

# Management of Self-Regulated Learning in Higher Education Institutions

Dissertation

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## DECLARATION BY THE SCHOLAR

This is to certify that the M.Phil. Dissertation being submitted by me on the topic entitled 'Management of Self-regulated Learning in Higher Education Institutions' has been completed under the guidance of Professor Vineeta Sirohi. It is declared that the present study has not previously formed the basis for the award of any Degree, Diploma, Associateship or Fellowship to this or any other University.

*Richa Sharma*

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## **CERTIFICATE OF THE SUPERVISOR**

This is to certify that the dissertation/thesis entitled ‘Management of Self-regulated learning in Higher Education Institutions’ is the work undertaken by Ms. Richa Sharma under my supervision and guidance as part of her M.Phil. degree in this Institute. To the best of my knowledge, this is the original work conducted by her and the dissertation may be sent for evaluation.

Supervisor’s Signature  
(Professor Vineeta Sirohi)

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## **List of Abbreviations and Acronyms**

|               |                                                                  |
|---------------|------------------------------------------------------------------|
| <b>SRL</b>    | Self- Regulated learning                                         |
| <b>NEP</b>    | National Education Policy                                        |
| <b>UNESCO</b> | United Nations Educational, Scientific and Cultural Organization |
| <b>HEI</b>    | Higher Education Institution                                     |
| <b>SPSS</b>   | Statistical Package for the Social Sciences                      |
| <b>ICT</b>    | Information and Communications Technology                        |
| <b>NCR</b>    | National Capital Region                                          |

# **CHAPTER 1**

## **INTRODUCTION**

## 1.1 Introduction

We know that the rate of knowledge is increasing day by day, even the students want to acquire knowledge from different domains and learn new things. On the other hand, there are dozens of government colleges without permanent principals and professors, having large number of students, which is hampering the functioning in the colleges besides taking a toll on the academics of the students. Referring to the Ministry of Education 2021, there are nearly 39, 882 sanctioned posts across IITs, NITs, IIMs, IISERs, IIITs, central universities and other institutes funded by centre, of which 14372 (36%) are vacant. One of the directors of the educational institutions says “compared to the first 50 yrs. the number of institutions have more than doubled in past two decades due to increased number of student enrolment” (The Times of India, May 2021). The present pandemic has made many people lose their job, and made work more challenging and difficult for those on permanent job.

Thus, it is obviously difficult for the teachers teaching at higher education to adapt themselves to provide instruction to each individual student according to their needs and requirements, as every student is unique and so is their learning style. To make learning compatible and meaningful for the individuals, literature recommends personalizing the learning environment to meet different needs and characteristics (Chiang, 2016; Ismaeel Al Mulhim, 2019; Shahsavar & Hoon, 2011; Tayebinik & Puteh, 2013). Various empirical researches show that, under certain conditions and situations, some teaching strategies suit some students better than others because they can interfere with the learning strategies that students are already using (Shuell 1988, Vermunt & Donche 2017). Therefore, the researchers began to stress upon the relevance of developing meta-cognitive and affective strategies, additionally the concept of self-regulated learning began to emerge (Boekaerts & Cascallar, 2006; Garrison, 1997; Vermunt & Van Rijswijk, 1988; Zimmerman, 2002).

Therefore, the central premise of this proposal is that self-regulated learning can be acquired and it leads to a more meaningful learning by the students' greater satisfaction in studying with improved learning outcomes (Vermunt & Donche, 2017; Vermunt & Van Rijswijk, 1988; Zimmerman, 2002). In this investigation, the researcher aimed to study the self-regulation process of learning, explore the strategies and the barriers to

it. The study also aims to examine the management of self-regulated learning in higher education institutions.

## **1.2 Theoretical Framework**

Contemporary work of self-regulated learning is heavily influenced by Albert Bandura whose first writings were published in 1970s. Bandura (1986) in his work of Social Foundations of Thought and Action has majorly shaped the direction and development of concept of Self-regulation. The early writings of Bandura on self-efficacy and motivation eventually gave rise to the additional area of regulated learning.

Bandura (1977) expressed human functioning as interplay between environment, behaviour and person. Here, the role of self-regulation is to effect of environment on the person mediated through behaviour. Variables that affect person's behaviour include self-processes that interact with one's environment through one's actions. For example, Bandura's Social learning theory (SLT) emphasizes on the derivation of knowledge from the environment. Additionally, while Flavell and other metacognitive researchers were more influenced by cognitive orientation of its predecessors, Bandura and his co-workers were more influenced by neobehaviorism (writings of Kenneth Spence).

In 1970's, Social Cognitive Theory also emerged which claims that, it is not only behaviour that is developed by experiences but also our ability to observe and understand the rewarded or punished behaviours of others. (Bandura 1971). This model basically emphasizes upon the processes of paying attention to the behaviour, absorbing it, willing to reflect upon it and finally the performance part. Individuals can observe themselves and compare their behaviour as per their own set criteria, and regulate themselves (Senemoglu, 2005, p. 233).

Bandura's publication of classic volume has led to development of the concept of self-regulation which further led to emergence of SR research in academic domains by Zimmerman, Schunk. Work of Graham and Harris (1991) have provided a more refined analysis of self-regulation when researching on SR strategies. The increased

focus on self-regulation in academic settings has directly contributed to emergence of new term, self-regulated learning or SRL. SRL emerged in 1980s and gained prominence in 1990s. The developmental path of SRL is quite unique and different from that of metacognition and self-regulation. Distinctively, while metacognition and SR were developing in parallel with little commerce, most of the SRL models cover the aspects of both metacognition and self-regulation to mould its lens on learner monitoring. Theorists initially pointed out that, SRL is an integrated theory of learning, that attempts to address the interaction of cognitive, motivational, and contextual factors rather than single contributions. Contrary to the beginnings of metacognition and self-regulation, the regulatory focus was a little broader.

The broader regulatory focus in SRL is amalgamation of both endogenous and exogenous theories into one that Moshman (1982) pictured as dialectical constructivism. “In SRL, nor endogenous and neither exogenous view is dominant over the other. The two exist in relation corresponding constraint and facilitation,” (p.375). However, Byrnes (1992) pointed out that synthesizing these theories is possible, as they are not mutually exclusive. Byrnes also noted that integrated views are increasingly popular with the popularity of SRL.

Therefore, a large number of studies are focussing on how students regulate themselves in academic environments that has certainly led to the development in the concept of self-regulated learning. (Dinsmore, Alexander, & Loughlin, 2008).

### **1.3 Conceptual Framework**

Self-regulated learning is defined as an active and constructive process through which individuals set their own learning goals, regulate themselves and are directed and limited by their own goals and contextual features around (Pintrich,2000). Self-regulated learning helps the individuals to know themselves, become wise and determinant in their learning approaches (Zimmerman, 1990). Later on, he redefined self-regulated learning as a cyclical process wherein the student plans and monitors his learning activities on his own and then reflects on the same. (Zimmerman, 2002).

It is a process that assists students in managing their thoughts, behaviours, and emotions to successfully navigate their learning experiences, and transform their mental abilities into skills and habits through developmental process that emerges from guided practice and feedback. (Zumbrunn, Tadlock, & Roberts, 2011).

**Self-Regulated learners-** A self-regulated learner constantly engages in four core activities: Planning, Organizing, Monitoring, and Evaluating his learning processes. Being self-motivated and directed entails using all skills that enable one to metacognitive, motivational, and behaviourally participate in one's own learning process.

#### **1.4 Self-Regulated Learning - The Process**

Through Self-regulated learning (SRL), students follow a plan to complete assignments, study for tests and stay focussed. Referring to Pant (2021), learning to self-regulated learning material, the first step to be a self-regulated learner is to be aware about your goals and objectives. For that, ask yourself- Are you going through the process of self-regulated learning only because you have to or you want to take it as an opportunity to be prepared for real world. To follow the SRL process, adjust your time in such a manner that you can utilize your free time effectively for yourself. The process of self-regulated learning emphasizes the need for taking viable breaks in between which helps to refresh the mind and body so that they can become aligned once again. Know that, if you are stuck at any point during self-regulated learning it is better to adopt a new angle and move on. Try to study from the alternative material or seek help from your instructor/teacher or learning communities. For that you may also use technology for benefit. Using internet you can find thousands of materials on any topic that you are looking for. Technology is one such key that can do wonders during the process of self-regulated learning. Tutorials, study materials, questionnaires, notes, etc are available through the internet very easily.

In spite of following the SRL process, success of students heavily relies on students' ability to autonomously and actively engage in learning process (Wang, Shannon & Ross, 2013). It is therefore important that the learner must have self-generated ability

to control, manage and plan their learning actions. Such regulatory process is called self-regulatory learning (Zimmerman, 2008). The challenge is therefore placed on the shoulders of stakeholders of the education system to find the ways to harness the benefits of self-regulated learning to provide youths and adults with the foundation for future development and learning.

The academic administrators are therefore expected to identify the gaps and bridge them by decision making process thus making their role more challenging and innovative. In this light, the present study emphasizes upon the, administrative support mechanisms that academic administrators can provide for enabling the process the self-regulated learning.

### **1.5 Role of Teacher/Instructor in Self-Regulated Learning**

Self-regulation (SR) appears to be critical for success in learning in academic life and beyond (Boekaerts, 1999). Therefore, teachers play a crucial role in promoting self-regulated learning (SRL). Teachers need to be able to learn in and from practice since the knowledge to teach can hardly be fully obtained before or apart from practice (Randi, 2004).

They work in a rapidly changing environment and need to continuously update their teaching skills (Randi, Corno, & Johnson, 2011). About seventy per cent of teacher learning occurs through every day learning (Fullan, 2007). Therefore, the recognition of learning opportunities at work is tremendously important and can be facilitated through SRL skills. Van Eekelen and colleagues define the core of teacher SR as “independently directing the process of improving teaching and/or attaining learning goals”. This definition enables us to connect teacher SR to the introduction of SRL classroom practices, which is the current paper’s aim. Different authors previously outlined a profile of ‘the self-regulated teacher’.

Further, self-regulated teachers are mostly described as those who trigger certain educational beliefs, construct appropriate instructional practices accordingly and proactively control the teaching environment and conditions. Furthermore, teacher SR

builds on metacognitive processes that follow a spiral process: teachers set goals for teaching and learning, plan appropriate actions, enact instructional strategies based on the pre-set goals, monitor and evaluate outcomes, and adapt and revise their approach when necessary (Bartimote-Aufflick et al., 2010).

Self-regulated teachers are decision makers that deliberately and preliminary reflect on their judgments. Therefore, teacher introspection and self-assessment are critical and might lead teachers to modify and possibly supplement their knowledge about teaching and learning. As independent learners, self-regulated teachers have the necessary skills to learn from teaching and are expected to apply similar SRL strategies as students, e.g. seek help from mentors, look for feedback and search professional literature for new ideas (Butler, 2003; Butler et al., 2004; Manning & Payne, 1993; Randi, 2004).

The following are some strategies to enhance self-regulated learning (UNESCO, 2020)

#### 1. Learning to Learn

Innovative method for Self-Learning

Innovative Motivation of Students

#### 2. Extension Study Materials

Preparing Course Writers in Extension Studies

Choosing a Textbook

Making Audiotape

#### 3. The Multimedia Approach

Developing a Source Book for Distance Education

Teleconferencing: Designing a Distance Teaching Programme

Computer Teaching at a Distance

#### 4. Research and Evaluation

Using Research Support in Distance Education

### **1.6 Self-Regulated Learning Strategies**

Self-regulated learning strategies signify the actions directed in acquiring information/skill that involve agency, goals and perceptions of the learner. On the basis of existing knowledge of literature different self-regulated learning strategies are



identified. The categories are taken from social learning theory and research. They included goal setting, environment structuring, self-consequences (self-rewarding and self-punishment) and self-evaluation. However, several other categories are also identified on the basis of closely allied theoretical foundations given by Zimmerman and Pons (1986) which include planning, organizing and transforming, seeking information, self-consequences, rehearsing and memorizing. Self-regulated learning strategies help the individual in moulding their behaviour when a student starts to understand the concept of self-regulated learning.

### **1.7 Self-Regulated Learning-Significance**

Self-regulatory learning has several advantages over the traditional settings. It encourages the learners to seek knowledge proactively rather than just reacting to the situations that provide them with the opportunity to learn. It guides the learners appropriately, until they are assured that they have covered the entire syllabus in detail. It has also been reported by many educational institutions that self-regulated learning allows an encouraging environment, student can freely study as much as he/she wants without any interference.

It also allows them to set intrinsic goals and teaching offered in various environments using different strategies stimulate much better learning plus it is modifiable depending on the way the learner wants to learn, thus making it more learner-centred model. The students largely the students belonging to HEIs find it exciting although challenging to adapt SRL as it offers them with the freedom to express themselves.

### **1.8 Barriers to Self-Regulated Learning**

While there are many barriers in self-regulated learning as statistics indicate that only 5 to 15 percent of the learners are able to complete their online courses. Rest face some constraints that do not allow them to move ahead in their online courses. There are numerous obstacles learners have to overcome to achieve learning success. While in some cases this could be a medical condition. Barriers can be extrinsic and intrinsic to the learners. (M.M Pant, 2021) Common barriers include emotional barriers, motivational barriers, and learning environment barriers.

Emotional barriers: This includes self-doubt and difficulty in adapting change. Where learners are resistant to new technology, you can offer additional tools on the eLearning platform such as live support for their technical glitches or content queries. Emotional Artificial Intelligence or emotion AI conjures up with the vision of having personal assistant robots that can have human like interactions. By 2022, 10% of personal devices will have emotion AI capabilities.

Motivational barriers: Lack of goals and purpose fuels procrastination. Learners who feel they have no life purpose fail to appreciate available learning opportunities. Keeping the tasks short and using micro-learning strategies will help as well as including gamification where possible. Encourage learners to complete tasks that can be accomplished on the same day. Many ICT Tools are in use these days to motivate learners. E- certificates, E- Badges and E-Appreciation Letters can be used to motivate step-1, step-2 and final step learners.

Learning environment barriers: “A learner who cannot complete their final online assessment because of a distraction-filled workplace” comes under this section. Open plan offices, loud colleagues, construction on a nearby building, visitors on site They distract learners not only from their work, but also from learning. We know that every learner is different. The introduction of technology to the traditional learning environment established a framework for blended learning, which is now the dominant model for educating modern-day learners. But AI brings personalization to a whole new level.

### **1.9 Administrative Support Mechanisms for Management of Self-Regulated Learning**

With the increase in advancement of technology and expansion in global population, self-regulated learning has certainly occupied a major place in the pages of history of education system. In addition to this, the education system has brought up with the new trends in teaching methods, strategy, support mechanisms to prepare the students for their future. Time is gone when education was confined to one classroom with outdated syllabus, with boring teaching methods. Now the rate of knowledge is increasing, students are gaining interest in diverse domains, they want to know about everything and if we continue to remain stuck with the classroom sitting teaching method, students

will be learning only what teacher knows. How will the students be able to dig into the depth of knowledge by taking help of others or someone controlling them all the time moreover, no teacher can make any student learn until the student himself wants to learn.

Therefore, in order to make learning possible, we need to support them through different strategic mechanisms through administration, help them in managing themselves, so that learning does not confuse them, and they can dig into the well of knowledge as much as they want to. The only way through which it is possible is when institutions adopt administrative support mechanisms towards self-regulated learning. Referring to Figure 1.1 given by UNICEF (2020) explaining some of the administrative support mechanisms for self-regulated learning.

**Figure 1.1: Administrative Support Mechanisms for Self-Regulated Learning**

| Planning for Results                                                                                                                                                                                                                                                                                     | Achieving Results                                                                                                                                                                                                                                                       | Demonstrating Results                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Design programmes that are measurable and that can be implemented</li> <li>• Defining Desired Results</li> <li>• Assessing Assumptions and Risks</li> <li>• Assessing Evaluability</li> <li>• Developing a monitoring plan</li> <li>• Prioritization</li> </ul> | <ul style="list-style-type: none"> <li>• Monitoring Implementation</li> <li>• Adjusting, taking decisions and corrective actions</li> <li>• Quality assurance and feedback</li> <li>• Monitoring tools and approaches</li> <li>• Communication and Reporting</li> </ul> | <ul style="list-style-type: none"> <li>• Evaluating results achievement</li> <li>• Documenting and acting on lessons learned and recommendations</li> <li>• Learning, adjusting and adopting</li> </ul> |

Further, we know that, in any organization or an institution, administration takes place at all levels and is carried out by some academic and non-academic staff. It is the administrator’s ability to see how actions of individuals, or decision affect the organization. This proposal examines the roles and the management mechanisms that academic administrators take in the light of demand- need for self-regulation mechanisms in higher education institutions.

