Chapter 1

INTRODUCTION

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1.1 Background of the study

The relevance of a study is best appreciated if it is approached from the perspective of the context in which it takes place. Education is referred to as any act or experience that has an impact on the academic success of an individual. It has largely contributed to build a strong base for developing knowledge, providing an enabling environment for innovation and in building human resources required for a potential future knowledge economy. The real wealth of a nation is linked with assets of mind and assets of creativity which can only be acquired through the power of education. In popular parlance, education is the modification of behavior in desirable direction (Patak, 2012). Development of a repertoire of learner friendly learning experiences and innovative classroom settings responsive to diversity will offer opportunities towards inspiring and insightful application of the conceptualized schemata.

Considering this objective, we need an exploratory pedagogy that helps students to expand and enrich their reflective trends in learning and thus makes profound contribution in the learning scenario. It ensures the possibility to make every student to be best that he or she can be. Each student has unique personality, preference, ability, talent, learning style, thought, feeling, likes and dislikes, thinking stanza and the like. Instructional transactions based on innovative initiatives, differentiated paradigms which intensify appropriate processes, integrated thematic conceptualization and interdisciplinary approach to curriculum are recently gained much research support. It highlights the need for developing a discourse based on differentiated instruction which plays a vital role in constructing a positive learning climate in the class room.
Educationists need to attempt to design process oriented learning climate that not only meet the present needs of the learners, but also develop the mental horizons of them and anticipate continuous success in their future. Schools should provide structural patterns of thinking towards developing their multifarious strengths and a kind of scaffolding within which students need to grow, learn and evolve in the learning task. Howard Gardner’s landmark study of Multiple Intelligences has opened many avenues for improving the process of learning and challenges teachers to explore new instructional practices in schools. He broke away from the common notion of single number that depicts the ‘intelligence’ of a human being. He argues that people learn best when they use the intelligence that they favour which is denoted as their ‘learning style.’

The learning style approach to teaching and learning is based on the idea that all students have strengths and abilities and that each student may learn in a different way. This idea was supported by Zapalska (2002) who states that information absorption and retention depends largely on whether it was received through the person’s preferred learning modality. Teachers and parents always desire the best for their ward, and they are often pressurized to put strenuous effort in learning. But is the developmental path suggested by the elders in structuring information is much effective in drawing out the maximum potential?. There lies the significance of identifying the learning preferences of students and building appropriate classroom environments towards stretching their potential in a maximum level. It will motivate them to build self confidence and create faith in their talents. Confidence in learning will consistently rise when learners know ‘how to learn’. Learning to learn and grasping knowledge in a phased manner enable the students to take responsibility for their own learning.
Tomlinson (2006), a major authority on differentiated learning, believes the heart and soul of teaching is creating real relationship between the teacher and the students and the need for caring each and every student as a unique one. Articulation of varied learning task demands a wide array of activities which are helpful for igniting learners’ potential to the maximum. Research supports (Mchradad, Ahghar, 2011) that the process of “figuring something out” enables the child to learn, retain and retrieve the content material more effectively. That ‘something’ denotes the most preferred mode of conceptualizing the learning material.

Active learning is an interpretive process that involves construction of knowledge by the individuals and energized initiatives taken by them towards the prediction of academic success. The development of higher order thinking skills is almost dependent on this type of interactive teaching and learning (Walker 2005). He argues that the challenging opportunities will create dramatic change and sustain involvement in the classrooms. Active learning or attaining the standards in learning require more than memorization of content material. The dissemination of learning needs interpretation and internalization of the processes and learner actions embedded in the learning cycle. These actions enable the learner to design the activities and retain the information in a structured pattern. Incorporation of such discussions produces unimaginable results and multiple opportunities for the learner to become much more competent in learning (Rekha, 2012).

Shift from teacher centric to learner centric definitely demands the promotion of certain skills through the active incorporation of various methodologies in every classrooms. Today’s knowledge based society needs and demands every learner to prepare to develop these
skills and realize the essential role of learning task in an efficient manner. The skills are listed in Table 1.1.

