

# 4A Plan for Instruction: Elaborating the Psychosocial Dimensions

1<sup>st</sup> Dr. Durga Lekshmi G S

**Abstract** - 21<sup>st</sup> century teaching learning society witnesses a plethora of new teaching strategies, designs, and new instructional plans. Among the developed ones, a majority of the instructional models and plans are befitting to certain select disciplines only. It is the need of the hour to incorporate all the essential principles of learning under a single plan of instruction. The author, being a teacher educator since a decade, felt the need of a new instructional plan which would be able to facilitate the teacher- learner needs of various disciplines proposes a new plan of instruction under the title '4A Plan for Instruction'. The instructional plan is the output of the author's doctoral research. The present paper elaborates the psychosocial theories that are utilised for the development of the instructional plan. The instructional plan is sequenced in four instructional phases namely Acceleration, Acquisition, Affirmation and Amplification. The present instructional plan can be utilised for instructing multi discipline and various grade levels.

**Keywords** - 4A Plan for Instruction, Acceleration, Acquisition, Affirmation and Amplification.

## I. INTRODUCTION

An instructional plan can be considered as a framework for sequencing learning tasks. It encompasses the salient features of objective based instruction like behavioural and learning outcomes, methods and strategies, assessment and evaluation etc. Every learning process will come to fruition when a teacher starts with learners' prior knowledge activation and the students end up utilising the acquired knowledge for their real life situations. The nature of learning is always dependent on the psychosocial attributes of learners. '4A Plan for Instruction' is an instructional plan meant to incorporate these attributes and the insight of teachers at the time of instruction. In this paper, the author explains the major theories utilised for the development of 4A Plan for Instruction. The instructional plan emphasizes instructivism to constructivism through successive learning phases.

## II. 4A PLAN FOR INSTRUCTION - PHASES

### Phase I – Acceleration

Enhancing Prior Knowledge

Strengthening Cognitive Structure

### Phase II – Acquisition

Activity for Establishment

Acquisition of the Content

### **Phase III – Affirmation**

Articulation of Ideas

Reflection and Self Analysis

### **Phase IV – Amplification**

Strengthening Situated Learning Skills

Reciprocate to Real Life Situations

#### **A. Phase I – Acceleration**

In the first phase, the prior knowledge of the learner is activated through various strategies and a suitable learning environment is created. Towards the end of the first phase, cognitive structure of the learner gets strengthened.

##### **a) Enhancing Prior Knowledge**

Prior knowledge, otherwise known as schema or plain experience, plays a vital role in the learning process. Schemas are the ‘mental tools’ that form the basis of the thinking process and provide the learners with a ‘mental toolkit’. Teachers have a tendency to simply assume their students possess necessary background knowledge. It cannot be assumed that prior knowledge always results in the acquisition of the new concept. As the students’ culture, belief and standard of living influence the classroom learning environment, prior knowledge can either facilitate or hinder their learning. Piaget (1999) disagreed with the ‘tabula rasa’ theory of mind. He believed children gradually develop their cognitive structure to sense the world around them. According to Dochy and Alexander (1995), “prior knowledge is the whole of a person’s knowledge, including explicit and tacit knowledge, metacognitive and conceptual knowledge”.

Marzano (2004) points out that vocabulary plays a significant role in building background knowledge. Associating everyday life experiences with learning contexts and making the learners connect previous knowledge with the acquired knowledge can promote meaningful and lasting learning. The comprehension level of the learners can be enhanced by activating ‘mental files’ during pre-reading, while-reading and post- reading sessions.

##### **b) Strengthening Cognitive Structure**

It is noted in our classrooms that even if the teachers are hardworking and dedicated, some students don’t receive what the teachers intend to transact. In the same learning scenario, some other students perform considerably well. They are capable of processing the information they receive in the classroom very well. The reason for this variation in information processing depends on the development of ‘cognitive structure’.

Cognitive structures are “the basic mental processes people use to make sense of information.” (Garner, 2007). These structures function in the area of comparative thinking- which acts as the basis of information processing, symbolic representation- which transforms information into a culturally accepted coding system and logical reasoning- which utilizes thinking strategies for generating information. The

cognitive structures are to be developed from the early years of education and every individual is responsible for developing his/her cognitive structure.