Similar to the traditional educational administrators, when conducting the self-regulated learning, the academic administrators are expected to meet variety of problems and challenges to deal with. One of them stems from long standing debate between the traditional classroom program versus self-regulated learning programs. Therefore, the academic administrators must ensure quality of instruction by having right people-instructional and technology experts, right technology, quality and well-organized curriculum, appropriate materials-textbooks and other media sources. Curriculum planning and quality assurance are important factors. As the learners will be regulating learning on their own, administrators still need to carry out the managerial role of controlling and monitoring for standards. They need to work hard, not only in getting, but also maintaining the standards approval of needed programs.

Additionally, effective academic administrators must keep abreast of new programs., for that they must take part in global trends in education, seek to be actively visible.

Self-regulated learning requires dedication on the part of academic administrators who must work with and cooperate with many learners, staff and faculty to ensure that all the student services are delivered effectively by ensuring everything is efficiently planned, developed and delivered. Academic administrators must effectively lead and look for the mechanisms and opportunities they can provide to develop value and quality in self-regulatory learning programs.

In the light of the above, the central premise of the study is to look into the administrative support mechanisms for management of self-learning in higher education institutions.

### **1.10 Rationale of the study**

The present pandemic situation has made us realize that our education system is not prepared to manage the learning in remote areas and nor do they prepare them to be independent learners of knowledge. Although national and international organisations have taken many initiatives to make education accessible to all, even for those living

in the remotest part of the country. However, education has still not reached the students as per their needs and the way they want to learn. Because the online education has become completely teacher-centric. Teacher regulates the entire learning strategies in which he/she is comfortable to teach in, uses all the formal methods of teaching despite being away from the students.

Higher education institutions must understand that students are not remote of whose activities can be controlled. Students must be given space and flexibility, else learning will create mess in the coming time and slowly superficial layer of learning will be seen in through the lens of the learners, and students will eventually lose interest in learning or understanding how to learn. Looking onto the role of academic administrators and policy makers, they are just busy in simplifying learning materials for the students. They don't want students to understand the basic concepts in depth. Reducing the syllabus, running away from the responsibilities, selecting the easiest way, running away from student difficulties won't help. It will weaken the roots of the education system slowly and will produce poor quality products that no one would like to have.

We need to understand that, learning happens when we take care of the individual needs. In order to make the learning process student centric, we must enable them by guiding them through different strategies of learning so that learning happens at its own pace. It becomes enjoyable rather than making learning compulsory for students and making them to understand the concepts as you understood it.

Giving them opportunity to seek help, making them regulate their own learning behavior will make them a better person for life and work.

We must also acknowledge that, learners take time and encouragement to become autonomous. The job of academic administrators will thus increasingly become to structure students learning, help them with their difficulties, run discussions based on, look after students pastorally and guide them.

Therefore, it is necessary for the academic administrators to actively engage themselves in making the students self-regulated learners. We must not assume that

students know how to regulate their learning. We must teach them and take active steps by exploring process of self-regulated learning, strategies for making self-regulated learners, reducing barriers to self-regulatory learning and by understanding our responsibility towards the learning community as academic administrators. Self-regulated learning will change however the role of the academic administrator forever. There can be no going back. By supporting teaching in all their tasks, academic administrators will usher in the biggest change the profession has ever seen- Self-regulated learning. Therefore, through this research we will also explore the administrative mechanisms that would help the students in making them self-regulated learners.

### **1.11 Statement of the problem**

The problem in the present study is – Management of self-regulated learning in Higher Education Institutions.

### **1.12 Operational Definitions**

**Self-regulated learning:** Self-regulated learning is basically an individualized method of learning, it is also called as modern way of learning, through which a learner teaches himself skills and knowledge that proves relevant to his daily activities.

**Self-regulated learning process:** It is a cyclical process wherein a student plans for a task, organizes and assembles their learning material, uses strategies and monitors their performance and then reflects on outcome. This cycle then repeats and it should be tailored for individual students and for specific learning tasks.

**Self-regulated learning strategies:** Learners self-regulate by applying learning tactics that help them to achieve their goals. These learning tactics are research based instructional techniques that help learner monitor and manage their learning skills.

### **1.13 Research Questions**

1. How does the self-regulated learning process takes place?

2. What are the self-regulated learning strategies adopted by undergraduates in higher education institutions?
3. What are the barriers to self- regulated learning?
4. What are the administrative support mechanisms for management of self- regulated learning in higher education institutions?

### **1.14 Objectives**

The present study seeks to:

1. Study the process of Self-regulated learning.
2. Explore the self-regulated learning strategies among undergraduates in higher education institutions.
3. Examine the barriers to self-regulated learning
4. Explore the administrative support mechanisms for management of self-regulated learning in higher education institution

### **1.15 Significance of the Study**

This study has special significance for the management of college, college faculty, teachers, Higher Education Institutions and curriculum planners. This study aimed to understand the process the process of self-regulated learning and analyse the strategies adopted by undergraduates in higher education institutions additionally the administrative support mechanisms for management of self-regulated learning in higher education institutions. This will have a ripple effect in the teaching learning process adopted by the higher education institutions and subsequently by the college faculty.

### **1.16 Delimitation of the study**

Every researcher has to delimit his or her study because everything can't be done in a study due to time constraint, availability of resources, etc. So keeping these aspects in mind, the present study was delimited as follows:

- The present study has only taken process, strategies, barriers and administrative support mechanisms of SRL, leaving the factors affecting SRL and relationship between different variables because of lack of time.
- The data was collected through online forms and telephonic interviews only without any face to face interaction on students of B.Ed. streams due to pandemic.
- Only students of B.Ed. stream were selected for sample collection as it was difficult to contact students belonging to different streams in the selected Universities due to COVID-19 pandemic.

### **1.17 Organization of the Study**

This study contains six chapters dissertation.

Chapter 1 Introduction- gives a view of a larger perspective of self-regulated learning at its management, which mainly includes higher education institutions. The chapter tries to define the concept, process, and barriers of self-regulated learning, factors affecting self-regulated learning, and administrative support mechanisms being used for the management of self-regulated learning study. The research problem is introduced in this chapter.

Chapter 2 Review of literature – discusses literature on self-regulated learning, techniques, methodology, forms and trends in management of self-regulated learning.

Chapter 3 Methodology- discusses the research objectives and questions. The methodology, sample, and tools discussed. This chapter compiles the data and findings obtained in the study.

Chapter 4 Results - is the section on result analysis which provides complete details about the responses and their interpretation.



Chapter 5 Discussion – focusses on results interpretation and discussion and shows how results are related to the review of literature and research questions by making an argument in support to overall conclusion.

Chapter 6 Conclusion – discusses the overall findings of the study, informs about limitations or weaknesses of the study and provides answer to the research question and objectives.

## **CHAPTER 2**

# **REVIEW OF LITERATURE**

## **2.1 Introduction**

A review of literature is the systematic collection and explanation of applicable studies that address the research question. It provides an overview of previous research in the field as well as current hypotheses and theories. The analysis provides valuable context and information about justification for the study that was carried out. A review of the literature aids the researcher in developing a research strategy and also helps in identifying research gaps. This section aimed at reviewing 40 previous studies related to the current study. The present study incorporates recent research studies on self-regulated learning concept, process, strategies, barriers and administrative support mechanisms.

## **2.2 Review of Research**

Since it is clearly visible that the disastrous impact of COVID-19 is likely to bring long term pact on the entire education industry. UNESCO, 2020 addresses both the challenges and the opportunities in the education settings by emphasizing upon the role of teacher and students.

UNESCO has also highlighted that the students must be given project based learning opportunities so that they learn to solve problems independently additionally the students must be provided greater autonomy in the educational system so that they are able to organize their work better, take more initiative, think critically and develop a responsible behavior towards their learning. UNESCO has further emphasized upon the role of flexible environment so that students can make proper decisions regarding their life and learning thus they will become less dependent upon adults. Further, UNESCO says that the teachers must be provided proper training of the effective use of technology and role of teachers is to skillfully oversee their students, by letting them make their own decisions and taking initiative.

“We need to understand that, the world is facing many disruptive and uncertain challenges now and learning is the only greatest humanity’s renewable resource in order to respond to these challenges and invent alternatives, yet education doesn’t only

respond to the changing world, education transforms the world but to create the future we want, we need to rethink education. Thus it is the right time that we need to re-imagine how knowledge and learning can shape our future. Therefore, we must now debate and discuss and re-envision the ways education enables us to become what we want to become for ourselves, for each other. We need to think together so we can act together to make the futures we want.” (UNESCO 2021)

Additionally, the document on “Guidance on open educational practices during school closures” discussed about the application of Open Educational Resources (OER) using appropriate and broader range of pedagogical tools along with diversity of learning activities must be introduced in the education industries so that both the learners and the educators are engaged in the teaching-learning process. The article has emphasized on using Open Educational Practices (OEP) i.e practice centered approach with the help of OER i.e content-centered approach published by the MoE. They have also asserted that OEP gives accessibility of learning and good educational content along with life-long learning. It also asserts that OEP keeps the learners engaged and active in learning process by creating and revising OER, hence it help the learners in their learning process. The article also emphasizes that OEP and OER are helpful in facilitating learning and teaching process during educational disruption due to COVID-19 outbreak. (UNESCO 2020).

### **2.3 Concept of Self-Regulated Learning**

The concept of self-regulated learning (SRL) was introduced in 1980s and 1990s elaborating the distinctive features of successful learners (Schloemer & Brenan, 2006). In a chapter published on ‘self-regulated learning: where we are today’, the author explained that self-regulated learning is an important construct in our education system and our understanding of the concept of self-regulation has emerged out of 3 schools of thought-research on learning styles, research on metacognition and regulation styles, and theories of the self, including goal-directed behaviour. Therefore, it will help the educators and researchers in developing the conceptual clarity about self-regulated learning. (Boekaerts, 1999)

Similarly, UNESCO emphasizes the need of self-regulation skills to be learnt by students so that they are prepared with the 21<sup>st</sup> century skills in order to prepare

themselves face different challenges and solve their problems actively. Guidance outlines various problems that arise during learning at home with solutions and tips for solving them. It provides tips, stories and recommendations for self-regulated learning and along with recommendations for maintaining physical and mental wellbeing amidst pandemic. (UNESCO IITE, 2020)

Even, NEP 2020 emphasizes the educational institutions to adopt student-friendly curriculum and pedagogical methods by emphasizing upon the role of assistive devices, technology based supportive tools and language appropriate teaching learning materials for specially-abled students to integrate more easily in the classrooms. It also emphasizes that implementation of technology will help promote inclusivity and also provide opportunity for students to gain meaningful experiences. NEP 2020 also emphasizes that students must be taught the concept of self-regulated learning through self-education-reading and writing so that they are able to regulate their own learning from their environment by seeking support from their educational managers and faculty and staff.

Referring to **NEP (2020)** para 4.6 states that its thrust will be to move the education system towards real understanding and **learning how to learn** – and away from the culture of rote learning. Its goal will be to create holistic and well-rounded individuals equipped with key 21st-century skills. Once a person has ‘learnt how to learn’ the person is on the way to become a self-regulated learner.

In an another study done on “Metacognition, Self-regulation, and Self-regulated learning: A Rose by any other Name?” is based on commentary reviews explaining the distinctions between the concepts of metacognition, self-regulation and self-regulatory learning. The methods are also examined to explore these constructs. These distinctions have been explored so that appropriate methods and assessments can be developed. In this paper, the authors have pointed out the misuse of the terms and have elaborated that these three terms are different from each other and not identical. It basically emphasizes upon the use of better definitions to understand the concept and methods properly. The article has also discussed the Bandura’s notion of reciprocal determinism (1977) of situated learning, wherein the interactions between the person, behaviour and environment can develop new meanings similarly the knowledge gets constructed in

different environment. The article also talks about the interaction between the environment and mind that can be explored using computers as cognitive tools. (Lajoie, 2008)

However, building on the insights of different articles, it has been found that metacognition, self-regulation and self-regulated learning are sub-types and not distinct concepts of the general, abstract, phenomenon of self-regulated action. And self-regulation itself is therefore not a unitary construct and as there are different self-regulated actions suited for different contexts for different set of students. Despite its common use in the literature, it seems that types of “self-regulated achievement” are much more prevalent than types of “self-regulated learning.” (Kaplan, 2008)

#### **2.4 Self-Regulated Learning Process**

Emphasising the online measures of self-regulatory processes, Zimmerman, (2008) states “The second wave of research, which has involved the development of online measures of self-regulatory processes and motivational feelings or beliefs regarding learning in authentic contexts. These innovative methods include computer traces, think-aloud protocols, diaries of studying, direct observation, and microanalyses. Although still in the formative stage of development, these online measures are providing valuable new information regarding the causal impact of SRL processes as well as raising new questions for future study.”

Moving towards higher education institutions, self-regulated learning plays a very meaningful role. As per the educational standards of higher education in Russia, a student must spend nearly 70 percent of all his education time on self-study. Thus, the role of self-regulated learning becomes important and hence its promotion is therefore important in educational institutions. As self-regulated learning involves behavioural process, metacognitive and motivational aspects which learner needs to accommodate in his behaviour through goal setting, planning, learning strategies, self-reinforcement, self-recording and self-instruction. Here the role of teachers is to help the students in understanding the process of self-regulated learning, how to apply SRL strategies and learn effectively. (Revista Publicando,, 2017)

Also, it has been found that, learning models together with self-regulated learning concept and factors play a major role in application of self-regulated strategies. However, the self-regulated learning factors depend on both individual and contextual factors. The processes of self-regulated learning can be learnt and lead students to more meaningful learning, greater satisfaction in studying, and better learning outcomes. The authors have also emphasized the need to develop interventions as SRL so that student can take responsibility of their own learning. For that, the students must therefore be given right amount of support by their teachers and fellow students, must be intrinsically motivated and faced with meaningful challenges and they must be made to believe they can reach their goals. (ŠARIĆ, 2020)

In another study, the authors discussed the relatedness between learning style, academic control beliefs and student self-evaluation. The study discussed the role of SRL, its key components and process. It elaborated the Boekaerts conceptual model of self-regulated learning to detail upon the relevance of learning style, perceived academic personal control and peer and self-assessment constructs. They concluded their study by suggesting implications for policy and practice in higher education by emphasizing upon student diversity as a significant factor in student adjustment and development in higher education. (Simon Cassidy, 2011)

Another study examined whether SRL engagement during dynamic testing could enhance behaviors and performance in three intellectual areas (planning, monitoring, control and evaluation) and reveal differences in SRL processes on 50 students with learning disabilities, and it was found that SRL activities had an impact on both the student's SRL process and writing performance. (Roodenburg, 2013)

## **2.5 Self-Regulated Learning-Strategies**

Zimmerman elaborates in his article on self-regulation that, “the topic of how students become self-regulated as learners has attracted researchers for decades. Initial attempts to measure self-regulated learning(SRL) using questionnaires and interviews were successful in demonstrating significant predictions of students' academic outcomes.” In a study, structured interview procedure (Self-Regulated Learning Interview Schedule)

was used and fourteen categories of self-regulation strategies were identified from student answers that dealt with six learning contexts. It was found that, high achieving students displayed greater use of 13 categories of self-regulated learning. The one category that failed to relate to student achievement was self-evaluation. (PONS, 1986)

Further, a large proportion of literature clearly indicates that academic performance is tied to the degree of self-regulation the learner is capable of exercising (Borkowski, Carr, Rellinger, & Pressley, 1990; Harris, 1990; Lindner & Harris, 1992b; Winne, 1995; Zimmerman & Martinez Pons, 1986; Zimmerman, 1990). In another study conducted on self-regulated learning indicates that SRL is a meaningful and measurable tool mediated by different factors in the life of the students and is one of the major factor in determining academic success at the University level. (Harris, 1998)

Self-regulated learning is important for improving the student success and throughout acknowledged by South African Higher Education as presently they are facing problem of accommodating larger heterogeneous groups of student population and preparing them for lifelong learning. In a case study done on 20 engineering students, the LASSI pre-test showed that the group scored below the 50th percentile on four scales (anxiety, attitude, selecting main ideas and test-taking strategies). Observed improvements in the post-test scores of the LASSI scales for seven out of ten scales were statistically significant. The students' academic achievements also improved. The findings are important for improving student success and throughout in South African higher education. (Schulze, 2010)

Further, in many studies, it has been noticed that measures of metacognition, self-regulation, and self-regulated learning were not linked with measures of academic performances. Second, in many studies, measures of metacognition, self-regulation, and self-regulated learning are not linked with measures of students' learning or achievement. It is tempting to assume that if students who use more self-regulatory strategies demonstrate higher achievement than students who use fewer strategies, then the self-regulation produced the difference in achievement. But these data are correlational, not causal. Maggioni and Parkinson (2008) contend that there also exists a disconnect between teachers' beliefs and their pedagogical practices. It is time that



researchers engage in more detailed study of how changes in metacognition, self-regulation, and self-regulated learning affect educational outcomes. (Schunk, 2008)

Similarly, in another study done on the influence of SRL on satisfaction and academic performance of students has been investigated. In this study the results show that metacognition, environment structuring, computer self-efficacy, and social dimension have a positive impact on satisfaction and academic performance of students studying online, however, goal-setting produced no significant influence on students satisfaction and academic performance. This research also evaluates what influences the dimensions of SRL, which is progress in both theoretical and practical understanding of SRL application on satisfaction and academic performance. (Ejubović, 2019)