### Table 1.1. Exemplars of skills

| Information and communication skills | a) Information and media literacy skills. (Analysing, accessing, managing, integrating evaluating and creating information in a variety of forms and media.)  
|                                 | b) Communication skills (understanding, managing and creating effective oral, written and multimedia communication in a variety of forms and contexts). |
| Thinking and problem solving skills | a) Critical thinking and system thinking. (Exercising sound reasoning in understanding and making complex choices, understanding the inter connections among systems.)  
|                                 | b) Problem identification, formulation and solution, ability to frame, analyze and solve problems.  
|                                 | c) Creativity and intellectual curiosity (developing, implementing and communicating new ideas to others, staying open and responsive to new diverse perspectives). |
| Interpersonal and self directional skills | a) Interpersonal and collaborative skills (Demonstrating team work and leadership, adapting to varied roles and responsibilities, working productively with others, exercising empathy, respecting diverse perspectives.)  
|                                 | b) Self direction (Monitoring one’s own understanding and learning needs, locating appropriate resources, transferring learning from one domain to another)  
|                                 | c) Accountability and Adaptability (Exercising personal responsibility and flexibility in personal work place and community contexts, setting and meeting high standards and goals for oneself and others, tolerating ambiguity)  
|                                 | d) Social responsibility (Acting responsibly with the interest of the larger community in mind, demonstrating ethical behavior in personal work place and community contexts.) |

Source: http://www.21st century skills.org.
Worldwide efforts are increasing to infuse thinking skills into the curriculum which are part and parcel of cognitive behavior. Inclusion of these skills in the instructional processes make the learner producers of knowledge and help them to create a sense of responsibility. The ripple effects of these practices are excellent models for creating critical thinking habits. Despite the intense efforts taken by the authorities to develop appropriate designs for knowledge construction, unfortunately, not all students in our present classrooms are engaged in a fascinating or enjoyable way in school. They are not trying to learn how to become as empowered as possible, and how to survive and thrive. This assumes that the emergence of new century may revolutionize the teaching learning process and the knowledge governance will replace the teacher’s ascendancy. (Little john & Allison 2009). If they practice in such a way, that enlightenment and empowerment “brainwash” themselves and they will become self responsible and confident learners. Classrooms with rich instructional context challenges the learners to practice and develop higher order skills and make the classroom a place of vibrant and successful learning. We need more on-ramps opportunities to keep students engaged in classrooms and emerging pedagogical tools for keeping effective learning on track. By providing variety of learning experiences, constructive working relationships, schools can keep them fully involved in the learning task. Setting certain pre-planned criteria for accomplishing a learning goal, teachers can enhance the depth of learning in order to bring quality outcome in the learning scenario. They constantly face certain challenges towards the implementation of the most effective methods of instruction that could enhance academic achievement through satisfying the diverse learners in the classroom. Because students are natural thinkers and pattern
seekers and they learn in different modalities – Visual, Auditory and Kinesthetic. Tapping into their preferred modalities is the key to engaging students in their own learning. Facilitating learning with the support of a variety of techniques provide more opportunities for success to the students. Teachers will need to step down from the podium and switch from lecturing to facilitating student interaction in class and thereby act as a choreographer of the learning process.

Research suggests that learning is fundamentally influenced and enriched by the context and activity in which it is embedded (Brown et al 1989). In this context, Meta cognitive strategy instruction acquires paramount importance. Meta cognitive learning activities immerse students in challenging tasks and it creates a space for students to discuss, debate new ideas and allows them introspecting, assessing and set targets for learning. Above all, it enables them to strive to excel in their areas of responsibility and acts as a viable tool for self directed learning (OKoro, 2011).Planning, Monitoring and Evaluating are the basic meta cognitive strategies (Dirkes,1985) which help to promote a culture of thinking which is the priority of educational programmes. (Salmon, 2008).

Language is a system of communication that offers countless possibilities for representation, expression and construction of meaning and thought. It is constructed of interacting symbols of sounds, meanings, sentence formation and use and also permeates human thought and life (Cox, 2002). Halliday (1975) defines language as ‘meaning potential’ that is a set of opinions or alternatives in meaning, that are available to the speaker-hearer (p.63). Based on that definition, Halliday has created a model that shows the function of language that children have developed by the time they come to
school. Narrating personal and imaginary stories, reporting information and offering explanations, persuading, dramatizing, questioning are some of the functions of language. Halliday’s framework of language functions are depicted in Figure 1.1.