### **Students and Cognitive Structure**

Garner (2007) postulates that students use their cognitive structures for certain information processing by 1) *making connections* - Connects with prior knowledge and personal experience. 2) *finding patterns* - Students compare and organize information into patterns and relationships. 3) *formulating rules* – Students formulate rules for automatic and fast processing of information and 4) *abstracting principles* - Students abstract principles so as to transfer it to real life situations. It may occur due to mediated learning or by asking questions by the teacher.

If a teacher wants to strengthen the cognitive structure of his/her students, the classroom activities should be modified. These activities should make the learners reflectively aware of their learning, visualize information and probe questions and make use of experiential learning in the classroom. Kelly (1955) calls cognitive structures as “mental constructs that enable us to perceive and understand. It is a ‘Personal Map of Reality’ which helps us to guide and react to events”.

### **Zone of Proximal Development and Cognitive Structuring**

The Zone of Proximal Development (ZPD) is considered as the gap between what the learners know and what they can master when provided with essential educational inputs. Vygotsky considers social interaction as the basis of cognitive development. Bransford, Brown, and Cocking (2000) state that “communication that happens in a social setting with more proficient people like teachers, peers, parents etc. assist children in building an understanding of the concept”. In the classroom setting, the teacher must “understand how cognitive tasks fit into the child’s cultural activities” (Zeuli, 1986). He postulates that “instruction should emphasize connections to what the learner already knows in other familiar, everyday contexts”.

Vygotsky (1978) did not identify instruction as development instead he thinks a properly organized instruction will cater to the child’s intellectual development, and it brings a series of developmental processes which will not be possible without instruction. Berger (2009) states “teachers, parents and mentors attuned to a learner can recognize where he or she is within the ZPD, by asking questions and recognizing their learning style”. Hence ZPD enables them to identify the learner’s immediate needs and what they can master in the future. (Vygotsky, 1978). The knowledge of ZPD enables each teacher to model his/her lessons, select appropriate strategies to strengthen the cognitive structure of the learners and provide meaningful construction of knowledge through the setting of appropriate social learning situations.

### **B. Phase II – Acquisition**

The second phase highlights the importance of incorporating suitable learning activities through social learning contexts, as learning is a process of socialization by means of interaction among teachers, students, learning materials and curriculum. The activities are essential for the establishment of ideas in the learners and hence resulting in the meaningful acquisition of the content and its further application in real life situations.

#### **a) Activity for Establishment**

For the establishment of knowledge and skills related to the matter of concern, the teacher has a prime role. According to Feuerstein (1991), a mediator has a significant role in the learner's learning environment. The mediator can be anyone: a parent, peer, or teacher, who has the capacity to organize and transform the desired stimuli and make it for the needs of the learners. A mediator supports the quality of interactions between the learner and the environment by selecting suitable stimuli for the learners' effective acquisition of knowledge. Here the mediator clearly states the objectives to be realized. Mediated Learning Experience (MLE) enables the learners to acquire new skills and behaviours through structured learning and a set of strategies.

### **Mediated Learning Experience**

Feuerstein (1990) put forward the concept 'Structural Cognitive Modifiability' which aims to explain the modifiability of deficient cognitive functions. According to him, a person's capability to learn depends not only on his genetic make-up, but also on 'mediation'. Feuerstein and Feuerstein (1991) believed that lack of mediated learning experience results in the deficiencies to learning, to form positive disposition and propensity to learn. A learner will not be benefitted from formal or informal learning contexts, if it is not mediated. It helps the learners to become better thinkers by developing their cognitive skills. MLE helps to enhance quality interactions through meaningful and purposeful learning. It also gives due scope for the implementation of different teaching strategies through collaborative and cooperative learning activities and helps the teachers to reflect upon their own teaching through the feedback from students and colleagues.

### **Scaffolding and Mediation**

According to Vygotsky (1978), the potential for cognitive development lies within the 'Zone of Proximal Development' (ZPD). This zone indicates the area where the students are cognitively ready, but need some assistance or social interaction. "Within the ZPD, the child is not a mere passive recipient of the adult teaching, nor is the adult simply a model of expertise. Instead the adult-child dyad engages in joint problem-solving activity, where both share knowledge and responsibility for the task" (Wells, 1999).

