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BLOCK 4 ANDRAGOGY AND ITS APPLICATIONS

Introduction to Block 4

Blocks 1 to 3 of course MAE-001 have dealt with different aspects of understanding of adult education, viz. ‘Development of Adult Education’, ‘Foundations of Adult Education’ and ‘Curriculum Development, Transaction and Evaluation’ respectively. Having understood these aspects, it is essential to understand ‘Andragogy and its Applications’ in Block-4, without which the understanding of adult education will remain incomplete from both theoretical and practical points of view of adult education. In this context, it is also essential to have clarity about adult learning theory, the methods of teaching literacy to adults, and the distinction between and among the concepts of pedagogy, andragogy and heutagogy in a comparative perspective including the applications of andragogy in higher and professional education, among many other fields. In view of the above, Block 4 here attempts to deal with andragogy and its applications with special emphasis on adult learning theory and methods of teaching literacy to adults. This Block has the following four units.

Unit 16 titled *Pedagogy, Andragogy and Heutagogy: A Comparison* explains in detail the concepts of pedagogy, andragogy and heutagogy along with the assumptions underlying these concepts. It also highlights the key differences between and among pedagogy, andragogy and heutagogy and their respective relevance to promoting child learning, adult learning and facilitating self-directed, self-regulated or self-managed learning. Further, the relevance of pedagogy, andragogy and heutagogy to teaching and learning in education, adult education, and open and distance education respectively has also been explained thoroughly as these play crucial role in promoting learning among the respective learners. Further, it also explains how the assumptions underlying these concepts serve as the foundation for many actions the teachers, adult educators or facilitators of self-directed or self-managed learners perform to promote their learning.

Unit 17: Adult Learning Theory attempts to supplement and complement what has been discussed in Unit-7 of Block-2 of this course which covered “Theories of Learning and their Relevance to Adult Learning” with special reference to theories of ‘Learning by Association’, ‘Learning by Conditioning’, ‘Learning by Doing (Trial and Error)’ and ‘Learning by Insight’, and Unit-16 of this Block (i.e. Block-4 here) which focused on the basic assumptions underlying traditional approach to learning (pedagogy), new approach to learning (andragogy) and management of learning for self-managed learners (heutagogy) and their relative significance in the process of learning by the individuals. In doing so it essentially discusses Gestalt Theory of Learning as explained by Wolfgang Kohler, Kurt Koffka and Max Wertheimer, Piaget’s Theory of Learning (cognitive development), Vygotsky’s Theory of Learning (sociocultural theory), Bandura’s Theory of Learning (social learning) and Malcolm Knowles’ Theory of adult learning or andragogy and how these theories contributed to developing adult learning theory.

Unit 18 titled *Methods of Teaching Literacy to Adults* focuses its discussion on different ‘Methods of teaching literacy to adults’, which include Synthetic, Analytic and Eclectic methods and their relevance to teaching adults in the non-formal settings. In Unit-11 of Block-3 you have studied different methods and techniques of teaching and training in adult education. Without understanding of the methods of teaching literacy to adults, our understanding of different methods and techniques of teaching and training in adult education will remain incomplete. Hence, Unit-18 presents an overview of different methods of teaching literacy to adults, viz. Synthetic, Analytic and Eclectic methods. It specifically focuses on synthetic model of teaching literacy -- types of synthetic methods and the merits and demerits of synthetic method; the analytical model of teaching literacy -- types of analytical methods and the merits and demerits of analytical method; and the eclectic method of teaching literacy -- types of eclecticism, different types of eclectic methods, viz. Aristotle’s Analytic-Synthetic Method, Pappu’s Analytic-Synthetic Method, and Eclectic method. It also highlights the significance of the Synthetic, Analytic and Eclectic methods and discusses the features/characteristics, advantages and disadvantages of eclectic approach.

Unit 19: Andragogical Applications in Higher and Professional Education focuses on the nature, relevance and scope of applications of andragogy in different fields. It explains how the pedagogical and andragogical models result in two very different approaches to the design and operation of educational programs with basic format of the pedagogical model being a *content plan*, and that of the andragogical model being a *process design*, consisting of seven elements: Climate setting, Involving learners in mutual planning, Involving participants in diagnosing their own needs, Involving learners in formulating their learning objectives, Involving learners in designing learning plans, Helping learners carry out their learning plans, and Involving learners in evaluating their learning. Though the pedagogical principles are used in all universities as well as in advanced training courses in different fields, this unit highlights how the andragogical approach has in fact changed the teaching philosophy of educators in different fields around the world. It explains the development of higher adult education as an organizational system from two perspectives -- structures for management among universities at the national, regional, and state levels, and structures for operation within individual institutions. It also highlights the growing hunger on the part of teachers, trainers, and administrators in business and industry, government agencies, colleges and universities, professional associations, religious organizations, voluntary organizations and even elementary and secondary schools resulting in finding andragogy as the better way. It further highlights a range of andragogical applications with special reference to higher education, medical education, clinical education, health and nursing education, social work education, remedial education, religious/spiritual education and criminal justice education.

After working through this Block, you will be able to:

- Explain the concepts of pedagogy, andragogy and heutagogy along with the underlying assumptions and the key differences between and among them;

- Discuss the relevance of different theories of learning and their contribution to development of adult learning theory;
- Compare the relative significance of different methods of teaching literacy to adults; and
- Analyse a range of andragogical applications in different disciplines, fields of study and operations.



UNIT 16 PEDAGOGY, ANDRAGOGY AND HEUTAGOGY: A COMPARISON

Structure

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- 16.3 Andragogy: New Approach to Learning
 - 16.3.1 What is Andragogy?
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16.0 INTRODUCTION

In course MAE-001, we dealt with ‘Development of Adult Education’ in Block-1, focused on ‘Foundations of Adult Education’ in Block-2, and discussed different aspects of ‘Curriculum Development, Transaction and Evaluation’ in Block-3. Nevertheless, like pedagogy in the case of (teacher) education, andragogy in adult education assumes great significance as far as professional development of adult educators is concerned. While pedagogy confines to teaching of children or helping children learn, andragogy is about teaching of adults or helping adults learn. But, in the context of open and distance education, whether it is training/education of school teachers or adult educators and others, what matters, in addition to pedagogy and andragogy, is heutagogy. *Pedagogy,*

andragogy and *heutagogy* are three different approaches related to education, adult education, and open and distance education.

In education, adult education and open and distance education these three concepts, viz., pedagogy, andragogy and heutagogy respectively play crucial role in promoting learning among the respective learners. Accordingly, the assumptions underlying these concepts serve as the foundation for many actions the teachers, adult educators or facilitators of self-directed or self-managed learners perform to promote their learning. What an educator (includes adult educator) assumes about their students -- their classroom or learning environment, ability, objectives, goals, role, etc. -- forms the foundation of various instructional actions in and out of the classroom. An important part of becoming a successful learner is developing the ability to self-direct or self-regulate learning in a variety of situations.

The Role of Assumptions in Education: Shift from Teaching to Learning

An effective way to help shift towards a learning perspective is through the clarification of assumptions. When a person's current set of assumptions remain unexamined then any change becomes more difficult as new actions require new assumptions. For example, it is more difficult and more frustrating for an educator to adapt learner-centered practices when that person holds the assumptions of teacher-centred practices. As the new learner-centered methods do not fit within those of the educator's current view of the world, these methods are more likely interpreted by the educator as extra work rather than more effective ways to help students learn.

The transformation process from teacher-centered to learner-centered methods is based on the ability of faculty developers to guide educators to recognize, realize and clarify their current assumptions, and to modify their assumptions towards adapting learner-centered methods within their new set of assumptions. These new learner-centered methods based on a newly adapted learning perspective would be more likely viewed as effective ways to help students learn. Consequently the answer lies within the internal willingness of the educator and the learner as the transformation process is based on their choice. The shifting role of assumptions in education from teaching to learning to facilitating learning management by self-directed learners determines the perspective of teaching-learning environment in evolving contexts of learning.

Since the 1960s, schools, colleges and universities had felt the need to accommodate an ever increasing number of adult learners. These learners are defined as individuals over the age of twenty five, usually employed full-time and attending classes on a part-time basis. Numerous non-traditional programmes have been developed to meet the educational needs of this population. Many of these programmes have been based upon andragogical instructional model or heutagogical instructional model. But question vis-à-vis the learners and their contexts remain as to which of the instructional models or instructional methodologies or their combination is effective? A meaningful answer effectively depends on the level of understanding of the concepts of pedagogy, andragogy and heutogogy.

In Unit-1 of Block 1, we have explained different basic terms and concepts of Adult Education. However, the terms pedagogy, andragogy and heutagogy have

not been discussed at all. In this Unit here (i.e. Unit-16) we attempt to explain these concepts in detail including the similarities and differences between and among them.

16.1 LEARNING OBJECTIVES

After going through this Unit, we expect you to be able to:

- Distinguish the concepts of pedagogy, andragogy and heutagogy;
- Analyse the assumptions underlying pedagogy, andragogy and heutagogy; and
- Explain the relative significance of pedagogy, andragogy and heutagogy in teaching-learning contexts and processes.

16.2 PEDAGOGY: TRADITIONAL APPROACH TO LEARNING

The history of training can be traced back to the Stone Age period when it was just a process of transferring skills from parents to their children. According to Swanson and Holton (2001), the educational system became more organized during the Greek and Roman periods (100 B.C.-300 A.D). The organized form of education (the origin of pedagogy) was implemented in cathedral schools in the seventh century (Knowles, et al., 1998). Since the eighteenth century, pedagogy has frozen the educational system in which teachers are responsible for making fundamentally every learning decision (Ozuah, 2005). It is apparent that the pedagogical approach is still embedded in the present educational systems and will keep playing its popular role in the teaching and learning process (Sang Chan, 2010, p.26).

Pedagogy is essentially a traditional approach to learning based on instruction; knowledge is transmitted formally from one who knows to one who does not know. This type of model has often been used in institutional settings -- for example in formal schools and such other educational establishments -- where it can be administratively easier to assume control of the learning experience, while ignoring the ability or needs of the person to engage in self-directed learning. Unfortunately, this traditional model can engender resistance or rebellion, particularly in older children, adolescents and adults. It could be claimed that pedagogy actually misses the point: providing training or education does not necessarily mean that the learner will enjoy or remember the experience, even less transfer it to useful settings (<https://www.skillsyouneed.com/learn/learning-approaches.html>).

16.2.1 What is Pedagogy?

According to Ozuah (2005), pedagogy is defined as “the art and science of teaching children” (p. 83). Pedagogy placed the importance on the role of the teacher in education (Bedi, 2004). The teacher decides what students should learn, how students are taught, and when the teaching and learning process will begin. Pedagogy is a teacher-oriented approach. According to Knowles et al. (1998, mentioned in Ozuah, 2005), pedagogy makes various assumptions: (a) learners have dependent personalities, (b) learning is subject-oriented, (c)

extrinsic motivation is an essential factor to learning, and (d) learner's previous experience is not relevant to learning. Apparently, these assumptions do not fit all learners, especially adult learners. According to Merriam, Caffarella, and Baumgartner (2007, mentioned in Sang Chan, 2010), adult learners are self-directed, problem-oriented, internally motivated, and independent learners.

Pedagogy is a teacher-led learning process. It is the theory and practice of learning an academic subject or a theoretical concept. From this method of learning, students are able to gain knowledge and skills in such a way that they can understand the same very well. Pedagogical skills are basically divided into classroom management skills and content-related skills. In the pedagogical learning approach, the learner is a dependent personality, and the teacher is the one who decides how, what, and when things are taught (<https://www.differencebetween.com/what-is-the-difference-between-pedagogy-andragogy-and-heutagogy/>). Learning in a pedagogical context is subject-oriented and focuses on a prescribed syllabus. The teacher plays an active role in the pedagogical context by planning and designing learning materials, methods and process.

16.2.2 The Pedagogical Model: Basic Assumptions

The assumptions of pedagogical model are stated by Knowles and Associates (1984, p.8) in their purest and most extreme form as follows;

- 1) *Regarding the concept of the learner -- self-concept:* The learner is a dependent personality, for the pedagogical model assigns to the teacher full responsibility for making all the decisions about what should be learned, how and when it should be learned, and whether it has been learned. The only role for the learner, therefore, is that of submissively carrying out the teacher's directions.
- 2) *Regarding the role of the learner's experience:* Learners enter into an educational activity with little experience that is of much value as a resource for learning. It is the experience of the teacher, the textbook writer, and the audiovisual aids producer that counts. Accordingly, the backbone of pedagogical methodology is transmission techniques – lectures, assigned readings and audiovisual presentations.
- 3) *Regarding readiness to learn:* Students become ready to learn what they are told that they have to learn in order to advance to the next grade level; readiness is largely a function of age.
- 4) *Regarding orientation to learning:* Students enter into an educational activity with a subject-centred orientation to learning; they see learning as a process of acquiring prescribed subject-matter content. Consequently, the curriculum is organized according to content units and is sequenced according to the logic of the subject matter.
- 5) *Regarding motivation to learn:* Students are motivated primarily by external pressures from parents and teachers, competition for grades, the consequences of failure, and the like.

In the name of ‘academic standards’ the teachers are often loyal to these assumptions under pressure from their systems, there may be some great teachers who experiment with other assumptions.

In other words, according to Knowles, et al. (1998, mentioned in Ozuah, 2005), pedagogy makes various assumptions: (a) learners have dependent personalities, (b) learning is subject-oriented, (c) extrinsic motivation is an essential factor to learning, and (d) learner’s previous experience is not relevant to learning.

The concept of a pedagogical model could thus be defined as the planning of a teaching-learning process that, based on different psychological, social, educational, learning, and philosophical theories, takes into account why and what is going to be taught, focusing on how it will be taught, to whom it will be and with what effect.

16.2.3 Dialogic Pedagogy: Types

Dialogue is a specific type of talk, distinct from others more commonly heard in classrooms. Participants in a dialogue are not trying to impose their views on others (as we often do in the course of teaching the curriculum) and are not willing to unthinkingly accept others’ views (as students do for much of the time). Rather they are engaged in a collaborative endeavour to reach better understandings of ideas, and of each other. Engagement in dialogue in the classroom signals a suspension of ‘putting in’ in favour of shared enquiry, reflection and *meaning making*. Participants engage in listening, questioning, answering, explaining, exemplifying, distinguishing, connecting, applying, evaluating, and so on. They become sensitive to the differences in their understandings, and use these to stimulate further talk aimed at resolving those differences or gaining an expanded awareness of the different perspectives that are held. Dialogic pedagogy is valuable in all subjects, though its form needs to be adapted to context and to different ‘ways of knowing’ (<http://21stcenturylearners.org.uk/?p=1337>).

What is dialogic pedagogy? Dialogic pedagogy involves teachers and students talking and *thinking* in a way that seeks out and values different perspectives, and uses them to develop understanding. The different perspectives in question might most commonly be those of the teacher (or the discipline) and the students, or those of different teachers and students. Such pedagogy might be characterised by the teacher encouraging / creating opportunities for talk that has the features of *dialogue*. It might also be characterised by a deliberate effort on the part of both teacher and students, to get better at dialogue because they value it as a learning tool and because they see it as a ‘good’ in its own right (<http://21stcenturylearners.org.uk/?p=1337>).