![Figure 1.1. Functions of Language](image)

Language unlocks human minds and extends his accessibility to differing plethora of information and entertainment and it gives definite configuration to man’s thought, feelings and emotions. ‘Language is a complex system for creating meaning through socially shared conventions’ (Halliday, 1978). Thinking, talking, reading and writing-none of these activities would be possible without language. It enables us to have ideas, to make sense out of our experiences and to share our ideas, feelings and expressions with others. The famous linguistic philosopher, Edward Sapir (1921) defines language as, ‘a purely human and non-instinctive method of communicating ideas, emotions and desires by means of voluntarily produced symbols’.

Students in today’s classroom are diverse than ever and this diversity poses the need for inculcating differentiating instruction in the classroom. Differentiating instructional practices based on the
learning styles of the students encourage and enrich their motivation and challenge them to learn smarter. Students who are sensitized to their own strengths and weaknesses can deal the situations productively and constructively. Above all learner’s persistence, diligence, and heightened engagement are the predictive outcome of the learning task. Knowing how to learn and knowing which practices work best are valuable skills that differentiate expert learners from novice learners. A Meta cognitive environment encourages awareness of the process of learning and thereby promotes self regulation and self direction which are the critical ingredients to successful learning. The self-regulated activity of a learner and the awareness in a learning process are shaped by cognitive and Meta cognitive strategies used by the students (Wernke et al 2011).

Anderson (2002) believes that “developing Meta cognitive awareness may lead to the development of stronger cognitive skills”. He also states the use of Meta cognitive strategies in igniting one’s thinking and leading to higher learning and better performance. They empower the learners to take charge of her/his own learning in a highly meaningful fashion. If teachers can respond to individual students’ learning style preferences, the achievement rate is likely to rise and these “Learning to learn” skills of students may provide the foundation for the lifelong learning concept. The prevailing one-size-fits-all approach tends to ignore the fact that individual children are sensitive to different sensory cues and have different preferences in the way they utilize and exchange information. Prioritization of a singular sensory technique or the neglect of sensory leaning modalities could lead to the marginalization of groups of children or fail to understand their individual perspectives and experiences.
In order to broaden students’ active engagement through adoption of conducive strategies which helps to lessen exclusion from the learning task, provide students ample opportunities to change the script of classroom and develop their own abilities and take advantage from the learning task in a fruitful way. When students leave the active learning classroom having been deeply engaged in making the maximum use of their thinking capabilities, they leave with minds that are full of sumptuous, enriching nutritious food. This food provides the energy for their minds to continue learning long after they are out the door (James Bellanca et al, 1997). Repeated exposure practices and reflections support the learners to perform a learning task in an organized manner and enable them to face the challenges confronted in the classroom set up. Focused strategic practices with special emphasis to Meta cognition interlinked with the preferential modalities of students help to meet heightened accountability mandates and essential contribution to improve student achievement in learning of language.

1.2 Need and significance of the study

Constructivist approaches to learning and teaching have become increasingly influential concepts over the past few decades and attention has increasingly focused on how we learn, as well as what we learn (Downing 2010). In order to modify the process of education and create successful human beings schools need to develop each student as a human being who can cope with and conquer life’s challenges, both internal and external. Effective learning demands active engagement and making classrooms alive and alert. It needs to focus on creating meaningful learning contexts and deliberately provide many opportunities for the learners to reanalyze and reinterpret what they
learned through the discussion of the learning process. Veering away from the teacher oriented method and put the onus of learning on the students is the new paradigm in helping to touch and transform their future in an exciting manner. The intellectual dimension of student learning enters to their cognitive readiness through the mode of self-regulated learning which is capable for making them responsible for managing their own learning. It is believed that good language learners exhibit greater autonomy than weak learners and are quite capable of learning in a self directive pattern.