Sociocultural theory of Vygotsky (1978) considers learning as a social process and intelligence of the humans originated in society or culture. Vygotsky postulates that development of cognition happens only through social interaction. For him, the cultural development of the learners appears on two levels: inter psychological and intra psychological. Vygotsky emphasized the need of teacher- student communication for learners' achievement. Like learning, teaching is also influenced by social and cultural contexts where the teacher acts as co- constructor or scaffolder and the students collaborate along with, to attain life- long learning skills. Vygotsky (1978) is of the view that "the level of assisted performance indicates what a person can achieve in the near future". He states that all learning processes should be in line with students' involvement in the activities where "the teacher is the director of the social environment in the classroom, the governor and guide of the interactions between the educational processes and student" (Vygotsky, 1997). Lantolf and Thorne (2006) believed human consciousness as a mediated mental activity. In the perspective of sociocultural theory, Williams and Burden (1997) point out that education should be concerned not with theories of instruction only, but with the idea of learning to learn, with skills and strategies for continuous learning, with making learning experiences meaningful and relevant , with helping the learner to develop and grow as a whole individual.

### **b) Acquisition of the Content**

Knowledge is constructed by learners on account of their cognitive structures. Content knowledge and content acquisition is the prime focus of any learning activity. To attain this, knowledge should be actively constructed and the learning process should be learner friendly. Teachers should be able to guide the learners to assimilate new knowledge to existing knowledge and to modify the existing knowledge to accommodate new knowledge. According to Piaget (1936), “knowledge is constructed through experience, not from the information they are given”. Fried, Zannini, Wheeler, Lee, and Cortez, (2005) argue that learning should be contextualized so as to provide students to perform realistic roles that enable them to enhance their learning. Piaget’s (1936) cognitive development is a progressive reorganization of the mental processes. According to Rogoff (1990), children’s cognitive development is a kind of apprenticeship that occurs through guided participation in social activity with peers who make them support their understanding of and skills in using the tools of one’s culture. Shayer and Adey (2002) postulate that there should be scope for ‘transferability’ of knowledge i.e. the learner should be able to transfer and apply their new knowledge and skills to a wide range of contexts and situations.

### **C. Phase III-Affirmation**

This phase is meant to develop the metacognitive ability of the learners and to make them articulate and reflect upon what they have learnt. Here the learners are able to analyse the problematic situations and think how they can solve the problems and apply their knowledge in real life situations.

#### **a) Articulation of Ideas**

In a learning situation, the learner is expected to articulate the acquired content knowledge either through written or spoken form and then it could be estimated that he/she has attained mastery of subject matter. Mastery learning refers to the “category of instructional methods which establishes a level of performance that all students must master before moving on to the next unit” (Slavin, 1987). Bloom (1968), the exponent of mastery learning model points out that mastery learning programs divide instruction into small units. In mastery learning, students are given time to practice what they have learned and are given corrective feedback (Motamedi and Sumrall, 1976). Bloom (1964) identified ‘teacher influence’ as an important factor that affects student learning. He observed that a majority of teachers do not change their instructional practices. All students are provided with almost the same strategies and same amount of time to learn. Bloom is of the view that the lesser the variation in teaching, the greater the variation in learning. Bloom suggested differentiated instruction to meet the learner needs.

Bloom (1976) suggests that students with less background information or prior knowledge need more assistance in the early stages of a course to attain mastery of the subject matter. He also suggested the importance of providing extension activities to the students. These activities help the learners to develop their metacognitive skills. According to Flavell (1979) metacognition is the individual’s self-awareness and consideration about his/her own cognitive processes and strategies. Eggen and Kauchak (1995) point out that it helps to develop good thinkers and life-long learners who can cope up with forthcoming life situations. Metacognition can be categorized as knowledge about self and knowledge about tasks. Alderson (2000); Kohonen, Jaatinen, Kaikkonen, and Lehtovaara, (2001) consider knowledge about self as “the reader’s perception of his or her reading abilities as well as his or her background knowledge about the topic he or she is going to read”. Christen and Murphy (1991) suggest that the prior knowledge of the students can be enhanced

by teachers if they present information through demonstrations, multimedia and graphics, use outside resources such as trips, and share students his/her experiences. According to Ono (1993), successful readers connect textual information to their previous knowledge, whereas less successful readers never connect background knowledge for comprehending the text.

In order to make the learning process effective, teachers should be able to select appropriate strategies. Beckman (2002) and Oxford (1994) highlight the importance of selecting the most effective strategy to meet the needs of the learner and the requirements of the task and it will be most effective if used in combination. Wenden (1995) defines task knowledge as “what learners need to know about (i) the purpose of a task, (ii) the task’s demands, and (iii) implicit in these considerations, a determination of the kind of task it is”. Alderman (2003) is of the view that the knowledge of the task goal leads students to achieve the target, to gather their resources and to develop plans and strategies to reach their goal.

