.04	0.78

Validity of the questionnaire

Establishment of the validity of a tool or questionnaire is nothing but whether developed questionnaire is to measure the attribute for what purpose the developer designed the questionnaire. A research tool or questionnaire can be termed as valid when it measures what is ought to measure. There are four types of validity namely face validity, content validity, criterion-related validity and construct validity.

In this study, the investigator established both face validity and content validity. Content validity is a type of validity established through value judgment by the experts on the appropriateness of the content.

k. Final Tryout

For administration of the tool**,** the investigator visited various higher secondary schools in Kanyakumari district. Before administering the tool the investigator explained the purpose of her study. Proper instructions were given about the tool. A copy of self-regulated learning questionnaire and general data sheet were administrated individually to the sample of 400 higher secondary students.

2. Academic achievement

For academic achievement, the total scores obtained by higher secondary students of kanyakumari district in their quarterly examination were taken.

3. General Data Sheet

The general data sheet was prepared to collect data regarding variables such as name, gender, locality, religion, community, type of family, type of management, nature of school, medium of instruction, father's and mother's educational qualification. General data sheet is given in appendix i

STATISTICAL TECHNIQUES

For the analysis of data the following statistical techniques were adopted. They are

1. Arithmetic Mean
2. Standard deviation
3. t test
4. ANOVA(Analysis of Variance) followed by scheffe's procedure
5. Carl Pearson's Product momemt Correlation coefficient

1. Arithmetic Mean

Mean is the most reliable and universally used central tendency. Mean is simplest and can be defined as the sum of all values of item in a series divided by the number of items.

Arithmetic Mean = $A + \frac{\Sigma fd}{N} \; X \; C$

Where, A= Assumed mean of the score obtained

F= Frequency of each class interval

D = Deviation of scores from the assumed mean

T= Total frequency

C= Class interval of the frequency distribution

2. Standard deviation

Standard deviation is the most stable index of variability standard deviation measures the scattered of the values. It is defined as the squares root of the average of the square of the deviation of the each score from the mean.

SD = $\frac{N \sum_x 2 - (\sum_x 2)}{N}$

Where, SD = Standard deviation

$\sum x^2$ = the square sum of the score

$\sum x$ = the sum of the scores of the distribution

N = Number of scores

3. t test (test of significance)

It is used for finding significant level of difference between two groups of population. From the mean and standard deviation; t-values can be calculated. If the obtained t-value is 2.58 and above, then the level of significance is at 0.01. If the t-value is between 1.96 and 2.58 significant level is 0.05 and if the t-value is below 1.96, the difference is not significant.

It is used for finding

$$\text{t ratio} = \frac{\text{M1} - \text{M2}}{\sqrt{\frac{\sigma 1^2}{\text{N1}} + \frac{\sigma 2^2}{\text{N2}}}}$$

Where,

M_1= Arithmetic mean of the first group

M_2= Arithmetic mean of the second group

$\sigma 1$ =Standard deviation of the first group

$\sigma 2$ = Standard deviation of the second group

N_1 = Total number in the first group

N_2= Total number in the second group.

ANOVA followed by Scheffa's post hoc test.

Analysis of variance is an important method for dividing the variation observed in experimental situation into different part, each part assignable to a known sources causes or factor. This method is derived by R.A.Fisher in 1923.

F-test or analysis of variance method is an improvement over t-test. The t test is used for ascertaining the significance of difference between two means where, F-test is used for testing the significance of difference more than two means simultaneously. The composite procedure for testing simultaneously the difference between several samples mean is known as Analysis Of Variance or ANOVA.

$$F = \frac{msv_b}{msv_w}$$

Here,

msv_b= Mean square variance between groups

$msv_{w=}$Mean square variance with in groups

If the F ratio is significant, the post hoc is used to find out the significant difference between the groups

Scheffe's Procedure:

Scheffe's test is used to find the significance between the pairs. In such cases, the comparison of the difference between the means for any two groups is done using scheffe's procedure (scheffe's 1957). Scheffe's test is one of the well-known multiple group comparison test.

Carl Pearson's Product moment method of Correlation Coefficient

Correlation is used to find out the relationship between the two variables. The most widely used method to measure the correlation is the Pearson's Product moment of correlation. The formula for correlation coefficient in terms of raw score is

$$r = \frac{N\sum XY - \sum X.\sum Y}{\sqrt{[N\sum X^2 - (\sum X)^2][N.\sum Y^2 - (\sum Y)^2]}}$$

Where, N = Number of scores

$\sum X$ = Sum of X scores

$\sum Y$ = Sum of Y scores

$\sum X^2$ = Sum of X scores squared

$\sum Y^2$ = Sum of Y scores squared

$\sum XY$ = Sum of product of X and Y scores

Coefficient Correlation

According to Garrett (1969) the interpretation of coefficient of correlation(r) is stated below,

The Value of r	Value description
0	Zero denotes negligible correlation
±0.01 to ± 0.20	Slight or negligible relationship
± 0.21 to ± 0.40	Low correlation
± 0.41 to ± 0.60	Moderate or substantial relationship
± 0.61 to ± 0.70	High Correlation
± 0.71 to ± 0.99	Very high correlation dependable relationship
± 1	Perfect correlation (Identical or opposite)

CHAPTER-IV

ANALYSIS AND INTERPRETATION OF DATA

Analysis of the data is the most skilled task of all the stages of the research. It is a task calling for the researcher's own judgement and skill. According to Francis Rummel, "The analysis and interpretation of data involve the objective material in the possession of the researcher and his subjective reaction and desires to drive from the data that inherent meaning in their relation to the problem.

Interpretation and explanation of data are the key responsibilities of the researcher. In all research studies, it is necessary to develop a meaningful and adequate account of what has been researched. The data collected provide the basis of analysis (Burges, 1982, Tuckman, 1988). The collected data require the development of a conceptual framework upon which the actions or events researched can be rendered intelligible for use or replication (Yin, 1994). Interpretation requires the development of conceptual tools through which to comprehend the significance of social action and how actions interrelate. Interpretation therefore makes the analyzed data meaningful to practitioners and users. Yin (1994) stresses that to interpret data collected for a research study it is important to use meaningful categories to organize them in order to get precise measure of the variables concerned.

The data collected from 400 higher secondary students were subjected to statistical techniques such as Arithmetic mean, Standard deviation, t test and ANOVA followed by scheffe procedure and Pearson's product moment method of Correlation.

Descriptive Statistics for Self-regulated learning

Table 4.1

Descriptive Statistics for Self-regulated learning

Mean	78.08
Std Deviation	9.04
Count	400

From the above table it is clear that the total number of sample selected for the present study was 400. The total score for self-regulated learning is 96. The arithmetic mean for the total sample was 78.08. It shows that most of the students scored more than mean value. Since the Standard deviation is too small. It is close to the mean it implies all the values in the data said are not scattering.