Dialogue is defined as a process where people communicate in words what they are thinking or feeling in a question-and-answer manner in order to produce new ideas for all involved. Classroom dialogue includes all forms of verbal interactions that occur between a child and a teacher, all being a form of pedagogy. Teachers often “think” that are promoting dialogue in their classrooms by asking many questions and “listening” to the children’s answers. Also, teachers often tend to lead children to preformed conclusions by looking

for answers that they want to hear, leaving practically no room for open-ended questions and authentic classroom dialogue. Despite the importance of classroom dialogue, there is a lack of research on intervention programs that can facilitate the promotion of open dialogue by teachers in general and pre-service teachers, in particular. Shapir and Rusu (2023) attempted to evaluate the current state of research-informed knowledge regarding dialogic approaches in preschools and classrooms. The methodological approach they followed consists of a systematic review of the aims of the research done on dialogic approaches that can be found in the literature, the types of research having as an objective the identification of the dimensions of dialogic pedagogy and the instruments most frequently used to assess the outcomes of dialogic pedagogy programs, by examining the current literature. The results of this systematic literature review could be valuable in designing pedagogical intervention programs for teachers working with all ages, especially for pre-service teachers during their training.

Shapir and Rusu (2023) found that there is a need for more pedagogical intervention programs in preschools and classrooms in order for teachers of all ages to understand how to create a more open and equal dialogic spaces, where children's interests and needs are at the center of the classroom dialogue. Furthermore, the results could be valued in designing intervention programs in kindergartens, schools and even higher education. The study also presents some potential methodological and conceptual problems. They showed that there is a need for intervention programs at pre-service teaching level, so that teachers entering the classroom can be more aware of the effects of classroom dialogue. An additional problem found was that some of the studies refer to only one dimension such as marginalized children, without taking into account other dimensions, such as teacher-child pattern effects on classroom dialogue. An important conclusion of this study refers to the significance of addressing all of the dialogic pedagogy dimensions when training teachers. Not all teachers seem to understand the importance of including marginalized students' opinions into classroom dialogue in order to promote their self-confidence and self-worth. A teacher trained in communication techniques such as helping learners think, speak, listen, learn effectively has the ability to empower them in the direction of classroom participation. Due to globalization, cultural diversity is a part of every classroom worldwide; therefore, teachers' awareness of this diversity as being an asset in terms of teaching will facilitate an inclusive climate, in which all students can engage and learn to respect others. Training in dialogic pedagogy can allow teachers to broaden their knowledge on patterns they set for open spaces for children to voice their thoughts. Last but certainly not least is the fact that training teachers to reach the conclusion that classroom talk is much more than just words, i.e., it represents a significant way of the implementation of student's ideas into the lessons taught and learned.

Matusov and Miyazaki (2014) provides a typology of different conceptual approaches to Dialogic Pedagogy as noticed in education. They defined three types of Dialogic Pedagogy -- instrumental, epistemological, and ontological types of Dialogic Pedagogy. Specifically, Eugene Matusov subscribes to ontological dialogic pedagogy arguing that dialogic pedagogy should be built around students' important existing or emergent life interests, concerns, questions, and needs. He challenged both instrumental dialogic pedagogy that is mostly interested in using dialogic interactional format of instruction to make

Dialogic pedagogy has a different status in different educational approaches. Ostensibly, the Conventional authoritarian school, in its traditional regime of the monologic transmission of knowledge and skills, does not recognize dialogue as such, nor does it acknowledge dialogue as an educational method. The predominant discourse pattern in these schools follows the monologic sequence of the Initiation-Response-Evaluation (IRE) (Sinclair & Coulthard, 1975), where the teacher has “the last word” when interrogating a student and evaluating their answer. According to Bakhtin often used pedagogical examples to illustrate the monologism as an antithesis to dialogue, In an environment of philosophical monologism, the genuine interaction of consciousnesses is impossible, and thus genuine dialogue is impossible as well. In essence, idealism knows only a single mode of cognitive interaction among consciousnesses: someone who knows and possesses the truth instructs someone who is ignorant of it and in error; that is, it is the interaction of a teacher and a pupil, which, it follows, can be only a pedagogical dialogue (Bakhtin, 1999, mentioned in Ana Marjanovic-Shane, 2023). The distinction thus becomes obvious between pedagogical dialogue and dialogic pedagogy.



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He continued developing the concept of Ontological Dialogic Education and the relevance of the role of Ontological Dialogic Education in addressing the challenges of their times, and how can it contribute, if at all, to a vision of a liberal democracy.

Dialogic pedagogy however is broadly concerned with dialogues in, around, and about teaching and learning. It differs radically from dialectic pedagogy in that the emphasis lies in the dialogue spaces in between and among learners (and teachers) rather than in hierarchical arrangements imposed by well-meaning authorities.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

1. What is pedagogy? How does dialogic pedagogy differ from pedagogy?

.....

.....

.....

.....

16.3 ANDRAGOGY: NEW APPROACH TO LEARNING

In this section we will focus on andragogy which is a new approach to learning, compared to pedagogy.

16.3.1 What is Andragogy?

Andragogy is defined as “the art and science of helping adults learn, in contrast to pedagogy as the art and science of teaching children” Knowles (1980, p.43). The term andragogy has a long history of development and evolution. In 1833, Alexander Kapp, a German educationalist, coined the term (Howard, 1993). However, the concept was not popular until Eduard C. Lindeman extended the idea in 1926 (Gessner, 1956, cited in Ozuah, 2005). In 1959, Malcolm Knowles further extended Lindeman’s work on andragogy (Ozuah, 2005) and helped develop it into a theory of adult learning (Zmeyov, 1998) and gave a perspective on andragogy (Forrest and Peterson, 2006; Merriam, Caffarella and Baumgartner, 2007).

The term andragogy refers to the learning approach in which teacher acts as a facilitator for adult learners who are considered self-directed learners, in contrast to that for children who are dependent. Autonomous and self-directed learning takes place in andragogy, unlike that in pedagogy. In this approach, adult learners use their own experience and others’ experiences as well in the learning process. The learning that takes place in andragogy is learner-centred,

need-based, task-oriented, task-centred or problem-centered. The role of the teacher is passive, and the teacher acts more as a facilitator than as an instructor. The motivation of the learners comes through self-esteem and self-confidence.

Self-concept changes as the children become adults. Adults no longer see themselves as full-time learners, but rather as producers or doers; and with this comes the need to be seen as wholly self-directing and independent and no longer to be treated as a child. Learning may be part of a painful memory of being less independent and struggling to keep up. When going back to systematic learning, the reward of this must outweigh their anticipation of the pain of learning (Knowles, 1970, p. 40). There are thus some significant differences in teaching children and adults, and this necessitates adult educators to be aware of the characteristics of learners in andragogy such as self-concept, self-directedness, experience, readiness to learn, orientation to learning, and motivation, which have their implications for learning:

Important implications to ensure adult learning are:

1. *The learning climate* – making adults feel comfortable and at ease. This should be ensured in both physical surroundings and psychological ones. It is important to note that the behaviour of the teacher is most important. Taking the time to get to know the students individually will help set a good tone.
2. *Diagnosis of needs* – involvement of the students to help “self-diagnosis” of their needs for learning.
3. *The planning process* – if the number of students is small enough, they may also be included in the planning process. In andragogy, responsibility for learning is mutual between the teacher and the student.
4. *Conducting learning experiences* – in contrast to pedagogy in which the teacher is responsible for what happens in the classroom, andragogy defines the teacher’s role as more a guide than a wizard. Andragogy assumes that a teacher cannot really *teach*, but rather help an adult learn.
5. *Evaluation of learning* – nothing will make an adult feel more childlike than being judged by another adult. For this reason, andragogy prescribes self-evaluation for the students. This means that the adult teachers must set the example as being open to feedback of their performance (Knowles, 1970, pp. 40–43).

Teaching adult learners with a high level of knowledge in their field is different from teaching undergraduate students. Although research is new to undergraduates, graduate/postgraduate students have knowledge and experience about the research process and what is expected from them is the knowledge of the literature in their field of research. This must be acknowledged to prevent frustration and poor learning outcome among these learners.

As the information landscape is changing, and vast quantities of information are becoming more and more accessible online, librarians often see it as a must to master online services. However, people are different and think and learn in different ways. Knowledge about this will not only help librarians approach different students in a more fruitful way, but also help to understand

the difference in how you think as a librarian and how a postgraduate student experiences his or her thesis work. It is not necessary for the librarian to be a researcher, or the postgraduate to be a librarian, but good communication and understanding will help to provide a better learning environment.

Andragogy combines easily with the sociocultural approach to information literacy. The idea is that one is socialised into a learning environment in which motivation to learn is directly linked to skills that are needed to complete work tasks. Andragogy also focuses on the mutual responsibility for learning between the students (adults) and the teacher.

16.3.2 The Andragogical Model: Basic Assumptions

In contrast to pedagogical model, the assumptions inherent in the andragogical model are as follows (Knowles and Associates, 1984, pp.9-12).

- 1) *Regarding the concept of the learner:* The learner is self-directing. In fact, the psychological definition of adult is “one who has arrived at a self-concept of being responsible for one’s own life, of being self-directing.” He develops a deep psychological need to be perceived by others and treated by others, as capable of taking responsibility for ourselves. Otherwise, he experiences a feeling, often subconsciously, of resentment and resistance. Even though adults may be totally self-directing in every other aspect of their life such as workers, spouses, parents, citizens, leisure-time users and so on, the minute they enter into a situation of “education”, “training” or any of their symptoms, they hark back on their conditioning in school, assume a role of dependency, and demand to be taught, but without being treated as children, which conflicts with their much deeper psychological need to be self-directing and their energy is diverted to away from learning to leading with this internal conflict. As they have been aware of this problem, adult educators have been devising strategies for helping adults make the transition from being dependent learners to being self-directed learners.
- 2) *Regarding the role of the learner’s experience:* The andragogical model assumes that adults enter into an educational activity with both a greater volume and a different quality of experience from youth. The difference in quality of experience occurs because adults perform different roles from young people, such as the roles of full-time worker, spouse, and voting citizen. This difference in experiences has several consequences for education: a) adults themselves are the richest resources for one another; hence the greater emphasis in adult education on such techniques – group discussion, simulation exercises, laboratory experiences, field experiences, problem-solving projects, and the like – that make use of the experiences of the learners; b) it assures greater heterogeneity in groups of adults. Consequently, in adult education greater emphasis is placed on individualized learning plans, such as learning contracts; c) It becomes increasingly the source of an adult’s self-identity. Otherwise, if their experience is ignored, not valued, not made use of it, it is not just the experience that is being rejected, it is the person rather.

- 3) *Regarding readiness to learn:* “The andragogical model assumes that adults become ready to learn when they experience a need to know or do something in order to perform more effectively in some aspect of their lives. Chief sources of readiness are the developmental tasks associated with moving from one stage of development to another; but any change – birth of children, loss of job, divorce, death of a friend or relative, change of residence – is likely to trigger a readiness to learn. But we don’t heed to wait for readiness to develop naturally; there are things we can do to induce it, such as exposing learners to more effective role models, engaging them in career planning, and providing them with diagnostic experiences in which they can assess the gaps between where they are now and where they want and need to be.” (Knowles, 1980, cited in Knowles and Associates, 1984, p.11).
- 4) *Regarding orientation to learn:* For the most part, adults do not learn for the sake of learning; they learn in order to be able to perform a task, solve a problem, or live in a more satisfying way. They enter an educational activity with a life-centered, task-centered, or problem-centered orientation to learning. The chief implication of this assumption is the importance of organizing learning experiences (the curriculum) around life situations rather than according to subject matter units. Another implication is the importance of making clear at the outset of a learning experience what its relevance is to the learner’s life tasks or problems. We have a dictum in adult education that one of the first tasks of a facilitator of learning is to develop ‘the need to know’ what will be learned (See Freire, 1970; Knowles, 1980; cited in Knowles and Associates, 1984, pp.11-12).
- 5) *Regarding motivation to learn:* Although it is acknowledged that adults will respond to some external motivators – a better job, a salary increase, and the like – the andragogical model predicates that the more potent motivators are internal – self-esteem, recognition, better quality of life, greater self-confidence, self-actualisation, and the like (Herzberg, 1966; Maslow, 1970).

Philosophical Implications of Andragogical Assumptions

Brookfield (1985, p.44) defines the controversy in philosophical terms based in part on the differences in assumptions between andragogy and pedagogy. The first assumption that Brookfield cites is that the purpose of adult education is to meet the felt needs of the learner. The fear, associated with this assumption, is that by adopting a completely learner-centered approach that the decision of what ought to be or needs to be learned will be ceded entirely to the learner. The idea that the learner lacks a sufficient knowledge base or has an understanding of the full range of possibilities that Brookfield cites are that the adult learners are naturally self-directed learners and that learning is a joyful, wholly fulfilling experience in which, what the educator intends and learner needs are matched. The philosophical problem that arises, according to Brookfield’s analysis, is that adult education becomes little more than a service-based or consumer-driven enterprise.

On a more practical side, critics of andragogy contend that andragogy is just a technique or set of techniques and is not dichotomous in regard to pedagogy. London (1973) argued that andragogy was nothing more than an invented word that added to the already overloaded jargon within the field of education and that adult educators were using it in an effort to achieve status and respect in educational circles. Beder and Darkenwald (1982) see the debate over andragogy and pedagogy as nothing more than a rehashing of the ongoing debate between progressivism and traditionalism, where progressivism is defined as learner-centred and traditionalism is defined as content-centred. Leon Mckenzie (1977) described the philosophical conflict between andragogy and pedagogy as beginning from very different foundational assumptions. Pedagogy's assumption is that children and adults are essentially the same since they share the same human nature. Therefore, the education of adults and children is the same. Andragogy's assumption is that children and adults are existentially different. Therefore, education for children and adults must be existentially different (Davenport and Davenport, 1985).

If, as Brookfield (1985) suggests, the field of adult education has uncritically accepted what is current practice, then it is necessary to examine what the research has to say in regard to which instructional methodology may or may not be most beneficial for adult learners. According to Beder and Darkenwald (1982) the teachers who taught both pre-adults and adults reported that they made greater use of discussion, varied their teaching techniques more frequently, made numerous attempts to relate class discussion to student life experience and made more adjustment in instructional content in response to student feedback. When teaching pre-adults, the same teachers reported that they spent more time in giving directions, providing emotional support to individual students, structured instructional activities more tightly, and spent more time in disciplining. Thus, this survey appears to support the idea that andragogical principles are utilized when teaching adults.

There is substantial literature on the topic andragogy but there is very little empirical research on the subject. However, a study by Beder and Carrea (1988) provided a guarded support for the hypothesis that andragogically trained teachers will have a higher rate of attendance. The reason for guarded support was that there was a small concern centred upon the fact that though the andragogical group did achieve a significantly higher attendance rate than the control group, but the differences between the andragogical group and the placebo group were not as great as was suspected. Though there were differences in attendance rate they did not achieve statistical significance. Two explanations were offered, indicating that the experiment may not have been constructed as well as it could have been. The second hypothesis, that the students would rate the andragogically trained instructors higher, had no support based upon the research. One reason suggested for the lack of statistical support for the second hypothesis may be that students, who may have evaluated the placebo (Monts, 2000, p.8).

Based on review of relevant research, Monts (2000) attempted to determine whether there is any validity to utilizing andragogy and its efficacy over and against pedagogy. The review of five studies (Beder and Darkenwald, 1982; Gorham, 1985; Raven and Jimmerson, 1992; Loesch and Foley, 1988;

and Beder and Carrea, 1988) by Monts (2000) indicates that more empirical research needs to be conducted to determine if the andragogical model is the most effective means of educating adult learners. Most of the studies focused on the college as the context for the delivery of instruction. Research that focused on the education of adults in the workplace and the role of andragogy and pedagogy in the delivery of this instruction would be beneficial. Research could also focus on why the disparity between perception and practice exists. In this regard, it would seem evident that further training and practice in andragogy may lessen the disparity between perception and practice. Another area of concern would be helping teachers evaluate their educational goals and developing strategies for accomplishing that goal. The reported goal of educators was of a more andragogical bent, but the student's perception of the instructor's goal was pedagogical. Answering why this disparity exists would be very beneficial to adult educators. For institutions that provide traditional and nontraditional baccalaureate degrees it may be beneficial to use as a tool, such as the LPI, to place students in programmes that best suit their learning preferences, rather than blindly assuming that they might function best in an andragogically-based programme. A final concern generated by this research is that, *not only will instructors need training in andragogical teaching, but the learners need training as well, in order to break away from the pedagogical mentality*. Based on the review, Monts (2000) concludes with a discussion of various future research issues that needed to be explored as well as implications for faculty and student training that might lead to a greater effectiveness in the utilisation of the andragogical model.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

2. What is andragogy? How does it differ from pedagogy?

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16.4 HEUTAGOGY: ADVANCED APPROACH TO LEARNING

Heutagogy is a term, which many of us have probably not heard. So, what is it, and what does it have to do with the professional development of adults as workforce or adults in workplaces or other places? Let us recall our primary school days or college days -- the approach to how people learn used to be fairly straightforward and teacher-directed. Students would sit in a classroom and do as the teacher instructed, but progressive educators have begun to adopt a new learning approach — called heutagogy, subsumed in andragogy, which is all about self-managed and self-directed learning.