The changing role of pedagogical approach needs to focus on ‘How and Why phrases of learning’. ‘How’ answers the need for figuring out the maximum learning potential of learners. Understanding differences in the learning styles of students can help to strengthen the use of diverse methods and bring a systematic approach to this effort. Effective curriculum mapping can be adopted, modified and implemented to suit the students’ preferred way(s) of learning and their strategies. Making use of multisensory teaching is one of the key factors ought to consider for helping the learners to retain the given information. Multisensory teaching incorporates three main learning styles: Visual, Auditory and Kinesthetic. This stylistic pattern of learning is based on the idea of individuation which implies that all students have strengths and abilities and that each student may learn in a different way. This Individuation occurs when the mediator fosters a sense of uniqueness and difference with the learner. Mediation of individuation encourages autonomy, independence and it celebrates the diversity of students.

Practices for developing autonomy and making learners self-regulated, self directed and independent are the target of ‘Why’ phase of learning. Self-improvement and expertise in expansion of
knowledge are the behavioral output of this type of learning. A wealth of research studies prove that effective use of meta-cognitive strategies automatically lead to heightened academic achievement as well as foster learner autonomy in a desirable manner (Philip & Hua, 2006; Karia, 2007; Zohar & David, 2008; Kelly & Ho, 2010; Dul, 2011 & Chan, 2012). Meta cognition mainly includes two major components: knowledge of cognition and regulation of cognition. Knowledge of cognition describes an individual’s awareness of cognition at three different levels: declarative knowledge (knowing about things), procedural knowledge (knowing about how to do things), and conditional knowledge (knowing why and when to do things). Regulation of cognition relates to how learners control their learning by inculcating the activities of Planning, Monitoring and Evaluating.

Oxford (1990) emphasizes that successful language development depends on the degree of understanding of one’s own learning style and on choosing appropriate learning strategies that fit his/her learning style. Strategy training is also emphasized because it requires strong self direction, high motivation and positive attitudes on the part of learners. Direct and indirect learning strategies are the main category of language learning. Among them meta-cognitive strategies come under the second category, which engages the learners in planning, focusing and evaluating their own learning. Making a shift towards adoption and amalgamation of meta-cognitive strategies in pedagogical practices plays a vital role in creating lifelong learners and creates a different script and different future for the classrooms. Meta cognition develops the automaticity in learning. It helps us in saving time and energy in the process of effective teaching and gain mastery in learning (Ram Ganesh, 2009). White (1998) explained that the promise associated
with Meta cognition was to be found in its usefulness as a construct for conceptualizing and designing classroom interventions that aimed to improve educational outcomes and student learning disabilities.

In 2000, the National Reading panel recommended Meta cognitive strategies which may hold the promise for enhancing student performance, but the intended changes in teaching and learning have not yet been fully realized in an outstanding manner. Until now, little emphasis has been given to the use of Meta cognitive strategies in a fully-fledged manner in the process of learning. The instructional practitioners must create opportunities for learners to learn by themselves, to self direct their learning, towards becoming autonomous learners and independent of teachers. Gradually they become confident learners to take up responsibility for their own learning. An area that has been neglected to some extent in learning of language is an emphasis on Meta cognitive dimensions. When process instruction becomes the content of instruction, transfer is enhanced and learning become crystallized. It might come in the form of Planning, Monitoring and Evaluating the content in a sequential mode of practice. The investigator being a teacher educator in Malayalam Education happened to interact with the present transaction modalities of Malayalam Language curriculum at secondary level felt that the prevailing classroom practices are not enough to cultivate a Meta cognitive classroom climate and there by facilitate the growth of successful learning communities in both the classroom and school wide. For ensuring and retaining the integrity, purity and vibrancy of our Mother tongue, pedagogical practices can occupy itself a momentous role. The apposite way of handling language skills like Listening, Speaking, Reading and Writing needs to be enriched and energized. The
exuberance in the transactional modes of Malayalam language provides abundant opportunities for ensuring the richness in language competence through the proper recognition of learning strategies. Instructional practices based on Meta cognitive strategies play a significant role in this regard. Hence the investigator tries to find out the effectiveness of meta cognitive classroom practices and learners’ preferential focus on receiving the information in Malayalam language classroom.

There is a paucity of literature on how Meta cognitive practices can be used for heightening the academic outcome of Malayalam language learners at secondary level. The objectives of the study are derived from these gaps in literature. No studies have been undertaken with regard to finding the effectiveness of learning styles and Meta cognition upon the learning of Malayalam language at secondary level. This served as the backdrop for the researcher to conduct this type of experimental study. Within this context, the investigator tried to answer some research questions related to the topic.

