Chapter 2
THEORETICAL OVERVIEW

2.1 APPROACHES TO STUDYING
2.2 SOME STRATEGIES THAT PROMOTE DEEP LEARNING
INTRODUCTION

This chapter presents a theoretical overview that is expected to aid in developing and enriching the theoretical framework of the study. To many people, the term theory suggests an ivory tower, sometimes unreal and of little practical value. On the contrary, a theory establishes a cause and effect relationship between variables with the purpose of explaining and predicting phenomena. Those who engage in pure research devote their potential to the formulation and reformulation of theories and may not be concerned with their practical applications. However, when a theory has been established, it may suggest many applications of practical value. John Dewey (1916) once said that there was nothing more practical than a good theory. A theory is an attempt to develop general explanation for some phenomenon. It defines non-observable constructs that are inferred from observable facts and events, and are thought to have an effect on the phenomenon under study. A theory describes the relationship among key variables for purposes of explaining a current state or predicting future occurrences. It is primarily concerned with explanation and therefore focuses on determining cause-effect relationship. In this study, the theory chapter is mainly concerned with approaches to studying and certain strategies that assist students to attain deep learning.
Approaches to Studying are a product of interaction between the behavioural pattern of individual students, viz. expectation, ambition, and factors of learning. In many studies, Researchers have focussed on process strategies that students use for learning and the way these strategies are related to levels of understanding. The findings of these studies are a pointer to the differences in the types of understanding. But it was Entwistle (1997) who developed the concepts of Surface and Deep Learning Approaches.

2.1 APPROACHES TO STUDYING

Children may vary not only in their capabilities for learning but also in ways in which they approach and deal with given tasks. In recent years, there has been a substantial amount of research focussing on the relationship between qualitative differences in studying and learning outcomes. Approaches to Studying extend our understanding about how students learn academic materials in the classroom.

In the last two decades, new insights into learning in natural educational settings have been gained. Researchers started to describe learning processes from the learners’ perceptive, which focus on relating the students’ motivation and conception and the ways in which the learners perceive the world and the events so that learners have personal perception of the world. So personal meaning and construction can be comprehended in the students’
unique personal and social context. Thus, if the students are inclined to fairly stable motives towards schoolwork, they may have stable conceptions about learning in a consistent way. This consistency of motive and strategy is the student’s approach to studying.

One of the major emerging concepts is that the Approaches to Studying are not stable traits in individuals. Although some students tend towards taking a Deep Approach, others tend towards taking a Surface Approach (Biggs, 1999). Thus Approaches to Studying can be differentiated as Deep and Surface based on the way they are related to levels of understanding.

I. Surface Approach

A Surface Approach with extrinsic motivation involves simple conceptions of learning such as memorization and intention so as to satisfy some task or course of demand apart from personal interest. Surface achievers systematically adopt rote learning and also select details to obtain high grades (Biggs, 1990). Students, who are engaged in rote learning, tend to use the textbook as an important tool for memorization. They prefer to skim the simple version of complex subject areas and read material without much understanding of its inner meaning.

Surface Learners have intention to restrict learning to the defined syllabus and specific tasks; they seek to define the
boundaries of the curriculum and stay within those boundaries. These students focus on what is required in course outlines. They rarely venture beyond the formal bounds of a course unless specifically required to do so by the instructor. Students who have a Surface Approach tend to have only a primary intention of understanding the subject. They tend to jump through the necessary hoops in order to acquire the required marks or grade or qualification. The Surface Approach to Learning by Biggs is depicted in Figure 2.1

**Figure 2.1**

*Surface Approach to Learning*

The characteristics of Surface Approach Learners are given in Table 2.1.
Table 2.1
Characteristics of Surface Approach Learners

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Characteristics</th>
</tr>
</thead>
</table>
| **Knowledge Transforming** | ➢ Tendency to choose quickest way to accomplish the task.  
➤ Tendency to acquire the learning material without asking in-depth questions.  
➤ Tendency to study the material in a linear manner.  
➤ Tendency to relate the minimal aspects of material to a problem without showing interest.  
➤ Tendency to learn by rote by relying on memory and on comprehension.  
➤ Tendency to be concerned with the time needed to fulfil the learning task.  
➤ Tendency to focus on memorizing the main elements.  
➤ Tendency to avoid use of expression of Metacognitive skills.  
➤ Tendency to have minimum learning motivation so as to avoid failure.  
➤ Tendency to have Surface motivation or extrinsic motivation.  
➤ Tendency to fail in distinguishing principles from examples.  
➤ Tendency to stick closely to course requirements.  
➤ Tendency to be motivated by fear of failure.  
➤ Tendency to have a narrow view and concentration.  
➤ Tendency to meet requirements minimally.  
➤ Tendency to set a balance between failure and working. |
| **Aim** | ➢ To limit target to the bare essentials.  
➤ To reproduce essentials for assessment purpose through memorising or rote learning.  
➤ To be passive in learning.  
➤ To have negative emotions about learning.  
➤ To prefer to learn in isolation. |
| **Outcome** | ➢ Having limited understanding of theoretical concepts and principles.  
➤ Inability to distinguish between examples and principles.  
➤ Having difficulty in developing a logical argument.  
➤ Inability to recognize key ideas.  
➤ Quickly forgetting things learnt. |
Students’ approach to a learning task will strongly influence the quality of outcome. Surface Approaches generally lead to low retention and inability to use information in new contexts. Good teaching should encourage Deep Approach to learning at the expense of Surface Approach.