While this concept is usually seen only in academia, it can still play an integral part in transformative workplace learning and development. In fact, it might be the tool that finally frees the individuals to fully own their development and practice self-learning or self-directed or self-regulated or self-managed learning.

16.4.1 What is Heutagogy?

‘Heutagogy’ is a term coined by Stewart Hase and Chris Kenyon of Southern Cross University in Australia. It is derived from the Greek roots for <self> and <leading>. Heutagogy is, essentially, self-determined learning. Hase and Kenyon (2000) used it to describe self-learning independent of formal teaching. This adds yet another learning theory to the established fields of pedagogy (child learning), and andragogy (adult learning). Heutagogy adds a new frame of reference to go beyond to diffuse phrases like self-directed learning, to encapsulate the outcomes we expect from students using multimedia and online learning. Heutagogy also acknowledges that learners do immensely valuable work for themselves by filling in the gaps of their formal education through discovery and reflection (i.e. learning on the job).

The theory of managing self-learning or self-regulated learning is known as heutagogy. This theory mainly emphasizes knowing key learning skills of the 21st century. Learners are independent, and they learn through new experiences in the theory of heutagogy. Learners of the heutagogy are able to manage or regulate their own learning. Although the teacher provides resources for learning, the learner himself selects the path. Learners use their own experiences as well as others’ experiences in the learning process.

16.4.2 Management of Learning for Self-managed Learners

What is self-managed learning and what are the components of self-managed learning? Over the last two decades the importance of Self-Managed Learning (SML) has become increasingly recognized. You may get a doubt: Is self-managed learning different from self-regulated or self-directed learning? These terms are often used interchangeably conveying the same principles, components and processes.

Self-directed learning is a phrase often used in higher education theory about adult learning. In 1975, adult educator Malcolm S. Knowles defined the process in a way we can still relate to today (<https://www.betterup.com/blog/self-directed-learning>): “Self-directed learning describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes.”

In SML, people continue applying what they learn in their day-to-day functions (Sangster, 2000). Similarly, the process is usually undertaken to counter existing gaps in organizational needs which ensures that what is learned will be put into practice.

Furthermore, individuals get the opportunity of choosing what to learn depending on one’s own preferences and level of knowledge. Additionally, the

process of learning becomes enjoyable since one engages in what is best for him or her. Similarly, an individual has the power to choose the schedule of learning according to a personal timetable without mechanically following a laid down procedure (Clampitt, 2009).

Self-managed learning is a process by which an individual takes initiative to learn something. According to this process an individual lists out the resources which are required for learning. This process also includes development of learning approaches and evaluation of outcomes to gain from activities.

In heutagogy learning approach, people are not only self-directed learners but they also become capable of determining their own goals, learning paths and processes. *Self-managed learning is really just heutagogy in practice* where ‘students’ choose what they want to learn and how they will go about learning it.

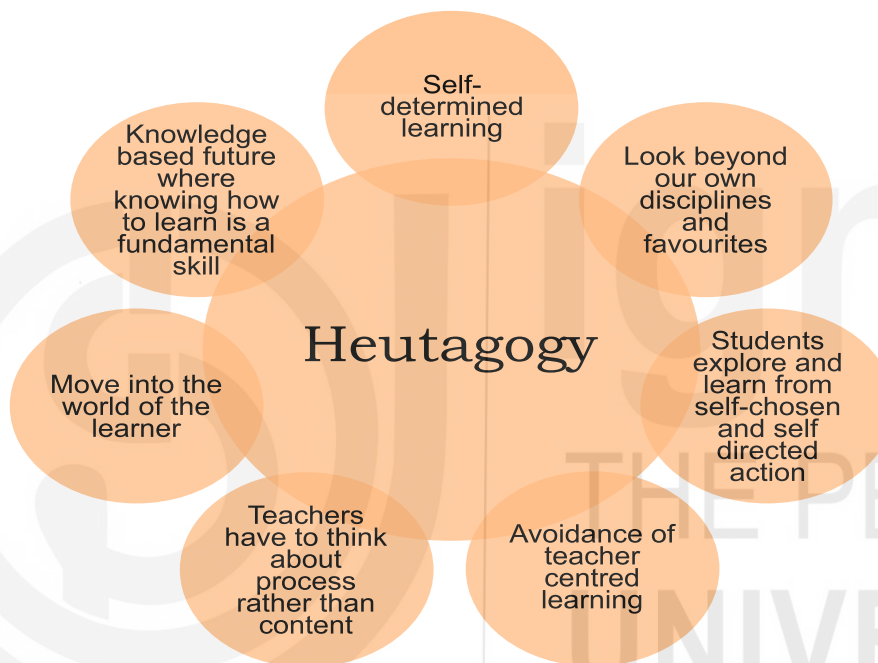


Figure 16.2: Heutagogy

Source: <https://www.learnerbly.com/articles/heutagogy-and-self-managed-learning>

SML can be either offline or open and distance learning, which includes in it online learning as well. In the case of both Self-Managed Learning in Offline Learning and Self-Managed Learning in Open and Distance Learning students are expected to be able to apply independent learning to support online learning to understand the material well.

The benefit of Self-Managed Learning

People who are willing to undergo the self-managed learning program are usually self-motivated and personally willing to advance their skills. In the context of workplace, SML facilitates this and the process enables an organization to identify employees who are easy to train. The process is compatible with other methods of learning. For example, an organization that decides to implement the process will not have to scrap the entire existing learning process. Consequently, the process is not very expensive to implement or to improve it. Further, it is more effective in its outputs. Moreover, since the program is aligned with the

present needs of the organization, the process addresses directly the needs of an organization in promoting self-learning or SML.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

3. What is heutagogy? In what way it is more progressive than andragogy?

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16.5 A COMPARISON OF PEDAGOGY, ANDRAGOGY AND HEUTAGOGY

Arguments regarding the distinction between child learning and adult learning have existed for decades. Pedagogy has a long tradition of providing educational guidance in which there is little differentiation between child and adult education. The two groups of learners are assumed to learn under the same philosophy. Conversely, andragogy, advanced by Malcolm Knowles in the 1970s, is a well-known approach to address the distinct needs of adult learners. Knowles’ concept of andragogy has been widely adopted by educators from various disciplines around the world. Andragogy is based upon six assumptions or principles: (a) self-directedness, (b) need to know, (c) use of experience in learning, (d) readiness to learn, (e) orientation to learning, and (f) internal motivation. There are ample applications of Knowles’ andragogy in different settings (Sang Chan, 2010, See <https://files.eric.ed.gov/fulltext/EJ930244.pdf>).

The study of adult learning — andragogy — has emerged as a learning framework due to its increasing popularity in the past four decades. The exponential increase of and the changes in the adult students’ population have greatly swayed a sizeable number of education practitioners towards andragogy. Present higher educational institutions have realised the significance of transforming themselves from pedagogy level of teaching to andragogical level. It is very decisive for us as teachers in this techno world to involve adults in their own learning and apparently glue our self to adult learning principles, introduce interactivity wherever possible into our instruction, look for opportunities to use case studies, brainstorming exercises, facilitated discussions, role-plays, problem-solving, etc. To dwell well into learning practice, learners need opportunities to make a connection with the content-relevance and connect the learning to practical life. They learn effectively only when they have an urge to discover their skill-sets and try to enhance their knowledge by interacting and gathering required information in relation with the area of interest. They are effective in their approach towards learning and their goals and purposes for learning and application of learning are unique (Shilpa Joshi, 2017, p.7).

Zmeyov (1998, mentioned in Shilpa Joshi, 2017) aptly defined andragogy differently from others. He said that andragogy is “the theory of adult learning that sets out the fundamentals of the activities of learners and teachers in planning, realizing, evaluating and correcting adult learning”. Reischmann (2005) made a clear distinction in his definition between andragogy and adult education. He defined andragogy as the science of lifelong and life-wide education/learning of adults.

Currently, “andragogy” is used in two senses (Khudaybergenova, et al, 2022, p.5460):

1. A section of the theory of education that reveals the specific patterns of acquisition of knowledge and skills by adults in educational activities, as well as the peculiarities of management of this activity by an adult, qualified teacher.
2. A new direction of pedagogical science, an area that describes, interprets and determines the specifics of adult education, models and technologies of educational processes.

16.5.1 Assumptions of Pedagogy, Andragogy and Heutagogy: Basic Differences

Andragogy differs from pedagogy based on four assumptions. *Firstly*, pedagogy views the learner as dependent. The teacher is expected to be the one who determines what is to be learned. Andragogy develops an understanding that there is a natural maturation within individuals in which they move from dependency to ever increasing self-directedness. *Secondly*, pedagogy sees little validity in the learner’s previous experience, what matters most is experience of the teacher, textbook or other instructional aids. Andragogy, on the other hand, views the experience of the learner as a deep reservoir that serves as a resource for learning. In pedagogy, the primary techniques used are lecture, assigned readings, and other passive methods. Andragogy, on the other hand, utilizes experiential techniques such as lab experiments, discussion, problem-solving cases, simulation games, field experiences and other similar methodologies. The *third* assumption is predicated upon the first. Pedagogy assumes that everyone is ready to learn what society says, that they ought to learn. Further, because most people are ready to learn the same things at the same time a fairly standard curriculum is utilized. Andragogy differs in that it asserts that learners are ready to learn when they experience a need to learn, in order to cope with some real-life task or problem. Learning, according to andragogical model should focus on life-application categories and should be ordered according to the learners’ needs and readiness to learn. The *final* pedagogical assumption is that most learning has a future orientation, that is, what is being learned today will be useful at some later date and applied at some indefinite date in the future. Therefore, learning is subject-centered and it moves from mastery of the simple to the more complex. Andragogy differs in that it understands education as a process of developing increased competencies. The goal is to learn something that can be applied to make living tomorrow more rewarding. Therefore the structure of learning is performance-centered rather than subject-centered (Knowles, 1980, pp.43-44 cited in Monts, 2000, p.2).

Although the three approaches -- pedagogy, andragogy and heutagogy -- are used in the teaching-learning process, they represent a progressive trend in that order. There are some distinct differences between and among these approaches. The key difference between and among these three approaches is that, while pedagogy refers to teaching children or dependent learners, andragogy refers to the principles of teaching adults who are considered as independent or self-directed learners, and heutagogy refers to the principles of managing self-learning. Heutagogy lays greater emphasis on self-directed learners in managing their self-learning. Thus, we can notice that although pedagogy, andragogy and heutagogy are used as learning principles and approaches, there are slight differences among these approaches. Pedagogy focuses on child learning among the dependent children, whereas andragogy involves self-directed adult learning among those who are independent. On the other hand, though heutagogy also involves self-directed learners of all types who are capable of managing their own learning. In other words, the learners in pedagogy are dependent children, but the learners in both andragogy and heutagogy are independent learners, be they adults or others.

Moreover, both andragogy and heutagogy focus on self-directed learning, whereas in a pedagogical context, the teacher decides what, where, when and how of teaching learners. In addition, the learning is subject-centered in the pedagogical context, but in andragogy, adult learning is need-based, task-specific or problem-oriented. In heutagogy the learners use their experience in problem-solving to make smooth progress in their learning. Furthermore, the role of the teacher is very active in pedagogy, whereas the teacher plays a somewhat passive role, mainly as a facilitator of learning in andragogy. And, in heutagogy, the teachers, irrespective of their physical presence before the learners, facilitate development of the capabilities of the learners in advancing their self-learning.

16.5.2 Implications for Programme Design: Choosing which model to use – pedagogical, andragogical or heutogical

Knowles (1984, pp.12-13) regards the pedagogical and andragogical models as parallel, not antithetical. For centuries educators had only one model, the pedagogical model, to go on. Now we have two sets of assumptions about learners. In some situations, such as when learner of whatever age are entering a totally strange territory of content or are confronting a machine they have never seen before, they may be truly dependent on didactic instruction before they can take much initiative in their own learning; in such situations the pedagogical assumption of dependency is realistic, and pedagogical strategies would be appropriate. In many more instances, however, especially with adult learner, the andragogical assumptions would be realistic – particularly if the learners have had some orientation to self-directed learning – and andragogical strategies would be appropriate. There is growing evidence (See Gibbons and Phillips, 1984; Sande, 1984; and Bishop Carroll High School, 1984; Knowles and Associates, 1984) that the andragogical assumptions are realistic in many more situations than traditional schooling has recognised. For example, children are very self-directing in their learning outside of school and could also be more

self-directed in school. Children and youth bring some experience with them into an educational activity, and this experience could be used as a resource for some kinds of learning. Children and youth are also more ready to learn when they experience a 'need to know' than when they are told they have to learn, and we can expose them to life situations through which they will become aware of what they need to know. Finally, children and youth are naturally more motivated by intrinsic rewards than by external pressures; it is schools that have conditioned them to be otherwise.

Implications for Programme Design: The pedagogical, andragogical and heutagogical models result in three very different approaches to the design and operation of educational program.

A) Pedagogical model: The basic format of the pedagogical model is a *content plan*, which requires the teacher to answer only four questions:

1. What content needs to be covered? The implication is that it is the teacher's responsibility to cover – in the classroom or through assigned reading – all the content that students need to learn. So the pedagogue constructs a long list of content items to be covered. It may, sometimes, place an unfair burden on the teacher to master all the content and to doom the students to be limited to the teacher's resources.
2. How can this content be organized into manageable units, such as fifty-minute, one-hour, two-hour, three-hour, or one-week units? So the pedagogue clusters the content items into manageable units.
3. What would be the most logical sequence in which to present these units? It is the logic of the subject matter that determines the sequence, not the readiness of the learners or other psychological factors. So in mathematical or scientific content programs, the sequence is typically from simple to complex; in history it is chronological.
4. What would be the most efficient means of transmitting this content? With highly informational content, the preferred means would probably be lecture or audiovisual presentations and assigned reading; if the content involves skill performance, it would probably be demonstrated by the teacher and drill by the students.

B) Andragogical model: In contrast to the pedagogical model, the basic format of the andragogical model is a *process design*. The andragogical model assigns a dual role to the facilitator of learning (a title preferred over 'teacher') first and primarily, the role of designer and manager of processes or procedures that will facilitate the acquisition of content by the learner; and only secondarily, the role of content resource. The andragogical model assumes that there are many resources other than the teacher, including peers, individuals with specialized knowledge and skill in the community, a wide variety of material and media resources, and field experiences. One of the principal responsibilities of the andragogue is to know about all these resources and to link learners with them.

Elements of andragogical process design: An andragogical process design consists of seven elements:

- 1) Climate setting: A climate that is conducive to learning is a prerequisite to effective learning; and little attention is paid to climate in traditional education. In planning procedures for climate setting, two aspects of climate require due attention: physical environment and psychological atmosphere.