Percentage wise analysis for self-regulated learning

Table 4.2

Percentage wise distribution of different levels of Self-Regulated Learning

Self-Regulated Learning	Count	Percentage
Low	66	16.50
Medium	266	66.50
High	68	17.00
Total	400	100.00

From the above table it is clear that, 16.50% of higher secondary students show low level of self –regulated learning, 66.50% of higher secondary students show medium level of self-regulated learning, 17.00% of higher secondary

students show high level of self-regulated learning. This indicates that the most of the higher secondary students have medium level of self-regulated learning.

Differential Analysis

Comparison of mean scores of self-regulated learning based on gender

Null Hypothesis

There exists no significant difference in the mean scores of self –regulated learning of male and female higher secondary students.

Table 4.3

Mean, SD and t values of self-regulated learning of male and female

Gender	Mean	SD	N	T	*P*	*Remarks*
Male	76.45	9.59	183	3.322	*0.001*	*Sig. at 0.01 level*
Female	79.46	8.31	217			

From the table it is clear that the calculated‘t’ value (t=3.32, p< 0.01) is significant at 0.01 level of significance. The mean scores of female higher secondary students is found to be79.46 which is higher than that of male higher secondary students whose mean score is 76.45.Therefore the null hypothesis is rejected. Hence it can be said that female higher secondary students are higher in their self –regulated learning than the male higher secondary students.

Comparison of mean scores of self-regulated learning based on locality of school

Null Hypothesis

There exists no significant difference in the mean scores of self –regulated learning of rural and urban higher secondary students.

Table 4.4

Mean, SD and t values of self-regulated learning of rural and urban students

Locality of school	Mean	SD	N	T	*P*	*Remarks*
Rural	77.74	8.46	171	0.667	*0.505*	*NS*
Urban	78.34	9.45	229			

From the table it is clear that the calculated‘t’ value (t=0.667, p>0.05) and it is not significant at any level of significance. Therefore the null hypothesis is accepted. Hence it can be said that rural and urban higher secondary students do not differ significantly in their self-regulated learning.

Comparison of mean scores of self-regulated learning based on type of family

Null Hypothesis

There exists no significant difference in the mean scores of self –regulated learning of higher secondary students from nuclear and joint family.

Table 4.5

Mean SD and t values of self-regulated learning of students from nuclear and joint family

Type of Family	Mean	SD	N	t	*p*	*Remarks*
Nuclear	77.88	8.93	354	1.183	*0.237*	*NS*
Joint	79.67	9.74	46			

From the table it is clear that the calculated‘t’ value (t=1.183, p>0.05) and it is not significant at any level of significance. Therefore the null hypothesis is accepted. Hence it can be said that nuclear and joint family higher secondary students do not differ significantly in their self-regulated learning.

Comparison of mean scores of self-regulated learning based on Religion

Null Hypothesis

There exists no significant difference in the mean scores of self –regulated learning of Hindu, Christian and Muslim higher secondary students.

Table 4.6

Mean SD and F values of self-regulated learning of students from Hindu, Christian and Muslim

Religion	Mean	SD	Source	Sum of Squares	Df	Mean Square	F	*p*	*Remarks*
Hindu	78.19	9.13	Between Gp	459.97	2	229.98			
Christian	78.68	8.83	Within Gp	32112.31	397	80.89	2.843	*0.059*	*NS*
Muslim	74.65	8.87	Total	32572.28	399				

From the table it is clear that the calculated'F' value (F=2.843, p>0.05) and it is not significant at any level of significance. Therefore the null hypothesis is accepted. Hence it can be said that Hindu, Christian and Muslim higher secondary students do not differ significantly in their self-regulated learning.

Comparison of mean scores of self-regulated learning based on Community

Null Hypothesis

There exists no significant difference in the mean scores of self –regulated learning of Forward Caste, Backward Caste, Most Backward Caste, Scheduled Caste and Scheduled Tribe higher secondary students.

Table 4.7

Mean SD and F values of self-regulated learning of students from FC, BC, MBC, SC/ST category

Community	Mean	SD	Source	Sum of Squares	DF	Mean Square	F	*p*	*Remarks*
FC	77.08	8.32	Between Gp	2198.65	3	732.88			
BC	77.56	8.44	Within Gp	30373.6	396	76.70	9.555	*0.00*	*Sig.at 0.01*
MBC	85.65	9.15	Total	32572.28	399				*level*
SC/ST	76	11.46							

From the table it is clear that calculated F value is 9.555, $p<0.01$ and it is significant at 0.01 level of significance. Therefore the null hypothesis is rejected. There is a significant difference in the mean scores of self-regulated learning of higher secondary students based on their community. But the exact significant difference between the groups cannot be found out. Therefore Scheffe's post hoc pair wise comparison is performed to know the exact difference between the groups.

Table 4.8

Scheffe's post hoc pair wise comparison for community

Community	N	Pair	p (Scheffe)	*Remarks*
FC (A)	38	A Vs B	0.992	*NS*
BC (B)	297	B Vs C	0.000	*Sig. at 0.01 level*
MBC (C)	34	A Vs C	0.001	*Sig. at 0.01 level*
SC/ST (D)	31	A Vs D	0.967	*NS*
		B Vs D	0.828	*NS*
		C Vs D	0.000	*Sig. at 0.01 level*

From the table it is clear that the higher secondary students of FC and BC, FC and SC/ST, BC and SC/ST do not differ statistically in their self-regulated learning on the basis of their community. The higher secondary students who belong to BC and MBC, FC and MBC, BC and SC/ST differ statistically in their self-regulated learning on the basis of their community.

Comparison of mean scores of self-regulated learning based on Medium of Instruction

Null Hypothesis

There exists no significant difference in the mean scores of self –regulated learning of Tamil and English medium higher secondary students.

Table 4.9

Mean SD and t values of self-regulated learning of students from Tamil and English medium

Medium of Instruction	Mean	SD	N	T	*p*	*Remarks*
Tamil	76.46	8.17	85	2.005	*0.05*	*Sig. at 0.05 level*
English	78.52	9.22	315			

From the above table, the calculated t value is 2.005,$p<0.05$ and it is significant at 0.05 level. The mean scores of higher secondary students of English medium is found to be 78.52 which is higher than that of higher secondary students of Tamil medium is found to be 76.46.Therefore the null hypothesis is rejected. Hence it can be said that the English medium higher secondary students have high self-regulated learning than the Tamil medium higher secondary students.