**Surface Approaches to Learning can be discouraged by**

- Matching the level of the subject and the pace by which it is presented with students' prior knowledge. Because of the use of Surface Approach in previous episodes of learning, many students will not have the expected prior knowledge at the beginning of a new event of learning.

- Ensuring that assessment tasks are set to match the desired response so as to reduce the chances for rote recall of theories and facts. If students believe that assessments are just machinery for deriving grades, they will jump the hoops and in return they will get their required grades.

- Keeping the workload at a level that allows students a wider exploration of ideas and development of interest that characterises a Deep Approach to learning.

- Matching actual and desired administrative requirements by avoiding punishment for late submission more than punishment for errors.
II. Deep Approach

Deep Approach is based on the student’s personal commitment to the learning process. Students look for meaning in their study materials and interact actively with what is learned by linking what they study with real life. Students constantly ask critical questions of what they read in books and papers and hear in lectures in order to attain deeper understanding of their subject matter. Students actively relate new information to previous knowledge. They seek to connect rationally and logically the new ideas they receive, even to the extent of using concept maps. Deep Approach to learning in the subject would seem likely to deliver an intelligent engagement with the subject as well as success in the subject. The Deep Approach to Learning by Biggs is depicted in Figure 2.2

Figure 2.2
Deep Approach to Learning

The characteristics of Deep Approach Learners are given in Table 2.2.
### Table 2.2
**Characteristics of Deep Approach Learners**

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Characteristics</th>
</tr>
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</table>
| **Knowledge Transforming** | - Tendency to relate new information to previous knowledge.  
- Tendency to search for a relevant meaning and connecting point between learning materials, daily life and personal experience.  
- Tendency to study different aspects in order to obtain the entire picture.  
- Tendency to be emotionally engaged and thereby experience deep learning.  
- Tendency to use Metacognitive skills to develop new ideas, to offer other solutions from an inquisitive and critical perspective and thereby to search and discover the inner self.  
- Tendency to maintain feeling of great satisfaction.  
- Tendency to satiate the inner need and reach a complete understanding.  
- Tendency to search for self-fulfillment.  
- Tendency to cultivate deep/inner/intrinsic motivation.  
- Tendency to ask critical questions on what is read in books and papers and heard in lectures in order to attain a deeper understanding of the subject matter.  
- Tendency to actively relate new information to previous knowledge.  
- Tendency to relate the concepts learnt to everyday experience.  
- Tendency to make use of evidence, inquiry and evaluation.  
- Tendency to read and study beyond the course requirements. |
| **Aim** | - To satisfy the interest in what is being learned.  
- To develop higher levels of competence in particular topics and subjects.  
- To become actively involved in learning by asking questions and wishing to apply new knowledge that has been gained.  
- To overcome fear and other negative feelings and to associate higher levels of values with learning.  
- To prefer to learn in a social context, such as with other students, or to engage the lecturer in discourse.  
- To discover meaning by personal exploration, reading widely, practicing, and memorising for meaning and understanding.  
- To interconnect new learning with previous and related knowledge.  
- To examine various points of view and become involved in creating knowledge and understanding through discussion. |
| **Outcome** | - Having a long-term retention of knowledge.  
- Acquiring the ability to apply knowledge to new situations.  
- Acquiring the ability to generate new meanings and novel ideas.  
- Becoming an independent learner. |
Deep Approaches to Learning can be encouraged by

- Structuring the material so that students can see where they are going and make the connections within and outside the subject area.

- Regularly allowing students to ‘map’ where they have been and where they are going as a helpful learning aid.

- Allowing some freedom in learning such that students can adopt a style with which they feel comfortable.

- Supplying the enthusiasm necessary to generate motivation and interest (positive feelings are necessary for Deep Approaches to Learning whereas cynicism and stress usually lead to Surface Approaches to Learning)

- Involving the learner in many active activities (like discussion, planning and problem solving) rather than passive learning (like being lectured). The more ways the learner is involved, the more the interconnections and the stronger the learning becomes.

- Giving qualitative feedback rather than on just the assessment items.