In regard to *physical environment*, the typical classroom setup, with chairs in rows and a lectern in front, is probably the least conducive to learning that the fertile human brain could invent. It announces to anyone entering the room that the name of the game here is one-way transmission, that the proper role of the student is to sit and listen to transmissions from the lectern. Important as a physical climate is, *psychological climate* is even more important. Here are the characteristics of a psychological climate that is conducive to learning (Knowles and Associates, 1984, pp.14-18).

- A climate of mutual respect: People are more open to learning when they feel respected.
- A climate of collaborativeness: Since, for many kinds of learning in adult education, peers are the richest resources for learning, the competitiveness among them makes those resources inaccessible. For this reason, in the climate-setting exercise the participant needs to be put into a sharing relationship from the outset.
- A climate of mutual trust: People learn from those they trust more than from those they mistrust. And here we who are put in the position of teacher or trainer of adults are at a disadvantage, for students in schools learn at an early age that on the whole teachers are not very trustworthy. For one thing, they have power over students; they are authorized to give grades, to determine who passes or fails, and otherwise to hand out punishments and rewards. For another thing, the institutions in which they work present them in their catalogues and program announcement as authority figures.
- A climate of supportiveness: People learn better when they feel supported rather than judged or threatened.
- A climate of openness and authenticity: When people feel free to be open and natural, to say what they really think and feel, they are more likely to be willing to examine new ideas and risk new behaviours than when they feel the need to be defensive. If the teacher or trainer demonstrates openness and authenticity in his or her own behaviour, this will be the model that participants will adopt.
- A climate of pleasure: Learning should be one of the most pleasant and gratifying experiences in life; for, after all, it is the way people can become what they are capable of being-achieving their full potential.
- A climate of humanness: Learning is a very human activity. The more people feel that they are being treated as human beings, the more they are likely to learn. Among other thing, this means providing for human comfort – good lighting and ventilation, comfortable chairs, availability of refreshments, designation of nonsmoking

areas, frequent breaks, and the like. It also means providing a caring, accepting, respecting, helping social atmosphere.

- 2) Involving learners in mutual planning: There is a basic law of human nature at work: people tend to feel committed to any decision in proportion to the extent to which they have *participated* in making it; the reverse is even more true – people tend to feel *uncommitted* to any decision to the extent that they feel others are making it for them and imposing it on them.
- 3) Involving participants in diagnosing their own needs for learning: One of the pervasive problems in this process is meshing the needs of the learners they are aware of (felt needs) with the needs their organizations or society has for them (ascribed needs). A variety of strategies are available, ranging from simple interest-finding checklists to elaborate performance assessment systems, with a balance between felt needs and ascribed needs being negotiated between the facilitator and the learners.
- 4) Involving learners in formulating their learning objectives: What procedures can be used to help learners translate their diagnosed needs into learning objectives? Learning contracts can be used in this regard.
- 5) Involving learners in designing learning plans: What procedures can be used to help the learners identify resources and devise strategies for using these resources to accomplish their objectives? Learning contracts can be used in this regard as well.
- 6) Helping learners carry out their learning plans: Here too learning contracts are useful.
- 7) Involving learners in evaluating their learning: Evaluation of the accomplishment of objectives by individual learners is treated as a part in the learning contracts. But evaluation is also concerned with judging the quality and worth of the total program. Assessing individuals' learning outcomes is a part of this larger evaluation, but more than this is being involved in this process.

Using Learning Contracts to Provide Structure: Learning contracts are an effective way to help learners structure their learning. Some people have difficulty with the term 'contract' because of its legalistic flavor and substitute 'learning plan' or 'learning environment' for it. But 'learning contract' is the term most often found in the literature.

The procedure Knowles and Associates (1984, pp.19-20) used in helping learners design and execute learning contracts included the following. (i) Each learner translates a diagnosed learning need into a learning objective that describes the terminal behaviour to be achieved (which is appropriate for most basic skills learning) or the direction of improvement in ability (which is appropriate for more complex learnings). (ii) The learner next identifies, with the facilitator's help, the most effective resources and strategies for accomplishing each objective. (iii) The learner then specifies what evidence will be collected for indicating the extent to which each objective was accomplished. (iv) Finally, the learner specifies how this evidence will be judged or validated. While these

learning contracts are used even in the case of in-service education programmes, they are a missing link in the case of pedagogical design process.

Ways of Using Andragogy for Education and Training: The andragogical model has been widely adopted or adapted in a variety of programmes for adults – from individual courses at every level of education to total programmes of in-service education, undergraduate education, graduate education, continuing education, human resources development, continuing professional education, technical training, remedial education, and religious or spiritual education.

C) Heutagogical model: As Cross (1981, pp.227-228) states: “Whether andragogy can serve as the foundation for a unifying theory of adult education remains to be seen. At the very least, it identifies some characteristics of adult learners that deserve attention. It has been far more successful than most theory in getting the attention of practitioners, and it has been moderately successful in sparking debate, it has not been especially successful, in stimulating research to test the assumptions. Most important, perhaps, the visibility of andragogy has heightened awareness of the need for answers to three major questions (Knowles and Associates, 1984, p.20): (1) Is it useful to distinguish the learning needs of adults from those of children? If so, are we talking about dichotomous differences or continuous differences? Or both? (2) What are we really seeking: Theories of learning? Theories of teaching? Or both? (3) Do we have, or can we develop, an initial framework on which successive generations of scholars can build? Does andragogy lead to researchable questions that will advance knowledge in adult education?” Actually, a growing amount of research indicates that andragogy’s greatest impact has been in action.

In fact, it is heutagogy that provides answers to the above questions. We are now aware that the pedagogy approach has been pushed to transform into Andragogy. And andragogy has also taken the form of heutagogy. Heutogogy provides for *self-regulated model*. Amiruddin, Baharuddin, Takbir, Setialaksana and Nurlaela (2023) studied the experiences with the andragogy approach and its potential impact on students’ self-regulated learning. Andragogy, heutagogy, peeragogy, and cybergogy principles used by the teacher as part of open and distance learning during the pandemic modelled to check their effect on the student’s self-regulated learning. The results show that andragogy, heutagogy, cybergogy, and peeragogy have significant effects on self-regulated learning. However, they found ‘Andragogy is proven to be based on heutagogy, peeragogy, and cybergogy since it has a strong effect on these three approaches’. Andragogy also has a significant indirect effect on self-regulated learning through these approaches. The results may lead to a conclusion that andragogy, heutagogy, cybergogy, and peeragogy together can be used as an effective way to improve the student’s self-regulated learning (p.551).

Thus, it can be noticed that many of the non-traditional programmes developed to meet the educational needs of the adult learners have been based upon an andragogical model rather than a traditional pedagogical model. Monts (2000) explores the validity of the andragogical model. He attempts to answer the following questions: Is the andragogical model a better way to provide educational instruction? Do adult learners actually prefer andragogical instruction or do they prefer pedagogical instruction? Or do they prefer a combination of both? Of course, the answers are not so simplistic, as they are mixed in their nature

depending upon diverse contexts and levels of learning. To conclude, we can agree that this view of Monts holds good till date.

16.6 LET US SUM UP

In this Unit we have explained the concepts of pedagogy, andragogy and heutagogy along with various assumptions underlying these concepts. We have also highlighted the key differences between and among pedagogy andragogy and heutagogy. It can be noticed that pedagogy involves child learning, whereas andragogy involves facilitating self-directed learning, and heutagogy involves managing self-regulated learning. The three approaches are used in the teaching-learning processes, and they have distinct applications or relevance depending upon the nature and type of learners and their learning contexts which vary from one another.

16.7 ANSWERS TO ‘CHECK YOUR PROGRESS’ QUESTIONS

1. Pedagogy is essentially a teacher-led learning process. Pedagogy is a traditional approach to learning based on instruction; knowledge is transmitted formally from one who knows to one who does not know. Pedagogical skills are basically divided into classroom management skills and content-related skills. In the pedagogical learning approach, the learner is a dependent personality, and the teacher is the one who decides how, what, and when things are taught and with what effect.

Dialogic pedagogy involves teachers and students talking and thinking in a way that seeks out and values different perspectives, and uses them to develop understanding. The different perspectives in question might most commonly be those of the teacher (or the discipline) and the students. Such pedagogy might be characterised by the teacher encouraging / creating opportunities for talk that has the features of dialogue. It might also be characterised by a deliberate effort on the part of both teacher and students to get better at dialogue because they value it as a learning tool and because they see it as a ‘good’ in its own right.

2. The term andragogy refers to the learning approach in which teacher acts as a facilitator for adult learners who are considered self-directed learners. Autonomous and self-directed learning takes place in andragogy, unlike that in pedagogy where children are dependent on others in their learning. In this approach, adult learners use their own experience and others’ experiences as well in the learning process.

The learning that takes place in andragogy is learner-centred, task-oriented, need-based or problem-centered. The role of the teacher is passive, and the teacher acts more as a facilitator than an instructor. The motivation of the learners comes through self-esteem and self-confidence. Self-concept, experience, readiness to learn, orientation to learning, and motivation are some characteristics of learners in andragogy.

3. In simple terms, the theory of managing self-learning is known as heutagogy. ‘Heutagogy’ adds yet another learning theory to the established fields of

pedagogy (child learning) and andragogy (adult learning). Heutagogy also acknowledges that learners do immensely valuable work for themselves by filling in the gaps of their formal education through discovery and reflection. Learners of the heutagogy are able to manage their own learning. Learners use their own experiences as well as others' experiences in the learning process. Although the teacher provides resources for learning, the learner himself selects the path.

Heutagogy is more progressive than andragogy in the sense that in this learning approach the self-directed learners also become capable of determining their own goals, learning paths and processes. Self-managed learning is really just heutagogy in practice where 'students' choose what they want to learn and how they will go about learning it.

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16.9 UNIT-END EXERCISES

In your own interest, you may prepare the answers to the following questions which may be useful as a part of your preparation for your term-end examinations.

1. What is pedagogy? What are the assumptions underlying pedagogy?
2. What is andragogy? What are the assumptions underlying andragogy?
3. What is heutagogy? What are the assumptions underlying heutagogy?
4. How do you compare pedagogy, andragogy and heutagogy?

16.10 UNIT-END ACTIVITIES

If you like to further enhance your interest, you may attempt to perform the following activity.

1. Do you consider pedagogy, andragogy and heutagogy as evolutionary in their nature, theory and practice? Justify your answer.
2. Do you think pedagogy, andragogy and heutagogy are sequential and also parallel in their application? Justify your answer.

UNIT 17 ADULT LEARNING THEORY

Structure

- 17.1 Introduction
- 17.2 Learning Objectives
- 17.3 Gestalt Theory of Learning
 - 17.3.1 Wolfgang Kohler
 - 17.3.2 Kurt Koffka
 - 17.3.3 Max Wertheimer
- 17.4 Piaget's Theory of Learning
- 17.5 Vygotsky's Theory of Learning
- 17.6 Bandura's Theory of Learning
- 17.7 Malcolm Knowles' Theory of Adult Learning
- 17.8 Let Us Sum Up
- 17.9 Answers to 'Check Your Progress' Questions
- 17.10 References and Suggested Readings
- 17.11 Unit-End Exercises
- 17.12 Unit-End Activities
- 17.13 Glossary of Terms

17.1 INTRODUCTION

You may recall that in Unit-7 of Block-2 of this course, i.e. MAE-001, you studied “Theories of Learning and their Relevance to Adult Learning” with special reference to theories of ‘Learning by Association’, ‘Learning by Conditioning’, ‘Learning by Doing (Trial and Error)’ and ‘Learning by Insight’. Further, in Unit-16 of this Block, i.e. Block-4 of MAE-001, you have studied basic assumptions underlying traditional approach to learning (pedagogy), new approach to learning (andagogy) and management of learning for self-managed learners (heutagogy) and their relative significance in the process of learning by the individuals.

We are aware that adults bring a wealth of life experiences to their learning situations, as well as strong opinions and attitudes toward their learning. Thus, there exist differences between adults and others, in terms of their age, experience and abilities. If the differences between adults and other learners are not addressed meaningfully, their learning experiences will be far from optimum.

Adult learning is a process of adults gaining knowledge, skills, and competence. It is defined as the practice of teaching and educating adults, theory and study of

adults learning, or pedagogical process (Aaltola, 2020). Adult learning, or the act of pursuing one's own education as an adult, can be done in a formal setting such as higher education, a trade school, or an apprenticeship. It can also refer to an adult simply wanting to learn about a new skill or topic independently (WGU, 2020).

New technological developments, including artificial intelligence and machine learning, will reshape both the job market and the retail market. Effective adult learning practices can help with the transition and ensure that the adults of tomorrow are well equipped to handle the resulting changes (Vipond, 2023). These practices of learning in the current time pose many challenges to adults. This calls for further understanding of adult learning theory and it is important for us in our ever-changing society.

Challenges of Adult Learning

Learning new skills or studying new subjects as an adult can be challenging for many reasons (WGU, 2020), most notably the following:

- i. *Lack of time:* Adults often have full-time jobs and sometimes children or other dependents relying on them. This can make finding the time to continue their learning very difficult.
- ii. *Self-doubt:* It's common for adult learners to feel that they are too old to continue their education. They may feel it is too late and that they have missed their chance, but whether someone has five years or 50 years left in the workforce, they deserve to follow a passion and pursue a career that they are excited about.
- iii. *Neuroplasticity:* The human brain has an element of plasticity that helps one learn and grow. Younger people have brains that are more plastic, so changes are easier for them. As one ages, the brain becomes less plastic. That can result in a struggle for adult learners who are trying to take on new concepts, forge new pathways, and more. These learners may have a harder time understanding new things simply because their brains are less plastic. While this is a difficulty, it is not something that is insurmountable.
- iv. *Financial Barriers:* Younger learners may have parental help when it comes to higher education. That is usually not the case for adult learners. Finances can get in the way of adult learners pursuing their dream of earning a degree.
- v. *Contradiction:* Some of the things adult learners will learn in their education may be different than what they thought they knew or learned before. This can mean a shift in a person's worldview, opinions, and knowledge, which requires mental flexibility.
- vi. *Lack of Support:* It can be overwhelming to try and tackle earning a degree without a strong support system. Adult students may find that they don't have the emotional or social support they need in place to be able to tackle the difficulty of classes and learning.

There are ten simple principles of adult learning for future educators to keep in mind. All of these aspects are important when building curriculum and expectations for adult learners (WGU, 2020):

- i) *Self-Directing*: For many adults, self-directed learning happens naturally without anyone explaining it or suggesting it. Adult learners are more prone to plan, carry out, and evaluate their learning experiences without the help of others. When instructing adults, it's important for learners to set goals, determine their educational or training needs, and implement a plan to enhance their own learning.
- ii) *Learning by Doing*: Many adults prefer not only to read or hear about subjects but to actively participate in projects and to take actions related to their learning. Project-based curriculum utilizes real-world scenarios and creates projects for students that they could encounter in a job in the future. Many adult learners find that this kind of learning is hugely beneficial for them as they apply what they have been taught to their careers, giving them direct access to seeing what they can do with their knowledge.
- iii) *Relevance*: While some enjoy learning as an end in itself, adult learners are more likely to engage in learning that has direct relevance to their lives. For example, if they are taking a certification course to improve their chances of promotion on the job, then the course should immediately address their needs.
- vi) *Experience*: Adults are shaped by their experiences, and the best learning comes from making sense of those experiences. Adult learners can greatly benefit from finding ways to get hands-on learning. Internships, job shadowing opportunities, projects, and other experiential opportunities can help them get a firmer grasp of their learning and be more excited about how what they learn can be applied to their interests and careers.
- v) *Utilization of Senses*: Most adult learners don't thrive as well in a lecture-style environment. Due to the lack of brain plasticity in older learners, it's important to fully engage the senses when learning to successfully solidify new knowledge. Learning practices need to incorporate audio, visual, reading/writing, kinesthetic, independent, and group techniques.
- vi) *Repetition*: Repetition is essential for adult learning. If learners can practice new skills in a supportive environment, self-efficacy will develop to take those skills outside of the classroom. And the more they can practice a particular subject or skill, the better the chances are for mastery.
- vii) *Guiding their own Development*: Utilizing dilemmas and situations to challenge an adult learner's assumptions and principles helps them guide their own development. Adults can use critical thinking and questioning to evaluate their underlying beliefs and assumptions and learn from what they realize about themselves in the process.
- viii) *Thrive with Goal Setting*: Learners who have a specific career or personal goal in mind will have a better experience as they pursue their degree programs. For example, if a student wants to learn Spanish before a trip to

Mexico, they might have a specific goal to be conversational by a certain date. Adult learners need these goals because their learning is more in their own hands than younger learners.