Comparison of mean scores of self-regulated learning based on Type of Management

Null Hypothesis

There exists no significant difference in the mean scores of self –regulated learning of students from Government, Private and Aided higher secondary schools.

Table 4.10

Mean SD and F values of self-regulated learning of students from Government, Private and Aided schools

Type of Management	Mean	SD	Source	Sum of Squares	df	Mean Square	F	*P*	*Remarks*
Government	79.33	9.13	Between Gp	742.04	2	371.02			*Sig.*
Private	77.10	8.4	Within Gp	31830.24	397	80.18	4.627	*0.01*	*at 0.01*
Aided	76.3	9.02	Total	32572.3	399				*level*

From the table it is clear that calculated F value is 4.627, $p<0.01$ and it is significant at 0.01 level of significance. Therefore the null hypothesis is rejected. There is a significant difference in the mean scores of self-regulated learning of higher secondary students based on their type of management. But the exact significant difference between the groups cannot be found out. Therefore Scheffe's post hoc pair wise comparison is performed to know the exact difference between the groups.

Table 4.11

Scheffe's post hoc pair wise comparison for Type of Management

Type of Management	N	Pair	p (Scheffe)	*Remarks*
Government (A)	213	A Vs B	0.156	*NS*
Private (B)	84	B Vs C	0.831	*NS*
Aided (C)	103	A Vs C	0.020	*Sig. at 0.05 level*

From the table it is clear that the higher secondary students of Government and Private, Private and Aided do not differ statistically in their self-regulated learning on the basis of their type of management. The higher secondary students who belong to Government and Aided differ statistically in their self-regulated learning on the basis of their type of management.

Comparison of Self-Regulated learning on Nature of school

Null Hypothesis

There exists no significant difference in the mean scores of Self-regulated learning students from Boys, Girls and Co-Education higher secondary schools.

Table 4.12

Mean, SD and F values of self-regulated learning of students from Boys, Girls and Co-Education schools

Nature of school	Mean	SD	Source	Sum of Squares	df	Mean Square	F	*p*	*Remarks*
Boys	81.3	7.51	Between Gp	1402.36	2	701.18			*Sig.at*
Girls	82.33	9.99	Within Gp	31169.92	397	78.51	8.931	*0.00*	*0.01*
Co-Education	77.17	8.84	Total	32572.28	399				*level*

From the table it is clear that calculated F value is 48.931, p<0.01 and it is significant at 0.01 level of significance. Therefore the null hypothesis is rejected. There is a significant difference in the mean scores of self-regulated learning of higher secondary students based on their nature of school. But the exact significant difference between the groups cannot be found out. Therefore Scheffe's post hoc pair wise comparison is performed to know the exact difference between the groups.

Table 4.13

Scheffe's post hoc pair wise comparison for Nature of School

Nature of school	N	Pair	p (Scheffe)	*Remarks*
Boys (A)	36	A Vs B	0.880	*NS*
Girls (B)	42	B Vs C	0.002	*Sig. at 0.01 level*
Co-Education (C)	322	A Vs C	0.030	*Sig. at 0.05 level*

From the table it is clear that the higher secondary students of Boys and Girls do not differ statistically in their self-regulated learning on the basis of their nature of school. The higher secondary students who belong to Girls and Co-Education, Boys and Co-Education differ statistically in their self-regulated learning on the basis of their nature of school.

Comparison of Self-Regulated Learning based on Father's Educational Qualification

Null Hypothesis

There exists no significant difference in the mean scores of self –regulated learning among higher secondary students whose father having different educational qualification.

Table 4.14

Mean SD and F values of self-regulated learning of students whose father's educational qualification Below SSLC, SSLC and Graduate

Father's Educational Qualification	Mean	SD	Source	Sum of Squares	Df	Mean Square	F	*P*	*Remarks*
Below SSLC	78.91	9.14	Between Gp	198.0	2	99.01	1.214	*0.298*	*NS*
SSLC	78.06	8.78	Within Gp	32374.3	397	81.55			
Graduate	76.79	9.58	Total	32572.3	399				

From the table it is clear that the calculated'F' value (F=1.214, p>0.05) and it is not significant at any level of significance. Therefore the null hypothesis is accepted. Hence it can be said that the higher secondary students do not differ significantly in their self-regulated learning based on their Father's Educational qualification.

Comparison of Self-Regulated Learning based on Mother's Educational Qualification

Null Hypothesis

There exists no significant difference in the mean scores of self –regulated learning among higher secondary students whose mother having different educational qualification.

Table 4.15

Mean SD and F values of self-regulated learning of students whose Mother's educational qualification below SSLC, SSLC and Graduate

Mother's Educational Qualification	Mean	SD	Source	Sum of Squares	Df	Mean Square	F	*P*	*Remarks*
Below SSLC	77.61	8.92	Between Gp	26.4337	2	13.2168			
SSLC	78.13	9.09	Within Gp	32545.8	397	81.9795	0.161	*0.851*	*NS*
Graduate	78.43	9.09	Total	32572.3	399				

From the table it is clear that the calculated 'F' value (F=0.161, p>0.05) and it is not significant at any level of significance. Therefore the null hypothesis is accepted. Hence it can be said that the higher secondary students do not differ significantly in their self-regulated learning based on their Mother's Educational qualification.

Descriptive statistics for Academic Achievement

Table 4.16

Descriptive statistics for Academic Achievement

Mean	844.79
Std Deviation	152.58
Count	400

From the above table it is clear that the total number of sample selected for the present study was 400. The total score for academic achievement is 1200.. The arithmetic mean for the total sample was 844.79. It shows that most of the students scored marks more than mean value. Since the Standard deviation is too

small. It is close to the mean it implies all the values in the data said are not scattering.

Percentage wise analysis for academic achievement

Table 4.17

Percentage wise distribution of different levels of academic achievement

Academic Achievement	Count	Percentage
Low	68	17.00
Medium	267	66.75
High	65	16.25
Total	400	100.0

From the above table it is clear that, 17.00% of higher secondary students show low level of academic achievement, 66.75% of higher secondary students show medium level of academic achievement, 16.25% of higher secondary students show high level of academic achievement. This indicates that the most of the higher secondary students have medium level of academic achievement.

Differential Analysis

Comparison of mean scores of academic achievement based on gender

Null Hypothesis

There exists no significant difference in the mean scores of academic achievement of male and female higher secondary students.

Table 4.18

Mean, SD and t values of academic achievement of male and female

Gender	Mean	SD	N	T	*P*	*Remarks*
Male	827.38	141.26	183	2.127	*0.034*	*Sig. at 0.05 level*
Female	859.47	160.36	217			

From the table it is clear that the calculated "t" value (t=2.127, p< 0.05) and it is significant at 0.05 level of significance. The mean scores of female higher secondary students is found to be 859.47 which is higher than that of male higher secondary students whose mean score is 827.38.Therefore the null hypothesis is rejected. Hence it can be said that female higher secondary students are higher in their academic achievement than the male higher secondary students.