There are many influential factors that determine Surface and Deep Learning, some of which are given below.
FACTORS INFLUENCING APPROACHES TO LEARNING

Research in Higher Education has shown that factors affecting student approaches to learning include the following:

1) Student’s conceptions of learning
   - If students believe learning involves memorising to recall for assessment purposes, or alternatively, if they believe learning is about changing their understanding, they are likely to adopt learning approaches consistent with that belief.

2) Level of student’s intellectual development
   - If students see knowledge as essentially facts rather than something to be negotiated and understood, they are more likely to adopt Surface Approaches to learning.
   - If students see knowledge as a way of understanding the discipline and the world, they are more likely to adopt a Deep Approach.

3) Student’s awareness of task demands
   - If students perceive that what is required of them is to reproduce facts for assessment purpose, or to relate and connect knowledge to experience, they will study accordingly.
4) **Style of teaching**
- Surface Approaches to learning are more likely to be associated with teaching which involves the selection, presentation and assessment of content by the teacher, whereas Deep Approaches to learning are more often associated with a supportive environment in which students make most of the decisions about their learning.

5) **Newness and size of subject**
- Subjects that students find to be new, complex and over-extensive make it impossible for them to adopt a Deep Approach to learning, even if they want to. Clear subject outlines and expectations can help them adopt Deep Approaches.

6) **Workload**
- Students who think the workload is high are more likely to adopt a Surface Approach to learning.

7) **Degree of threat and anxiety felt by students**
- Students who feel under threat (by examinations or over-demanding tasks) are more likely to adopt a Surface Approach to learning.
8) **Nature of assessment**

- If students believe the assessment is testing their understanding of the subject rather than their ability to recall information, they are more likely to adopt a Deep Approach to learning to develop understanding.

The figure given below presents a summary of this section.

**Figure 2.3**

**Synoptic Approach to Deep and Surface Learning**

Let us now discuss about some strategies that promote Deep Learning.
2.2 SOME STRATEGIES THAT PROMOTE DEEP LEARNING

The major problem faced by students is in the grasping of ideas at different levels of the learning domain. So learning will be effective only if it provides positive support to students in their effort to learn. Now-a-days in our classroom, learning takes place only at Surface level. This is inadequate for the development of the child’s potentialities at optimum level. Therefore Deep Learning is essential, for which certain strategies need to be introduced so as to bring in changes in their learning process. A diagrammatic representation of some such strategies, which if embedded in the learning process will promote Deep learning, are presented in Figure 2.4.
FIGURE 2.4
STRATEGIES THAT PROMOTE DEEP LEARNING

PROMOTE A DEEP APPROACH TO LEARNING

RESOURCE MANAGEMENT STRATEGY

METACOGNITIVE STRATEGY

SOCIAL STRATEGY

MACRO STRATEGY

COGNITIVE STRATEGY
I. COGNITIVE STRATEGY

Cognitive Strategy is a useful tool in assisting students in the Deep learning process. The term “cognitive strategy” in its simplest form means the use of the mind (cognition) to solve a problem or acquire a task. Cognitive Strategy is an instructional approach that emphasises the development of thinking skills and processes as a means to enhance learning. Cognitive Strategies may also be referred to as procedural, which provide a structure for learning, when a task cannot be completed through a series of steps. Attention to the steps results in deeper contemplation of the problem. Cognitive Strategies sub serve the learner and enable him to perform complex tasks.

The use of Cognitive Strategies can increase the efficiency with which the learner approaches a learning task. In a classroom where Cognitive Strategies are used, the teacher fulfills a pivotal role, bridging the gap between the student and the content to be learned. This role requires an understanding of the task to be completed, as well as knowledge of an approach to the task that can be communicated to the learner. The Deep learners generally utilize the objective of Cognitive Strategy. Thus the uses of the strategies have been associated with successful learning.
The various components of Cognitive Strategy are:

- **Mnemonic Devices**

  A mnemonic device is a memory-directed tactic that helps a learner transform or organize information to enhance its retrievability. Such devices can be used to learn and remember individual items of information (a name, a fact, and a date), sets of information (a list of names, a list, and a sequence of events) and ideas expressed in the text. These devices range from simple, easy-to-learn techniques to somewhat complex systems that require a fair amount of practice. Since they incorporate visual and verbal forms of elaborate encoding, their effectiveness is due to some factors that make imagery and category clustering successful with correct organization and meaningfulness.

- **Self-Questioning**

  Since students are expected to demonstrate much of what they know by answering questions of a written test, self-questioning can be a valuable learning tactic.

  The key to using questions profitably is to recognize different types of questions and make different cognitive demands. However questions, which assess comprehension, application, or synthesis of main ideas or other high levels of cognitive achievement, will require great imagination and Deep Approach in learning.
Note-taking

Good note taking can benefit a student in two ways. First, the process of taking notes while listening to a lecture or reading a text leads to better retention and comprehension of the noted information than just listening or reading does. Second, the process of reviewing notes produces additional chances to recall and comprehend the noted material.