In addition, A mixed-methods study was done to examine the effect of SRL on learner's achievement, motivation, and strategy use in web-enhanced college success courses at a community college in the US. The findings show that when students are provided SRL training, then their overall performance including the accomplishment of long-term tasks, self-satisfaction, and persistence improves. Hence SRL strategies might be beneficial to learners' persistence. (Driscoll, 2013)

In a comparable study, the authors discussed the strategies of time management, metacognition, effort regulation and critical thinking. The results showed that these strategies were directly correlated with the academic achievement of the sample. However, rehearsal, elaboration and organisation have least impact on academic outcomes. Peer learning was reported to have moderate positive impact. The study ended by giving future research suggestion on how mediating factors such as motivation work together with SRL strategies to improve our understanding of the influence of self-regulated learner on academic success within online environment. (Broadbent, 2015)

Further, “research on learning, memory, and metacognitive processes has provided clear evidence that people often have a faulty mental model of how they learn and remember, making them prone to both mis-assessing and mismanaging their own learning. Therefore, learning how to learn is a major life tool. Thus, to be maximally

effective also requires an appreciation of the incredible capacity humans have to learn and avoiding the mindset that one's learning abilities are fixed.” (Robert A. Bjork, 2012)

In another study, done on perception of the university students on metacognitive self-regulation, time and study environment management skills, and self-efficacy were on the average level, however effort regulation and help seeking behaviour were found on the higher side, and so the overall self-regulated skills were found low. Meaningful differences were found between education and agriculture department students in terms of self-efficacy perceptions. No significant differences were found in the dimension of metacognitive self-regulation. It could be argued that because the education department students were more ready for teaching profession compared to the students belonging to health sciences and agriculture department, their self-regulated skills and self-efficacy perceptions were found to be on the higher side. (Ceyhun Ozan, 2012)

## **2.6 Self-Regulated Learning- Barriers**

In a study conducted on “Education and the Covid-19 Pandemic” done by Daniel, S.J (2020) tried to address the issues faced by HEIs so as to offer guidance to teachers, administrators and officials and suggest flexible ways to repair the damage faced by students once the pandemic is over and gives the list of resources. The author has discussed different sub-themes in order to address the possible issues- preparations that education systems could make, needs of students at different level, reassurance to students and parents, simple approaches to remote learning, curricula, assessment, after COVID-19, useful resources. The paper also discussed the advantages of asynchronous learning, student assessment, designing of curricula and suggests that we need to find out the flexible ways of learning for students to improve the learning trajectories even when the pandemic is over.

In another study focused on the factors affecting students performance and whether students are facing internal barriers or external barriers that is affecting their success. The findings reveal that both internal barriers, such as lack of motivation, cognitive

and metacognitive abilities and external factors such as influence of environment-family and job responsibilities are responsible for students performance. Further influence of barriers have direct correlation with the academic performance of the student with lower self-regulated abilities. Hence, self-regulated abilities play a major role in student success. And student success is directly co-related with the use of self-regulated strategies. (Clement, 2016)

In another study done on struggling medical students from SRL perspective. It was found that those students who used inappropriate learning strategies, had inflated beliefs and expectations regarding their performance in the course and had problems with SRL, experienced multiple failures. The study also shows how SRL strategies helped these students by creating a culture of help-seeking and improved remediation. (Patel, 2015)

### **2.7 Self-Regulated Learning - Administrative Support Mechanisms**

In another study the authors discussed how university students are transitioning towards self-regulated online modalities, specifically focussing on student resource management strategies using individual differences method. The findings of the study indicated that, students were unable to regulate their attention, effort and time and they seem to be less motivated as they were before pandemic when they used to attend traditional classroom learning environment. Four adaptation profiles were identified and labelled according to the reported changes in their research management strategies- the overwhelmed, the surrenders, the maintainers, and the adapters. It was found that surrenders and the overwhelmed- appeared to be less able to regulate their effort, attention and time and found to be less motivated. However, the adapters appreciated the increased level of autonomy and were able to properly regulate their learning. The maintainers were found to be relatively stable. However, the student's responses to open answer questions by analysing their education experience using coding thematic analysis, were found to be consistent with their quantitative profile. The paper has also discussed the implications on how to support students in adapting to online learning. (Biwer F, Wiradhany W, oude Egbrink M, Hospers H, Wasenitz S, Jansen W and de Bruin A, 2021)

Therefore, self-regulated learning study can be an engaging powerful tool for engaging students now and even after the pandemic is over. In another study, authors reveal that, Collaborative self-study networks facilitate distributed knowledge and the wisdom of multiple perspectives. Effective mentoring, coaching or facilitating does not happen naturally as many of the self-studies on teacher administrators have demonstrated therefore the authors have emphasized that intentionality is important, regardless of the means or method of professional development for administrative roles and responsibilities, specifically in those that are ill-defined or difficult to evaluate. Whether institutionally driven, individually explored, or collaboratively investigated effective leaders should not rely on serendipity or chance to enact their practice in meaningful, equitable, and transformative ways. Finding modes of self-care and time management are critical in being able to maintain a leadership position over time, decreasing burnout, and providing more stability at all levels of leadership as the current and anticipated environments of both K-12 education and teacher education dictate that future and veteran teacher educator administrators must have the capacity to hone their leadership skills and study the implications of their practice. (Allison, Valerie & Ramirez, Laurie, 2019)

In similar study, the authors have described the importance of self-regulation and described how self-regulation can be managed by learners of secondary issues. The authors here included variety of metacognitive issues. The results showed that SRL is linked to metacognitive skills. It was also found that acquisition of metacognition, skill, and attitude are directly related to autonomy and self-efficacy. (Rosa Cera, Michela Mancini, Alessandro Antonietti, Alessandro Antonietti, 2013)

In similar studies done on self-regulated learning models, it was found that, the SRL models form an integrative and coherent framework to conduct research, through which students can be taught to be more strategic and successful. The study also utilised the meta-analytic evidence, regarding differential effects of SRL model based on students' educational level and developmental stages which managers of the HEIs can apply in their institutions to improve the students learning and SRL skills. (Panadero, 2017)

In one of the study involving self-regulation processes was conducted on 86 trainee teachers (in Netherlands) in teacher learning courses, the results show that that their experiences are not as self-regulated, planned, reflective, or spiral as some assume. Sometimes teacher learning was planned (self-regulated) but mostly it occurred in a non-linear (both external and self-regulated) or spontaneous (external influence) way. Thus, even the teachers do not self-regulate their learning, but they mostly do self-regulate their teaching practice with learning as a result (I. M. van Eekelen, 2005)

A parallel study conducted on student teachers in Brazil to explore whether an innovative teaching approach affected student teacher’s motivation and reflection about SRL and the findings indicate that improvement of students’ knowledge about SRL that will hopefully contribute to better teaching (not measured). (Ganda, 2013)

**Table 2.1: Summary of the literature review**

| Theme                                            | Literature Developed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Concept of Self-Regulated Learning</b></p> | <p>The concept of self-regulated learning (SRL) was introduced in 1980s and 1990s elaborating the distinctive features of successful learners (Schloemer &amp; Brenan, 2006). In a chapter published on ‘self-regulated learning: where we are today’, the author explained that self-regulated learning is an important construct in our education system and our understanding of the concept of self-regulation has emerged out of 3 schools of thought-research on learning styles, research on metacognition and regulation styles, and theories of the self, including goal-directed behaviour. Therefore, it will help the educators and researchers in developing the conceptual clarity about self-regulated learning. (Boekaerts, 1999)</p> |

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Self-Regulated Learning Strategies</b></p>  | <p>In a comparable study, the authors discussed the strategies of time management, metacognition, effort regulation and critical thinking. The results showed that these strategies were directly correlated with the academic achievement of the sample. However, rehearsal, elaboration and organisation have least impact on academic outcomes. Peer learning was reported to have moderate positive impact. The study ended by giving future research suggestion on how mediating factors such as motivation work together with SRL strategies to improve our understanding of the influence of self-regulated learner on academic success within online environment. (Broadbent, 2015)</p> |
| <p><b>Process of self-regulated learning</b></p>  | <p>In another study, the authors discussed the relatedness between learning style, academic control beliefs and student self-evaluation. The study discussed the role of SRL, its key components and process. It elaborated the Boekaerts conceptual model of self-regulated learning to detail upon the relevance of learning style, perceived academic personal control and peer and self-assessment constructs. They concluded their study by suggesting implications for policy and practice in higher education by emphasizing upon student diversity as a significant factor in student adjustment and development in higher education. (Simon Cassidy, 2011)</p>                         |
| <p><b>Barriers of self-regulated learning</b></p> | <p>In this study, the author tried to address the issues faced by HEIs so as to offer guidance to teachers, administrators and officials and suggest flexible ways to repair the damage faced by students once the pandemic is over and gives the list of resources. The author has discussed different sub-themes in order to address the possible issues- preparations that education systems could make, needs of students at different level, reassurance to students and</p>                                                                                                                                                                                                               |

|                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                     | parents, simple approaches to remote learning, curricula, assessment, after COVID-19, useful resources. The paper also discussed the advantages of asynchronous learning, student assessment, designing of curricula and suggests that we need to find out the flexible ways of learning for students to improve the learning trajectories even when the pandemic is over. (Daniel, S.J 2020).                                                                                                                                    |
| <b>Administrative support mechanisms of self-regulated learning</b> | In similar studies done on self-regulated learning models, it was found that, the SRL models form an integrative and coherent framework to conduct research, through which students can be taught to be more strategic and successful. The study also utilised the meta-analytic evidence, regarding differential effects of SRL model based on students' educational level and developmental stages which managers of the HEIs can apply in their institutions to improve the students learning and SRL skills. (Panadero, 2017) |

## 2.8 Conclusion

This chapter has four aspects of past research studies- Self-regulated learning process, strategies, barriers and administrative support mechanisms of self-regulated learning. The interlinkage between these aspects can be defined as studies in self-regulated learning and management mechanisms of self-regulated learning, which gives us an idea about what type of studies are going on in self-regulated learning. Moreover, studies about self-regulated learning provides us a clear view about different factors affecting the academic success of an individual. These studies have highlighted the role of self-regulated learning strategies and how using these techniques can make learners better in academics. Moreover, the role of self-regulated teacher is also highlighted here. If they practice self-regulated approach they will contribute better in teaching.

## **CHAPTER 3**

# **METHODOLOGY**



### **3.1 Introduction**

Review of literature section in previous chapter displays various methodological constructs adopted by different studies in addition to theoretical framework. This chapter discusses the research design and methodology upon which this study has been based. It explains how and why particular research techniques were selected, developed and implemented.

Given the research objectives and literature overview, this chapter explains the core methodology to achieve the objectives.

### **3.2 Research Design**

The present research was conducted with the help of qualitative research method. This method is the subjective description of the data, collected through techniques such as interviews, observation, open-ended tools etc. and analysis through coding or content analysis procedures. In the present research this method was involved because of the nature of the study as researcher wanted to answer process of self-regulated learning, strategies of self-regulated learning, barriers of self-regulated learning and administrative support mechanisms of SRL. Qualitative research helps to answer these questions with in-depth exploration through close-ended and open-ended questions of the questionnaire and collecting data through interviews. Moreover, the analysis of the data through content analysis of the statements given by the respondents helps to answer the research questions of the study.

#### **3.2.1 Population of the study**

All the B.Ed. students studying in government and private Higher education institutions (HEIs) of Delhi and Haryana state is the population of the study. The study was undertaken in 4 universities (2 government and 2 private) University of Delhi, K.R Mangalam University, Gurugram University and Jagan Nath University.

### 3.2.2 Locale of the Study

The study was undertaken in 4 universities (2 government and 2 private) University of Delhi, K.R Mangalam University, Gurugram University and Jagan Nath University in Delhi and Haryana region.

### 3.2.3 Characteristics of Participants

A total of 72 B.Ed. final year students were the participants of the study. They were contacted through phone, and have filled the questionnaire through google forms. Out of 72 students, 36 students belong to private institution and 36 students belonged to government institution. The number of participants from each university are briefly described in the table below.

**Table 3.1 Distribution of Sample**

| <b>Name of the University</b> | <b>Type of Institution</b> | <b>Total number of students participated</b> |
|-------------------------------|----------------------------|----------------------------------------------|
| K.R Mangalam University       | Private Institution        | 10                                           |
| Jagan Nath University         | Private Institution        | 26                                           |
| University of Delhi           | Government Institution     | 23                                           |
| Gurugram University           | Government Institution     | 13                                           |

Data was collected from B.Ed. students (undergraduates), just after their completion of an extended 14-week final school teaching phase (final year B.Ed. program students). B.Ed. students were selected for the study because they know the entire process of management of self-regulated learning in their institution throughout their B.Ed. program. In addition to this, post 14 week teaching phase, they will also be in good position to discuss the process of management of self-regulated learning in other institution/school and what we can be adopted from them (related to management mechanism and teaching-learning culture) and suggestions by other institutions related to self-regulated learning.

### 3.2.4 Sampling Technique

The sample was selected by using the technique of systematic random sampling. Systematic random sampling is a type of probability sampling method in which sample members from a larger population are selected according to a random starting point but with a fixed, periodic interval.

Therefore, 50% of the sample was taken from the total number of students enrolled in B.Ed. final year program in each university. Sample was taken from the students whose roll number was an odd number starting from 1.

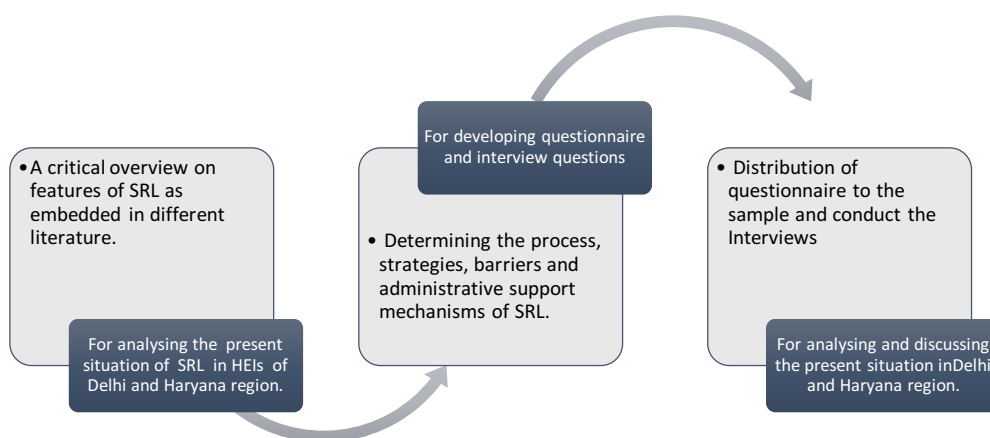
### 3.3 Data Collection Procedure

The data collection was held in two parts, In the first part of the study researcher collected data through questionnaire via google forms and in the second part data were collected through telephonic interviews. Although, due to the corona pandemic it was difficult to conduct face to face interviews with all the respondents.

Questions presented in the questionnaire were asked based on the objectives and theoretical framework of the study. Questions were then approved and finalised by the competent authority. After taking some permissions to apply the questionnaire, it was distributed to various groups of students. Nearly seventy-two responses were collected.

Three students were selected from each university for in-depth interviews. The interviews were taken separately for each student. It was made sure that the student is sitting in an comfortable, isolated place without any disturbance or hindrance. During the interview, students were asked questions related to the process, strategies, barriers and administrative support mechanisms of self-regulated learning which lasted for nearly 15 minutes.

**Figure 3.1: Procedure of the Study**



### 3.4 Tools/Research Instruments Used for Data Collection

**A. Questionnaire:** Questionnaire consisting of open ended and close-ended questions was used to collect information from the B.Ed. students of HEIs. It was administered to 50% of the sample enrolled in the B.Ed. Program of each University. It helped in knowing the perception/experience of the students related to self-regulated learning.

#### a) Design and Description of Questionnaire

This questionnaire consists of two sections. The introduction includes instruction to the participants in addition the questionnaire shows a list of 55 self-regulated learning questions for the participants to tick how frequently they practice each item with rating (Strongly Disagree (1 mark), Disagree (2 mark), Somewhat Disagree (3 mark), Neither Agree nor disagree (4 mark), Somewhat Agree (5 mark), Agree (6 mark), Strongly Agree (7 mark) to assess management mechanism of SRL in HEIs.

**Table 3.2: Description of Questionnaire**

| Parts of Questionnaire                                 | Item No. | Total No. of Items | Maximum Score | Minimum Score |
|--------------------------------------------------------|----------|--------------------|---------------|---------------|
| Process of SRL                                         | 1-26     | 26                 | 182           | 26            |
| Strategies for SRL                                     | 27-48    | 22                 | 154           | 22            |
| Barriers to SRL                                        | 49-55    | 07                 | 49            | 07            |
| Administrative Support Mechanism for Management of SRL | 56-57    | 02                 | Subjective    | Subjective    |

The second section of the questionnaire consist of two open-ended questions to which participants are free to respond in detail about how they feel about management of self-regulated learning in their institution.