Comparison of mean scores of academic achievement based on locality of school

Null Hypothesis

There exists no significant difference in the mean scores of academic achievement of urban and rural schools of higher secondary students.

Table 4.19

Mean, SD and t values of academic achievement of rural and urban students.

Locality of school	Mean	SD	N	T	*P*	*Remarks*
Rural	865.63	146.77	171	2.394	*0.017*	*Sig. at 0.05 level*
Urban	829.23	155.27	229			

From the table it is clear that the calculated‘t’ value (t=2.394, p< 0.05) is significant at 0.05 level of significance. The mean scores of academic achievement of rural higher secondary students is found to be 865.63 which is higher than that of urban higher secondary students whose mean score is 829.23.Therefore the null hypothesis is rejected. Hence it can be said that rural higher secondary students are higher in their academic achievement than the urban higher secondary students.

Comparison of mean scores of academic achievement based on type of family

Null Hypothesis

There exists no significant difference in the mean scores of academic achievement of nuclear and joint family higher secondary students.

Table 4.20

Mean SD and t values of academic achievement of students from nuclear and joint family

Type of Family	Mean	SD	N	T	*P*	*Remarks*
Nuclear	845.71	151.20	354	0.313	*0.755*	*NS*
Joint	837.72	164.40	46			

From the table it is clear that the calculated ‘t’ value (t=0.313, p>0.05) and it is not significant at any level of significance. Therefore the null hypothesis is accepted. Hence it can be said that nuclear and joint family higher secondary students do not differ significantly in their academic achievement.

Comparison of mean scores of academic achievement based on Religion

Null Hypothesis

There exists no significant difference in the mean scores of academic achievement of Hindu, Christian and Muslim higher secondary students

Table 4.21

Mean SD and F values of academic achievement of students from Hindu, Christian and Muslim

Religion	Mean	SD	Source	Sum of Squares	df	Mean Square	F	*P*	*Remarks*
Hindu	849.82	155.87	Between Gp	15972.8	2	7986.42			
Christian	841.52	147.85	Within Gp	9272614.9	397	23356.71	0.342	*0.711*	*NS*
Muslim	828.53	156.1	Total	9288587.8	399				

From the table it is clear that the calculated 'F' value (F=0.342, p>0.05) and it is not significant at any level of significance. Therefore the null hypothesis is accepted. Hence it can be said that Hindu, Christian and Muslim higher secondary students do not differ significantly in their academic achievement.

Comparison of mean scores of academic achievement based on Community

Null Hypothesis

There exists no significant difference in the mean scores of academic achievement of Forward Caste, Backward Caste, Most Backward Caste, Scheduled Caste and Scheduled Tribe higher secondary students.

Table 4.22

Mean SD and F values of academic achievement of students from FC, BC, MBC, SC/ST category

Community	Mean	SD	Source	Sum of Squares	Df	Mean Square	F	*P*	*Remarks*
FC	900.92	165.68	Between Gp	1002993.5	3	334331.2			*Sig.at*
BC	859.19	130.41	Within Gp	8285594.3	396	20923.22	15.979	*0.00*	*0.01 level*
MBC	797.76	179.36	Total	9288587.8	399				
SC/ST	89.61	197.88							

From the table it is clear that calculated F value is 15.979, $p<0.01$ and it is significant at 0.01 level of significance. Therefore the null hypothesis is rejected. There is a significant difference in the mean scores of academic achievement of higher secondary students based on their community. But the exact significant difference between the groups cannot be found out. Therefore Scheffe's post hoc pair wise comparison is performed to know the exact difference between the groups.

Table 4.23

Scheffe's post hoc pair wise comparison for community

Community	N	Pair	p (Scheffe)	*Remark*
FC (A)	38	A Vs B	0.424	*NS*
BC (B)	297	B Vs C	0.140	*NS*
MBC (C)	34	A Vs C	0.029	*Sig. at 0.05 level*
SC/ST (D)	31	A Vs D	0.000	*Sig. at 0.01 level*
		B Vs D	0.000	*Sig. at 0.01 level*
		C Vs D	0.030	*Sig. at 0.05 level*

From the table it is clear that the higher secondary students of FC and BC, BC and MBC do not differ statistically in their academic achievement on the basis of their community. The higher secondary students who belong to FC and MBC, FC and SC/ST, BC and SC/ST, MBC and SC/ST differ statistically in their academic achievement on the basis of their community.

Comparison of mean scores of academic achievement based on Medium of Instruction

Null Hypothesis

There exists no significant difference in the mean scores of academic achievement of English and Tamil medium higher secondary students.

Table 4.24

Mean SD and t values of academic achievement of students from Tamil and English Medium

Medium of Instruction	Mean	SD	N	T	*P*	*Remarks*
Tamil	770.38	112.45	85	6.287	*0.000*	*Sig. at 0.01 level*
English	864.87	155.87	315			

From the above table, the calculated t value is 6.287, $p<0.01$ and it is significant at 0.01 level. The mean scores of academic achievement of higher secondary students of English medium is found to be 864.87 which is higher than that of higher secondary students of Tamil medium is found to be 770.38.Therefore the null hypothesis is rejected. Hence it can be said that the English medium higher secondary students have high academic achievement than the Tamil medium higher secondary students.

Comparison of mean scores of academic achievement based on Type of Management

Null Hypothesis

There exists no significant difference in the mean scores of academic achievement of higher secondary students of government, private and aided higher secondary school.

Table 4.25

Mean SD and F values of academic achievement of students from Government, Private and Aided schools

Type of Management	Mean	SD	Source	Sum of Squares	Df	Mean Square	F	*P*	*Remarks*
Government	800.54	149.09	Between Gp	924462.6	2	462231.29	21.940	*0.00*	*Sig. at 0.01 level*
Private	909.77	145.83	Within Gp	8364125.2	397	21068.33			
Aided	883.3	136	Total	9288587.8	399				

From the table it is clear that calculated F value is 21.940, $p<0.01$ and it is significant at 0.01 level of significance. Therefore the null hypothesis is rejected. There is a significant difference in the mean scores of academic achievement of higher secondary students based on their type of management. But the exact significant difference between the groups cannot be found out. Therefore Scheffe's post hoc pair wise comparison is performed to know the exact difference between the groups.