- ix) *Learn differently than Children:* Children and adults are very different when it comes to how they learn, so different techniques must be used in order to make learning effective for adults. In addition to reading and memorizing, adult learners utilize their past life experiences and their current understanding of a subject as they learn. Also, adult learning needs to be problem-centered, making the impact more focused on current events or real life.
- x) *Require Ownership:* With a more nuanced and advanced hierarchy of needs, adult learners place more value on intrinsic motivation and personal ownership of their learning. It's important to give adults internal motivation by recognizing their success and promoting increased self-esteem and confidence.

In this Unit, keeping in view the above mentioned challenges and principles of adult learning, we will discuss Gestalt Theory of Learning as explained by Wolfgang Kohler, Kurt Koffka and Max Wertheimer, Piaget's Theory of Learning, Vygotsky's Theory of Learning, Bandura's Theory of Learning and Malcolm Knowles' Theory of adult learning.

Before you proceed further we advise you to read the glossary of terms (Section 17.13) given at the end of this unit. It will enable you to have a full grasp of what you read in the following sections.

17.2 LEARNING OBJECTIVES

After going through this Unit, we expect you to be able to:

- Explain the meaning and concept of adult learning and adult learning theory;
- Explore the Gestalt Theory of Learning and how Max Wertheimer, Kurt Koffka, and Wolfgang Kohler developed the Gestalt Theory on a strong basis; and
- Discuss other theories of learning such as Piaget's Theory of Learning, Vygotsky's Theory of Learning, Bandura's Theory of Learning, and Malcolm Knowles' Theory.

17.3 GESTALT THEORY OF LEARNING

Learning theory describes how students receive, process, and retains knowledge during learning. Cognitive, emotional, and environmental influences, as well as prior experience, all play a part in how understanding, or a worldview, is acquired or changed and knowledge and skills retained. (Illeris, 2004). In simple terms, theories of learning are ideas about the ways students learn and retain information. These principles provide different frameworks that teachers can use to adapt to students' diverse learning styles and academic needs. In addition to helping students absorb the information being taught, learning theories can also help teachers manage students' behavior. This empowers educators to

create an atmosphere that's more inclusive and conducive to learning — a skill that's essential whether teaching online or in a traditional classroom setting.

There are significant differences between most theories of learning. However, what all of them share in common is that they seek to understand and explain the learning process so that educators can act accordingly, taking approaches to teaching that are appropriate, effective, and efficient (NU, 2023).

Max Wertheimer (1880–1943), Kurt Koffka (1886–1941), and Wolfgang Köhler (1887–1967) founded Gestalt psychology in the early 20th century.

Gestalt Psychology Principles

Gestalt psychology is a school of thought that looks at the human mind and behavior as a whole. When trying to make sense of the world around us, Gestalt psychology suggests that we do not simply focus on every small component. Instead, our minds tend to perceive objects as elements of more complex systems.

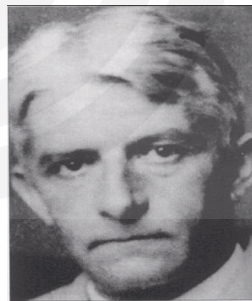
Gestalt meaning in psychology calls attention to the several ways the human brain perceives individual parts of a whole object compared to the object as a whole. The seven gestalt psychology principles are discussed below.

- i) *Principle of proximity:* This principle is established when we notice objects that are located close to each other. They tend to share a more direct relation between themselves when compared to objects that are placed far away from each other. This principle is well used in the marketing campaign of the Univer Company that uses the signature 'U' shaped logo which includes 25 different icons. We neglect these smaller components but perceive the logo as a whole.
- ii) *Principle of closure:* Our brain always tries to organize information rationally. Thus the priority of human minds lies in simplifying complex patterns and designs into simpler segments. This formulates the principle of closure. Even if we miss bits and pieces that are compulsory to construct a predictable pattern, our brain pictures them automatically. An example of Gestalt Psychology of this stature is observed when our brain perceives a triangle drawn with broken lines as a regular triangle version.
- iii) *Principle of similarity:* This principle comes into play when someone sees shapes or objects that are identical to one another. We tend to assume that these things must serve the same function. This behavior is used to categorize materials present in a group by representing them with distinct colors, clubbing, or sub-grouping techniques. An example in the real world can be taken from a person's manner of organizing his study table. He probably keeps his books on a separate shelf and notebooks inside the drawer as the two things serve separate functions.
- iv) *Principle of continuity:* This principle of Gestalt psychology explains the human mindset of believing things that are arranged in a continual line or curve are related to one another to form a compound. Music videos on YouTube are an ideal illustration of this principle. Our mind gets a soothing effect after perceiving the collective feeling of small video fragments with the song that keeps on progressing fast until the end.

- v) *Principle of perception:* This principle determines the base of our logical reasoning behind stating the components of a picture as the focal point and the background. When living and nonliving things are present in a single frame, our mind tries to create uncomplicated relationships between each of them depending on their size and position. Sometimes, we can be creative in using this principle to draw the attention of our target audience.
- vi) *Principle of organization:* This principle is composed of five sub-groups: uniform connectedness, common regions, synchrony, focal point, and parallelism. Uniform connectedness creates a correlation between objects that are attached. Common region gestalt psychology principles relate items that share a common space. Synchrony is established when objects move in the same direction instead of opposite paths. Parallelism connects parallel texts or images to create a complete sense.
- vii) *Principle of symmetry:* People assume that symmetrical elements club together to build a common structure. The arrangement of symmetrical objects helps to create a sense of order and formal organization. Examples of this visual display can be noticed in colleges, schools, hospitals, and government buildings that are familiar to a formal environment.

Gestalt psychology teaches us that the entire component is more significant than the single units of that component in terms of the perception of human minds. This concept surfaced in the psychology field in the early 20th century. Gestalt meaning in psychology refers to the shape of something. In the modern-day world, gestalt therapy is used to execute numerous marketing campaigns to attract the target audience.

17.3.1 Wolfgang Kohler (1887-1967)



**Wolfgang Kohler
(1887-1967)**

Wolfgang Kohler was a German psychologist and phenomenologist who, like Max Wertheimer and Kurt Koffka, contributed to the creation of Gestalt psychology. Kohler's Gestalt psychology is a type of learning theory that suggests that the mind perceives sections of information as a whole. Furthermore, the problem-solving theory explores the ways in which animals use insight and purpose, rather than trial-and-error to learn. He adapted these findings in his insight learning theory, which suggests that people use their insight to find solutions to problems.

Insight learning is the sudden understanding of the relation between a problem and a solution. By learning through insight, the correct solution not only appears seemingly out of nowhere but also repeated readily in subsequent presentations of that problem. Once solved, the problem, no matter how many times repeated, will no longer be a problem (Sujan, 2021).

In insight learning, the perceptual stimuli are restructured in different ways and rely on cognitive processes. Occasionally insight comes dramatically and makes the problem solution suddenly clear.

Kohler, first of all, used this term (insight) to describe the learning of his apes. In the theory of Learning by insight, Kohler did his experiment on chimpanzees and his name is Sultan. Kohler conducted many experiments on chimpanzees and brought out a book 'Mentality of Apes' in 1925 which was the result of his experiments, conducted during the period 1913-17 on the Canary Island.

Experiment of Kohler Learning by Insight Theory

This experiment shows learning by insight. Some of them are given below with pictures (spcialeducationnotes).

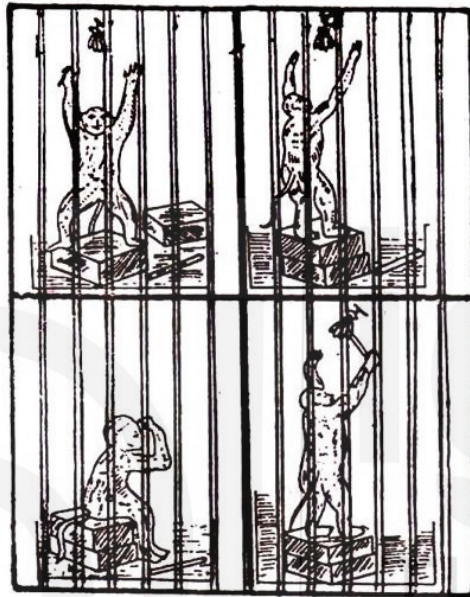


Figure 17.1: Kohler's experiment on chimpanzee

- ❖ In one experiment, Kohler put a chimpanzee (Sultan) inside a cage and a banana was hung from the roof of the cage. A box was placed inside the cage. The Sultan tried to reach the banana by jumping but could not succeed. Suddenly, he got an idea and used the box as a jumping platform by placing it just below the hanging banana.
- ❖ In another experiment, Kohler made this problem more difficult. Now it requires two or three boxes to reach the banana. Moreover, the placing of one box over the other required different specific arrangements.
- ❖ In another experiment, the banana was placed outside the cage of the chimpanzee. Two sticks, one larger than the others, were placed inside the cage. One was hollow at one end so that the other stick could be thrust into it to form a longer stick. The banana was so kept that it could not be picked up by one of the sticks.
- ❖ The chimpanzee first tried these sticks one after another but failed. Suddenly, he got a bright idea. The animal joined the two sticks together and reached the banana. In these experiments, Kohler used many different chimpanzees. Sultan, who was the most intelligent of Kohler's chimpanzees, could solve all the problems. Other chimpanzees could solve the problems only when they saw the sultan solving them.

- ❖ With such experiments, Kohler concluded that in the solution of problems, his apes did not resort to blind trial and error mechanisms. They could solve their problem intelligently. Kohler used the term “Insight” to describe the learning of his apes (Hoque, 2022).

Insight involves the following criteria:

- The situation as a whole is perceived by the learner;
- The learner tries to see and judge the relationship between various factors involved in the situation; and
- As a result, the learner is helped in the sudden grasping of the solution of the problem.

Gestalt’s Insight learning theory

Gestalt psychologists also did other experiments they found that at some stage there is a new organization of the perceptual field resulting in the sudden discovery of the solution. Therefore, learning according to Gestalt’s is restructuring the field of perception and insight. As a whole, insight depends upon the factors like experience, intelligence, learning situation, initial efforts, repetition and generalization.

- *Experience:* Past experience helps in the insightful solution of the problems. A child cannot solve the problems of modern mathematics unless he is well-acquainted with its symbolic language.
- *Intelligence:* Insightful solution depends upon the basic intelligence of the learner. The more intelligent an individual is, the greater will be his insight.
- *Learning Situation:* How insightfully the organism will react depends upon the situation in which it has to act. Some situations are more favourable than others for an insightful solution. As a common observation, insight occurs when the learning situation is so arranged that all the necessary aspects are open for observation.
- *Initial efforts:* Insightful learning has to pass through the process of trial and error. But this stage does not last long. These initial efforts are in the form of a simple trial and error mechanism.
- *Repetition and Generalization:* After having an insightful solution to a particular type of problem, the organism tries to repeat it in another situation, demanding a similar type of solution. The way found in one situation helps him to react insightfully in the other identical situation.

Application of the Gestalt theory of learning in classroom teaching

These are implications of the Gestalt principles in the teaching and learning process (Hoque, 2022).

- Law of Proximity:* Related concepts or lessons should be taught aligned or closely to each other. This is the reason why subtraction is taught after addition, multiplication after subtraction then division after multiplication. Imagine teaching addition then jumping directly to polygons.

- ii) *Law of Similarity*: Similar lessons or contents should be grouped together to make learners develop understanding more efficiently and effectively. This is the reason why lessons are grouped into units: part I is for the human body, part II is for energy and motion, so on and so forth.
- iii) *Law of Closure*: When a concept or topic is incomplete thus isn't "closed", incomplete information may make learners want to discover what's missing, rather than concentrating on the given instruction. If students find a math algorithm confusing because a certain question is left unanswered or a step isn't clear, they will tend to concentrate on that confused part of the process rather than the total process as a whole. This is why students get "lost". Thus, make the lesson complete. Present it clearly, simply and always be ready for students' clarifications.
- iv) *Law of Good Continuation*: Lessons should be presented in such a way that learners will see these as connected and continuous. Now you know why we have the "Review" part of the lesson plan. This way, students will realize that their new lesson actually has continuity and is related to what they already know or to the previous lesson.
- v) *Law of Pragnanz*: Pragnanz states that when things are grasped as whole, the minimal amount of energy is exerted in thinking. In short, make your lesson holistic, complete and most of all simple.
- vi) *Law of Figure/Ground*: For a figure to be perceived, it must stand out from the background. Emphasis should be done on important aspects of the lesson. For example, teachers should vary the tone of their voice or write boldly or underline the important key words of the lesson.

17.3.2 Kurt Koffka (1886 - 1941)



Kurt Koffka
(1886-1941)

Koffka believed that most of early learning is what he referred to as, "sensorimotor learning," which is a type of learning which occurs after a consequence. For example, a child who touches a hot stove will learn not to touch it again. Koffka also believed that a lot of learning occurs by imitation, though he argued that it is not important to understand how imitation works, but rather to acknowledge that it is a natural occurrence. According to Koffka, the highest type of learning is ideational learning, which makes use of language. Koffka notes

that an important time in children's development is when they understand that objects have names (King, 2009).

Koffka's Major Contribution to Psychology:

- ❖ Koffka's major contributions to psychology include his work on the perception of objects, which he believed was based on the Gestalt principle of "figure-ground" organization.
- ❖ He also developed the concept of "functional fixedness," which refers to the tendency of people to think about objects only in terms of their conventional uses, and to overlook their potential for other uses.

- ❖ He believed that the study of perception and cognition needed to focus on the whole, rather than just the sum of its parts. He argued that the mind actively organizes sensory information into meaningful patterns and holes, which he referred to as “Gestalten.” This led to the development of the Gestalt theory of perception, which emphasizes the importance of understanding the whole picture, rather than just its individual parts.

Kurt Koffka was a prominent figure in the development of the Gestalt theory of psychology, which emphasizes the importance of understanding the whole picture or “Gestalt” rather than just its individual parts. Koffka’s theory of perception focused on the Gestalt principles of organization, which include:

- Figure-ground organization:* Objects are perceived as being distinct from their background.
- Proximity:* Objects that are close to each other are perceived as a group.
- Similarity:* Objects that are similar to each other are perceived as a group.
- Closure:* The mind completes incomplete patterns to create a coherent whole.
- Continuity:* The mind perceives smooth, continuous lines and patterns rather than disjointed ones.