#### b) Reliability test of Questionnaire

##### i. Cronbach's alpha ( $\alpha$ )

Cronbach's alpha indicates whether the items measure the same construct. Cronbach's Alpha ( $\alpha$ ) ranges from 0 to 1. The minimum acceptable value for Cronbach's alpha ca 0.70; Below this value the internal consistency of the common range is low.

Meanwhile, the maximum expected value is 0.90; Above this value is perceived as redundancy or duplication.

Therefore, Cronbach's alpha was used to estimate the reliability of the items present in the questionnaire on the Excel sheet and the following values were obtained.

**Table 3.3: Results of Cronbach Alpha**

|                                  |                    |
|----------------------------------|--------------------|
| <b>No. of items/questions</b>    | <b>55</b>          |
| <b>Sum of the item variances</b> | <b>105.7093753</b> |
| <b>Variance of total scores</b>  | <b>817.9783951</b> |
| <b>Cronbach's alpha</b>          | <b>0.886892846</b> |

The Cronbach's alpha ( $\alpha$ ) obtained here is 0.886892846 which clearly indicates that the reliability score of the items is excellent with satisfactory level of internal consistency coefficients of the items included in the questionnaire.

**ii. Construct validity**

Construct validity was measured through SPSS by finding the convergent validity and discriminant/divergent validity of the items in the questionnaire. For, that, the data was analyzed in SPSS and then correlation were determined for all the items present in different scales of the questionnaire. The following results were obtained.

For measuring convergent validity, scale of correlation must lie between 0.3 to 0.7 and for measuring the divergent validity, we have to look for the column and rows below the box and on the right and left of the box, the values must lie below 0.3. The results of questionnaire for correlations indicate that convergent validity is weak for question number 5,6,7, 10, 16, 23, 28, 32, 47, 51, 55. And also divergent validity is suffered at some places.

**c) Analysis of the Questionnaire**

The Cronbach-Alpha reliability coefficient showed high score of 0.88, meaning high internal consistency among the items and this is because probably the questionnaire includes factual and objective type of questions. It indicates the how closely the items are related to each other. The results of the convergent and divergent validity together indicate that there is moderate correlation between the items.

Overall, the inter-item correlations indicate that strategies of self-regulated learning is the strongest section. Minor modifications are needed to be made in (evaluation, before beginning of the course). The overall result thus indicates that SRL questionnaire is a reliable survey.

**B. Interview:** The semi-structured interview schedule was made by the researcher to study the process, strategies, barriers and administrative support mechanisms of self-regulated learning. The students were asked 5 questions in total about the management mechanisms of SRL. Their statements were noted down and content analysis of their responses was done thoroughly.

### Structure of Interview Questions

Parental consent was obtained for the participants of the study. Both the parent and the students were informed that they will be interviewed for the study therefore they were asked to sit in a separate room at scheduled time and their answers were recorded during the interview that lasted for approximately 15 minutes. The following were the questions. The Interview questions have been adapted from PONS, B. J. (1986). Development of a Structured Interview for Assessing Student Use of Self-Regulated Learning Strategies.

**Table 3.4: Interviewer’s Question**

| <b>Interviewer’s Question</b>                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. What are your perspectives about self-regulated learning?                                                                                    |
| 2. In terms of process of self-regulated learning, are your overall expectations same as or different from face to face teaching?               |
| 3. How much is your management supporting in doing self-regulated learning?                                                                     |
| 4. What are the advantages of self-regulated learning? What strategies are you using for self-regulated study.                                  |
| 5. Give some examples from your real life situations related to SRL. What if you are facing difficulty? Is there any particular method you use? |

### **3.5 Data Analysis**

The first step in the analysis process is to interpret the responses (close ended and open ended questions from questionnaire) given by the students and analyse them. Further, word by word analysis of the recorded sentences of all interviewee is done which were then discussed and interpreted.

# **CHAPTER 4**

# **RESULTS**



## 4.1 Introduction

The present research focuses on the process of self-regulated learning (SRL), strategies for SRL adopted by undergraduates in higher education institutions (HEIs), barriers to SRL and the administrative support mechanisms for management of SRL in HEIs. The study is qualitative in nature. Data is collected by administering questionnaire on the sample and it is analysed using qualitative method. Further, 12 students were interviewed over phone, depending on the flexibility of time and their availability. They were introduced to the study and were requested to give responses to all the questions. They were also assured that their personal details will be kept confidential.

## 4.2 Results

### 4.2.1 Results of Survey

#### a) Objective 1 of the study: Study the process of Self-regulated learning.

In this section, the responses received from the questionnaire were collected and recorded. Majority of students agree that they knew about the **process** of SRL. Refer to table 4.1 for details. It was interesting to note that nearly 58.3 percent of students are very much interested in the content area of the course and treat the course material as a starting point to develop their own ideas. Nearly 41 percent of the students get opportunity to evaluate in their own progress. Majority of the students also agree that their instructors are readily available outside the class. However nearly 20 percent of students disagree that group work is not done in their classroom and 44.4 % of students learn everything exactly as it is outlined in the course materials that shows students are not given much opportunities to develop their critical thinking and problem-solving abilities.

**Table 4.1: Students response to process of self-regulated learning (%)**

| S.No. | Questions                                                  | SD | D   | SW<br>D | NA  | SW<br>A | A    | SA   |
|-------|------------------------------------------------------------|----|-----|---------|-----|---------|------|------|
| 1.    | I knew what I wanted to learn before I came to the course. | 0  | 4.2 | 5.6     | 4.2 | 15.3    | 51.4 | 19.4 |

|     |                                                                                                            |      |      |      |      |      |      |      |
|-----|------------------------------------------------------------------------------------------------------------|------|------|------|------|------|------|------|
| 2.  | The instructor provided a list of alternative resources.                                                   | 1.4  | 2.8  | 8.3  | 6.9  | 22.2 | 50   | 8.3  |
| 3.  | A textbook has been assigned by the instructor.                                                            | 1.4  | 5.6  | 1.4  | 9.7  | 12.5 | 52.8 | 16.7 |
| 4.  | I am confident I can learn the basic concepts taught in this course                                        |      |      |      | 4.2  | 18.1 | 54.2 | 26.4 |
| 5.  | An outline of topics to be covered was distributed by the instructor.                                      |      | 4.2  | 5.6  | 1.4  | 12.5 | 58.3 | 18.1 |
| 6.  | I am very interested in the content area of this course.                                                   |      |      |      | 4.2  | 6.9  | 58.3 | 30.6 |
| 7.  | I treat the course material as a starting point and try to develop my own ideas about it.                  |      |      |      | 1.4  | 9.9  | 56.3 | 32.4 |
| 8.  | I have had the opportunity to evaluate my progress as the course proceeds.                                 | 5.6  | 12.5 | 5.6  | 6.9  | 15.3 | 41.7 | 12.5 |
| 9.  | I have had input in developing the marking scheme for the course.                                          | 11.1 | 26.4 | 6.9  | 1.4  | 16.7 | 30.6 | 6.9  |
| 10. | Due dates have been determined by the instructor.                                                          |      | 4.2  | 2.8  | 1.4  | 12.5 | 55.6 | 23.6 |
| 11. | A lot of group work is done in the course.                                                                 | 1.4  | 20.8 | 6.9  | 5.6  | 15.3 | 31.9 | 18.1 |
| 12. | The instructor is readily available outside of class hours.                                                | 1.4  | 13.9 | 9.7  | 4.2  | 12.5 | 44.4 | 13.9 |
| 13. | I learn everything exactly as it is outlined in the course materials.                                      |      | 6.9  | 4.2  | 5.6  | 19.4 | 44.4 | 19.4 |
| 14. | Discussions take up most of the course time.                                                               | 4.2  | 12.5 | 8.3  | 12.5 | 11.1 | 41.7 | 9.7  |
| 15. | Past experiences of students are integrated into the course as the course progresses.                      | 1.4  | 12.5 |      | 6.9  | 22.2 | 41.7 | 15.3 |
| 16. | The instructor lectures for over half the class time.                                                      | 1.4  | 8.3  | 8.3  | 6.9  | 22.2 | 44.4 | 8.3  |
| 17. | I have used information learned so far in the course in real-life situations.                              | 1.4  | 4.2  | 1.4  | 6.9  | 23.6 | 41.7 | 20.8 |
| 18. | Alternative solutions are presented for a problem                                                          | 1.4  | 2.8  | 1.4  | 2.8  | 20.8 | 51.4 | 19.4 |
| 19. | I receive feedback in each class.                                                                          | 4.2  | 23.6 | 4.2  | 6.9  | 13.9 | 30.6 | 23.6 |
| 20. | I check my learning progress by formulating the main points of a concept in my own words after I study it. |      | 4.2  |      | 6.9  | 19.7 | 45.1 | 23.9 |
| 21. | When a section of the course is a problem for me, I try to find out why it is difficult for me.            | 1.4  | 2.8  | 1.4  | 5.6  | 23.6 | 48.6 | 16.7 |
| 22. | I find the directions for assignments in the course are clear to me.                                       |      | 4.2  | 5.6  | 5.6  | 18.1 | 50   | 16.7 |
| 23. | I use the same study style for all sections of the course.                                                 | 1.4  | 16.7 | 12.5 | 4.2  | 26.4 | 31.9 | 6.9  |
| 24. | I often try to express the material in a unit in my own words to see if learning has occurred.             | 1.4  | 1.4  | 1.4  | 8.3  | 18.1 | 55.6 | 13.9 |
| 25. | I create questions of my own to test my learning.                                                          |      | 1.4  | 7    | 7    | 15.5 | 47.9 | 21.1 |
| 26. | When beginning a new unit, I organize the topics in an order which are meaningful to me.                   |      |      | 2.8  | 5.6  | 25.4 | 38   | 23.9 |

SD denotes Strongly Disagree

D denotes Disagree

SWD denotes Somewhat Disagree

NA denotes Neither Agree nor Disagree

SWA denotes Somewhat Agree

A denotes Agree

SA denotes Strongly Agree

**b) Objective 2 of the study: Explore the self-regulated learning strategies among undergraduates in higher education institutions.**

Referring to table 4.2, majority of undergraduates agree that they follow similar **strategies** for self-regulated learning. However, similar percentage of students agree and disagree that they often miss important points because they are thinking of other things. Furthermore, majority of undergraduates (nearly 29.2%) feel so lazy or bored during study for class that they quit before they finish what they had planned to do. Having said that, we would like to point out that a strong minority of undergraduates (nearly 23.6%) don't quit before they finish what they had planned to do.

**Table 4.2: Students response to strategies of self-regulated learning (%)**

| S.No. | Questions                                                                                               | SD | D   | SWD | NA  | SW<br>A | A    | SA   |
|-------|---------------------------------------------------------------------------------------------------------|----|-----|-----|-----|---------|------|------|
| 27.   | During class time I often miss important points because I am thinking of other things.                  |    | 25  | 8.3 | 8.3 | 15.3    | 25   | 5.6  |
| 28.   | When reading for this course, I make up questions to help focus my reading.                             |    | 5.6 | 5.6 | 4.2 | 25      | 52.8 | 6.9  |
| 29.   | When I become confused about something I am reading for this class, I go back and try to figure it out. |    | 1.4 | 2.8 | 4.2 | 18.1    | 59.7 | 13.9 |
| 30.   | If course readings are difficult to understand, I change the way I read the material.                   |    | 1.4 | 1.4 | 2.8 | 13.9    | 62.5 | 18.1 |
| 31.   | Before I study new course material thoroughly, I often skim it to see how it is organised               |    | 2.8 |     | 9.7 | 16.7    | 52.8 | 18.1 |

|     |                                                                                                                           |     |      |      |      |      |      |      |
|-----|---------------------------------------------------------------------------------------------------------------------------|-----|------|------|------|------|------|------|
| 32. | I ask myself questions to make sure I understand the material I have been studying in this class                          |     |      | 1.4  | 4.2  | 19.7 | 56.3 | 18.3 |
| 33. | I try to change the way I study in order to fit the course requirements and the instructor's teaching style.              | 1.4 |      | 2.8  | 11.1 | 16.7 | 51.4 | 16.7 |
| 34. | I usually study in a place where I can concentrate on my course work.                                                     |     |      | 1.4  | 5.6  | 8.3  | 65.3 | 19.4 |
| 35. | I make good use of my study time for this course.                                                                         |     | 1.4  | 5.6  | 5.6  | 11.3 | 57.7 | 18.3 |
| 36. | I have a regular place set aside for study.                                                                               | 1.4 | 2.8  |      | 2.8  | 11.1 | 23.6 | 58.3 |
| 37. | I make sure that I keep up with the weekly readings and assignments for this course.                                      | 1.4 | 1.4  | 1.4  | 4.2  | 19.4 | 52.8 | 19.4 |
| 38. | I attend this class regularly.                                                                                            |     | 1.4  |      | 5.6  | 5.6  | 51.4 | 36.1 |
| 39. | I often feel so lazy or bored when I study for this class that I quit before I finish what I planned to do.               | 5.6 | 23.6 | 5.6  | 8.3  | 16.7 | 29.2 | 11.1 |
| 40. | I work hard to do well in this class even if I don't like what we are doing.                                              | 2.8 | 8.3  | 6.9  | 8.3  | 13.9 | 40.3 | 19.4 |
| 41. | Even when course materials are dull and uninteresting, I manage to keep working until I finish.                           | 1.4 | 5.6  | 9.7  | 6.9  | 12.5 | 48.6 | 15.3 |
| 42. | When studying for this course, I often try to explain the material to a classmate or friend.                              |     | 5.6  |      | 5.6  | 12.5 | 58.3 | 18.1 |
| 43. | I try to work with other students from this class to complete the course assignments.                                     |     | 2.8  | 2.8  | 2.8  | 12.5 | 58.3 | 20.8 |
| 44. | When studying for this course, I often set aside time to discuss course material with a group of students from the class. |     | 5.6  | 2.8  | 8.3  | 8.3  | 55.6 | 19.4 |
| 45. | Even if I have trouble learning the material in this class, I try to do the work on my own, without help from anyone.     | 1.4 | 14.1 | 12.7 | 4.2  | 8.5  | 47.9 | 11.3 |
| 46. | I ask the instructor to clarify concepts I don't understand well.                                                         |     | 4.2  |      | 2.8  | 9.9  | 66.2 | 16.9 |
| 47. | When I can't understand the material in this course, I ask another student in this class for help.                        |     | 1.4  |      | 2.8  | 9.7  | 76.4 | 9.7  |
| 48. | I try to identify students in this class whom I can ask for help if necessary.                                            |     | 4.2  | 4.2  | 2.8  | 16.7 | 30   | 22.2 |

SD denotes Strongly Disagree

D denotes Disagree

SWD demotes Somewhat Disagree

NA denotes Neither Agree nor Disagree

SWA denotes Somewhat Agree

A denotes Agree

SA denotes Strongly Agree

**c) Objective 3 of the study: Examine the barriers to self-regulated learning**

Referring to table 4.3, majority of undergraduates agree that they face similar **barriers** to SRL like sticking to a study schedule, changing study approach to fit course requirements and instructor’s teaching style. However, almost similar number of undergraduates agree (nearly 23.6% of students) and disagree (nearly 25.6% of students) to the point that they often find that they have been reading for this class but don’t know what it was all about. It was interesting to note the perseverance of a majority (nearly 30.6% of students) of undergraduates as they did not give up when course work is difficult or only study the easy portion. Having said that, a small percentage (nearly 26.4% of students) did give up on difficult course work or only study the easy portion. Furthermore, majority of undergraduates disagree (26.8% of students) that they don’t devote much time on the course because of other activities. Moreover, a majority (nearly 27.8% of students) of undergraduates disagree to the point that they rarely find time to review their notes or readings before an examination. Lastly, a majority (approximately 56.9% of students) of undergraduates agree that they usually study in a place where they can concentrate on their course work.