Table 4.26

Scheffe's post hoc pair wise comparison for Type of Management

Type of Management	N	Pair	p (Scheffe)	*Remarks*
Government (A)	213	A Vs B	0.000	*Sig. at 0.01 level*
Private (B)	84	B Vs C	0.464	*NS*
Aided (C)	103	A Vs C	0.000	*Sig. at 0.01 level*

From the table it is clear that the higher secondary students of Government and Private, Government and Aided differ statistically in their academic achievement on the basis of their type of management. The higher secondary students who belong to Private and Aided do not differ statistically in their academic achievement on the basis of their type of management.

Comparison of mean scores of academic achievement based on Nature of school

Null Hypothesis

There exists no significant difference in the mean scores of academic achievement of higher secondary students of boys, girls and co-education.

Table 4.27

Mean SD and F values of academic achievement of students from Boys, Girls and Co-Education school.

Nature of school	Mean	SD	Source	Sum of Squares	Df	Mean Square	F	*p*	*Remarks*
Boys	890.25	116.09	Between Gp	123698.5	2	61849.24			
Girls	810.57	139.32	Within Gp	9164889.3	397	23085.36	2.679	*0.07*	*NS*
Co-Education	844.17	156.85	Total	9288587.8	399				

From the table it is clear that the calculated' value (F=2.679, p>0.05) and it is not significant at any level of significance. Therefore the null hypothesis is accepted. Hence it can be said that Boys, Girls and Co-Education higher secondary students do not differ significantly in their academic achievement.

Comparison of mean score of Academic achievement based on Father's Educational Qualification

Null Hypothesis

There exists no significant difference in the mean scores of academic achievement among higher secondary students whose father having different educational qualification.

Table 4.28

Mean SD and F values of academic achievement of students whose father's educational qualification below SSLC, SSLC and Graduate

Father's Educational Qualification	Mean	SD	Source	Sum of Squares	Df	Mean Square	F	*P*	*Remarks*
Below SSLC	811.61	120.32	Between Gp	587488.5	2	293744.2			
SSLC	836.68	164.33	Within Gp	8701099.3	397	21917.13	13.402	*0.0*	*Sig. at 0.01 level*
Graduate	924.59	136.45	Total	9288587.8	399				

From the table it is clear that calculated F value is 13.402, p<0.01 and it is significant at 0.01 level of significance. Therefore the null hypothesis is rejected. There is a significant difference in the mean scores of academic achievement of higher secondary students based on their father's educational qualification. But the exact significant difference between the groups cannot be

found out. Therefore Scheffe's post hoc pair wise comparison is performed to know the exact difference between the groups.

Table 4.29

Scheffe's post hoc pair wise comparison for Educational Qualification of Father

Father's Educational Qualification	N	Pair	p (Scheffe)	*Remarks*
Below SSLC (A)	116	A Vs B	0.341	*NS*
SSLC (B)	214	B Vs C	0.000	*Sig. at 0.01 level*
Graduate (C)	70	A Vs C	0.000	*Sig. at 0.01 level*

From the table it is clear that the pair of below SSLC and SSLC do not differ statistically in the academic achievement of higher secondary students based on their father's educational qualification. The other pairs SSLC and Graduate, Below SSLC and Graduate differ statistically in the academic achievement of higher secondary students based on their father's educational qualification.

Comparison of mean scores of Academic achievement based on Mother's Educational Qualification

Null Hypothesis

There exists no significant difference in the mean scores of academic achievement among higher secondary students whose mother having different educational qualification.

Table 4.30

Mean SD and F values of academic achievement of students whose mother's educational qualification below SSLC, SSLC and Graduate

Mother's Educational Qualification	Mean	SD	Source	Sum of Squares	df	Mean Square	F	*p*	*Remarks*
Below SSLC	845.96	152.45	Between Gp	22684.761	2	11342.38	0.486	*0.615*	*NS*
SSLC	848.86	154.3	Within Gp	9265903	397	23339.81			
Graduate	828.48	147.32	Total	9288587.8	399				

From the table it is clear that the calculated'F' value (F=0.486, p>0.05) and it is not significant at any level of significance. Therefore the null hypothesis is accepted. Hence it can be said that the higher secondary students do not differ significantly in their academic achievement based on their Mother's Educational qualification.

Pearson Correlation between Self Regulated learning and Academic Achievement of Higher Secondary students

Table 4.31

Pearson Correlation between Self-Regulated learning and Academic Achievement of Higher Secondary students

Background Characteristics	Pearson Correlation	p	Remarks
Total	0.365	0.004	Sig.at 0.01 level

Analysis of table reveals that the calculated value ($r=0.365$, $p<0.01$) is significant at 0.01 level. Hence there is a significant relationship between Self-regulated learning and Academic Achievement of higher secondary students. From the r value it can be said that there exists positive low correlation between Self-regulated learning and Academic Achievement of higher secondary students.

CHAPTER-V

FINDINGS AND CONCLUSION

Study in Retrospect

The study under investigation is entitled as Self-Regulated learning and Academic Achievement of higher secondary students. This chapter attempts to summarize all the findings and conclusion drawn from the present investigation.

Objectives of the Study

1. To construct and validate a self-regulated learning questionnaire for higher secondary students.
2. To study the level of self-regulated learning of higher secondary students.
3. To study the level of academic achievement of higher secondary students.
4. To study the correlation between the self regulated learning and academic achievement of higher secondary students.
5. To study whether there exists any significant difference in the mean scores of self-regulated learning of higher secondary students with respect to-
    i. Gender
    ii. Locale of the school
    iii. Type of Family
    iv. Religion
    v. Community
    vi. Medium of Instruction
    vii. Type of Management
    viii. Nature of School
    ix. Educational qualification of father

x. Educational qualification of mother

6. To study whether there exists any significant difference in the mean scores of academic achievement of higher secondary students with respect to-

i. Gender
ii. Locale of the school
iii. Type of family
iv. Religion
v. Community
vi. Medium of Instruction
vii. Type of Management
viii. Nature of School
ix. Educational qualification of father
x. Educational Qualification of Mother

Hypotheses framed for the Study

1. There exists significant correlation between self-regulated learning and academic achievement of higher secondary students.
2. There exists significant difference in the mean scores of self-regulated learning and academic achievement of male and female higher secondary students.
3. There exists significant difference in the mean scores of self-regulated learning and academic achievement of higher secondary students from urban and rural locale.
4. There exists significant difference in the mean scores of self-regulated learning and academic achievement of higher secondary students from nuclear and joint family.