Elaboration Strategies

Elaboration Strategies include paraphrasing, summarizing the material to be learned, creating analogies, generative note taking, explaining the ideas to be learned to someone else and asking questions and answering.

Organizational Strategies

Organizational Strategies include selecting the main idea from the text, outlining the text or material to be learned and using a variety of specific techniques for selecting and organizing the ideas in the material.

For Deep learning to occur, students should use a combination of organization and elaboration strategies to analyze and synthesize information in ways that build a mental model linked to prior knowledge in memory.
Thus the use of Cognitive Strategies can increase the efficiency and confidence with which the learner approaches a learning task, as well as his ability to develop a product, retain essential information, or perform a skill. Teaching Cognitive Strategies requires a high degree of commitment from both the teacher and learner; the results are well worth the effort to reach towards deeper levels of understanding.

II. METACOGNITIVE STRATEGY

“Metacognition” is one of the latest buzzwords in educational psychology, but what exactly is metacognition? Metacognition refers to higher order thinking, which involves active control over the cognitive processes engaged in learning. Activities such as planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task are metacognitive in nature. Because metacognition plays a critical role in Deep learning, it is important to study metacognitive activity and development to determine how students can be taught to better apply their cognitive resources through metacognitive control. Metacognition enables us to be successful learners, and has been associated with intelligence (Borkowski and Muthukrishnan, 1992).

Metacognition and Intelligence

Metacognition refers to the awareness and control processes in learning. Metacomponents are executive processes that control
other cognitive components as well as receive feedback from these components (Schunk, 1984). According to Sternberg (1986), Metacomponents are responsible for "figuring out how to do a particular task or set of tasks, and then make sure that the task or set of tasks are done correctly". These executive processes involve planning, evaluating and monitoring problem-solving activities. Sternberg maintains that the ability to appropriately allocate cognitive resources, such as deciding how and when a given task should be accomplished, is central to intelligence.

**Five elements of Metacognition**

Anderson (2000) believes that “developing Metacognitive awareness may also lead to the development of stronger cognitive skills”. Based on research, he proposed five main elements for Metacognition, viz.

1. Preparation and planning for learning,
2. Selection and using of learning strategies,
3. Employing monitoring strategies,
4. Orchestrating various strategies, and
5. Evaluating strategy use and learning.

By preparing and planning in relation to their learning goals, students think about their goals and the ways to achieve them. With the help of the teacher, students can set realistic goals within a time
Theoretical Overview

frame for successful accomplishment. The realistic goals can help students to view their own progress and hopefully, by becoming consciously aware of their progress, enhance their motivation for learning which will help them attain deeper levels of learning.

The Metacognitive ability to select and use particular strategies in a given context for specific purposes means that the learner can think and make conscious decisions about the learning process. Learners should be taught not only about learning strategies but also about when to use them. Students should be instructed on how to choose the best and most appropriate strategy in a given situation.

Anderson defines metacognition as “thinking about thinking”. As Anderson states, the use of Metacognitive Strategies ignites ones “thinking and can lead to higher learning and better performance”. Furthermore, understanding and controlling cognitive processes may be one of the most essential skills that teachers can help learners to attain.

Metacognition also refers to a level of thinking that involves active control over the process of thinking that is used in learning situations. Planning the way to approach a learning task, monitoring, comprehending and evaluating the progress towards the completion of a task – these are skills that are metacognitive in nature. The theory that metacognition has a critical role to play in
successful learning means it is important that it can be demonstrated both by students and teachers alike.

**Use of Metacognitive Strategy to promote Deep Learning**

One general aspect of Metacognition is the periodic appraisal of one’s thinking. It is useful for teachers and students alike because it is reflection on the dynamics of teaching and learning, the core of education, and a first step to change or revise one’s approach. The following figure depicts how Metacognitive Strategy promotes Deep learning.

**FIGURE 2.5**

**PROMOTING DEEP LEARNING THROUGH METACOGNITIVE STRATEGY**
1. **Study Strategies**

The first condition for reaching Meta level of knowledge is to adopt study strategies, which is referred to as general knowledge about how human beings learn and process information. For example, we may be aware that our study strategies will be more productive if we work in a quiet library rather than at home where there are many distractions. Study strategies of task variables include knowledge about the nature of the tasks as well as the type of processing demands that it will place upon the individual. For example, we may be aware that it will take more time for us to read and comprehend a text as compared to the time required for reading and comprehending after acquiring deeper knowledge. The second condition for the same is Monitoring.

2. **Monitoring: Reflection and Self-assessment**

For Self-assessments, personal styles/strategies for learning, and comparing them with others, increases awareness in both the teacher and the student.