**Research Questions**

- Can the select pattern of Meta cognitive classroom practices be effectively implemented for enhancing the academic achievement of Malayalam language at secondary level?

- Can the select Meta cognitive classroom practices be effectively adopted for strengthening the Meta cognitive awareness of Malayalam language students at secondary level?

- Do the select learning styles namely, Visual, Auditory and Kinesthetic have varied impact on the academic achievement of Malayalam language students at secondary level while employing differentiated Meta cognitive classroom practices?
1.3 **Statement of the problem**

The focal point of instructional practices would be the recognition of diversity of learning potential and orientation towards igniting learners’ needs by incorporating Meta cognitive components in an effective manner. An interlinked web between the learning styles and Meta cognitive practices emphasizes the learners to become autonomous and independent which are likely to contribute individual flourishing in terms of accountability. In order to get more activated learners in the classroom, there is a pressing need to identify the preferential focus of learners towards learning and make them aware of the strategies they employed in the accomplishment of a learning task. The successful completion of the journey of learning process requires the needs to bolster up the varied learning styles of the students and booster the corresponding instructional strategies, which lead to the transformation of knowledge and empowerment of learners. Meta cognitive reflection or student-initiated self-reflection is the elusive element of transfer, which is a critical strategy for enhancing learning. Meta cognition moves the transfer boat and without it, the boat would be adrift at sea (Fogarty, 2009). In this stance, the investigator attempted to formulate certain classroom practices infused with Meta cognitive components namely, Planning, Monitoring and Evaluation. Based on these observations, review of the related studies and the research questions formulated the present study is entitled, ‘**Effectiveness of learning styles and Meta cognition upon the learning of Malayalam language at secondary level**’.
1.4 Definition of Key Terms

Effectiveness

The extent to which an intervention, when used under ordinary circumstances, brings about a desired effect (Cooper, 2008). ‘Effectiveness’ in this study is conceived not only in terms of improvement in academic achievement, but also in terms of awareness of meta cognitive components like planning, monitoring and evaluating. It refers to the desired change in the learner’s behaviour because of the experimental intervention.

Learning Styles

The concept of learning styles advocated that teaching and learning methods should be adapted to suit how individual learners prefer to interact with the information being presented to them (Kolb, 1984).

Dunn and Dunn (2002) points out that learning styles are the way in which each learner begins to concentrate on process, internalize, remember and retain new and difficult academic information. It is the application of information within a meaningful experience in the learner’s environment.

Learning and engagement preferences on how children receive instructions are affected by the predominant sensory modality, which the individual prefers to approach and engage with, as well as take in new information. Their learning modalities refer to the sensory pathways like, Visual, Auditory and Kinesthetic through which they send, receive and store information (James and Gardner, 1995).

In the present study the investigator detailed learning style as the crucial component in constructing a favourable learning environment.
for the learners and the chief componential dimensions of sensory preferences refer to the perceptual learning channels with which the learner is most comfortable to receive and retain the information. Hence based on this definition the learners are classified into three categories namely Visual, Auditory and Kinesthetic.

**Meta cognition**

Meta cognition means one’s awareness of one’s own cognitive processing tendencies and abilities (Riegler, 2008). Brown divides (1987) meta cognition into two broad categories. (1) Knowledge of cognition which means activities that involve classroom reflection on one’s cognitive abilities (2) Regulation of cognition as activities regarding self regulatory mechanisms during an ongoing attempt to learn or solve problems. These two forms are closely related, each feeding on the other recursively. It occurs when student consciously adapt and manage their thinking strategies during the process of learning. This stronger focus of efforts enable students to become better critical thinkers.