5. There exists significant difference in the mean scores of self-regulated learning and academic achievement of higher secondary students who belong to Hindu, Christian and Muslim religion.
6. There exists significant difference in the mean scores of self-regulated learning and academic achievement of higher secondary students who belong to Forward Caste, Backward Caste, Most Backward Caste, Scheduled Caste and Scheduled Tribe Community.
7. There exists significant difference in the mean scores of self-regulated learning and academic achievement of English and Tamil Medium higher secondary students.
8. There exists significant difference in the mean scores of self-regulated learning and academic achievement of higher secondary students from Government, Aided and Private higher secondary schools.
9. There exists significant difference in the mean scores of self-regulated learning and academic achievement of higher secondary students from Boys, Girls and Co-Education schools.
10. There exists significant difference in the mean scores of self-regulated learning and academic achievement of higher secondary students whose father having different educational qualification.
11. There exists significant difference in the mean scores of self-regulated learning and academic achievement of higher secondary students whose mother having different educational qualification

Methodology in Brief

Normative survey method was employed for the study. The study was conducted on a sample of higher secondary students studying in the class XI of various higher secondary schools in Kanyakumari district following state board syllabus during academic year 2016-2017. The sample size consisted of 400 higher secondary students. The tools used for the study are Self-Regulated Learning Questionnaire (Sreedevi and Deepa, 2016). Academic Achievement was measured by the scores obtained by higher secondary students in their quarterly examination and Personal Data sheet.

Data Collection Procedure

The investigator visited various higher secondary schools in Kanyakumari District. Self-Regulated Learning questionnaire was administered individually to the higher secondary students. Proper instruction was given by the investigator. The students were instructed to read the statements carefully and mark their responses in the response sheet.

Scoring and Tabulation

The collected data sheets were scored systematically using scoring key. For the positive items in the self-regulated learning questionnaire a score of 3, 2, and 1 was given.

Statistical Techniques

1. Arithmetic Mean
2. Standard deviation
3. t test
4. ANOVA followed by scheffee procedure.
5. Pearson's product moment method of correlation

Major Findings

1. There exists significant positive correlation between the self-regulated learning and academic achievement of higher secondary students
2. The female higher secondary students had high self-regulated learning than the male higher secondary students. This findings is supported by the result, $t = 3.32$, $p<0.01$ which is significant at 0.01 level.
3. There existed no significant difference in the mean scores of self-regulated learning of rural and urban higher secondary students.
4. There existed no significant difference in the mean scores of self-regulated learning of nuclear and joint family higher secondary students.
2. There existed no significant difference in the mean scores of self-regulated learning of higher secondary students who belong to Hindu, Christian and Muslim community.
3. The Most Backward Caste higher secondary students had high self-regulated learning than Forward Caste, Backward Caste and Scheduled Caste / Scheduled Tribe higher secondary students. This findings is supported by the result $F= 9.555$, $p<0.01$ which is significant at 0.01 level.
4. The English medium higher secondary students had high self-regulated learning than Tamil medium higher secondary students. This findings is supported by the result $t=2.005$, $p<0.05$ which is significant at 0.05 level.
5. The higher secondary students from the government schools had high self-regulated learning than students from private and aided higher secondary schools. This findings is supported by the result $F= 4.627$, $p<0.01$ which is significant at 0.01 level.

6. The higher secondary students from girl's schools had high self-regulated learning than students from Boys and Co-Education higher secondary schools. This findings is supported by the result F= 8.931, $p<0.01$ which is significant at 0.01 level.
7. There existed no significant difference in the mean scores of self-regulated learning of higher secondary students whose father's educational qualifications is below SSLC, SSLC and Graduate.
8. There existed no significant difference in the mean scores of self-regulated learning of higher secondary students whose mother's educational qualifications is below SSLC, SSLC and Graduate.
9. The female higher secondary students had high academic achievement than male higher secondary students. This findings is supported by the result t = 2.127, $p<0.05$ which is significant at 0.05 level.
10. The rural higher secondary students had high academic achievement than urban higher secondary students. This findings is supported by the result t = 2.394, $p<0.05$ which is significant at 0.05 level.
11. There existed no significant difference in the mean scores of academic achievement of nuclear and joint family higher secondary students.
12. There existed no significant difference in the mean scores of academic achievement of Hindu, Christian and Muslim higher secondary students.
13. The higher secondary students who belong to Forward Caste had high academic achievement than the students who belong to Backward Caste, Most Backward Caste and Scheduled Caste/ Scheduled Tribe community. This findings is supported by the result F= 15.979, $p<0.01$ which is significant at 0.01 level.

14. The English medium higher secondary students had high academic achievement than Tamil medium higher secondary students. This findings is supported by the result t=6.287, p<0.01 which is significant at 0.01 level.
15. The students who studied in private higher secondary school had high academic achievement than the students from Government and Aided higher secondary schools. This findings is supported by the result F= 21.940, p<0.01 which is significant at 0.01 level.
16. There existed no significant difference in the mean scores of academic achievement of Boys, Girls and Co-Education higher secondary students.
17. The higher secondary students whose father's educational qualifications as Graduate had high academic achievement than the higher secondary students whose father's educational qualification is below SSLC and SSLC. This findings is supported by the result F= 13.402, p<0.01 which is significant at 0.01 level.
18. There existed no significant difference in the mean scores of academic achievement of higher secondary students whose mother's educational qualifications is below SSLC, SSLC and Graduate.

Educational Implications

1. The teachers could design open-ended instructional activities to enhance self regulated learning
2. Different student centered teaching methods such as active learning; peer tutoring, small group discussion could be implemented in the school curriculum.
3. Library reading could be encouraged to develop self regulated learning.

4. Projects, Portfolios and performance assessments could be used to encourage self-regulated learning.
5. To develop self-regulated learning among the students the teachers could provide some strategies namely Self-Assessment, Wrapper Activity, Think Aloud, Questioning and Reciprocal teaching.
6. Teachers could create self-regulated learning environments for the complex and diverse needs of the students.
7. Activities like Think-Pair-Share, Retrieval practice, Sorting, Chunking and Organizing Information, Reading Reflections could be provided to the students to enhance academic achievement and self regulated learning.
8. Activities to enhance metacognition such as brain storming, assignments and self study could be initiated.

Conclusion

The following conclusions were drawn from the present study.

The higher secondary students possessed average level of self-regulated learning. Locality of School, Type of Family, Religion, Father's and Mother's Educational qualification had no influence on the self-regulated learning of higher secondary students. Gender, Community, Medium of Instruction, Type of Management and Nature of school had influence on the self-regulated learning of higher secondary students. Type of Family, Religion and Mother's Educational qualification has no influence on the academic achievement of higher secondary students. Gender, Locality of School, Type of Family, Community, Medium of instruction, Type of Management and Father's Educational qualification has influence on the academic achievement of higher secondary students. There

existed positive correlation between self-regulated learning and academic achievement of higher secondary students.