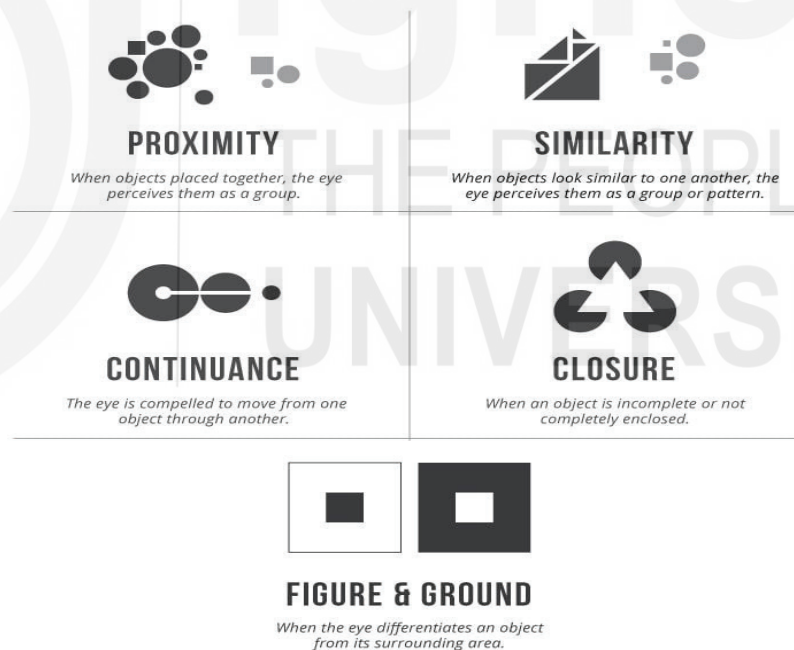
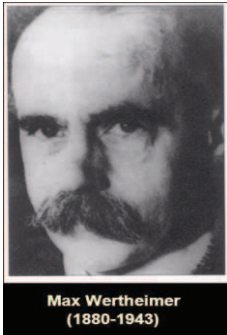


Figure 17.2: Gestalt psychology

Source: <https://www.simplypsychology.org/what-is-gestalt-psychology.html>

Koffka’s theory of functional fixedness focused on the idea that people tend to think about objects only in terms of their conventional uses, and overlook their potential for other uses. This idea has implications for problem-solving and creativity, as it suggests that people need to think outside the box and consider alternative uses for objects in order to come up with innovative solutions to problems (Jain, 2023).

17.3.3 Max Wertheimer (1880 – 1943)



Max Wertheimer was one of the three founders of Gestalt psychology, along with Kurt Koffka and Wolfgang Kohler. He is known for his book, *Productive Thinking*, and for conceiving the phi phenomenon as part of his work in Gestalt psychology. Gestalt theory emphasized higher-order cognitive processes in the midst of behaviorism. The focus of Gestalt theory was the idea of “grouping”, i.e., characteristics of stimuli that causes us to structure or interpret a visual field or problem in a certain way (Wertheimer, 1922). The primary factors that determine

grouping were: (1) *proximity* – elements tend to be grouped together according to their nearness, (2) *similarity* – items similar in some respect tend to be grouped together, (3) *closure* – items are grouped together if they tend to complete some entity, and (4) *simplicity* – items will be organized into simple figures according to symmetry, regularity, and smoothness. These factors were called the laws of organization and were explained in the context of perception and problem-solving.

“Man is not only part of a field, but a part and member of his group. When people are together, as when they are at work, then the most unnatural behavior, which only appears in late stages or abnormal cases, would be to behave as separate Egos. Under normal circumstances they work in common, each a meaningfully functioning part of the whole.” – Max Wertheimer (1924 cited in Ansbacher, 1954, p. 11)

The Phi Phenomenon: Max Wertheimer began the formal founding of Gestalt psychology in 1910 as he began experiments on the phi phenomenon. He published these experiments in a paper titled “Experimental Studies on the Perception of Movement”. The phi phenomenon is apparent movement caused by alternating light positions. Wertheimer illustrated this phenomenon on an apparatus he built that utilized two discrete lights on different locations. Although the lights are stationary, flashing the lights at succeeding time intervals causes the retina to perceive the light as moving. Wertheimer worked with partners Koffka and Köhler to collect data which ultimately led to their launch of the Gestalt movement. Their findings further demonstrated that the quality of the whole is different from the sum of the parts. The explanation of the phi phenomena was that movement is perceived because the eye itself moves in response to the successive flashes of light. The movement an observer experiences is based on feedback from the moving eye (Tietz, 2016).



Figure 17.3: Example of the Phi Phenomenon

Wertheimer was especially concerned with problem-solving. Wertheimer (1959) provides a Gestalt interpretation of problem-solving episodes of famous scientists (e.g. Galileo, Einstein) as well as children presented with mathematical problems. The essence of successful problem-solving behavior according to Wertheimer is being able to see the overall structure of the problem: “A certain region in the field becomes crucial, is focused; but it does not become isolated. A new, deeper structural view of the situation develops, involving changes in functional meaning, the grouping, etc. of the items. Directed by what is required by the structure of a situation for a crucial region, one is led to a reasonable prediction, which like the other parts of the structure, calls for verification, direct or indirect. Two directions are involved: getting a whole consistent picture, and seeing what the structure of the whole requires for the parts.” (Wertheimer, 1923).

Gestalt theory applies to all aspects of human learning, although it applies most directly to perception and problem-solving. The work of Gibson was strongly influenced by Gestalt theory.

The classic example of Gestalt principles provided by Wertheimer is children finding the area of parallelograms. As long as the parallelograms are regular figures, a standard procedure can be applied (making lines perpendicular from the corners of the base). However, if a parallelogram with a novel shape or orientation is provided, the standard procedure will not work and children are forced to solve the problem by understanding the true structure of a parallelogram (i.e., the figure can be bisected anywhere if the ends are joined). (Wertheimer, 1959).

The main principles lying with the Gestalt theory are given below:

- ❖ The learner should be encouraged to discover the underlying nature of a topic or problem (i.e. the relationship among the elements).
- ❖ Gaps, incongruities, or disturbances are an important stimulus for learning
- ❖ Instruction should be based upon the laws of organization: proximity, closure, similarity and simplicity (Culatta, 2023).

Check Your Progress

- Notes:**
- a) Write the answer in the space given below the question.
 - b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

1. What is Gestalt theory of learning?

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17.4 PIAGET'S THEORY OF LEARNING

Piaget learning theory was first developed by Jean Piaget (1896-1980) – a psychologist and epistemologist specializing in child development who gave his name to his research. Today we can understand and appreciate children's cognitive development, thanks to Piaget learning theory – one of the first theories to map out how children's cognitive skills develop and change as they grow (Thinkific, 2023).

Cognition refers to thinking and memory processes, and cognitive development refers to long-term changes in these processes. One of the most widely known perspectives about cognitive development is the cognitive stage theory of a Swiss psychologist named Jean Piaget. Piaget created and studied an account of how children and youth gradually become able to think logically and scientifically.

After observing children closely, Piaget proposed that cognition developed through distinct stages from birth through the end of adolescence. By “stages” he meant a sequence of thinking patterns with four key features:

- a) The stages always happen in the same order.
- b) No stage is ever skipped.
- c) Each stage is a significant transformation of the stage before it.
- d) Each later stage incorporated the earlier stages into itself.

Basically, this is a “staircase” model of development. Piaget proposed four major stages of cognitive development, and called them (1) sensori-motor intelligence, (2) preoperational thinking, (3) concrete operational thinking, and (4) formal operational thinking. Each stage is correlated with an age period of childhood, but only approximately (Open Library, 2017).

- 1) Sensori-motor (birth to 2 years): understanding of the world is limited to visual and tactile interaction with the world. Imitation provides a foundation for thinking in visual images.
- 2) Pre-operational (2 to 7 years): thinking involves visual images about sensori-motor actions and experiences, and symbolic thought. Thought is focused on the particular without abstracting general principles, and relies on perception and intuition.
- 3) Concrete operational (7-8 to 11-12 years): cognitive structures have developed sufficiently to be used as logical systems (termed “operations”) and used across contexts rather than being specific to a certain type of problem in a particular context. At the operational stage of thought, children understand notions of reversibility (subtraction can cancel addition, a clay ball can be transformed into a sausage and back again) and associativity (an ability to identify several ways to pursue an objective, such as a range of ways to solve 25×25).
- 4) Formal operational (11-12 to 16-17 years): abstract and decontextualized reasoning using verbal propositions, premises, ideas and concepts is possible without access to concrete objects. Students can hypothesise,

solve problem, note relations between ideas and things, hold a number of ideas in mind, and develop and relate concepts. (The Education Hub, 2023).

Piaget believed individuals must adapt to their environment. He described two processes for adaptation which is an organism's ability to fit in with its environment, assimilation and accommodation. Assimilation is the process of using or transforming the environment so that it can be placed in preexisting cognitive structures. Accommodation is the process of changing cognitive structures in order to accept something from the environment. It changes the schema, so it can increase its efficiency. According to Piaget, the developmental ideal is a balance between assimilation and accommodation, which is also known as equilibrium. Piaget believed when a balance between children's mental schemas, which is a "...mental image produced in response to a stimulus that becomes a framework or basis for analyzing or responding to other related stimuli" and the external world has been reached, children are in a comfortable state of equilibrium (Agnes, 1999). Thus, students have already mastered what has been taught and have confidence in their abilities to do or perform the assigned task. During this time, students are not in the process of acquiring new information or learning. Disequilibrium occurs when children come across new environmental phenomena; these new environmental phenomena, however, often do not fit exactly into children's mental schemas. Students are drawn towards disequilibrium because of their curiosity. Teachers should use disequilibrium to motivate their students because it allows for changes in students' mental structures.

Piaget's theory has not been universally accepted by all. Some researchers believe Piaget underestimated children's knowledge. Complex skills can be acquired easily once simpler prerequisite skills have been learned. Some have noted that the stages in his theory have inconsistencies. He ignored social and cultural groups in his research. Piaget's tasks underestimated the impact of culture by being culturally biased. And, formal operational thinking is not universal (Blake, 2008).

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

2. Why is Piaget's theory important in education?

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17.5 VYGOTSKY'S THEORY OF LEARNING

Lev Vygotsky (1896-1934), a Russian psychologist and the founder of sociocultural theory, believed that human development and learning originate in social and cultural interaction. In other words, the ways people interact with others and the culture in which they live shape their mental abilities.

Vygotsky's theory suggests that each stage builds upon the previous ones, and he believed that adults learn from observing children. He also believed that children learn through play, and that play is a form of sociocultural learning. His work has become an integral part of contemporary psychology. His theory revolves around the idea that social interaction is central to learning. This means the assumption must be made that all societies are the same, which is incorrect. He emphasized the concept of instructional scaffolding, which allows the learned to build connections based on social interactions.

A simple and concrete example of this is when we help children learn to ride a bicycle - first with training wheels, then as we hold the bicycle steady for them (with some verbal coaching as well), and finally without any help, as children ride independently.

Vygotsky claimed that we are born with four 'elementary mental functions': Attention, Sensation, Perception, and Memory. It is our social and cultural environment that allows us to use these elementary skills to develop and finally gain 'higher mental functions.' He believed everything is learned on two levels. First, through interaction with others, and then integrated into the individual's mental structure. A second aspect of Vygotsky's theory is the idea that the potential for cognitive development is limited to a "zone of proximal development" (ZPD).

Vygotsky developed concepts of cognitive learning zones. The Zone of Actual Development (ZAD) occurs when students can complete tasks on their own. There is nothing new for the students to learn. In this zone, the students are independent. The Zone of Proximal Development (ZPD) requires adults or peers to provide assistance to students, who cannot complete the assigned task without help. The ZPD is the gap between what learners are able to do independently, and what they may need as instructional help in accomplishing (Daniels, 2001). Instruction and learning occurs in the ZPD. When students are in this zone, they can be successful with instructional help.

Vygotsky explores three different types of speech: social, private, and internal. He refers to social speech as the instructions given by adults to children. Private speech allows children to process what the adult has said and try to apply it to similar situations. For example, a teacher tells the class to keep their hands to themselves. Self-control is an example of private speech because children are using for themselves the same, "language that adults use to regulate behavior" (Wilhelm, 2001). So, since their teacher has informed them to keep their hands to themselves, the students do not hit or punch each other in class. Both teacher and student share the responsibility of developing students' private speech. Internal or inner speech takes place "as the student's silent, abbreviated dialogue that she carries on with self that is the essence of conscious mental activity"

(Wilhelm, 2001). In the earlier example, these students must internalize the consequences of hitting another student, which could lead to a disciplinary referral. Thought is the result of social speech becoming private speech that has been internalized. When the cultural signs become internalized, humans acquire the capacity for higher order thinking (Huiitt, 2000).

There are fundamental differences between Piaget and Vygotsky. Piaget believed the individual is primary in the learning process, while Vygotsky believed that social life is primary in the learning process. As Dimitriadis and Kamberelis (2006) note, “Piaget grounded his developmental learning theory in the individual learner and positioned children as active, intelligent, creative constructors of their own knowledge structures” (p.170). In contrast, Vygotsky’s main construct of the Zone of Proximal Development (ZPD) learning “depends upon outside social forces as much as inner resources” (Palmer, 2001). Vygotsky believed that if students were not improving academically, their instruction was inappropriate. This belief contradicts Piaget’s reasoning that the students may have “plateaued” in a specific developmental stage.

Developmental growth is another area of difference. Piaget’s theory focuses on fixed stages of development, whereas Vygotsky’s theory notes a more fluid, on-going repertoire of development (Blake, 2008).

Check Your Progress

- Notes:**
- a) Write the answer in the space given below the question.
 - b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

3. How is Vygotsky’s theory used in the classroom?

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17.6 BANDURA’S THEORY OF LEARNING

Psychologist Albert Bandura’s social learning theory suggests that observation and modeling play a primary role in how and why people learn. Bandura’s theory goes beyond the perception of learning being the result of direct experience with the environment. Learning, according to Bandura, can occur simply by observing others’ behaviour. He explains in his book *Social Learning Theory*, “most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions, this coded information serves as a guide for action.” (Berkeley, 2023).

It’s no surprise that social interaction plays a role in learning. Albert Bandura’s *Social Learning Theory* states that people learn behavior from their environment through observation, imitation, and modeling (Robcondon, 2022).

Albert Bandura (1925-2021) stressed that individuals may simply learn from the behavior rather than imitate it. Observational learning is a major component of Bandura's social learning theory. He also emphasized that four conditions were necessary in any form of observing and modeling behavior: attention, retention, reproduction, and motivation (Stone, 2017).



Figure 17.6: Illustration of Bandura's Social Theory of Learning

Social Learning Theory, proposed by Bandura, posits that people learn through observing, imitating, and modeling others' behavior. This theory posits that we can acquire new behaviors and knowledge by watching others, a process known as vicarious learning. He emphasized the importance of cognitive processes in learning, which set his theory apart from traditional behaviorism. He proposed that individuals have beliefs and expectations that influence their actions and can think about the links between their behavior and its consequences.

For example, if a child observes their parents going to work every day, volunteering at a local community center, and helping their significant other with tasks around the home, the child is likely to mimic those behaviors. If rewarded, these behaviors become reinforced and most likely repeated by the individual.

Social learning theory helps us understand how our environment and the people around us shape our behavior. It helps explain how individuals develop new skills and behaviors by paying attention to the behavior of others and then trying to reproduce that behavior themselves. It is an important theory for psychologists, educators, and anyone interested in human behavior and development (Mcleod, 2023).

The Four Phases of Social Learning

According to the social learning theory, the learning process is divided into four stages: attention, retention, reproduction and motivation. Each of them plays an important role in the learning process. So, let's take a closer look at each of four stages (Ritchie, 2022).

1. *Attention:* People are exposed to much different behaviour over the course of their lives and choose a role-model that grabs their attention. The role-model is the person that is going to be observed and imitated and could

be a parent, teacher or peer. They are the ones that hold the knowledge and experience that the learner wants and, therefore, will be the person that transmits the learning experience. If the role-model does not hold the learners attention, the flow of information is interrupted and learning will not take place.