**Teachers can maintain reflection by:**

- Assessing their own learning strategies in schools by examining the processes they use to write papers, the tactics they use to search for information in the library or on the Internet, or their methods of preparing for tests.

- Sharing and modelling self-monitoring processes.
Explaining strategies that students can use.

Clarifying why particular strategies are helpful and useful.

Clarifying and modelling when particular strategies are appropriate.

Identifying aspects of the lesson that may be confusing so that superficial or erroneous information are not passed on to students.

Evaluating a lesson being prepared to teach and identifying the important and secondary information.

Asking questions to other teachers about their lesson plan so as to prompt them to assess their own level of understanding and to provide warrants for their teaching.

Asking critical questions about the topic.

**Proficient learners demonstrate the following Metacognitive skills:**

- Recognizing when they have a problem in learning.
- Spotting inconsistencies and incompatible assumptions in their own thinking.
- Knowing when to consciously apply a variety of problem-solving strategies.
Explaining why a particular decision was taken and applying self-monitoring techniques (e.g. frequent checking, goal setting, reassessing and evaluation).

Learning to “track” the thinking processes in a lesson by asking “What did I do?”

Learning to change the thinking patterns so as to work more effectively by asking, “How can I improve?”

Learning to use other resources for increasing skillful thinking by asking “What help do I need?”

Evaluating what is known and what is not known.

Discerning personal depth of understanding about key points.

Promoting efficient effort allocation.

Conducting periodic self-appraisal that is useful for assessment.

Developing self questioning skills (to generate their own questions)

Helping to follow a wise course of action.

3. Motivation: Attribution and Self-efficacy

Learning processes and outcomes are useful habits to be developed because it promotes monitoring of progress, stimulates repair strategies, and promotes feelings of self-efficacy.
III. MACRO STRATEGY

Macro Strategy is more related to (A) motivation, (B) emotion, and (C) interest. Motivation has a major role in promoting personal commitment in the learning process, which enhances Deep learning. Only those students who are more motivated to learn are likely to use learning tasks more effectively. This enhances their self-efficacy, maintains positive effect, and enables them to use Metacognitive, Cognitive, Social and Resource Management strategies to promote Deep learning.

Duch et al (2000) found that students can be intrinsically motivated to learn by providing a real situation, setting a goal and action plan for learning, and relating learning to students’ needs which will lead them towards a deeper level of understanding.

A. Intrinsic Motivation

There are two types of motivation, i.e. intrinsic motivation and extrinsic motivation. It is intrinsic motivation that leads towards Deep learning. Intrinsic motivation generally consists of an internal desire for something.

Intrinsic motivation is highly desirable, because most of the activities in which teachers, students, and other human beings engage are most directly influenced by intrinsic, rather than extrinsic, motivation (Csikszentmihalyi & Nakamura, 1989). For example, most people use a knife and a fork in a certain way or follow conventions in a
restaurant not because they find use of the knife and fork, but because the correct use of these utensils leads to such intrinsic benefits as a good meal or the respect of people we care about.

Thus, intrinsic motivation in simple terms refers to what people will do without external inducement. Thus by intrinsic motivation people will engage themselves for no reward but for interest and enjoyment that accompanies them.

**Four perspectives of Intrinsic Motivation**

_Spiteck (1993)_ stated that individuals engage in deep learning when they learn for intrinsic reasons (i.e. learning because they want to, rather than have to). When learning is enjoyable, it results in more learning. The following are four perspectives of intrinsic motivation.

- **Competence** – Pupils engage in learning activities, in part, for the purpose of developing competence and experiencing the positive feeling of successful mastery of the material.

- **Curiosity** – Students are naturally curious about activities that are somewhat discrepant from their expectations. Pupils seek situations that challenge their current level of skills, and strive to master the challenges and experience feelings of competence or understanding.
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- **Autonomy** – Human beings need to feel that they are in control. They want to believe that they are engaging in activities at their own discretion rather than for some external reward.

- **Internalised Motivation** – Students engage in academic activities that are not intrinsically interesting because they have internalised achievement values. They want to be well informed and see its value in society.

The factors that promote intrinsic motivation for attaining Deep learning are given in Table 2.3.