**Table 4.3: Students response to barriers of self-regulated learning (%)**

| S.No. | Questions                                                                                                    | SD   | D    | SWD  | NA  | SWA  | A    | SA   |
|-------|--------------------------------------------------------------------------------------------------------------|------|------|------|-----|------|------|------|
| 49.   | I find it hard to stick to a study schedule.                                                                 | 4.2  | 15.3 | 4.2  | 6.9 | 15.3 | 44.4 |      |
| 50.   | I try to change the way I study in order to fit the course requirements and the instructor's teaching style. |      | 9.7  | 2.8  | 9.7 | 13.9 | 50   | 13.9 |
| 51.   | I often find that I have been reading for this class but don't know what it was all about.                   | 9.7  | 25   | 13.9 | 9.7 | 11.1 | 23.6 | 6.9  |
| 52.   | When course work is difficult, I either give up or only study the easy portions.                             | 9.7  | 30.6 | 6.9  | 2.8 | 18.1 | 26.4 | 5.6  |
| 53.   | I often find that I don't devote much time on this course because of other activities.                       | 11.3 | 26.8 | 18.3 | 2.8 | 11.3 | 22.5 | 7    |

|     |                                                                          |      |      |      |     |      |      |     |
|-----|--------------------------------------------------------------------------|------|------|------|-----|------|------|-----|
| 54. | I rarely find time to review my notes or readings before an examination. | 16.7 | 27.8 | 18.1 | 2.8 | 8.3  | 18.1 | 8.3 |
| 55. | I usually study in a place where I can concentrate on my course work.    |      | 2.8  | 1.4  | 2.8 | 11.1 | 56.9 | 25  |

SD denotes Strongly Disagree

D denotes Disagree

SWD denotes Somewhat Disagree

NA denotes Neither Agree nor Disagree

SWA denotes Somewhat Agree

A denotes Agree

SA denotes Strongly Agree

#### 4.2.2 Responses to open-ended questions

##### ➤ **Objective 4 of the study: Explore the administrative support mechanisms for management of self-regulated learning in higher education institution**

Responses to open-ended questions are interesting. Out of 72 students, 63 students responded to the open-ended questions, it seems that nearly 13 percent of the students did not respond to the second part of the survey. This indicates that students need to be motivated to respond to the open-ended questions. Almost 97% of them said they liked self-regulated learning. This may indicate why these students responded to the second part of the questionnaire. The respondents were asked to write responses in their words which needed some motivation. Here, we tried to explore administrative support mechanisms for management of SRL and we tried to understand how did their respective HEI help undergraduates in managing self-regulated learning.

Interestingly, majority nearly 70 percent of undergraduates agreed to the point that their institution helped in managing self-regulated learning in three broad ways - incorporating technology access, having best in class professors and providing a learning routine in environment.

- By incorporating technology, other organizational tools to help students organize themselves, and working on everyday problems related to ICT, notes, assignments, submissions, attendance and resolving them, by providing

required online access to professors, study materials, course materials, assignments, notes, lectures, related literature, supplementary material, pdf of books, google classes / online interactions.

- Through professorial / instructor / teacher guidance, encouragement & motivation on various activities to apply the knowledge and skills learned in the classrooms
- By providing a learning environment and helping in all possible ways guiding on learners self-beliefs, goal settings and expectations, reflective dialogue, providing corrective feedback, link new experiences to prior learning, make connections between abstract concepts, good mix of practical and theory knowledge, promoting learning by doing (teaching of a particular topic in class and then doing discussion on that topic in the next class, helped me a little bit with self- regulated learning), exercise & meditation, library access with relevant resources, by providing proper time to time monitor their performance and making environment conducive to focus, by providing helpful faculty that motivate us and widen our horizons, by organizing practical activities, helping solve problems / queries immediately, motivating us to study more, planning / organizing / scheduling our daily activity or daily timetable, by providing students with frequent guided practice, offer positive feedback, staying in touch regularly

#### **4.2.3 Results of Interview on Student's view on Management of Self-regulated learning (through In-depth Interviews)**

In order, better understand the **process** of self-regulated learning (SRL), analyse the SRL **strategies** adopted by undergraduates in higher education institutions, **barriers** to SRL and to explore the **administrative support mechanisms** in-depth, students were interviewed through phone-call and the following sentences are being noted and highlighted for analysis.

##### **a) Qualitative Analysis of Student's view of Student number 03**

This student showed high interest in SRL and is very happy with the management mechanism of SRL.

On Analysis, of his views the following statements have been noted down:

- “Professors help us in managing self-regulated learning. They give us various activities to apply the knowledge and skills learned in the classrooms. It motivates us to learn new things and keep our interests in the course we have taken.”
- “Though, we have our interests in this course and determination to complete it by learning different things. We know that it will help us in the future, not only for our career but also for real-life situations.”
- “Our Institution is managing self-regulated learning very well by supporting us in every way be it installation of zoom software or any Microsoft related query or anything we discuss with our faculty and mentors every Friday 2:00 pm in mentor’s class. We have time and special class allotted for it.”
- Regarding barriers of SRL: “I face problem in interacting with my teacher sometimes, they are available sometimes to solve our queries and sometimes they ignore our calls, at that point of time SRL is a barrier to us. Once I had whitewashing in my home at that time it was difficult to self-study at home. I had so many problems in understanding the concept. I had to change my place many times from one room to another.”
- Regarding strategies: “I learn by watching videos about the concept I want to learn, the best part about SRL is that I can learn as much as I want and there is no one to disrupt in between by saying this is only that you have to study, or upto here only you have to study. I also like to talk to my friends if I don’t understand any concept, we help each other.”

#### **b) Qualitative Analysis of Student’s view of Student number 19**

This student also showed high interest in SRL and is happy with the management mechanism of SRL.

On Analysis, of his views the following statements have been noted down:

- “Institutions give me lots of chances through practical knowledge, theory knowledge”.
- “We are given online training of practical subjects like computer and ICT”
- Strategies and barriers: “We face problem in interaction with my colleagues, they solve problems as we can go to their house. Though teachers are available



for us, but we don't like interacting with them, as they are rude sometimes because it takes time for us to understand certain concepts online for example statistics in education, mean median mode is easy but correlations, chi square test, t test, they are very difficult to understand online unless teacher is able to see our copy to know where we are basically facing problem”.

- Management mechanism: “we are given feedback form that we fill online about every teacher, there we can write about any teacher or anyone in the college, regarding how they are helping us or supporting us or what issues we are facing”.
- **“Management is supportive**; they have also reduced our fees so that we do not leave our study due to economic reasons”.
- “I feel we need good internet connectivity whole day and night so that we do not face problem in studies”.
- **“I think before giving the admission in B.Ed. or other teaching related course, teacher should give brief knowledge about the course so that student understands about the course because we do not know how we have to study some concepts, how they will teach us, or what we have to do learn that concept”.**

### c) Qualitative Analysis of Student's view of Student number 20

This also student showed less interest in SRL, here are some of the statements recorded given by her-

- **“Physical classroom learning is entirely different from self-regulated learning”.**
- “with SRL, temptations are REAL unlike those in college most of the time we have focus there,”
- “Some professors and students from urban areas cannot accept that learners from a particular location are educated and are capable of performing well and/or excelling academically”
- “SRL is better for independent learners, those who want to learn on their own.”
- “SRL may help students in achieving success in life but not academically”.
- “transferring to SRL mode has been one of the biggest challenge towards learning for me as I have seen myself becoming less focussed with my work”

#### d) Qualitative Analysis of Student's view of Student number 63

Student seems to show little interest in SRL, here are some of the statements recorded given by him-

- “My institution too started SRL, our teachers started teaching us with power point presentation by replacing chalk and duster which somehow affected our learning style as I am not too much interested in listening to a power point presentation for hours, it may have many examples but it is actually not engaging for me, I feel classroom teaching is more convenient and interactive method of teaching”
- “SRL only helped me in improving my time management nothing more, we lost enjoying and living life with our peers”
- “SRL is good for those who have done it right from school days as it requires lot of discipline and if you don't have self-discipline it is very difficult, because everything is you have to do on your own. So it might be a good teaching method for some but for me it is absolutely not, I like learning by doing, we cannot learn everything sitting at home theoretically or just by seeing videos, we need to step out of home and learn by entering into real world”.
- **“Sometimes I feel I am not really working or learning anything, I am just kept busy”**
- “Positive about SRL is less likelihood of conflicts between individuals, we can study at our own pace and on own flexibility, online seminars and conferences provide us more global exposure, I can now collaborate with people staying in other parts of the country in much more in-depth manner as we are learning new skills everyday on our own with just a click.”
- **“Our institution is managing the SRL very well, they are providing all the resources- be it study schedule or study resources, online library services on just a click, management is not a problem, practicality is the issue- how much we are learning practically, are we able to apply our learning in real environment?”**

#### e) Qualitative Analysis of Student's view of Student number 72

Student seems to showed little interest in SRL, here are some of the statements recorded given by her-

- **“Learning at institution is best for me, it’s very frustrating to behave like a puppet with SRL”**
- “I sometimes feel not at all interested in completing assignments and I feel I’m lazy. I still do the assignments, but sometimes I submit them after the deadline. It’s like I will do the assignments whenever I feel like”.
- “I can say that it is happening because of a reason, at home is like a sleeping or resting environment. In institution, I can focus more on assignments/work and get engaged in the subject. When I am in the institution I feel I am prepared to learn and get my brain work, at home it is like very hard to be prepared because I always get distracted.”
- **“In institution, whenever I need help, my faculty and support staff is always there. When I have problem at home, I have to wait for their response.”**
- “My home is not a learning environment with teachers, learning tools, desks, table, chairs and those sitting right in front of me who I can get support from”
- “SRL has its perks, I can talk to my family anytime.”
- **“There is nothing that I feel, I like about SRL except how supportive management and faculty has been doing, despite me not performing well”.**
- “SRL is a new way of learning, which is surely going to rule the world as it provides flexibility in learning and gives time to learner to learn in his own way.”

#### **f) Qualitative Analysis of Student’s view of Student number 54**

Student showed interest in SRL, here are some of the statements recorded given by her-

- “I feel lot of nervous at college, lot of competition is there, be it dresses, or studies, or jewellery, or friends, or style, or friend circle, I always felt nervous there”
- **“Now I am at home, I don’t feel nervous here”**
- “teachers and management are available to help me for every question, it is because of them I am better at SRL”

- “I like to use Computer, and I am good at it so I like online learning more”
- **“In SRL, I can finish more work in less time”**
- “College environment was pressurizing, now I can learn at my own pace”
- “If I need clarification on something I simply rewind the video my teachers give us and listen to them as many times I want, SRL is just incredible”
- “I feel I am learning now and no gazing everything that I used to do in the college which was actually time wasting”.
- **“I am not a social person who is dependent on interaction to learn something”**

**g) Qualitative Analysis of Student’s view of Student number 43**

Student showed interest in SRL, here are some of the statements recorded given by him-

- **“holds harmless policy, we cannot be debarred even if we do not submit our work on time or if we fail in end term examination”.**
- “freer schedule”
- **“Truth is quality of self-regulated learning depends on how better you are trained and it and the quality of your instructor”**
- “for me the best part is that I can have a cup of tea and be really relaxed while doing my work at my own pace”
- **“management is really good, be it scheduling our daily routine, resolving our queries or giving us opportunities to participate in international and national conferences, management has kept everything on our fingertips”**
- “strategies that I use for SRL is daily time management, evaluating myself after understanding every concept on my own, being in constant touch with faculty, asking for help from friends and faculty when in doubt, maintaining portfolio of my study routine, writing notes like I used to do during face to face interaction”
- “SRL has taught me how to use internet properly, this is why my experience is good compared to my friends they face lot of problem when accessing technology, being tech savvy is helping in SRL”
- “barriers are there of course- internet connectivity sometimes makes me feel a lot irritated, too many assignments make me feel completely helpless at times

but everything is ok, as load of positives in SRL is much heavier than negatives.”

- “I feel better in self-regulated learning as it has given me confidence to do work on my own and on time in addition now I can manage myself”

#### **h) Qualitative Analysis of Student’s view of Student number 07**

Student showed little in SRL, here are some of the statements recorded given by her-

- “We don’t enjoy much self-regulated learning as teachers don’t respond to our queries when we call”
- “Face to face mode of learning was better than this because we used to interact with our friends, now we don’t talk”
- “Though, management is very supportive, they always respond to our queries. When we don’t have access to internet they understand, however sometimes teachers mark us absent even when we are present in the class because of internet issues”
- “Actually some of our teachers have pre formed conceptions about each and every student, even if we perform well, it is of no use, they know who are toppers and so they don’t care about other students much”.
- “we go to library sometimes to make notes; we help each other”
- “self-regulated learning is very good for those who like to read alone or want personalized learning environment, but we like to study in group so for me I like face to face study”

#### **i) Qualitative Analysis of Student’s view of Student number 26**

Student showed interest in SRL, here are some of the statements recorded given by her-

- “I think SRL is best for me first I can study as much as I want and whatever I want”
- “I wanted to study about Einstein’s theory, our professor taught us the concept, I read it in detail taking notes from the professor because I was interested in it. So even if we are not doing PhD in physics we can study any subject as much as we want to.”

- “I was an average student when I used to go to school, now I feel more confident when responding in online class”
- “My grades have improved a lot from 60s to 80s”
- “Management is very supportive. When I am facing any difficulty management helps in resolving it fast. I lost my password of institution ID then it was difficult for me to log in and attend classes online. Management helped in getting access to the ID within 24 hrs.”
- “I just hope we study this way only as it saves time, petrol and this way we get more time to spend with our family members”
- Regarding strategies: “I start studying and planning activities 2 months before my exam.”

Student’s experiences of self-regulated learning were as diverse as student’s themselves. Some students appreciated the flexibility provided by SRL, while others felt SRL works best when one is good with ICT.

Some students appreciated that well planned week is better than surprise assignments. One of them said “It is really helpful when teacher provides us schedule for next week in advance”

Another student said, “I don’t like faculty posting random assignments on google class and asking us to complete it in one or two days. This means I have to work on weekends as well, which I don’t like. I need a break why they don’t understand. Keeping a student busy should not be strategy for teachers”

Many students believed that, self-regulated learning can only work if one has quality instructor.

Another student said, “some faculty are just overloading us with loads of work as much they can handle grades. Some are very kind, they are offering help with any and every course- even if they don’t teach them” seems management must train teachers related to how teaching style must be so that students take interest in SRL and it does not become burden on them.

Another student said, “few teachers know their job and they do it very well but most of the faculty comes unprepared online, they want us to make power point presentations and complete the course so they don’t have to teach us anything. They

assign all the course topic to all the students and ask them to prepare ppts to everyone. In this way some courses are completed by teaching each. Then what is the role of facilitator when teacher doesn't want to teach the content of the course. why does management keep such instructors for years and make students suffer?"

Finally, some subjects lend themselves towards SRL than others.

One of them said, "preparation to psychology in education was online, meaning we can get direct feedback on our progress, both on the assignment and in the class"

Another said, "good teachers make students dependent on them for education, but quality teacher will make us independent learner"

But one of the students responded very differently, when he said, robots can replace humans, but only

quality managers of education system can replace robots"

### **4.3 Conclusion**

The results indicate that majority of the respondents believed that they would like to undergo self-regulated learning forever because it gave them opportunity to learn on their own i.e. they can control their learning and management were supporting them in this process. But, many of the respondents stressed upon the role of instructor in self-regulated learning. Therefore, the faculty and managers therefore must provide proper instructions and must be readily available for the students so that students know the right process of self-regulated learning. This clearly indicates that, management mechanisms of self-regulated learning in HEIs need to be improved and modified as per the needs of individual learner.

**CHAPTER 5**  
**DISCUSSION**



## 5.1 Discussion

The higher education institutions (teacher education institutions) selected for the study are among India's second largest in terms of students, next to NIEPA and the RIEs. India's Higher Education sector system has increased the number of Universities/University level institutions since independence. The pandemic has severely affected the entire education industry of India. The first decision that Central government took in the field of education was to shut the entire education industry with the outbreak of COVID-19. Soon then the government announced their decision to start the self-regulated learning which certainly led to major shift in entire curriculum of the students as it was for the first time for the students that they are making a shift from traditional teaching-learning method to new method of SRL. Additionally, posed several barriers that directly affected the efficacy of teaching-learning process though the institutions provided many administrative support mechanisms to support the students.

Therefore, the research investigated the management of Self-regulated learning in Higher Education Institutions (HEIs) on the sample of students from Delhi and Haryana. Appropriate management mechanisms along with right usage of self-regulated learning strategies will determine whether the students will continue using self-regulated learning. Students will definitely opt for SRL if it helps them master knowledge faster and easier. Also, if management and faculty are providing proper support to them they will continue using SRL. For this reason, in this study, it was important to investigate to what extent management is supporting the students of higher education institutions in self-regulated learning.

Responses show the insight of student's perception regarding self-regulated learning process, strategies, barriers and administrative support mechanisms. The survey also analyzed the administrative support mechanism of the students. For that, opinion of students studying in University of Delhi, Amity University, Jagan Nath University and Gurugram University undertaking B.Ed. course were collected to know the process of self-regulated learning, the strategies, barriers and administrative support mechanisms. Interestingly, students have responded to have self-regulated learning method better

than traditional method of teaching. Referring to the graph in figure 5.1, the responses of students to open ended questions about management mechanisms of self-regulated learning in their institutions. Results reveal that nearly 90 percent of the students are completely satisfied with the SRL. However, 10 percent of the students believe that they are not getting proper guidance, are dissatisfied the way SRL is conducted

**Figure 5.1: Students response to self-regulated learning**



The results indicate that majority of the respondents believed that they would like to undergo self-regulated learning forever because it gave them opportunity to learn on their own i.e. they can control their learning and management was supporting them in this process. But, many of the respondents stressed upon the role of instructor in self-regulated learning. Therefore, the faculty and managers must provide proper instructions and must be readily available for the students so that students know the right process of self-regulated learning. This clearly indicates that, management mechanisms of self-regulated learning in HEIs need to be improved and modified as per the needs of individual learner.