The government should take necessary steps to enhance self regulated learning among the higher secondary students. The school curriculum should be reconstructed so that self regulated learning could be promoted among the students. Examination system could be revamped and provide scope for application and creative level questions.

Suggestions for Further Research

The following are the suggestions for further research.

1. The present study is confined only to the higher secondary students. Similar studies can be conducted for high school students and college students.
2. A study could be conducted to find out the relationship between self regulated learning and decision making ability of higher secondary students.
3. Further research could be done to examine the relationship between self regulated learning and Parental involvement of high school students.
4. A study could be conducted to find out the relationship between self regulated learning and Problem solving ability of higher secondary students.
5. The present study can be conducted for the students those who are following the CBSE and ICSE syllabus.

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APPENDIX-i

N.V.K.S.D COLLEGE OF EDUCATION

ATTOOR, KANNIYA KUMARI DISTRICT

2015-2017

PERSONAL INFORMATION SCHEDULE

Dear student,

Read carefully the following information given below, write your name, schools name and put a tick (√) mark on the appropriate choice.

1. Name of the student	:	
2. Gender	:	Male / Female
3. Locale of the school	:	Rural/ Urban
4. Type of family	:	Nuclear/ Joint
5. Religion	:	Hindu/ Christian/ Muslim
6. Community	:	FC/BC/MBC/SC/ST
7. Name of the school	:	
8. Medium of Instruction	:	Tamil/ English
9. Type of Management	:	Govt/ Private/ Aided
10. Nature of School	:	Boys/ Girls/ Co-Education
11. Syllabus	:	State board/ CBSE/ICSE
12. Educational Qualification of Parents		
i) Father	:	Below SSLC/SSLC/Graduate
ii) Mother	:	Below SSLC/SSLC/Graduate
14. Total Marks obtained in		
Quarterly Examination	:	

APPENDIX-ii

N.V.K.S.D.COLLEGE OF EDUCATION. ATTOOR

SELF-REGULATED LEARNING QUESTIONNAIRE

By

(M.Sreedevi & Dr.R.P.Deepa. 2016)

Draft Questionnaire

INSTRUCTION:

The following statements are related to the dimensions of self-regulated learning namely metacognition, motivation, and general behaviour. Kindly read the statements and mark your response against the options. Put a tick (√) mark in the columns**; Yes, Neutral (N)** and **No** which is most suitable to you. Please do not omit any statements.

Section - I

Sl No.	Statements	Yes	N	No
1.	I always keep a schedule for my learning.			
2.	I reflect on my performance always.			
3.	I use various thinking strategies to learn a concept.			
4.	I review my learning always for better understanding.			
5.	I try to learn my lessons though they are dull and uninteresting.			
6.	I think divergently to solve a learning problem.			
7.	I am aware that I have understood all that I have learned.			
8.	I use excellent study skills to master the subject matter.			

9.	I summarize and rewrite my notes to prepare for tests.			
10.	I ensure the correctness of my learning.			
11.	During examinations I learn the important facts again and again.			
12.	I can learn even the difficult areas.			
13.	I put my maximum effort to perform the learning tasks in a perfect way.			
14.	When I study, I use to remember the important points into my own words.			
15.	I monitor the progress of my studies regularly.			
16.	I get feedback of my work for its betterment from others.			
17.	I use to make a note of the concepts and terms that I fully understand.			
18.	When I read, I try to connect the things that I already know.			
19	I know various strategies to overcome my learning difficulties.			
20	I try to put the information from the class and the book together for my studies.			

Section - II

Sl No.	Statements	Yes	N	No
1.	I think life is an intellectual challenge.			
2.	I can easily handle any unusual situation.			
3.	I am confident to face the unexpected events.			
4.	I like to learn the concepts that arouse my curiosity, even if it is more difficult to learn.			
5.	I try to understand the content thoroughly.			
6.	I often recall what I have learned.			
7.	I learn new concepts quickly.			
8.	Mastery of new knowledge or skills is more important to me.			
9.	I listen carefully all concepts from the class.			
10.	I can do great things in an uncomfortable zone.			
11.	I explore innovative ways for better learning.			
12.	I always participate in skill development training programme.			
13.	I set standards to achieve my goals.			
14.	I participate in all kind of competitions with enthusiasm.			
15.	I enjoy in learning challenging subject.			
16.	I search for in depth details.			
17.	I actively involve in my studies even in stressful context.			
18.	I am highly motivated through intrinsic instinct.			
19.	I work hard to get a good grade even when I don't like a class.			
20.	I try to learn from my mistakes whenever I commit mistakes.			

Section - III

Sl No.	Statements	Yes	N	No
1.	I seek help from others to understand the concepts.			
2.	I clear my doubts with teachers when studying the new concepts.			
3.	I react easily when others question my integrity.			
4.	I remain cool when others blame me for none of my mistakes.			
5.	I am never provoked by any external forces.			
6.	I never get upset for my mistakes.			
7.	I keep fixed timings for learning.			
8.	I carefully organize my study materials.			
9.	I use to do my work systematically.			
10.	I use a variety of sources for completing the task.			
11.	I prioritize all my works.			
12.	I do things immediately when they are assigned.			
13.	I think I know a great deal about any subject.			
14.	I do not give up easily, even when confronted with obstacles.			
15.	I believe I am responsible for my own learning.			
16.	I am not a procrastinator.			
17.	I am goal- oriented and try to achieve it			
18.	I have the habit of sitting late night for my studies.			
19	I consider myself capable of independent learning.			
20	I ask questions in class when I need clarification.			

APPENDIX-iii

N.V.K.S.D.COLLEGE OF EDUCATION. ATTOOR

SELF-REGULATED LEARNING QUESTIONNAIRE

By

(M.Sreedevi & Dr.R.P.Deepa. 2016)

Final Questionnaire

INSTRUCTIONS:

The following statements are related to the dimensions of self-regulated learning namely metacognition, motivation, and general behaviour. Kindly read the statements and mark your response against the options. Put a tick (√) mark in the columns; **Yes, Neutral (N),** and **No**, which is most suitable to you. Please do not omit any statements.