**Table 2.3**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
<th>Related Guidelines</th>
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</table>
| Challenge | Pupils are best motivated when they are working toward personally meaningful goals whose attainment requires activity at a continuously optimal level of difficulty. | 1. Set personally meaningful goals.  
2. Make attainment of goals probable but uncertain.  
4. Relate goals to learners’ self esteem. |
| Curiosity | Something in the physical environment attracts the learner’s attention or there is an optimal level of discrepancy between present knowledge or skills and what these could be if the learner is engaged in some activity. | 1. Stimulate sensory curiosity by making abrupt changes that will be perceived by the senses.  
2. Stimulate cognitive curiosity by making a person wonder about something (i.e., stimulate the learner’s interest). |
<table>
<thead>
<tr>
<th>Theoretical Overview</th>
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<tbody>
<tr>
<td><strong>Control</strong></td>
</tr>
<tr>
<td>Students have a basic tendency to control what happens to them.</td>
</tr>
<tr>
<td>1. Make clear the cause-and-effect relationships between what students are doing and things that happen in real life.</td>
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<tr>
<td>2. Enable the learners to believe that their work will lead to powerful effects.</td>
</tr>
<tr>
<td>3. Allow learners to freely choose what they want to learn and how they will learn it.</td>
</tr>
<tr>
<td><strong>Fantasy</strong></td>
</tr>
<tr>
<td>Learners use mental images of things and situations that are not actually present to stimulate their behaviour.</td>
</tr>
<tr>
<td>1. Make a game out of learning.</td>
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<tr>
<td>2. Help learners to imagine them using the learned information in real-life settings.</td>
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<tr>
<td>3. Make the fantasies intrinsic rather than extrinsic.</td>
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<tr>
<td><strong>Competition</strong></td>
</tr>
<tr>
<td>Learners feel satisfaction by comparing their performance favourably with that of others</td>
</tr>
<tr>
<td>1. Competition occurs naturally as well as artificially.</td>
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<tr>
<td>2. Competition is important to promote deep learning</td>
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<tr>
<td>3. Competition promotes hardworking</td>
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<tr>
<td>4. Competition sometimes reduces the urge to be helpful to other learners.</td>
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<tr>
<td><strong>Cooperation</strong></td>
</tr>
<tr>
<td>Learners feel satisfaction by helping others achieve their goals</td>
</tr>
<tr>
<td>1. Co-operation is a useful real-life skill.</td>
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<td>2. Co-operation requires and develops interpersonal skills.</td>
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<tr>
<td><strong>Recognition</strong></td>
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<tr>
<td>Learners feel satisfaction when others recognize and appreciate their accomplishments</td>
</tr>
<tr>
<td>1. Recognition requires that the process or product or some other result of the learning activity be visible.</td>
</tr>
<tr>
<td>2. Recognition differs from competition in that it does not involve a comparison with the performance of someone else.</td>
</tr>
</tbody>
</table>
B. Emotion

Emotion has been conceptualised in three distinct ways. It is a psychological state (e.g., frustration or joy) a value judgement in response to a situation [e.g., fear to perceived threat or joy for a reward] transformation or enlightenment from an experience. Regardless of its embodiment, emotion is generally viewed as a motivation for human endeavours.

Learning emotion link

Deep learning occurs when the student attempts to understand the subject matter or can construct his or her own meaning from a learning experience. Deep learners will question the facts and opinions in order to gain a new individually developed perceptive of phenomenon. On the other hand, surface learners interpret learning as an additive product where facts and processes are memorized, recalled and repeated. Surface learners learn in order to do well enough on the test and may even be able to apply their learning to another context, but they take their learning at face value and do not question the underlying structures or causality of what they are learning.

Whether one learns deeply or at the surface level his learning may be related to his emotional state. Recently, neurologists have found a strong psychological link between emotion and the reason indicating that emotions and memories are processed in the same
areas of the brain [Weiss, 2000]. This finding indicates that learning experiences are encoded in the emotional context at the time of the learning event. These emotions serve as a screening function through which new information may or may not be acknowledged and they provide a context for organizing and processing newly acknowledged information. These functions are important to learning because new information cannot be processed for learning unless it has been recognised emotionally. In other words, if a person does not attach an emotion to an experience, that experience will not be retained long-term or added to the person’s knowledge base.

Some researchers go ahead as to say that learning and emotion are inseparable (Brown, 2000), a study of MBA students show that this link is so strong yet so subtle that her students take the connection for granted. Brown suggests that the emotion felt by the students is expressed through the reflection and appraisal process. The student’s contemplation and evaluation of the content of their learning revealed that emotion was used to help them reach a deeper level of understanding of both the topic and themselves. Conversely, what the students feel about the subject may also lead them to think and question more about what they have learned. Because the students are emotionally connected to the subject matter, the instructor or themselves they may become
more involved with the topic and continue the learning process long after the class has ended. Let us now explain how emotion promotes deep learning. Students who are not emotionally engaged are like sea sponges or surface learners and they soak up new knowledge, and when pressed they regurgitate the facts and information they have absorbed, and they feel minimum importance for learning or to get a grade and see no future value and their information is like original form, without having undergone reinterpretation, reflection or evaluation. This is because they are not emotionally connected to what they are learning, so they do not dig deeper do if pushed by the teacher to go beneath the surface, they may not even have the ability to do so consequently.