Allison, Valerie & Ramirez, Laurie (2019) have also emphasized upon the role of mentors and administrators. They have emphasized that management and teachers

must have capacity to hone leadership skills and study the implication of their practice as self-regulated learning is the future of education.

In a similar study done by Schulze (2010) have also found out that student scores have been improved using self-regulated learning strategies throughout South African Higher Education system.

In another study done by Zimmerman and Pons (1986) have categorized fourteen categories of self-regulated learning strategies and it was found that, high achievement group of students reported higher use of self-regulated learning strategies than low achievers. Other analyses revealed that students use of self-regulated learning strategies yielded better scores of students in their achievement tests.

“Learners will change how they act in the world when old ways are no longer effective in getting what they want.” states NEP 2020. In line with the research results, NEP also aims to make students independent learners and also self-reliant when it comes to academics and other co-curricular areas by transacting newer and more engaging teaching methodology for students for that they are suggesting multiple pathways to learning for students which will also be in tune with global practices.

However, the survey results and content analysis of the statements within SRL interview have shown that, for some of the students there is ambiguity and uncertainty among students concerning self-regulated learning. Supporting statement may be found, given by Brookfield (1986) that more education is needed to understand what self-regulated learning is all about. Educators must be prepared for self-regulated learning. Even the UNESCO emphasizes the need of self-regulation skills to prepare students for 21<sup>st</sup> century skills so that they can solve their problems independently. The rationale behind self-regulated learning needs to be explained to the management of educational institutions. A network between student and management staff need to be developed.

Another study done by Pilling (1990) claim that in their study, many students did not like self-regulated learning as they did not know what self-regulated learning was all about.

Further, the responses given by some students may indicate that they do not all know or want to follow self-regulated learning approaches to learning except for few. Knowles (1990) assumes that they know but actually adult students may not agree. Certainly, the results do not support Knowles assumption. Preferably, the results appear to support Jarcis (1989) who states that everyone does not have problem-centric orientation to learning.

Thus, it is important for the students to be aware of the self-regulated learning strategies and the process as the rate of knowledge is increasing and they want to gather knowledge from different domains at their own flexibility. Thus, self-regulated learning appears to be more promising in its process and strategies compared to traditional teaching-learning system.

The suggestions and recommendations are provided to improve the management mechanisms of self-regulated learning.

**CHAPTER 6**

**CONCLUSION**

## **6.1 Self-Regulated Learning**

The study determined the management of self-regulated learning in higher education institutions. Some students do not seem to perceive self-regulated learning to be taking place which is really a matter of concern in a university level program. The students surveyed and interviewed in the study do not appear to take responsibility of their learning. Even the instructors in the program do not perceive self-regulated learning as a responsibility. It also seems that the definition of self-regulated learning is unknown to 4-5 students. At this level, taking the responsibility of learning is necessary.

Learners need some self-motivation and direction when they are given to choose career to enter and courses to register for. Blindly learning what is “taught” by the professors and vomiting it out for exams is certainly a very ineffective way of education. Structuring the entire course of the students is one of the major disservice done by many adult educators to their students. Studies on self-regulated learning could give educators an indication on how active a role students play in their education. By making students participate in development of course structure development and its evaluation, students are directly involved in their education. Additionally, students should be able to see the relevance of their course outside the classroom and must be encouraged to incorporate all they learn into their ongoing education.

Self-regulated learning is a very important component of the education system and destreaming it is a major issue these days in the universities. How would these newly trained teachers going to cope with the basic, moderate and advanced level students in one classroom when they even are not aware about self-regulated learning as a technique? Some learners will be for sure self-regulated learners, and therefore the management must know how to manage the learning of these students with those learning under structured environment. Constant upgrading is very necessary to be an effective teacher in this technology oriented world. How can teachers provide the best education to the students if they themselves are not aware regarding where they are going? Responsibility for one’s learning is necessary.

## 6.2 Major findings of the study

As students were still undergoing the shock of campus closure and adjusting with a new system of self-regulated learning, the general consensus that they might miss the face to face interaction with their friends. After analyzing the collected data, it was evident that students were okay with not having to be in physical presence of their faculty-as faculty communicated the resources and materials available to them. Less commuting, saving on money, saving on petrol, having more time to complete assignments, getting more time to talk to family members were some of the positive outcomes of campus closure.

Hence, majority of the respondents believed that they would like to undergo self-regulated learning forever because it gave them opportunity to learn on their own i.e. they can control their learning and management were supporting them in this process. But, many of the respondents stressed upon the role of instructor in self-regulated learning. Therefore, the faculty and managers therefore must provide proper instructions and must be readily available for the students so that students know the right process of self-regulated learning. This clearly indicates that, management mechanisms of self-regulated learning in HEIs need to be improved and modified as per the needs of individual learner.

Students liked self-regulated learning because it gave them opportunity to learn on their own i.e they can control their learning and management were supporting them in this process. Hence, the answer to the first research question is that students are aware about the process of self-regulated learning and they feel comfortable in following the process of SRL.

The second objective of the study is exploration of SRL strategies by the students. The results showed that students are very well aware about the strategies of SRL as they mentioned they rehearse and memorize the concepts, they keep notes and list that went wrong, they go to library for collecting information, they plan their activities for sequencing and timings and they even isolate themselves during exams. These

statements show that students are aware about the SRL strategies and they follow these strategies with happily.

The third objective of the study is to examine the barriers faced by the students in SRL. It seems that some students are facing environmental barriers, technical barriers and motivational barriers and emotional barriers sometimes. Here, we need to understand that for an effective self-regulated learning it is important to understand the problem and ask the course facilitators regarding suggestions to resolve the problem. Providing adequate facilities to the students, guiding the students at different stages of learning, supporting the students mentally and emotionally is necessary. Plus the education stakeholders need to analyse and investigate the SRL process at different time intervals so that they can understand the problems faced by students at different times. Further, there is a digital gap in access to technological resources and the internet and since the pandemic arrived it has increased the educational deficiencies of those who do not have adequate access to it. Therefore, to overcome this gap it is necessary to guarantee equal opportunities for all students, have patience with students, strengthen group work, investigate and offer sites with good internet connectivity and carry out a prior analysis of digital competence and access to ICT resources.

The fourth objective of the study is to explore the management mechanisms of SRL. The results suggest that students reveal that management is going out of the way to support the students in SRL. Institutions support the students by providing them with action plans, time management, evaluating the performance of the students and evaluating their own performance in making the tasks clear to the students, motivating the students by communicating their expectations from the students, teaching the students about SRL strategies. It is interesting to note that, nearly 90 percent of the students feel that their management is supportive for them and are available to solve their problems. However 10 percent of the students feel that faculty donot answer their calls and ignore them when they ask for help, some of them said they donot understand the way management is working- the faculty is posting random assignments on google classroom. Even when they are present in the class they are marked absent which is very irritating for them as their internet connection is weak sometimes.



Some of the respondents stressed upon the role of faculty in self-regulated learning. Thus the faculty must provide proper instructions and must be readily available for the students so that students know the right process of self-regulated learning. Thus, answers to fourth research question clearly indicates that, management mechanisms of self-regulated learning in HEIs need to be improved and modified as per the need of individual learner.

### **6.3 Implications**

The results clearly indicate that SRL may hold notable potential for increasing educational productivity. It guides the educational stakeholders and managers in engaging the students with planning, setting goals, assignment preparation and time management. It also informs the students that their success in their course is under their control. It helps the students in taking responsibility of their own learning and development. With SRL, the student gets opportunity to not only learn the courses that are part of his/her syllabus, but can also attain knowledge from different domains that he /she wishes to learn. Here, the role of faculty/teacher is to act as a facilitator of knowledge, who will help the student in understanding the process of learning but student will themselves discover the process of 'learning-how to learn'. With SRL, knowledge will not be restricted, students can get knowledge as much as they want as per their own convenience and pace of learning.

### **6.4 Suggestions for further Research**

The programs used in the study were teacher education institutes in different universities of Delhi and Haryana region. Various programs using self-regulated learning can be used to know if the perception of self-regulated learning is uniform across different streams. Future test can be done using this questionnaire. There are many applications of this tool. Self-regulated learning is an area with considerable potential. An individual can progress at his/her own rate.

Educators can act as facilitators instead of spoon feeders. Self-regulated learning can be a challenge for some higher education institutions. Management needs to meet these

challenges by taking an initiative by learning more about self-regulated learning. Hence, management can then show their students that self-regulated learning is an effective way to learn.

The purpose of this learning is to help you become better at learning in whatever you choose to pursue, and is not limited to a specific subject, skill or behavioral change. The need for this is felt by almost everyone at every stage of life because they say that “the largest (sometimes biggest) room in the world is the room for improvement”.

## **6.5 Limitations**

Limitations to this study include the fact that <25% of the students from the selected University participated in the study. While the data is supportive of the efforts that the faculty from these Universities have exerted in collection of data during the crisis, it would have been preferable if at least more than half of the student body respond. Additionally, the study is limited in that, it was conducted in pandemic time, where there are high chances that student’s emotional levels could have affected their perceptions of the impact of SRL.

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## Appendix -I

### Self-Regulated Learning Questionnaire

#### MANAGEMENT OF SELF-REGULATED LEARNING

##### Introduction

In this study, Self-Directed Learning test (Pilling (1990) and Motivated Strategies for Learning Questionnaire (MSLQ) (McKeachie, Pintrich, Lin, & Smith (1986) are adapted and modified as per the need of the research study to gather information about the students self-regulated learning process and explore the self-regulated learning strategies among undergraduates in higher education.

The instrument assesses the extent to which self-regulated learning is taking place. The scale used is a Likert scale. The stem includes a value or direction that indicates the degree of agreement the respondent holds. There are two parts.

The first section consists of 55 questions grouped into three categories: process of self-regulated learning, self-regulated learning strategies, barriers of self-regulated learning.

The second section contains two open-ended questions addressing self-regulated learning.

**Instructions** The following questions are related to the management mechanisms of self-regulated learning. Remember there are no right or wrong answers, just answer as accurately as possible. Use the scale below to answer the questions. If you think the statement is very true for you, circle 7; if a statement is not at all true for you, circle 1. If the statement is more or less true for you, find the number between 1 and 7 that best describes you.

- 1- Strongly Disagree (Not at all true of me)
- 2- Disagree
3. Somewhat Disagree
4. Neither Agree nor disagree
5. Somewhat Agree
6. Agree
7. Strongly Agree (Very true of me)

**BACKGROUND INFORMATION**

Name of the University \_\_\_\_\_

Please do not write your name. All information will be kept confidential. Please circle the response (number) that you think is the most appropriate.

**SECTION I**

**PART I**

**PROCESS OF SELF-REGULATED LEARNING**

*Before beginning of course*

1. I knew what I wanted to learn before I came to the course. 1 2 3 4 5  
6 7

2. I am confident I can learn the basic concepts taught in this course. 1 2 3 4 5 6  
7

3. An outline of topics to be covered was distributed by the instructor 1 2 3 4 5 6  
7

at the beginning of the course.

4. I am very interested in the content area of this course. 1 2 3 4 5 6 7

5. I treat the course material as a starting point and try to develop 1 2 3 4 5 6 7  
my own ideas about it.

6. The instructor provided a list of alternative resources. 1 2 3 4 5 6 7

7. A textbook has been assigned by the instructor. 1 2 3 4 5 6 7

*Evaluation - role of student input*

8. I have had the opportunity to evaluate my progress 1 2 3 4 5 6 7  
as the course proceeds.

9. I have had input in developing the marking scheme 1 2 3 4 5 6 7  
for the course.

10. Due dates have been determined by the instructor. 1 2 3 4 5 6 7

*What is actually happening in the course*

11. A lot of group work is done in the course. 1 2 3 4 5 6 7

12. The instructor is readily available outside of class hours. 1 2 3 4 5 6 7
13. I learn everything exactly as it is outlined in the course materials. 1 2 3 4 5 6 7
14. Discussions take up most of the course time. 1 2 3 4 5 6 7
15. Past experiences of students are integrated into the course as the course progresses. 1 2 3 4 5 6 7
16. The instructor lectures for over half the class time. 1 2 3 4 5 6 7

*Characteristics of learning*

17. I have used information learned so far in the course in real-life situations. 1 2 3 4 5 6 7
18. Alternative solutions are presented for a problem. 1 2 3 4 5 6 7
19. I receive feedback in each class. 1 2 3 4 5 6 7
20. I check my learning progress by formulating the main points of a concept in my own words after I study it. 1 2 3 4 5 6 7
21. When a section of the course is a problem for me, I try to find out why it is difficult for me. 1 2 3 4 5 6 7
22. I find the directions for assignments in the course are clear to me. 1 2 3 4 5 6 7
23. I use the same study style for all sections of the course. 1 2 3 4 5 6 7
24. I often try to express the material in a unit in my own words to see if learning has occurred. 1 2 3 4 5 6 7
25. I create questions of my own to test my learning. 1 2 3 4 5 6 7
26. When beginning a new unit, I organize the topics in an order which are meaningful to me. 1 2 3 4 5 6 7

**PART II**

**SELF-REGULATED LEARNING STRATEGIES**

*Metacognitive Self-Regulation*

27. During class time I often miss important points because I am thinking of other things. 1 2 3 4 5 6 7
28. When reading for this course, I make up questions to help focus my reading. 1 2 3 4 5 6 7
29. When I become confused about something I am reading 1 2 3 4 5 6 7

for this class, I go back and try to figure it out.

30. If course readings are difficult to understand, I 1 2 3 4 5 6 7  
change the way I read the material.

31. Before I study new course material 1 2 3 4 5 6 7  
thoroughly, I often skim it to see how it is organized.

32. I ask myself questions to make sure I understand 1 2 3 4 5 6 7  
the material I have been studying in this class.

33. I try to change the way I study in order to fit the 1 2 3 4 5 6 7  
course requirements and the instructor's teaching style.

*Resource Management Strategies: Time and Study Environment*

34. I usually study in a place where I can 1 2 3 4 5 6 7  
concentrate on my course work.

35. I make good use of my study time for this course. 1 2 3 4 5 6 7

36. I have a regular place set aside for study.. 1 2 3 4 5 6 7

37. I make sure that I keep up with the weekly readings 1 2 3 4 5 6 7  
and assignments for this course.

38. I attend this class regularly. 1 2 3 4 5 6 7

*Resource Management Strategies: Effort Regulation*

39. I often feel so lazy or bored when I study for this 1 2 3 4 5 6 7  
class that I quit before I finish what I planned to do.

40. I work hard to do well in this class even if I 1 2 3 4 5 6 7  
don't like what we are doing.

41. Even when course materials are dull and uninteresting, I 1 2 3 4 5 6 7  
manage to keep working until I finish.

*Resource Management Strategies: Peer Learning*

42. When studying for this course, I often try 1 2 3 4 5 6 7  
to explain the material to a classmate or friend.

43. I try to work with other students from this 1 2 3 4 5 6 7  
class to complete the course assignments.

44. When studying for this course, I often set aside time 1 2 3 4 5 6 7  
to discuss course material with a group of students from the class.

*Resource Management: Help Seeking*

45. Even if I have trouble learning the material in this class, 1 2 3 4 5 6 7

I try to do the work on my own, without help from anyone.

46. I ask the instructor to clarify concepts I don't understand well. 1 2 3 4 5 6 7

47. When I can't understand the material in this course, I 1 2 3 4 5 6 7

ask another student in this class for help.

48. I try to identify students in this class whom I can 1 2 3 4 5 6 7

ask for help if necessary.

**PART III**

**BARRIERS OF SELF-REGULATED LEARNING**

49. I find it hard to stick to a study schedule. 1 2 3 4 5 6 7

50. I try to change the way I study in order to fit the 1 2 3 4 5 6 7

course requirements and the instructor's teaching style.

51. I often find that I have been reading for this class 1 2 3 4 5 6 7

but don't know what it was all about.

52. When course work is difficult, I either give up or 1 2 3 4 5 6 7

only study the easy portions..

53. I often find that I don't devote much time on 1 2 3 4 5 6 7

this course because of other activities.

54. I rarely find time to review my notes or readings 1 2 3 4 5 6 7

before an examination

55. I usually study in a place where I can concentrate 1 2 3 4 5 6 7

on my course work.