### **b) Reflection and Self Analysis**

Reflection is considered a mental process of thinking and learning with a purpose. Higgs (1988) states that the value of reflection in learning is closely related to its capability to help learners to clarify their thoughts, gain insight and deepen their understanding of the received information. Reflective practices help the learners improve their problem solving skills and to feel confident in the learning process. Reflection is the outcome of metacognition. It helps the learners to become future leaders. Classroom is the appropriate place where a learner can develop his skills. Kolb (1984) considers reflection as a major component of experiential learning cycle.

### **Reflection and Learning**

Reflective teaching and learning is an integral part of cognitive theories of learning. Reflection provides a kind of insightful learning to the students. It is goal directed, purposeful and helps the learners in meaningful problem solving. According to Boud, Keogh, and Walker (1985), reflection is intellectual and affective in nature which helps the individuals in exploring their experiences so as to lead to new understanding and appreciations. Reflection can occur at two paces: reflection-on- action, which occurs during the lesson, and reflection- on-practice, which occurs after the lesson. These types of reflective practices help to develop the imagination, creativity and thinking skills of the learners. Reflective learning is insightful learning. Schon (1983) points out that reflection may either occur within the event or after the event.

According to Dewey (1938), there is a distinction between primary and secondary experiences. For him, primary experience occurs with the interaction of physical and social environment, but the secondary experience is reflective in nature where the individuals consider the environment and its components as objects of reflection. Dewey opines that it is essential to combine primary and secondary experiences within the same academic environment. Learning may be lost if the students are not given the chance to reflect on primary experiences and not given the opportunities to apply information from secondary experiences (Wurdinger, 2005).

Mezirow (1998), in a study, highlights the term ‘critical reflection’ which can facilitate insight and can enhance learning. “Critical reflection is prominent in developing moral and ethical responsibility of the individuals” (Grey, 2004). It is a “key to challenging prevailing mental models and fostering more systematic patterns of thinking” (Argyris and Schon, 1978). In the learning process, leadership educators take the role of

facilitators. They are able to engage other learners in reflective learning and help the new learners to look inward and outward and how they are able to connect to a larger whole (Huber, 2002). Morrison (1996) opines that students engage in reflective practices show self-awareness and self-confidence and hence they are able to enhance their self-concept.

The reflective practices in the classroom can be facilitated by providing appropriate 'space' to the learners (Kolb and Kolb, 2005). If there is a common goal for the whole group, everyone contributes to each other's learning and it helps to improve the interpersonal relationship and team effectiveness among the learners (Ramsey and Fitzgibbons, 2005; Johnson and Johnson, 1999).

In a classroom situation, the mastery of the subject matter can be best expressed through reflective writing. It can be done with the help of reflective journals and learning logs which helps the teachers to assess students' progress. Writing reflective journals helps learners to "explicitly see the process skills that they have employed to solve the problem" (Woods, 1995). He notes that while writing the reflective journal, students build bridges with their own experiences. They improve their understanding through bridging old and new knowledge and they extend it by reflecting upon how they can use their skills in other disciplines and everyday life.

A teacher should be careful in connecting reflective activities with learning materials. Appropriate contexts should be provided to the learners to think reflectively. The reflection- on - action process should be started from the early stages of schooling and should be continued to the later years of schooling. Appropriate and systematic ways should be organized and implemented in the classroom to promote reflective practices. This will help the learners to promote a deeper level of learning and understanding.

#### **D. Phase IV- Amplification**

This phase is meant to enhance the situated learning skills of the learners and thereby enable them to reciprocate to real life situations. Situatedness in learning provides meaningful situations, which will provide real-life experience to learners. There is a criticism against old school of learning where the classroom conditions do not facilitate real life learning. The final phase of the instructional plan aims at providing meaningful real-life like situations in the classroom itself.

##### **a) Strengthening Situated Learning Skills**

Jean Lave and Etienne Wenger ((1991) were of the opinion that students learn better in cooperative learning contexts. According to them learning- an aspect of social practice- involves the whole person. It is the individual's participation in learning activities as well as social communities in the form of a full participant. The individuals interact within social communities and become a different person. Stein (1998) points out that situated learning is a matter of creating meaning from real life activities.