In the study conducted by White & Dimidiates (1998) proved that learning could engender deep learning if they are emotionally engaged. At deeper levels, learning can entail a significant change in individual’s values, ideas, beliefs and habits about themselves and /or their world that can create self-doubts. The novel experience of learning combined with these self-doubts can create anxieties that trigger defensive mechanisms that could impede learning. They will mull over what they have learned outside of the classroom until they have reached some satisfactory conclusion, that is, until they feel good about what they have
learned because they care about the outcome. It is through these reflections and appraisals that Deep learning is achieved.

C. Interest

Interest is increasingly being recognized as an effective motivator for learning. Interest is an intrinsic motivator, which makes the learner to engage in an activity that is inherently satisfying and requires no additional reward. Students, being human, are more interested in some things and less interested in others. Interest leads to involvement and motivation, and thus is more likely to facilitate a Deep approach to learning. We usually assume that students who have embarked on intrinsic interest can achieve Deep learning and longer retention of the acquired material. However, when students have no choice in these circumstances, they know they must jump through a particular hoop, so they may respond or retaliate by doing the minimum to obtain a pass and remain uninvolved, i.e. they take a Surface Approach towards learning that subject. Research has shown that when a student has interest in a task, (s)he is likely to expend more effort and persist longer at that task. As a result, some researchers propose that learning occurs best in a holding environment where anxiety is managed and there is room to explore without too many threats. Thus, interest, emotion and motivation play a very important role in
deciding whether the student has attained Deeper or Surface level learning.

**IV. SOCIAL STRATEGY**

Social Strategy is a philosophy of interaction and personal lifestyle. Consequently, learning is a philosophy in which the individual chooses to accomplish a task. It refers to an instructional method in which students at various performance levels work together in small groups towards a common goal. The students are responsible for one another’s learning as well as their own. Thus, the success of one student helps other students to be successful.

Under Social Strategy, learning is an umbrella term for a variety of educational approaches involving the joint intellectual effort of students or students and teachers, for group projects or group work (Burnett, 1999). In these educational approaches, students actively explore or learn to apply the lesson content.

Social Strategy is "working together to accomplish shared goals" (Johnson & Johnson, 2000). Social Strategy is of two types; *co-operative learning* and *collaborative learning*, which is used interchangeably, although usually they tend to assume very distinct meanings. Whereas collaboration happens in both small and large groups leaving the assigned responsibility to the student, co-operation refers primarily to small groups of students working together in an environment highly structured by the teacher. Both
terms share the common social element of learning and emphasize this social approach to the personal development of learning skills, work skills, and life skills, which engender Deep learning.

**Characteristics of Social Strategy**

Under Social Strategy, classrooms seem to have four general characteristics: the first two capture changing relationships between teachers and students; the third characterizes teachers’ new approaches to instruction; the fourth addresses the composition of a collaborative classroom.

- **Shared knowledge among teachers and students in traditional classrooms:** The dominant metaphor for teaching is the teacher as the information giver; knowledge flows only one way from teacher to student. In contrast, the metaphor for collaborative classrooms is shared knowledge. The teacher has vital knowledge about content, skills and instruction, and provides that information to students. However, collaborative teachers also value and build upon the knowledge, personal experiences, language, strategies and culture that bring students to the learning situation.

- **Shared authority among teachers and students under Social Strategy classrooms:** Teachers share authority with students in very specific ways. In most traditional classrooms,
the teacher is largely, if not exclusively, responsible for setting goals, designing learning tasks, and assessing what is learned.

- **Role of Teachers:** Under Social Strategy, teachers differ in that they invite students to set specific goals within the framework of what is being taught, provide options for activities and assignments that capture different student interests and goals, and encourage students to assess what they learn. Here, teachers encourage students to use their own knowledge, ensure that students share their knowledge and their learning strategies, treat each other respectfully and focus on high levels of understanding. They help students listen to diverse opinions, support knowledge claims with evidence, engage in critical and creative thinking, and participate in open and meaningful dialogue.

As knowledge and authority are shared among teachers and students, the role of the teacher increasingly emphasizes mediated learning. Successful mediation helps students to connect new information to their experiences and to learning in other areas, it also helps students to figure out what to do when they are stumped and helps them learn how to learn. Above all, the teacher as mediator adjusts the level of information and support, so as to maximize the ability to take responsibility for learning.
**Heterogeneous groupings of students**: The perspectives, experiences, and backgrounds of all students are important for enriching learning in the classroom. As learning beyond the classroom increasingly requires understanding diverse perspectives, it is essential to provide students with opportunities in multiple contexts. Under Social Strategy, classrooms are where students are engaged in a thinking curriculum; everyone learns from everyone else, and no student is deprived of this opportunity for making contributions and appreciating the contributions of others.