**SECTION 2**

56. How does your institution help you in managing self-regulated learning?

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57. Suggestions/ Comments

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## Appendix II

**Frequency distribution table**

| No. | Questions                                                           | Response                   | Frequency | Percentage (%) |
|-----|---------------------------------------------------------------------|----------------------------|-----------|----------------|
| 1.  | I knew what I wanted to learn before I came to the course           | Strongly Disagree          |           |                |
|     |                                                                     | Disagree                   | 03        | 4.2            |
|     |                                                                     | Somewhat Disagree          | 04        | 5.6            |
|     |                                                                     | Neither Agree nor Disagree | 03        | 4.2            |
|     |                                                                     | Somewhat Agree             | 11        | 15.3           |
|     |                                                                     | Agree                      | 37        | 51.4           |
|     |                                                                     | Strongly Agree             | 14        | 19.4           |
| 2.  | The instructor provided a list of alternative resources.            | Strongly Disagree          | 1         | 1.4            |
|     |                                                                     | Disagree                   | 2         | 2.8            |
|     |                                                                     | Somewhat Disagree          | 6         | 8.3            |
|     |                                                                     | Neither Agree nor Disagree | 5         | 6.9            |
|     |                                                                     | Somewhat Agree             | 16        | 22.2           |
|     |                                                                     | Agree                      | 36        | 50             |
|     |                                                                     | Strongly Agree             | 6         | 8.3            |
| 3.  | A textbook has been assigned by the instructor.                     | Strongly Disagree          | 1         | 1.4            |
|     |                                                                     | Disagree                   | 4         | 5.6            |
|     |                                                                     | Somewhat Disagree          | 1         | 1.4            |
|     |                                                                     | Neither Agree nor Disagree | 7         | 9.7            |
|     |                                                                     | Somewhat Agree             | 9         | 12.5           |
|     |                                                                     | Agree                      | 38        | 52.8           |
|     |                                                                     | Strongly Agree             | 12        | 16.7           |
| 4.  | I am confident I can learn the basic concepts taught in this course | Strongly Disagree          |           |                |
|     |                                                                     | Disagree                   |           |                |
|     |                                                                     | Somewhat Disagree          |           |                |
|     |                                                                     | Neither Agree nor Disagree | 3         | 4.2            |
|     |                                                                     | Somewhat Agree             | 13        | 18.1           |

|    |                                                                                           |                            |    |      |
|----|-------------------------------------------------------------------------------------------|----------------------------|----|------|
|    |                                                                                           | Agree                      | 39 | 54.2 |
|    |                                                                                           | Strongly Agree             | 19 | 26.4 |
| 5. | An outline of topics to be covered was distributed by the instructor.                     | Strongly Disagree          |    |      |
|    |                                                                                           | Disagree                   | 3  | 4.2  |
|    |                                                                                           | Somewhat Disagree          | 4  | 5.6  |
|    |                                                                                           | Neither Agree nor Disagree | 1  | 1.4  |
|    |                                                                                           | Somewhat Agree             | 9  | 12.5 |
|    |                                                                                           | Agree                      | 42 | 58.3 |
|    |                                                                                           | Strongly Agree             | 13 | 18.1 |
| 6. | I am very interested in the content area of this course.                                  | Strongly Disagree          |    |      |
|    |                                                                                           | Disagree                   |    |      |
|    |                                                                                           | Somewhat Disagree          |    |      |
|    |                                                                                           | Neither Agree nor Disagree | 3  | 4.2  |
|    |                                                                                           | Somewhat Agree             | 5  | 6.9  |
|    |                                                                                           | Agree                      | 42 | 58.3 |
|    |                                                                                           | Strongly Agree             | 22 | 30.6 |
| 7. | I treat the course material as a starting point and try to develop my own ideas about it. | Strongly Disagree          |    |      |
|    |                                                                                           | Disagree                   |    |      |
|    |                                                                                           | Somewhat Disagree          |    |      |
|    |                                                                                           | Neither Agree nor Disagree | 1  | 1.4  |
|    |                                                                                           | Somewhat Agree             | 7  | 9.9  |
|    |                                                                                           | Agree                      | 41 | 56.3 |
|    |                                                                                           | Strongly Agree             | 23 | 32.4 |
| 8. | I have had the opportunity to evaluate my progress as the course proceeds.                | Strongly Disagree          | 4  | 5.6  |
|    |                                                                                           | Disagree                   | 9  | 12.5 |
|    |                                                                                           | Somewhat Disagree          | 4  | 5.6  |
|    |                                                                                           | Neither Agree nor Disagree | 5  | 6.9  |
|    |                                                                                           | Somewhat Agree             | 11 | 15.3 |
|    |                                                                                           | Agree                      | 30 | 41.7 |
|    |                                                                                           | Strongly Agree             | 9  | 12.5 |
| 9. | I have had input in developing the                                                        | Strongly Disagree          | 8  | 11.1 |
|    |                                                                                           | Disagree                   | 19 | 26.4 |



|     |                                                                       |                            |    |      |
|-----|-----------------------------------------------------------------------|----------------------------|----|------|
|     | marking scheme for the course.                                        | Somewhat Disagree          | 5  | 6.9  |
|     |                                                                       | Neither Agree nor Disagree | 1  | 1.4  |
|     |                                                                       | Somewhat Agree             | 12 | 16.7 |
|     |                                                                       | Agree                      | 22 | 30.6 |
|     |                                                                       | Strongly Agree             | 5  | 6.9  |
| 10. | Due dates have been determined by the instructor.                     | Strongly Disagree          |    |      |
|     |                                                                       | Disagree                   | 3  | 4.2  |
|     |                                                                       | Somewhat Disagree          | 2  | 2.8  |
|     |                                                                       | Neither Agree nor Disagree | 1  | 1.4  |
|     |                                                                       | Somewhat Agree             | 9  | 12.5 |
|     |                                                                       | Agree                      | 40 | 55.6 |
|     |                                                                       | Strongly Agree             | 17 | 23.6 |
| 11. | A lot of group work is done in the course.                            | Strongly Disagree          | 1  | 1.4  |
|     |                                                                       | Disagree                   | 15 | 20.8 |
|     |                                                                       | Somewhat Disagree          | 5  | 6.9  |
|     |                                                                       | Neither Agree nor Disagree | 4  | 5.6  |
|     |                                                                       | Somewhat Agree             | 11 | 15.3 |
|     |                                                                       | Agree                      | 23 | 31.9 |
|     |                                                                       | Strongly Agree             | 13 | 18.1 |
| 12. | The instructor is readily available outside of class hours.           | Strongly Disagree          | 1  | 1.4  |
|     |                                                                       | Disagree                   | 10 | 13.9 |
|     |                                                                       | Somewhat Disagree          | 7  | 9.7  |
|     |                                                                       | Neither Agree nor Disagree | 3  | 4.2  |
|     |                                                                       | Somewhat Agree             | 9  | 12.5 |
|     |                                                                       | Agree                      | 32 | 44.4 |
|     |                                                                       | Strongly Agree             | 10 | 13.9 |
| 13. | I learn everything exactly as it is outlined in the course materials. | Strongly Disagree          |    |      |
|     |                                                                       | Disagree                   | 5  | 6.9  |
|     |                                                                       | Somewhat Disagree          | 3  | 4.2  |
|     |                                                                       | Neither Agree nor Disagree | 4  | 5.6  |
|     |                                                                       | Somewhat Agree             | 14 | 19.4 |
|     |                                                                       | Agree                      | 32 | 44.4 |

|     |                                                                                       |                            |    |      |
|-----|---------------------------------------------------------------------------------------|----------------------------|----|------|
|     |                                                                                       | Strongly Agree             | 14 | 19.4 |
| 14. | Discussions take up most of the course time.                                          | Strongly Disagree          | 3  | 4.2  |
|     |                                                                                       | Disagree                   | 9  | 12.5 |
|     |                                                                                       | Somewhat Disagree          | 6  | 8.3  |
|     |                                                                                       | Neither Agree nor Disagree | 9  | 12.5 |
|     |                                                                                       | Somewhat Agree             | 8  | 11.1 |
|     |                                                                                       | Agree                      | 30 | 41.7 |
|     |                                                                                       | Strongly Agree             | 7  | 9.7  |
| 15. | Past experiences of students are integrated into the course as the course progresses. | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                       | Disagree                   | 9  | 12.5 |
|     |                                                                                       | Somewhat Disagree          |    |      |
|     |                                                                                       | Neither Agree nor Disagree | 5  | 6.9  |
|     |                                                                                       | Somewhat Agree             | 16 | 22.2 |
|     |                                                                                       | Agree                      | 30 | 41.7 |
|     |                                                                                       | Strongly Agree             | 11 | 15.3 |
| 16. | The instructor lectures for over half the class time.                                 | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                       | Disagree                   | 6  | 8.3  |
|     |                                                                                       | Somewhat Disagree          | 6  | 8.3  |
|     |                                                                                       | Neither Agree nor Disagree | 5  | 6.9  |
|     |                                                                                       | Somewhat Agree             | 16 | 22.2 |
|     |                                                                                       | Agree                      | 32 | 44.4 |
|     |                                                                                       | Strongly Agree             | 6  | 8.3  |
| 17. | I have used information learned so far in the course in real-life situations.         | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                       | Disagree                   | 3  | 4.2  |
|     |                                                                                       | Somewhat Disagree          | 1  | 1.4  |
|     |                                                                                       | Neither Agree nor Disagree | 5  | 6.9  |
|     |                                                                                       | Somewhat Agree             | 17 | 23.6 |
|     |                                                                                       | Agree                      | 30 | 41.7 |
|     |                                                                                       | Strongly Agree             | 15 | 20.8 |
| 18. | Alternative solutions are                                                             | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                       | Disagree                   | 2  | 2.8  |
|     |                                                                                       | Somewhat Disagree          | 1  | 1.4  |

|     |                                                                                                            |                            |    |      |
|-----|------------------------------------------------------------------------------------------------------------|----------------------------|----|------|
|     | presented for a problem.                                                                                   | Neither Agree nor Disagree | 2  | 2.8  |
|     |                                                                                                            | Somewhat Agree             | 15 | 20.8 |
|     |                                                                                                            | Agree                      | 37 | 51.4 |
|     |                                                                                                            | Strongly Agree             | 14 | 19.4 |
| 19. | I receive feedback in each class.                                                                          | Strongly Disagree          | 3  | 4.2  |
|     |                                                                                                            | Disagree                   | 17 | 23.6 |
|     |                                                                                                            | Somewhat Disagree          | 3  | 4.2  |
|     |                                                                                                            | Neither Agree nor Disagree | 5  | 6.9  |
|     |                                                                                                            | Somewhat Agree             | 10 | 13.9 |
|     |                                                                                                            | Agree                      | 22 | 30.6 |
|     |                                                                                                            | Strongly Agree             | 12 | 23.6 |
| 20. | I check my learning progress by formulating the main points of a concept in my own words after I study it. | Strongly Disagree          |    |      |
|     |                                                                                                            | Disagree                   | 3  | 4.2  |
|     |                                                                                                            | Somewhat Disagree          |    |      |
|     |                                                                                                            | Neither Agree nor Disagree | 5  | 6.9  |
|     |                                                                                                            | Somewhat Agree             | 14 | 19.7 |
|     |                                                                                                            | Agree                      | 33 | 45.1 |
|     |                                                                                                            | Strongly Agree             | 17 | 23.9 |
| 21. | When a section of the course is a problem for me, I try to find out why it is difficult for me.            | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                                            | Disagree                   | 2  | 2.8  |
|     |                                                                                                            | Somewhat Disagree          | 1  | 1.4  |
|     |                                                                                                            | Neither Agree nor Disagree | 4  | 5.6  |
|     |                                                                                                            | Somewhat Agree             | 17 | 23.6 |
|     |                                                                                                            | Agree                      | 35 | 48.6 |
|     |                                                                                                            | Strongly Agree             | 12 | 16.7 |
| 22. | I find the directions for assignments in the course are clear to me.                                       | Strongly Disagree          |    |      |
|     |                                                                                                            | Disagree                   | 3  | 4.2  |
|     |                                                                                                            | Somewhat Disagree          | 4  | 5.6  |
|     |                                                                                                            | Neither Agree nor Disagree | 4  | 5.6  |
|     |                                                                                                            | Somewhat Agree             | 13 | 18.1 |
|     |                                                                                                            | Agree                      | 36 | 50   |
|     |                                                                                                            | Strongly Agree             | 12 | 16.7 |

|     |                                                                                                |                            |    |      |
|-----|------------------------------------------------------------------------------------------------|----------------------------|----|------|
| 23. | I use the same study style for all sections of the course.                                     | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                                | Disagree                   | 12 | 16.7 |
|     |                                                                                                | Somewhat Disagree          | 9  | 12.5 |
|     |                                                                                                | Neither Agree nor Disagree | 3  | 4.2  |
|     |                                                                                                | Somewhat Agree             | 19 | 26.4 |
|     |                                                                                                | Agree                      | 23 | 31.9 |
|     |                                                                                                | Strongly Agree             | 5  | 6.9  |
| 24. | I often try to express the material in a unit in my own words to see if learning has occurred. | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                                | Disagree                   | 1  | 1.4  |
|     |                                                                                                | Somewhat Disagree          | 1  | 1.4  |
|     |                                                                                                | Neither Agree nor Disagree | 6  | 8.3  |
|     |                                                                                                | Somewhat Agree             | 13 | 18.1 |
|     |                                                                                                | Agree                      | 40 | 55.6 |
|     |                                                                                                | Strongly Agree             | 10 | 13.9 |
| 25. | I create questions of my own to test my learning.                                              | Strongly Disagree          |    |      |
|     |                                                                                                | Disagree                   | 1  | 1.4  |
|     |                                                                                                | Somewhat Disagree          | 5  | 7    |
|     |                                                                                                | Neither Agree nor Disagree | 5  | 7    |
|     |                                                                                                | Somewhat Agree             | 11 | 15.5 |
|     |                                                                                                | Agree                      | 35 | 47.9 |
|     |                                                                                                | Strongly Agree             | 15 | 21.1 |
| 26. | When beginning a new unit, I organize the topics in an order which are meaningful to me.       | Strongly Disagree          |    |      |
|     |                                                                                                | Disagree                   |    |      |
|     |                                                                                                | Somewhat Disagree          | 2  | 2.8  |
|     |                                                                                                | Neither Agree nor Disagree | 4  | 5.6  |
|     |                                                                                                | Somewhat Agree             | 18 | 25.4 |
|     |                                                                                                | Agree                      | 28 | 38   |
|     |                                                                                                | Strongly Agree             | 17 | 23.9 |

## SRL Strategies

| No. | Questions                                                                                               | Response                   | Frequency | Percentage (%) |
|-----|---------------------------------------------------------------------------------------------------------|----------------------------|-----------|----------------|
| 27. | During class time I often miss important points because I am thinking of other things.                  | Strongly Disagree          |           |                |
|     |                                                                                                         | Disagree                   | 18        | 25             |
|     |                                                                                                         | Somewhat Disagree          | 6         | 8.3            |
|     |                                                                                                         | Neither Agree nor Disagree | 6         | 8.3            |
|     |                                                                                                         | Somewhat Agree             | 11        | 15.3           |
|     |                                                                                                         | Agree                      | 18        | 25             |
|     |                                                                                                         | Strongly Agree             | 4         | 5.6            |
| 28. | When reading for this course, I make up questions to help focus my reading.                             | Strongly Disagree          |           |                |
|     |                                                                                                         | Disagree                   | 4         | 5.6            |
|     |                                                                                                         | Somewhat Disagree          | 4         | 5.6            |
|     |                                                                                                         | Neither Agree nor Disagree | 3         | 4.2            |
|     |                                                                                                         | Somewhat Agree             | 18        | 25             |
|     |                                                                                                         | Agree                      | 38        | 52.8           |
|     |                                                                                                         | Strongly Agree             | 5         | 6.9            |
| 29. | When I become confused about something I am reading for this class, I go back and try to figure it out. | Strongly Disagree          |           |                |
|     |                                                                                                         | Disagree                   | 1         | 1.4            |
|     |                                                                                                         | Somewhat Disagree          | 2         | 2.8            |
|     |                                                                                                         | Neither Agree nor Disagree | 3         | 4.2            |
|     |                                                                                                         | Somewhat Agree             | 13        | 18.1           |
|     |                                                                                                         | Agree                      | 43        | 59.7           |
|     |                                                                                                         | Strongly Agree             | 10        | 13.9           |
| 30. | If course readings are difficult to understand, I change the way I read the material.                   | Strongly Disagree          |           |                |
|     |                                                                                                         | Disagree                   | 1         | 1.4            |
|     |                                                                                                         | Somewhat Disagree          | 1         | 1.4            |
|     |                                                                                                         | Neither Agree nor Disagree | 2         | 2.8            |
|     |                                                                                                         | Somewhat Agree             | 10        | 13.9           |
|     |                                                                                                         | Agree                      | 45        | 62.5           |
|     |                                                                                                         | Strongly Agree             | 13        | 18.1           |