2. *Retention*: Once their attention has been caught, the learner must be able to retain and store the information that has been transmitted to them. If they can't do this, only a limited amount of learning will take place.
3. *Reproduction*: Simply storing this information successfully does not necessarily imply that the learner knows how to use it correctly. It is the process of imitation that helps them reproduce it. Imitation also can be limited by many factors such as the physical or the mental state of the learner.
4. *Motivation*: In the last phase, rewards come into play. Here, we are referring to prizes or punishment based on the success or failure of the learning process. If the rewards are seen as being adequate compensation for the effort of learning, then the process will be more successful. If not, the learner may fail completely in this last phase. In essence, this is the mechanism through which all humans learn. Children might be rewarded with praise or sweets, while adults may be thinking about promotions, or enhanced relationships.

The main criticism of all Bandura's studies is that they lack validity. The children were put in a strange situation, exposed to some unusual adult behaviour and given toys to play with which encouraged them to act unnaturally.

Check Your Progress

- Notes:**
- a) Write the answer in the space given below the question.
 - b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

4. What is Albert Bandura's learning theory?

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17.7 MALCOLM KNOWLES' THEORY

In the previous sections, i.e. 17.3 to 17.6 we have discussed Gestalt Theory of Learning (propounded by Wolfgang Kohler, Kurt Koffka and Max Wertheimer), Piaget's Theory of Learning, Vygotsky's Theory of Learning and Bandura's

Theory of Learning which looked at learning as it takes place in the individual from different perspectives. However, they do not pertain to how adults learn in particular. This section (i.e. 17.7) specially focuses on adult learning theory.

In the 1980s, educator Malcolm Knowles popularized the concept of andragogy, the practice of teaching adults, and contrasted it with pedagogy, the practice of teaching children. The andragogy theory states that adult learners are vastly different from children in terms of their motivation, the relevancy of the education to their lives, and how they apply that education. In practice, adult learning focuses on giving adults an understanding of why they are doing something, lots of hands-on experiences, and less instruction so that they can tackle things themselves. Many adult learning theories developed out of Knowles' work in the following decades, all with the specific goal to enhance teaching methods and experiences for adult learners (WGU, 2020).

History of Adult Learning Theory

American adult educator Malcolm Knowles initially developed the adult learning theory in 1968, with six key points or assumptions. The assumptions are as follows (Vipond, 2023):

- i. *Readiness to Learn* – Adults who are ready to learn are usually spurred by a specific reason, such as self-development and growth related to their work or career path.
- ii. *Orientation of Learning* – Adults are more prone to learning when it is applicable to everyday lives instead of general learning about certain subjects that are unrelated to ~~our~~ their lives. In general, adults will want to learn practical skills that will make their lives and work more efficient.
- iii. *Motivation to Learn* – Adults require their own motivations and reasons to learn new things. As for children, the reason for learning is simply because they are directed to learn; however, adults need to develop their own motivation to learn.
- iv. *Reason to Learn* – Adults require a strong reason to learn, such as a problem that they need to solve and an immediate application of new knowledge.
- v. *Self-concept* – Adults' learning is much more self-directed and independent as they mature. It allows adults to decide when they want to learn, what they want to learn, and how they want to learn. Such an assumption shows that educators need to develop a plethora of choices for adult learners, allowing them to design their own learning environment.
- vi. *Experience* – Adult learning, in contrast to children, includes a significant amount of previous life experiences to rely upon to assist with new learning experiences. The previous experiences can bring a unique perspective that fosters discussions and are valuable learning resources. However, they may also result in some biases and misinformation.

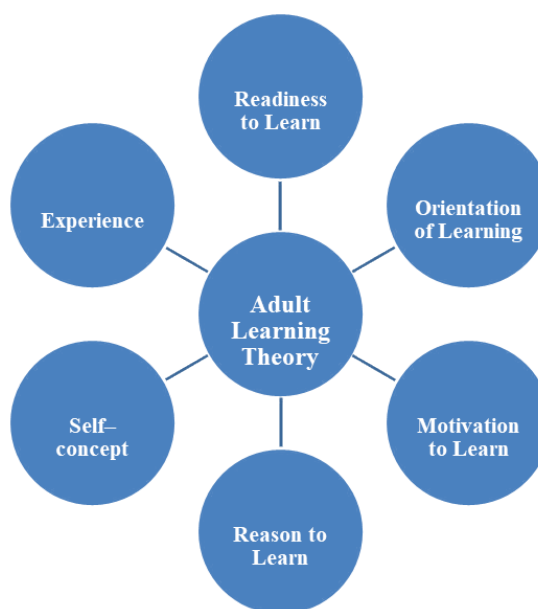


Figure 17.4: Key Assumptions of Adult Learning Theory

Understanding Adult Learning Theory

Adult learning theory is also known as andragogy. As mentioned above, Malcolm Knowles developed the theory based upon the six assumptions of adult learners. It is based upon the concept that adults will usually choose what they want to learn, where they want to learn, and how they want to learn. A key distinction between adult learning and children's learning is that, in the former there is more autonomy over their learning.

Adult learning theory also places importance on the ability to share life experiences as adults with each other, which can enhance the overall learning experience. Therefore, other adult experiences can be used as resources to learn. Furthermore, adults will base their learning on situations that arise in their life, which they may require new learning in order to deal with such situations (Vipond, 2023).

Practical Applications

As adults progress through life and develop skills and their career, understanding adult learning theory is crucial in order to develop training programs for adults. The training programs are important for employees who are learning new skills and job functions. They are also essential for customers who may be learning to use a new product or new technologies (Vipond, 2023).

To apply adult learning theory, there are a few steps that should be loosely followed, including:

- a. Analyzing learning with the theory in mind to create a learning process and overall framework for training.
- b. Fostering collaboration within the learning process, which gives an opportunity for adult learners to benefit from each others' life experiences.
- c. Creating a self-directed learning experience where the learners are able to control when, where, and how their learning is conducted. New technologies

have made this self-directed learning much easier through e-learning.

- d. Deriving examples from real-world cases. It allows the trainees to see the application of what they are learning.
- e. Allowing learners to solve problem and figure out solutions on their own. It fosters creativity and critical thinking at a deeper level.
- f. Allowing learners to experiment and test different things is important to training, as trial and error, at times if not all times, is important for adult learning.

Importance of Adult Learning Theory

- i. Understanding adult learning theory is important in our ever-changing society. New technological developments, including artificial intelligence and machine learning, will reshape both the job market and the retail market.
- ii. Effective adult learning practices can help the transition and ensure that the adults of tomorrow are well-equipped to handle the resulting changes.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

5. How do you summarise Malcolm Knowles’ andragogy?

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17.8 LET US SUM UP

Adult learning or the act of pursuing one’s own education as an adult can be done in a formal setting such as higher education, a trade school, or an apprenticeship. It can also refer to an adult simply learning about a new skill or a topic independently. Adult learners are result-oriented. They need to know that the material is relevant to their goals. They prefer the practical to the theoretical, and want to be able to apply what they learn immediately. Adult learners are more self-directed. Malcolm Knowles propounded the theory of adult learning, and is called the founder of andragogy.

On the other hand, the Gestalt theory of learning is the concept that a deeper level of understanding or learning can come from critically thinking about the whole picture and how the summation of the parts that create the whole interact. An example of Gestalt psychology in everyday life is in the way people complete jigsaw puzzles. Rather than looking at each piece as an individual unit, they form meaningful relationships between the pieces to see the big picture more

quickly and efficiently. Max Wertheimer along with Kurt Koffka and Wolfgang Kohler developed the gestalt theory of learning in 20th century. Piaget's theory of cognitive development, Vygotsky's sociocultural theory, and Bandura's social learning theory contributed a lot in developing adult learning theory. We have discussed all these in this unit.

17.9 ANSWERS TO 'CHECK YOUR PROGRESS' QUESTIONS

1. Gestalt Theory is all about the notion of summation of parts and how they interact, or the whole of something is more significant than the individual pieces. This theory emphasizes that the individual parts that make up the whole cannot be individualistically used to completely describe the whole.
2. By using Piaget's theory in the classroom, teachers and students benefit in several ways. Teachers develop a better understanding of their students' thinking. They can also align their teaching strategies with their students' cognitive level (e.g. motivational set, modeling, and assignments).
3. Vygotsky's theory promotes the belief, "What is learned must be taught". Teachers should be explaining, modeling, and using guided practice in the classroom. By modeling what they want their students to do, students will be better able to work through their assigned tasks.
4. Social learning theory, proposed by Albert Bandura, emphasizes the importance of observing, modeling, and imitating the behaviors, attitudes, and emotional reactions of others. Social learning theory (SLT) considers how both environmental and cognitive factors interact to influence human learning and behavior.
5. Andragogy is built on the premise that adults are more experienced, self-directed and motivated to learn than children, and that they need to be given the opportunity to learn in ways that are relevant to their lives.

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Suggested Readings

Adult Learning Theory

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17.11 UNIT-END EXERCISES

In your own interest, you may prepare the answers to the following questions which may be useful as a part of your preparation for your term-end examinations.

- 1) What is adult learning called?
- 2) Who is the father of adult learning theory?
- 3) What is the origin of adult learning theory?
- 4) What is the basic idea of Gestalt theory?
- 5) Who is the founder of Gestalt theory?
- 6) Where can we apply Gestalt theory?
- 7) Discuss in brief the Kohler's theory of learning.
- 8) Explain the works of Kurt Koffka in developing the theory of learning.
- 9) Write the contribution of Max Wertheimer in developing and shaping the Gestalt theory of learning.
- 10) Make a comparative study between Piaget's Theory of Learning, Vygotsky's Theory of Learning, and Bandura's Theory of Learning.
- 11) Discuss the adult learning theory developed by Malcolm Knowles.

17.12 UNIT-END ACTIVITIES

If you like to further enhance your interest, you may attempt to perform the following activity.

1. Draw the experimental results of Max Wertheimer, Kurt Koffka, and Kurt Koffka. Find the similarities and dissimilarities of their experimental results.
2. Talk to few interested adults and apply Malcolm Knowles's theory of adult learning on them. Write down the results what you will achieve from this experiment.
3. Apply the pedagogy and andragogy method on child learners and adult learners respectively. From practical experiences, make a comparative study between pedagogy and andragogy.

17.13 GLOSSARY OF TERMS

Adult Education: According to Encyclopedia Americana (Vol. 1), adult education includes all experiences that help mature men and women to acquire new knowledge, understanding, skills, attitudes, interests or values. Adult education does not mean only literacy; it also means the awareness about their surroundings, problems, rights and duties. It is non-formal and meant for adults in the age group 15 and above. It is lifelong continuing education and life oriented.

It aims at bringing about a positive and a definite change in the knowledge skill and attitude of the people. It is need based and dynamic in nature. It emphasizes more on experiential learning and is multi- disciplinary in nature. The concept of adult education has now emerged from mere adult literacy to 'man making' where the emphasis is not only on physical, intellectual, social, economic and aesthetic aspects but also on moral and spiritual aspects in order to make the individual educated and cultured in the true sense.

Adult Learning: Adult learning is a process of adults gaining knowledge, skills, and competence. It is defined as the practice of teaching and educating adults, theory and study of adults learning, or pedagogical process.

Adult Learning Theory: It is the concept of learning in adults and how it differs from that of children's learning patterns. The theory is based on the idea that adult learning is highly distinct from the learning that humans do as children. It also emphasizes the determination of suitable learning techniques for adults. (CFI, 2023)

Andragogy: According to Oxford Dictionary, andragogy is the method and practice of teaching adult learners Typically, andragogy means the understanding of the science and practice of adult learning. This contrasts to pedagogy, which is the understanding of the science and practice of children learning.

Heutagogy: Heutagogy is the management of learning for self-managed learners. It is a student-centred instructional methodology that focuses on the development of autonomy, capacity, and capability.

Pedagogy: Pedagogy refers to the method and practices of a teacher. It's how they approach their teaching style, and relates to the different theories they use, how they give feedback, and the assessments they set. When people refer to the pedagogy of teaching, it means how the teacher delivers the curriculum to the class.

UNIT 18 METHODS OF TEACHING LITERACY TO ADULTS

Structure

- 18.1 Introduction
- 18.2 Learning Objectives
- 18.3 Synthetic (Traditional) Method
 - 18.3.1 Concept of Synthetic Method
 - 18.3.2 Process of Synthetic Method
 - 18.3.3 Types of Synthetic Method
 - 18.3.4 Merits and Demerits of Synthetic Method
- 18.4 Analytic Method
 - 18.4.1 Concept of Analytic Method
 - 18.4.2 Process of Analytic Method
 - 18.4.2 Types of Analytical Method
 - 18.4.3 Merits and Demerits of Analytic Method
- 18.5 Eclectic Method
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 - 18.5.2 Process of Eclectic Method
 - 18.5.3 Types of Eclectic Method
 - 18.5.4 Major Features and Characteristics of Eclectic Approach
 - 18.5.5 Advantages and Disadvantages of Eclectic approach
 - 18.5.6 Relative significance of Synthetic, Analytic and Eclectic methods
- 18.6 Let Us Sum Up
- 18.7 Answers to ‘Check Your Progress’ Questions
- 18.8 References and Suggested Readings
- 18.9 Unit-End Exercises
- 18.10 Unit-End Activities

18.1 INTRODUCTION

In Unit-16 of Block-4 of this Course (i.e. MAE-001), you have been acquainted with the concepts of Pedagogy, Andragogy and Heutagogy, and their comparison are presented. Having studied the unit, we expect that you have understood: the Traditional approach to learning, i.e., the Pedagogical Model and its basic assumptions; the New Approach to learning – the Andragogical Model, and its basic assumptions; and the Heutagogy – Management of learning for self-

managed learners. Further, in Unit-17 of Block-4 itself, you have studied about the 'Adult Learning Theory' which highlighted the Gestalt theory of learning, Piaget's Theory of learning, Vygotsky's Theory of learning, Bandura's Theory of Learning and Malcolm Knowles Theory of adult learning. Thus, you are well aware of the concepts of Pedagogy, Andragogy and Heutagogy, and different learning theories, which have their own implications for adult learning and education.

You are further aware that, in terms of age, maturity, understanding, knowledge, skills, experience, attitudes, independence, autonomy to learn or not, orientation and ability to learn, adults are quite different from children and, hence, they ought to be taught differently. It means, in the case illiterate (non-literate) adults in particular, same methods which are used for teaching literacy to children may not work equally well. In this Unit (i.e. Unit-18), we will therefore focus our discussion on different 'Methods of teaching literacy to adults', which include Synthetic, Analytic and Eclectic methods and their relevance to teaching adults in the non-formal settings. These methods of teaching literacy are sometimes like teaching the blind about the elephant –with parts and whole perspective, to make the concept clear. The use of modern innovative techniques is an essential requirement for language pedagogy. One single method cannot meet all the needs of learners in literacy teaching. The influence of social, cultural and technological development has not only transformed the world of pedagogy today in traditional classroom contexts but has also led majority of educational stakeholders to consider teaching-learning methods and practices in all other contexts by taking into account all the diversities. Thus, the purpose of this unit is to dwell into the different methods of teaching literacy to adults with special reference to the relative significance of Synthetic, Analytic and Eclectic methods.

18.2 LEARNING OBJECTIVES

After going through this Unit, we expect you to be able to:

- Develop the understanding of different methods of teaching literacy to adults;
- Illustrate the Synthetic, Analytic and Eclectic methods of teaching literacy to adults;
- Discuss in detail the different methods/models, types, features, characteristics and pre-requisites of Synthetic, Analytic and Eclectic methods of teaching literacy to adults;
- Analyze the merits and the demerits of Synthetic, Analytic and Eclectic methods of teaching literacy to adults; and
- Explain the relative significance of Synthetic, Analytic and Eclectic methods of teaching literacy to adults.

18.3 SYNTHETIC (TRADITIONAL) METHOD

In this section, we will focus on the concept, process, types, merits and demerits of synthetic method in the context of teaching literacy to adults.