#### **The Learner and the Social Context**

"Human actions of any nature are socially situated, affected by cultural, historical and institutional factors" (Wertsch, 1998). This situatedness is essential to the learning environment and hence to be considered in a cognitive apprenticeship where learning occurs through Legitimate Peripheral Participation. It refers "both to the development of knowledgeable skilled identities in practice and to the reproduction and communities of practice which depend on a membership" (Lave and Wenger, 1991). We can't always expect the full

participation of the learners. But in the later stages, the learners become active and become full participants by receiving appropriate feedback from the experienced persons in the learning contexts, which can be a teacher, parent or peer.

Situated learning happens in an authentic context. According to Stein (1998), situated learning engages students in co-operative learning activities where they have to use their critical thinking and kinaesthetic abilities. He adds that learners should be able to apply and transfer these activities at their homes, communities and workplaces. While concentrating in these kinds of learning experience, students can reflect on their previous knowledge and also challenge the assumptions of their peers.

The situated learning skills of the learners can be enhanced through various activities inside the classroom like cooperative learning activities, creative writing, drama, laboratory participation etc. These activities help the learners to confront real life situations and lead them to reciprocate to real life situations without any confusion. When the students engage in practical sessions, they are 'situated' in the learning activity and can acquire knowledge as part of the learning activity, its context and culture. Stein (1998) is of the view that teachers should select appropriate situations for engaging the learners in complex real life activities which may help them to acquire the desired knowledge. He advocates that teachers should act as a scaffolder for the needy, and should be changed from the role of content transmitter to facilitator; where the teacher can track progress, assess students' outputs, create collaborative learning situations, encourage reflection and assess the intellectual growth of the learners. It should encourage the learners to tap their prior knowledge and to challenge others in the community.

#### **b) Reciprocate to Real Life Situations.**

Every classroom situation must help the learners to integrate their learning with real life situations. A pragmatic approach is the need of the hour. Experiential learning approach helps the learner to participate actively in learning activities other than classroom activities and make learners self-confident. According to Duffey and Jonassen (1992) "learning is an active process in which meaning is developed on the basis of experience".

#### **Experiential Learning and Education**

Meaningful and purposeful experiences help the learners express their basic talents and hidden skills. According to Dewey (1916) "education is the reconstruction or reorganization of experience which adds to the meaning of experience and to which increases ability to direct the course of subsequent experience". To Kolb (1984), in learning process, knowledge is created through transformation of experience. Experiential education makes learners get immersed in an experience which encourages reflection about the experience and it helps to develop new skills, attitudes and new ways of thinking. It is interdisciplinary and constructivist in nature. Experiential learning atmosphere helps learners connect with the real world. According to Wurdinger (2005) "experiential learning is aligned with the theory of learning where outcomes of the learning process are varied and often unpredictable and learners play a critical role in assessing their own learning". The experiential learning environment need not be the same always. There may not be a specific text book for study or a specific curriculum to transact. A successful experiential learner is able to change their conception of a topic and reason out. They naturally attain the skills of self-explanation, clarity of purpose, self-management, adjustment, open

mindedness etc. Moon (2004) asserts that learners can identify and reflect on the role of emotion in their learning and their new knowledge.

Lewis and Williams (1994) identified two kinds of experiential learning types; field based and classroom based. Field based learning comprises internship, co-operative and service learning and practicum. Classroom based learning includes role plays, games, presentation, simulations etc. They are of the opinion that, in the experiential class rooms “students can process real life scenarios, experiment with new behaviours and receive feedback in a safe environment”. Experiential learning assignments help students relate theory to practice and analyze real life situations in light of course materials. Here the students solve problematic situations with the help of a peer group. The social learning environment is supportive, cooperative and cohesive where the students work with or without the mediation of the teacher or peer. Even though there is no direct influence of the teacher, there are specific rules and regulations for the learners to accomplish the task. The learners can move together towards a common goal beyond their individual capabilities and realize the objectives.

### III. CONCLUSION

In this paper, the author tries to sequence an instructional plan based on the learning theories mentioned above. It is evident that a learning process, whether it is based on the behaviourist or constructivist approach, starts with activation of prior knowledge and ends with connecting the knowledge to the immediate surroundings of the learner. All researches and all learning theories agree that every learning situation should be task based or problem oriented. The solutions to the learning tasks can be actualised through different models, instructional designs and plans. 4A Plan for Instruction is designed to cater the learner needs of multi discipline by integrating the fundamental psychosocial principles of learning.

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