The present study describes meta cognition as the higher order thinking and the executive form of conscious learning process where in the learners deliberately and purposefully frame the learning process through Planing, Monitoring and Evaluating the content material with the assistance of the instructional practitioner and peers towards the promotion of autonomous, independent and self directive learning. Regulation of cognition or meta cognitive skillfulness through the espousal of certain classroom practices namely, Graphic Organizer, Self Questioning and Problem Solving interlinked with the select meta cognitive components like Planning, Monitoring and Evaluating is the focus of this study.
Learning of Malayalam language

Learning is a process of modification of behavior and it profits by one’s own experience. ‘It is the acquisition of habits, knowledge and attitudes and it involves new ways of doing things and it operates in an individual’s attempt to adjust to new situations’ (Crow and Crow, 1973).

Learning is enhanced by challenge and it always involves conscious and unconscious processing (Fogarty, 2009).

The present study is attempted to test the effectiveness of meta cognitive classroom practices and learning styles towards nurturing the academic achievement of Malayalam language learning at secondary level.

Secondary level

The term refers to the level of schooling providing secondary education that comprises of 8th, 9th and 10th standards of school education. In this study, the students at eight standard are referred to as secondary level.

1.5 Hypotheses of the study

The following hypotheses were formulated for the study.

1) The prevalent curriculum transactional modes of Malayalam language at secondary level are inadequate in enhancing Meta cognitive awareness among the secondary school students.

2) The select Meta cognitive classroom practices namely, Graphic Organizer, Self Questioning and Problem Solving are better than the prevailing activity oriented modes of
3) The select Meta cognitive classroom practices namely, Graphic Organizer, Self Questioning and Problem Solving are better than the prevailing activity oriented modes of curriculum transaction in strengthening Meta cognitive awareness of students at secondary level.

4) Significant difference exists between the extent of effectiveness of select Meta cognitive classroom practices namely, Graphic Organizer, Self Questioning and Problem Solving on the academic achievements of Malayalam language students having varied learning styles namely, Visual, Auditory and kinesthetic.

1.6 Objectives of the study

The study mainly focused on attaining the following objectives:

1) To identify the prevailing modalities of curriculum transaction in the learning of Malayalam language at secondary level with special reference to Meta cognitive classroom practices.

2) To find out the learning preferences of students at secondary level with special reference to their sensory modalities namely, Visual, Auditory and Kinesthetic.

3) To find out the effectiveness of select Meta cognitive classroom practices namely Graphic Organizer, Self Questioning and Problem Solving on the academic achievement of Malayalam Language students at secondary level.
4) To find out the effectiveness of select Meta cognitive classroom practices namely Graphic Organizer, Self Questioning and Problem Solving on strengthening the Meta cognitive awareness of Malayalam Language students at secondary level.

5) To compare the effectiveness of select Meta cognitive classroom practices namely, Graphic Organizer, Self Questioning and Problem Solving among the students at secondary level having varied learning style preferences namely, Visual, Auditory and Kinesthetic.

6) To analyze the worthiness of the select Meta cognitive classroom practices namely, Graphic Organizer, Self Questioning and Problem Solving in a natural setting through the administration of

   a) Strategy Evaluation proforma.
   b) Observational checklist
   c) Collection of Linguistic Discourses
   d) Student Generated Rubric

1.7 Functional outline of the study.

The present study attempted to empower the student folk at secondary school level with high academic achievement in Malayalam language and strengthened Meta cognitive awareness through the active implementation of select Meta cognitive classroom practices in accordance with learners’ learning preferences. For attaining the set objectives of the investigation both quantitative and qualitative methodology were adopted by the investigator. As a prelude to the
study, a semi structured interview was administered over the experts in the field of Malayalam language Education for getting a deep vision about the prevalent classroom practices with regard to the learning of Malayalam language. The quasi-experimental design with pre-test post test non equivalent group design was employed for the quantitative segment and Meta cognitive awareness Rubric, Collection of Linguistic Discourses, Observational Checklist and Student Generated Rubric were adopted for the qualitative segment of the present study.

1.7.1 Sample selected

The sample of the study primarily consisted of 331 pupils at Secondary school level belong to three districts of Kerala namely, Pathanamthitta, Kottayam and Alappuzha. A select sample of experts (N= 77) comprised of School practitioners, Experts in Malayalam Language, Teacher Educators at B. Ed and M. Ed level were included under the purview of the study. Along with this, a few students who were exposed to the intervention groups were also selected as the sample of the study.