Section – I

Sl.No	Statements	Yes	N	No
1	I always keep a schedule for my learning. □□□□ □□□□□□□□□□ □□□□□□□□□□□ □□□ □□□□□□□□□□ □□□□□□□□□□□□□□□□□□.			
2	I use various thinking strategies to learn a concept. □□□□ □□□ □□□□□□□□□□ □□□□□ □□□□ □□□□□□□ □□□□□□□ □□□□□□□□ □□□□□□□□□□□□□□□□□.			
3	I try to learn my lessons though it is dull and uninteresting. □□□□ □□□□□□□□□□ □□□□□□□□ □□□□□□□□□□, □□□□□□□□□□□□□ □□□□□□□□□□□ □□□□ □□□□□□□□□ □□□□□ □□□□□ □□□□□□□ □□□□□□□□□.			
4	I am aware that I have understood whatever I have learned. □□□□ □□□□□ □□□□□□□□□□□ □□□□□□□□□ □□□□□□□□□ □□□□□□ □□□□□□□ □□□□□□□□□□□□.			
5	I use excellent study skills to master the subject matter. □□□□□□□□□ □□□□□□□□□□□ □□□□□□ □□□□□□□ □□□□□□□□□□□□ □□□ □□□□□□□□□ □□□□□□ □□□□□□□□□□ □□□□□□□□□□□□□□□□□□□.			
6	I summarize and rewrite my notes to prepare for tests. □□□□ □□□□□□□□□□□□ □□□□□ □□□□□ □□□□□□□□□□□□□□□□□□□ □□□□ □□□□□ □□□□□□□□□□□□□ □□□□□□□□□□□ □□□□□□□□□□□□□□□□□ □□□□□□□□□.			

7	I ensure the correctness of my learning. □□□□ □□□□ □□□□□□ □□□□□□□□□ □□□□□□□ □□□□□□□□□□□□□□□□□□.			
8	I put my maximum effort to perform the learning tasks in a perfect way. □□□□ □□□ □□□□□□□□ □□□□□□□ □□□□□□ □□□□□□□□ □□□□□□□□□ □□□□□□□□ □□□□□□□ □□□□□□□□□□□□□.			
9	I get feedback of my work for its betterment from others. □□□□ □□□□ □□□□□□□□ □□□□□□□□□□□□□□□□□□□□□□□ □□□□ □□□□□□□ □□□□□□□□□□□□□□□ □□□□□□□□□□□□.			
10	I used to make a note of the concepts and terms that I fully understand. □□□□ □□□□□□□□ □□□□□□□□□ □□□□□□□□ □□□□□□, □□□□□□□□□□□□ □□□□□□□ □□□□□□□ □□□□□□□□□□□□□□□□□□□□□□□□□□.			
11	When I read, I try to connect the things that I already know. □□□□ □□□□□□□ □□□□□□□□□□□□ □□□□□□□ □□□□□□□□ □□□□□□□□□□□□ □□□□□□□ □□□□□□□ □□□□□□□□.			
12	I know various strategies to overcome my learning difficulties. □□□□□□□□ □□□□□□□□ □□□□□□□□□□ □□□□□□□□ □□□□□□□ □□□□□□□□ □□□□□□ □□□□□□□□.			

Section – II

Sl.No	Statements	Yes	N	No
1	I am confident to face the unexpected events.			

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2	I like to learn the concepts that arouse my curiosity, even if it is more difficult to learn. □□□ □□□□□□□□□ □□□□□□□□□ □□□□□□□□□□□□□□ □□□□□□□□ □□□□□□□□□□□□ □□□ □□□□□□□□ □□□□□□ □□□□□□□□□□□□□□□□.			
3	I try to understand the content thoroughly. □□□□ பாடத்தின் □□□□□□□□□□□□□ □□□□□□□□□□□□ □□□□□□□□□ □□□□□□ □□□□□□□□ □□□□□□□□□□□□.			
4	I listen carefully all concepts from the class. □□□□ □□□□□□□□□□கற்பிக்கும் □□□□□□□□ பாடக்□□□□□□□□□□□□□□□□□□□ □□□□□□□ □□□□□□□□□.			
5	I can do great things even in an uncomfortable zone. எந்த பாதுகாப்பற்ற சூழ்நிலையிலும் என்னால் மிக பெரிய □□□□□□□□□ □□□□□□ □□□□□□□□□.			
6	I explore innovative ways for better learning. □□□□ □□□□□□□□□ □□□□□□□□□□ □□□□□□□ □□□□□□□□□□.			
7	I participate in all kind of competitions with enthusiasm. □□□□ □□□□□□□□ □□□□□□□ □□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□ □□□□□□□□□□□□□.			
8	I search for in depth details. □□□□ □□□□□□ □□□□□□□□□□ □□□□□□□□□.			
9	I actively involved in my studies even in stressful context. □□□□ அதிகமா□ □□ □□□□□□□□□□□□□□□ □□□□□□□□□□ □□□□□□□ □□□□□□□ □□□□□□□□□□□□□□□□ □□□□□□□□□□□□.			
10	I am highly motivated through intrinsic instinct. □□□□ □□□□□ □□□□□□□□□□□ □□□□□□□□□□□ □□□□□□ □□□□□□□□□□□□ □□□□□□□□□□□□□.			

Section – III

Sl.No	Statements	Yes	N	No
1	I seek help from others to understand the concepts. □□□□ □□□ □□□□□□□□ □□□□□□□□□ □□□□□□ □□□□□□□□□□□□□ □□□□□□□ □□□□□□□□□.			
2	I clear my doubts with teachers when studying the new concepts. □□□□ □□□□□□ □□□□□□□□□□□□□□ □□□□□□ □□□□□□□□□□ □□□□□ □□□□□□□□□□□□□ □□□□□□□□□ □□□□□□□□□.			

3	I remain cool when others blame me for none of my mistakes. நான் தவறுகள் செய்யாத போது மற்றவர்கள் என்னை பழிகூறினாலும் நான் அமைதியாகவே காணப்படுவேன்.			
4	I am never provoked by any external forces. □□□□ □□□□ □□□□□□□□□□□□□□□□□□ □□□□□□□□□□□□□டுவ□□□□□□□.			
5	I carefully organize my study materials. □□□□ □□□□ □□□□□□□ சம்பந்தமான பணிகளை முறையாக செய்வேன்.			
6	I use to do my work systematically. □□□□ □□□□ □□□□□□□ பணி□□□ □□□□□□□□ □□□□□□□□□.			
7	I think I know a great deal about any subject. □□□□ □□□□ □□□□□□□□□□□□□□□□□□ □□□□□□□□ □□□□□□□□□□□□ □□ □□□□□□□□□□□□□□.			
8	I do not give up easily, even when confronted with obstacles. □□□□ □□□□□□□ □□□□□□□□□□ □□□□□ □□□□□□□□□ □□□□□□□□□ □□□□□□□□ □□□□□□□□□□ □□□□□□ □□□□□□□□□.			
9	I believe I am responsible for my own learning. □□□□ □□□□□ □□□□□□ □□□□□□□□□ □□□□□□□□□□□□ □□□□□□□□□□□□□□□□.			
10	I consider myself capable of independent learning. □□□□□□□ □□□□□□□ கற்கும் திறன் இருப்பதாக நான் கருதுகிறேன்.			