Thus, a critical characteristic of classrooms under Social Strategy is that students are not segregated according to supposed ability, achievement, interests or any other characteristic. Segregation seriously weakens collaboration and impoverishes the classroom by depriving all students of opportunities to learn from and with each other. Students labelled unsuccessful in a traditional classroom might learn from "brighter" students, but more importantly, the so-called brighter students have just as much to learn from their more average peers. Teachers beginning to teach collaboratively often express delight when they observe the insights revealed by their weaker students.

Thus, shared knowledge and authority, mediated learning, and heterogeneous groups of students are essential characteristics of the Social Strategy. These characteristics necessitate new roles for
teachers and students that lead to interactions, which is important for Deep learning.

**Use of Social Strategy to promote Deep Learning**

The power of Social Strategy lies in its ability to promote Deep learning. Deep learning does not occur simply because students are placed in groups; it emerges from the careful, sequenced assignments and activities “orchestrated” by a teacher committed to student learning. The following figure represents the factors of Social Strategy that promote Deep learning.

**FIGURE 2.6**

**PROMOTING DEEP LEARNING THROUGH SOCIAL STRATEGY**

- Feeling the topic is relevant
- Motivating learning
- Discussing what is being learned with others
- Choosing what to learn and how to learn
- Active learning through making connection with past learning to current experience
- Making relationship between themes clear
- Teaching relating to students

**PROMOTING A DEEP APPROACH TO LEARNING**
The students’ approach to learning – whether they take a Surface or a Deep approach – is a crucial factor determining the quality of learning outcomes. Those who take a Deep approach understand more, produce better-written work containing logical structures and conclusions rather than lists, remember for a longer time, and obtain better marks and degrees than those students who take a Surface approach. We learn best when we feel a need to know. Intrinsic motivation remains inextricably bound to some level of choice and control.

Researchers generally agree that group work and problem solving can result in Deep learning. Thus, the Social Strategy – whether face-to-face or electronically facilitated – must be viewed within the larger teaching and learning framework. Specifically, they form the centre of a carefully crafted learning sequence, One could think of the sequence as a complex sandwich, with carefully designed out-of-class assignments (homework) that motivate students to learn the subject matter - the two pieces of bread. Then, class time can be profitably spent in reinforcing the learning through active and interactive learning activities.

The following figure diagrammatically shows how Social Strategy mentors Deep learning.
V. Resource Management Strategy

The Resource Management Strategy includes the ways and means by which students manage and control the internal and external environments, time, effort and study environment. Resource Management Strategies are assumed to help students adapt to their environment as well as to change environment so as to fit their goals and needs.
A student might find a particular question threatening and intimidating in one context yet stimulating and challenging in a different context. What makes one learning context unpleasant and another pleasant? Learning depends on several factors; but a crucial step is the engagement of the learner. This is affected by motivation and perception of relevance. These, in turn, can be affected by the learners’ previous experiences and preferred learning styles and also by the context and environment in which the learning takes place. In adult learning theories, teaching is as much about setting the context or climate for learning as it is about imparting knowledge or sharing expertise.

**Resource Management Strategy Factors (Internal) affecting Deep Learning**

A. Effort
B. Attention
C. Time management
D. Self esteem
E. Active involvement
F. Personal exploration
Resource Management Strategy Factors (External) affecting Deep learning

A. Time management
B. Safety
C. Belongings
D. Comfortable seating

Resource Management Strategy and Approaches to Learning

Students who resort to Resource Management Strategy that leads to *Surface Learning Approach*,

- meet the requirements minimally;
- set a balance between failure and working more than necessary;
- satisfy the external (assessment) requirements;
- limit their target to the bare essentials;
- reproduce essentials for assessment purposes through memorising or rote learning;
- are passive in their learning;
have negative emotions about learning;

prefer to learn in isolation; and

physiological factors.

Students who resort to Resource Management Strategy that leads to **Deep Learning Approach**, satisfy their interest in what is being learned;

devolve higher levels of competence in particular topics and subjects;

become actively involved in learning by asking questions and wishing to apply new knowledge that they have gained;

overcome fear and other negative feelings and associate higher levels of values with learning;

prefer to learn in a social context such as with other students or seeking opportunities to engage the lecturer in discourse;

discover meaning by personal exploration, reading widely, practicing, and memorising for meaning and understanding;

interconnect new learning with previous and related knowledge;

wish to examine various points of view and become involved in creating knowledge and understanding through discussion;
feel safe to experiment, voice their concerns, identify their lack of knowledge, and stretch their limits;

have a sense of belonging in a group or team;

develop Self esteem by making the learner feel valued;

reach Self actualisation; and

engage in exploration of ideas.

CONCLUSION

The investigator examined the theoretical frameworks of Approaches to Studying and certain Learning Strategies that promote the Deep Approach. This helped the investigator to frame the topic of research and to adopt a suitable procedure to conduct the study.