1.7.2 Tools and Techniques used

The tools and techniques employed for the present study were:

1) Interview Guide
2) Learning style inventory
3) Meta cognitive awareness Rubric
4) Achievement Test on Malayalam language.
5) Lesson Design based on Graphic Organizer
6) Lesson Design based on Self Questioning
7) Lesson Design based on Problem Solving
8) Strategy Evaluation proforma based on the select classroom practices namely Graphic Organizer, Self Questioning and Problem Solving.

9) Observational Checklists for the select classroom practices namely Graphic Organizer, Self Questioning and Problem Solving.

10) Collection of Linguistic Discourses.

11) Student Generated Rubric.

1.7.3 Statistical procedures employed

The statistical procedures employed for analysis of data were:

1) Descriptive statistics
2) ANOVA
3) ANCOVA
4) Estimation of Adjusted Means
5) LSD
6) Percentage Analysis

1.8 Scope of the study

The present study is aimed to find out the effectiveness of learning styles and Meta cognition upon the learning of Malayalam language at Secondary level. The effectiveness of the select Meta cognitive classroom practices was tested with regard to the academic performance of Malayalam language and the level of Meta cognitive awareness of students at secondary level. In the present study, the investigator implemented learning designs based on the select classroom practices namely, Graphic Organizer, Self Questioning and Problem Solving. The Meta cognitive components like, Planning, Monitoring and Evaluating
are intentionally interlinked with these classroom practices which enable the learners to gain confidence in learning and develop a sense of self efficacy among them. ‘Planning’ emphasises on articulating the learning task, ‘Monitoring’ enables to consciously know how it hooks together like using a radar to check the progress in learning. ‘Evaluating’ helps in looking back at how the work has done. The findings of the study reveal that the instructional modalities stemmed from Meta cognitive classroom practices could capacitate the learners to acquire the skills needed for self directed learning. This study also reveals that the instructional dynamics incorporated with students’ preferred learning paradigms will offer a comfortable space for every learner and credible improvement in the process of learning. Awareness about Meta cognition creates relaxation in learning process and mental focus for concentration and retention of information. Besides that, the peripheral sensory inputs like Visual, Auditory and Kinesthetic can be powerful and as long lasting when they become explicit in the mind.

It is expected that the findings of the study will help curriculum planners to make needed changes in the textbook of Malayalam by offering provision for Meta cognitive discussions for students. Giving due emphasis to the preferential modalities of learners would enable the instructional practitioners to adjust the pedagogical practices to foster increased learning among individuals and it would equip them to take more responsibility for their own learning which is the spot indicator of learning expertise.

1.9 Delimitation of the study

The study is delimited to a sample of 8th standard students from 4 selected Schools belong to Pathanamthitta, Kottayam and Alappuzha.
Districts which represents a cross section of the secondary school students in Kerala. The study is delimited to Malayalam language learners as the investigator is a teacher in Malayalam Education and have expertise in that domain of knowledge. Only three classroom practices namely Graphic Organizer, Self Questioning and Problem Solving have been considered because the investigator deemed that these classroom practices are the best feasible and effectual practices in the domain of Malayalam language learning. According to the different psychological theories, there are so many models of learning styles identified, but, in the present study, only three learning styles based on learners’ sensory modalities namely Visual, Auditory and Kinesthetic were considered.

1.10 Overview of the forthcoming chapters.

The researcher divided the present report of the study into six chapters. The brief outline of the remaining chapters of the present study is given below.

Chapter 1. Introduction

This chapter signifies the background and rationale of the study, statement of the problem, Definition of key terms, Objectives, Hypotheses and delimitations of the study briefly.

Chapter 2. Theoretical overview

This chapter presents the theoretical foundation of the problem.

Chapter 3. Review of Related Literature

This chapter contains the practical foundation of the problem and previous studies in this field.

Chapter 4. Methodology
This chapter represents research design and its bases. It includes the description of the study, sample employed, selection and development of the tools used, procedure adopted for data collection and statistical treatment carried out.

Chapter 5. **Analysis and Interpretation**

The details of the results are reported and supported with tables and figures, and sufficient interpretations are given.

Chapter 6: **Summary and conclusion**

This chapter reflects summary of findings, and conclusions including implications, recommendations for future researches and limitation of the study.