|     |                                                                                                              |                            |    |      |
|-----|--------------------------------------------------------------------------------------------------------------|----------------------------|----|------|
| 31. | Before I study new course material thoroughly, I often skim it to see how it is organised.                   | Strongly Disagree          |    |      |
|     |                                                                                                              | Disagree                   | 2  | 2.8  |
|     |                                                                                                              | Somewhat Disagree          |    |      |
|     |                                                                                                              | Neither Agree nor Disagree | 7  | 9.7  |
|     |                                                                                                              | Somewhat Agree             | 12 | 16.7 |
|     |                                                                                                              | Agree                      | 38 | 52.8 |
|     |                                                                                                              | Strongly Agree             | 13 | 18.1 |
| 32. | I ask myself questions to make sure I understand the material I have been studying in this class..           | Strongly Disagree          |    |      |
|     |                                                                                                              | Disagree                   |    |      |
|     |                                                                                                              | Somewhat Disagree          | 1  | 1.4  |
|     |                                                                                                              | Neither Agree nor Disagree | 3  | 4.2  |
|     |                                                                                                              | Somewhat Agree             | 14 | 19.7 |
|     |                                                                                                              | Agree                      | 41 | 56.3 |
|     |                                                                                                              | Strongly Agree             | 13 | 18.3 |
| 33. | I try to change the way I study in order to fit the course requirements and the instructor's teaching style. | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                                              | Disagree                   |    |      |
|     |                                                                                                              | Somewhat Disagree          | 2  | 2.8  |
|     |                                                                                                              | Neither Agree nor Disagree | 8  | 11.1 |
|     |                                                                                                              | Somewhat Agree             | 12 | 16.7 |
|     |                                                                                                              | Agree                      | 37 | 51.4 |
|     |                                                                                                              | Strongly Agree             | 12 | 16.7 |
| 34. | I usually study in a place where I can concentrate on my course work.                                        | Strongly Disagree          |    |      |
|     |                                                                                                              | Disagree                   |    |      |
|     |                                                                                                              | Somewhat Disagree          | 1  | 1.4  |
|     |                                                                                                              | Neither Agree nor Disagree | 4  | 5.6  |
|     |                                                                                                              | Somewhat Agree             | 6  | 8.3  |
|     |                                                                                                              | Agree                      | 47 | 65.3 |
|     |                                                                                                              | Strongly Agree             | 14 | 19.4 |
| 35. | I make good use of my study time for this course.                                                            | Strongly Disagree          |    |      |
|     |                                                                                                              | Disagree                   | 1  | 1.4  |
|     |                                                                                                              | Somewhat Disagree          | 4  | 5.6  |
|     |                                                                                                              | Neither Agree nor Disagree | 4  | 5.6  |

|     |                                                                                                             |                            |    |      |
|-----|-------------------------------------------------------------------------------------------------------------|----------------------------|----|------|
|     |                                                                                                             | Somewhat Agree             | 8  | 11.3 |
|     |                                                                                                             | Agree                      | 42 | 57.7 |
|     |                                                                                                             | Strongly Agree             | 13 | 18.3 |
| 36. | I have a regular place set aside for study.                                                                 | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                                             | Disagree                   | 2  | 2.8  |
|     |                                                                                                             | Somewhat Disagree          |    |      |
|     |                                                                                                             | Neither Agree nor Disagree | 2  | 2.8  |
|     |                                                                                                             | Somewhat Agree             | 8  | 11.1 |
|     |                                                                                                             | Agree                      | 42 | 23.6 |
|     |                                                                                                             | Strongly Agree             | 17 | 58.3 |
| 37. | I make sure that I keep up with the weekly readings and assignments for this course.                        | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                                             | Disagree                   | 1  | 1.4  |
|     |                                                                                                             | Somewhat Disagree          | 1  | 1.4  |
|     |                                                                                                             | Neither Agree nor Disagree | 3  | 4.2  |
|     |                                                                                                             | Somewhat Agree             | 14 | 19.4 |
|     |                                                                                                             | Agree                      | 38 | 52.8 |
|     |                                                                                                             | Strongly Agree             | 14 | 19.4 |
| 38. | I attend this class regularly.                                                                              | Strongly Disagree          |    |      |
|     |                                                                                                             | Disagree                   | 1  | 1.4  |
|     |                                                                                                             | Somewhat Disagree          |    |      |
|     |                                                                                                             | Neither Agree nor Disagree | 4  | 5.6  |
|     |                                                                                                             | Somewhat Agree             | 4  | 5.6  |
|     |                                                                                                             | Agree                      | 37 | 51.4 |
|     |                                                                                                             | Strongly Agree             | 26 | 36.1 |
| 39. | I often feel so lazy or bored when I study for this class that I quit before I finish what I planned to do. | Strongly Disagree          | 4  | 5.6  |
|     |                                                                                                             | Disagree                   | 17 | 23.6 |
|     |                                                                                                             | Somewhat Disagree          | 4  | 5.6  |
|     |                                                                                                             | Neither Agree nor Disagree | 6  | 8.3  |
|     |                                                                                                             | Somewhat Agree             | 12 | 16.7 |
|     |                                                                                                             | Agree                      | 21 | 29.2 |
|     |                                                                                                             | Strongly Agree             | 8  | 11.1 |
| 40. |                                                                                                             | Strongly Disagree          | 2  | 2.8  |

|     |                                                                                                  |                            |      |      |
|-----|--------------------------------------------------------------------------------------------------|----------------------------|------|------|
|     | I work hard to do well in this class even if I don't like what we are doing.                     | Disagree                   | 6    | 8.3  |
|     |                                                                                                  | Somewhat Disagree          | 5    | 6.9  |
|     |                                                                                                  | Neither Agree nor Disagree | 6    | 8.3  |
|     |                                                                                                  | Somewhat Agree             | 10   | 13.9 |
|     |                                                                                                  | Agree                      | 29   | 40.3 |
|     |                                                                                                  | Strongly Agree             | 14   | 19.4 |
| 41. | Even when course materials are dull and uninteresting, I manage to keep working until I finish.. | Strongly Disagree          | 1    | 1.4  |
|     |                                                                                                  | Disagree                   | 4    | 5.6  |
|     |                                                                                                  | Somewhat Disagree          | 7    | 9.7  |
|     |                                                                                                  | Neither Agree nor Disagree | 5    | 6.9  |
|     |                                                                                                  | Somewhat Agree             | 9    | 12.5 |
|     |                                                                                                  | Agree                      | 35   | 48.6 |
|     | Strongly Agree                                                                                   | 11                         | 15.3 |      |
| 42. | When studying for this course, I often try to explain the material to a classmate or friend.     | Strongly Disagree          |      |      |
|     |                                                                                                  | Disagree                   | 4    | 5.6  |
|     |                                                                                                  | Somewhat Disagree          |      |      |
|     |                                                                                                  | Neither Agree nor Disagree | 4    | 5.6  |
|     |                                                                                                  | Somewhat Agree             | 9    | 12.5 |
|     |                                                                                                  | Agree                      | 42   | 58.3 |
|     | Strongly Agree                                                                                   | 13                         | 18.1 |      |
| 43. | I try to work with other students from this class to complete the course assignments.            | Strongly Disagree          |      |      |
|     |                                                                                                  | Disagree                   | 2    | 2.8  |
|     |                                                                                                  | Somewhat Disagree          | 2    | 2.8  |
|     |                                                                                                  | Neither Agree nor Disagree | 2    | 2.8  |
|     |                                                                                                  | Somewhat Agree             | 9    | 12.5 |
|     |                                                                                                  | Agree                      | 42   | 58.3 |
|     | Strongly Agree                                                                                   | 15                         | 20.8 |      |
| 44. | When studying for this course, I often set aside time to discuss course material                 | Strongly Disagree          |      |      |
|     |                                                                                                  | Disagree                   | 4    | 5.6  |
|     |                                                                                                  | Somewhat Disagree          | 2    | 2.8  |
|     |                                                                                                  | Neither Agree nor Disagree | 6    | 8.3  |
|     |                                                                                                  | Somewhat Agree             | 6    | 8.3  |



|     |                                                                                                                       |                            |    |      |
|-----|-----------------------------------------------------------------------------------------------------------------------|----------------------------|----|------|
|     | with a group of students from the class.                                                                              | Agree                      | 40 | 55.6 |
|     |                                                                                                                       | Strongly Agree             | 14 | 19.4 |
| 45. | Even if I have trouble learning the material in this class, I try to do the work on my own, without help from anyone. | Strongly Disagree          | 1  | 1.4  |
|     |                                                                                                                       | Disagree                   | 10 | 14.1 |
|     |                                                                                                                       | Somewhat Disagree          | 9  | 12.7 |
|     |                                                                                                                       | Neither Agree nor Disagree | 3  | 4.2  |
|     |                                                                                                                       | Somewhat Agree             | 6  | 8.5  |
|     |                                                                                                                       | Agree                      | 35 | 47.9 |
|     |                                                                                                                       | Strongly Agree             | 8  | 11.3 |
| 46. | I ask the instructor to clarify concepts I don't understand well.                                                     | Strongly Disagree          |    |      |
|     |                                                                                                                       | Disagree                   | 3  | 4.2  |
|     |                                                                                                                       | Somewhat Disagree          |    |      |
|     |                                                                                                                       | Neither Agree nor Disagree | 2  | 2.8  |
|     |                                                                                                                       | Somewhat Agree             | 7  | 9.9  |
|     |                                                                                                                       | Agree                      | 48 | 66.2 |
|     |                                                                                                                       | Strongly Agree             | 12 | 16.9 |
| 47. | When I can't understand the material in this course, I ask another student in this class for help.                    | Strongly Disagree          |    |      |
|     |                                                                                                                       | Disagree                   | 1  | 1.4  |
|     |                                                                                                                       | Somewhat Disagree          |    |      |
|     |                                                                                                                       | Neither Agree nor Disagree | 2  | 2.8  |
|     |                                                                                                                       | Somewhat Agree             | 7  | 9.7  |
|     |                                                                                                                       | Agree                      | 55 | 76.4 |
|     |                                                                                                                       | Strongly Agree             | 7  | 9.7  |
| 48. | I try to identify students in this class whom I can ask for help if necessary.                                        | Strongly Disagree          |    |      |
|     |                                                                                                                       | Disagree                   | 3  | 4.2  |
|     |                                                                                                                       | Somewhat Disagree          | 3  | 4.2  |
|     |                                                                                                                       | Neither Agree nor Disagree | 2  | 2.8  |
|     |                                                                                                                       | Somewhat Agree             | 12 | 16.7 |
|     |                                                                                                                       | Agree                      | 36 | 50   |
|     |                                                                                                                       | Strongly Agree             | 16 | 22.2 |

## Barriers of SRL

| No. | Questions                                                                                                    | Response                   | Frequency | Percentage (%) |
|-----|--------------------------------------------------------------------------------------------------------------|----------------------------|-----------|----------------|
| 49. | I find it hard to stick to a study schedule.                                                                 | Strongly Disagree          | 3         | 4.2            |
|     |                                                                                                              | Disagree                   | 11        | 15.3           |
|     |                                                                                                              | Somewhat Disagree          | 3         | 4.2            |
|     |                                                                                                              | Neither Agree nor Disagree | 5         | 6.9            |
|     |                                                                                                              | Somewhat Agree             | 11        | 15.3           |
|     |                                                                                                              | Agree                      | 32        | 44.4           |
|     |                                                                                                              | Strongly Agree             |           |                |
| 50. | I try to change the way I study in order to fit the course requirements and the instructor's teaching style. | Strongly Disagree          |           |                |
|     |                                                                                                              | Disagree                   | 7         | 9.7            |
|     |                                                                                                              | Somewhat Disagree          | 2         | 2.8            |
|     |                                                                                                              | Neither Agree nor Disagree | 7         | 9.7            |
|     |                                                                                                              | Somewhat Agree             | 10        | 13.9           |
|     |                                                                                                              | Agree                      | 36        | 50             |
|     |                                                                                                              | Strongly Agree             | 10        | 13.9           |
| 51. | I often find that I have been reading for this class but don't know what it was all about.                   | Strongly Disagree          | 7         | 9.7            |
|     |                                                                                                              | Disagree                   | 18        | 25             |
|     |                                                                                                              | Somewhat Disagree          | 10        | 13.9           |
|     |                                                                                                              | Neither Agree nor Disagree | 7         | 9.7            |
|     |                                                                                                              | Somewhat Agree             | 8         | 11.1           |
|     |                                                                                                              | Agree                      | 17        | 23.6           |
|     |                                                                                                              | Strongly Agree             | 5         | 6.9            |
| 52. | When course work is difficult, I either give up                                                              | Strongly Disagree          | 7         | 9.7            |
|     |                                                                                                              | Disagree                   | 22        | 30.6           |
|     |                                                                                                              | Somewhat Disagree          | 5         | 6.9            |

|     |                                                                                        |                            |    |      |
|-----|----------------------------------------------------------------------------------------|----------------------------|----|------|
|     | or only study the easy portions.                                                       | Neither Agree nor Disagree | 2  | 2.8  |
|     |                                                                                        | Somewhat Agree             | 13 | 18.1 |
|     |                                                                                        | Agree                      | 19 | 26.4 |
|     |                                                                                        | Strongly Agree             | 4  | 5.6  |
| 53. | I often find that I don't devote much time on this course because of other activities. | Strongly Disagree          | 8  | 11.3 |
|     |                                                                                        | Disagree                   | 19 | 26.8 |
|     |                                                                                        | Somewhat Disagree          | 13 | 18.3 |
|     |                                                                                        | Neither Agree nor Disagree | 2  | 2.8  |
|     |                                                                                        | Somewhat Agree             | 8  | 11.3 |
|     |                                                                                        | Agree                      | 16 | 22.5 |
|     |                                                                                        | Strongly Agree             | 5  | 7    |
| 54. | I rarely find time to review my notes or readings before an examination.               | Strongly Disagree          | 12 | 16.7 |
|     |                                                                                        | Disagree                   | 20 | 27.8 |
|     |                                                                                        | Somewhat Disagree          | 13 | 18.1 |
|     |                                                                                        | Neither Agree nor Disagree | 2  | 2.8  |
|     |                                                                                        | Somewhat Agree             | 6  | 8.3  |
|     |                                                                                        | Agree                      | 13 | 18.1 |
|     |                                                                                        | Strongly Agree             | 6  | 8.3  |
| 55. | I usually study in a place where I can concentrate on my course work.                  | Strongly Disagree          |    |      |
|     |                                                                                        | Disagree                   | 2  | 2.8  |
|     |                                                                                        | Somewhat Disagree          | 1  | 1.4  |
|     |                                                                                        | Neither Agree nor Disagree | 2  | 2.8  |
|     |                                                                                        | Somewhat Agree             | 8  | 11.1 |
|     |                                                                                        | Agree                      | 41 | 56.9 |
|     |                                                                                        | Strongly Agree             | 18 | 25   |

## Appendix III

### Responses to Question no 56.

56. How does your institution help you in managing self-regulated learning?

#### Agree Positive

1. they incorporate technology and other organizational tools to help students organize themselves.
2. They provide students with frequent guided practice and offer positive feedback.
3. by working on our everyday problems- ict related, notes, assignment submission, attendance and resolving them.
4. our institute clearly post, explain, and teach classroom rules and routines. Help us in setting goals and carrying out plans to achieve those goals.
5. The rigorous discussions and learning while doing helps a lot in self-regulated learning. Teaching of a particular topic in class and then doing discussion on that topic in the next class, helped me a little bit with self-regulated learning.
6. maintaining an environment conducive to focus
7. online interaction
8. responding to our queries immediately
9. By helping us resolve our queries
10. By solving our problems
11. providing online notes, supplementary material, pdf of books, google classes
12. my managing our daily timetable, preparing everyday schedule for us.
13. by motivating us to study more
14. by planning, organizing and scheduling our daily activity
15. By organizing practical activities
16. It's helps me individual.
17. helpful faculty and friends
18. Through motivation and by widening our horizons
19. By providing support in every way possible
20. By giving assignments and notes online
21. Promote reflective dialogue and provide feedback
22. Helps to link new experience with prior learning

23. by keeping in touch with us, talking regularly
24. By providing required online access to professors, study materials, course materials, assignments, lectures and related literature
25. Professors help us in managing self-regulated learning. They give us various activities to apply the knowledge and skills learned in the classrooms. It motivates us to learn new things and keep our interests in the course we have taken. However, we have our interests in this course and determination to complete it by learning different things. We know that it will help us in the future, not only for our career but also for real-life situations.
26. Providing best teachers and learning environment
27. They provide all help in all manner
28. Guide learners self-beliefs, goal setting, and expectations
29. Every time our professors stand with us.
30. Guide learners' self-beliefs, goal setting, and expectations. ...
31. Promote reflective dialogue. ...
32. Provide corrective feedback. ...
33. Help learners make connections between abstract concepts. ...
34. Help learners link new experiences to prior learning.
35. Proper time to time monitor their performance. Encourage, exercise & meditation etc.
36. Institutions give me lots of chances through practical knowledge, theory knowledge
37. Institution promotes to learning by doing
38. By providing access to online studying material and faculty members
39. Providing study material
40. Library is the place in institution where I can study with my own pace by selecting suitable resources and I usually use it.
41. If I talk about self-regulated learning during class time ,yes I get various opportunities and my teachers help a lot in that .They are always available to me to solve my doubts like if i am not getting suitable notes of any topic for self-study. They give us time in class to read thoroughly and asking questions and more.

**Disagree Negative**

I don't find them very supporting in context of guidance

I didn't get any help from the institution

5 students disagree