18.3.1 Concept of Synthetic Method

The term 'Synthetic' is derived from the word 'synthesis' which means the opposite of analysis, and synthesis is complement of analysis. To synthesize is to combine the elements to produce something new. The term 'synthetic' refers to the mental process of combining the detailed elements of language (the sounds and the alphabet of the consonants and of vowels) into larger units (phonemes and words). In Synthetic method, we proceed 'from known to unknown'. In synthetic method, we proceed from simple (parts) to more complex (whole), from general to more specialized and from cause to consequence. The facts already known are applied to new situations so that the combination of known facts helps us to find new relationships and facts. Thus, this method starts with joining of letters or alphabets or their sounds in the beginning and then proceeds to make words and sentences. The synthetic method is the main method used in schools and also in a number of adult literacy classes. Although it is called 'traditional method', we can find a majority of literacy primers developed based on this method.

18.3.2 Process of Synthetic Method

In this method, to begin with, the alphabets are taught individually and then these are combined, orally and in writing, into syllables, words, phrases which then form sentences, paragraphs and stories. It begins with the recognition and drill of letters. It is because of this synthesis involved in the process this method is called 'Synthetic' method. This is the main teaching method used in the schools and adult literacy classes. A majority of literacy primers are developed based on this method. At different stages some innovations are also introduced.

Synthetic method can be schematically represented as follows (See Fig.18.1).

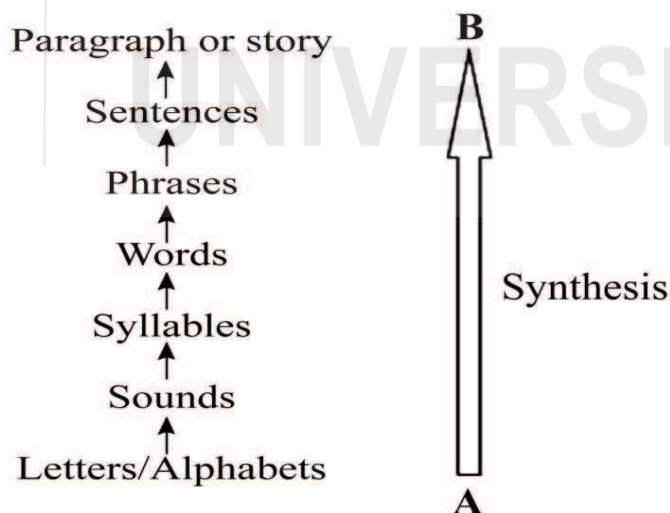


Fig. 18.1: Synthetic method of teaching literacy

18.3.3 Types of Synthetic Method

Following are the commonly used synthetic methods of teaching literacy to adults: 1) The Alphabet Method, 2) Traditional Method, 3) Alphabetic Method, 4) The Phonic Method, 5) The Phonetic Method, and 6) Sound Technique.

- 1) **Alphabet Method:** In this method, the alphabets are introduced as the basic units and then they are used in the meaningful words. Different sequences of alphabets and vowels are decided according to the teaching and learning convenience. Since an individual alphabet has no meaning of its own, it was often introduced in association of a word starting with that alphabet e.g. क of कमल (lotus flower); This made it easy to understand and remember the alphabet (Gode, n d1). This method is being used in formal education for centuries in India and abroad. That is the reason why it has been largely accepted as a right method of language learning for children. They have a faith in this method as generations of pupils have passed through this method for getting education.
- 2) **Traditional Method:** This method is based on grouping of the alphabets according to the similarity of their shapes and also associating them with illustrations or pictures. The picture of an object or a person is shown to the learners and they are asked to tell the name or title of the object. Then their attention is drawn to the sounds in the words that they have pronounced. The alphabets, representing these sounds are shown to them separately or in combination of other alphabets forming the word. Such pictures and words are printed or written distinctly to be visible to a group of learners. They are called flash cards, which are quite handy and in a sequence for their convenient use.

With a view to simplifying the traditional method, some persons have tried to bring some innovations and called as 'Improved Traditional Method'. For example, they select the most common alphabets or those which can be easily written or those which can be grouped together on the basis of similarity of their shapes and begin by teaching such alphabet(s) by shear drill, e.g. ग, ढ, ङ, and ञ as one group. Then the adults are taught to make words through combining of the alphabets already learnt (alphabets ग, ढ, ङ, and ञ in this case), sometimes even making meaningless words by such combinations.

- 3) **The Alphabetic Method:** In this method, alphabets having similar structure are grouped on each page of the primer for enabling the adults to learn to write the alphabets with ease. The beginning is made by teaching the name of letters. These alphabets are drilled through connected or unconnected words, phrases and sentences. Sometimes, the letters are introduced with the help of pictures or models to recognize the alphabets and words by the learners. Further, the vowels, signs and conjunct consonants are introduced to the learners through words, sentences or even small paragraphs (Gode, n d1). By proceeding in a sequence, the teacher can make reading a fun. For example, he has taught the word 'rat', now he can invite similar meaningful words. He can give the form of a group competition. The students will probably say bat, chat, fat, sat, mat, hat etc. This would not only enhance their vocabulary but also give them confidence (Rashid, 2015). These words, sentences or paragraphs used for the purpose are quite simple and relevant to the adults' life. This method was prominently used by the Mysore State Adult Education Council for Kannada Language.

There are two versions of alphabetic method. They are: i) Alphabetic-Picture Association method, and ii) the Awasthi Method.

- i) **Alphabetic-Picture Association Method:** This method is commonly known as 'Laubach' Method, which is named after its author Dr. Frank C. Laubach. The basic theory behind this method is that the learners are able to recall to memory the shape of an alphabet if it resembles the shape of an object whose name begins with the same alphabet. For instance, the picture of a 'tap' (तप) resembles the alphabet and so if the learners can recall to memory the picture of 'Nal' (नल), they could easily remember the shape of the alphabet 'Na' (न). However, such natural resemblances of alphabets and objects cannot be found for all the alphabets (Gode, n d1).
- ii) **The Awasthi Method:** This method devised by late Shri B. D. Awasthi of Lucknow. This method was an improved version of synthetic method. The only variation is that, this method was based on the modern principles of educational psychology in place of the traditional system of Synthetic Method. In this method, unlike Synthetic Method, all the alphabets and strokes were not memorized by drill from the beginning, but three alphabets were placed for recognition, alongside the learners were also made to write, so that the brain and hands work in co-ordination. By doing so, it becomes easier for the participants to memorize. Words are constructed by joining the few learnt alphabets and from the words, sentences are made, which are meaningful and is encouraging for participants.
- 4) **The Phonic Method:** The Phonic method is similar to the alphabetic method. In this method we teach the sounds of letters in the words we pronounce. The names of the alphabet are combination of different sounds. Therefore, by joining two or three letters, we pronounce a word which seems quit unnatural. For example, we take the word 'am'. It pronounces as 'm' but we say 'a' 'm' 'am'. In phonic method, we shall only utter the sounds of 'a' and 'm' and by joining these two sounds, we shall make the word 'am'. There is one spelling but different sounds. Some spellings can be pronounced in different ways. For example, the letter 'a' is pronounced differently in these words: ant - /a/; any - /e/; April - /ae/ want - /o/ (Gode, n d1).
- 5) **Phonetic Method:** In the words of regular spellings, there are letters and groups of letters called 'Phonograms' or 'Phonetic' elements. The teacher by inviting the attention of students to sounds of certain phonograms can teach reading easily. The phonetic method is an improved form of the phonic method. This method introduces a new system of symbols so that there is a separate letter for each separate sound. The sounds of ch, sh, are, the, ere etc. have their peculiar sounds. The students by combining these sounds can easily read the new words. No doubt that this method removes the hurdles of confusing spellings but as the books are written in ordinary letters therefore, this method is not much in use (Gode, n d1).
- 6) **Sound Technique:** In the 'Synthetic Method', the participants are familiarized with the sound of alphabets instead of their names. When the participants pronounce several alphabets together, then meaningful words are formed by joining of alphabets e.g. क, ल, म. When pronounced together make the word 'कलम'. The participants, thus, start learning words form letters and phrases and so on. The synthetic method focuses on putting together longer words by using phonic principles and applying

them in context. It uses lots of repetition and provides plenty of examples that help children and adults learn how to read common words quickly. In this method, teachers teach the basic concepts like writing letters and identifying sounds first, before moving onto reading and writing syllables. Adults learn by doing (Gode, n d1).

18.3.4 Merits and Demerits of Synthetic Method

Let us look at some of the merits and demerits of synthetic method.

Merits: Synthetic method is a short method; it saves the time and the labor of both teacher and the learner. It is a clear method in which we present the facts in a systematic way, and thus it suits majority of students. It can be applied to teaching of majority of topics in language and mathematics. It glorifies the memory of the learner. Accuracy is developed by this method. Most of the instructors/teachers primarily use this method in the literacy classes. The learners too regard the recognition of alphabets as the basis of language learning. In general, both teachers and learners perceive this method as easy to teach and learn.

Demerits: Though synthetic method is systematic in its nature, it is an un-psychological method. It is more likely to make the students passive and encourage cramming, and thus, there is a scope for forgetting. The recall of each step cannot be possible for every learner. There is no scope of discovery. Some other demerits of this method are given hereunder:

- The teaching through Alphabet Method initially tended to be meaningless and demoting as an individual alphabet doesn't have its own meaning as such.
- As the alphabets in themselves are meaningless, the learning exercise is quite likely to be boring as well as time consuming till the impact of this method is felt.
- Though the learners learn reading through this method, they tend to read mechanically without understanding.
- There is no scope for discussion; and creation of awareness.
- Learners are more likely to get many doubts and may not develop confidence in them.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

1. Explain in brief the synthetic method of literacy teaching.

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2. What are the different types of synthetic method of teaching literacy?
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18.4 ANALYTIC METHOD

Here, we will attempt to discuss the concept, process, types, merits and demerits of analytic method in the context of teaching literacy to adults.

18.4.1 Concept of Analytic Method

The word 'analytic' is derived from the word 'analysis' which means breaking down the words into their constituent elements or smallest units of sound – syllables and letters. The analytic method thus refers to the mental process of breaking down words into their smallest parts. It is believed that all the highest intellectual performance of the mind is 'analysis', which means to loosen or separate things that are together. In modern philosophy and science, analytic method is understood as a regressive method and synthetic as a composite (composition of various elements) or progressive method. The difference is in direction. The analytical method moves from the specific to a more universal direction, from the whole to its parts, and from the consequences to the causes.

18.4.2 Process of Analytic Method

In the analytical method, we break up the unknown problem into simpler parts and then see how these can be recombined to find solutions. So we start with what is to be found out and then think of further steps or possibilities that may connect the unknown to built the known and find out the desired result. This method leads conclusion to hypothesis; unknown to known; and abstract to concrete. Thus, we start from wholes, i.e. words, phrases, sentences, paragraph or story etc., and then we break them into their small parts, i.e., syllables, letters, sounds, etc. Further, it helps the new learner to understand how words are made up and how to read them. Analytic method can be schematically represented as follows in Fig.18.2.

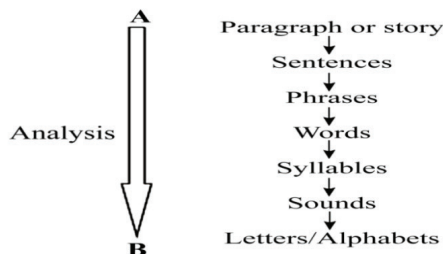


Fig. 18.2: Analytic method of teaching literacy

The great psychologist, Thorndike supported this method. He believed that through analysis, the highest intellectual performance of the mind is possible.

Further, this method is particularly suitable for teaching of Arithmetic, Algebra and Geometry as it analyses the problem into sub-parts and various parts are reorganized and the already learnt facts are used to connect the known with unknown. It puts more stress on reasoning and development of power of reasoning, which is one of the major aims of teaching of mathematics.

18.4.3 Types of Analytical Method

The following analytical methods are often used in the learning process: 1) The Word Method, and 2) The Phrase and Sentence Method.

1. **The Word Method:** In analytic method, we analyse the word into consonants and vowels. Since, the adults already know the words and their meanings; half of the job of the teacher is already done. Now, what the teacher has to do is to teach them the reading and writing of the consonants and vowels. Also, ultimately learners should learn making new words from the known alphabets (Gode n.d2).

The word method is based on the assumption that the adult learns the names of objects or sentences. He never comes across meaningless sounds. Therefore, it is natural that he should be taught meaningful words. At first, the meaningful words are taught with the help of charts, pictures, models, etc. When the child is able to recognize the word, the picture or the chart is removed. New words are introduced, again with the help of pictures or charts. When the students are able to recognize these new words too, then the pictures or the charts are removed.

The new words are thus introduced continually with the help of some structures already studied. For example, the students have already learnt the structure 'This is a'. By adding a new word, 'ball' in the structure, thus, it will become 'This is a ball'. The students will immediately recognize the newly introduced word 'Ball'. Many words used in English are combination of two structural forms. It often happens that the students have studied both the forms separately. If they are directed to read the word by joining the two forms, they will find it easier to study them. For example, the students have already read two different words 'some', and 'time'. The new word 'sometimes' can be easily read by first reading the word 'some' and 'time' separately (Rashid, 2015).

- 2) **The Phrase and Sentence Method:** The Phrase and Sentence method is the extension of word method. Some psychologists (Ashby, J., et al., 2005; Rayner, K., et al., 2012) have the opinion that the eye movement stretches to a phrase or sentence and the student looks at the combination of words with one eye movement. Thus, this method starts with small sentences which go up to make a short story. Beginning with a sentence, the method breaks in to analysis of the key words of the story in to 'sub-words' and finally the analysis of these 'sub-words' into alphabets (Gode, n.d.3). These alphabets and sounds used in words are taught by the teacher. Later, the words used in a phrase are taught. Now, what the teacher has to do is to teach the learners reading and writing of the consonants and the vowels. Also, ultimately learners should learn making new words from the known alphabets.

18.4.4 Merits and Demerits of Analytic Method

Let us look at some of the merits and the demerits of analytic method too.

Merits: Analytic Method is a psychological method; it develops the power of thinking and reasoning; it develops self-confidence and self-reliance in the students; it develops scientific originality and creativity amongst the students; it helps in a clear understanding of the subject because the students have to go through the whole process themselves; no cramming is required in this method and students' participation is encouraged; and this method helps the learners understand how words are made up and how to read them. The knowledge gained by this method is more solid and durable (Theyagu, 2011).

Demerits: As the learners have to learn a lot of new terms, this method is quite confusing for them. They also need to be able to pronounce all phonemes correctly. Further, if they are not careful with how words break down into parts (for example, confusing a long 'o' sound with a short 'o' sound), it can make learning how to read even more difficult! If the learner has trouble reading anything that isn't broken down into parts, then this might not be the right method for him/her. The learners may rely more on their memory and begin reading the whole thing with the understanding of sequence and not on the basis of recognition. The skill for writing is not developed. Further, this method is also time consuming and lengthy method, so it is uneconomical. The method has slow speed, time taken for reasoning and thinking is long. In it, facts are not presented in a neat and systematic order. This method is not suitable for all the topics in language or mathematics teaching. This does not find favor with all the students because below average students fail to follow this method. Every teacher cannot use this method successfully.

Though both analytic and synthetic methods seem to oppose each other, they complement and support each other. Analysis leads to synthesis and synthesis makes the purpose of analysis clear and complete. While teaching, the teacher can use both synthetic and analytic methods and also encourage the student to present them in the synthetic method, as analysis forms the beginning and synthesis, as a follow up work.

Check Your Progress

- Notes:** a) Write the answer in the space given below the question.
b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

3. Explain the process of analytic method of teaching literacy.

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4. Discuss different types of analytic method of teaching literacy.

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18.5 ECLECTIC METHOD

Here, we will attempt to discuss the concept, process, types, merits and demerits of eclectic method in the context of teaching literacy to adults.

18.5.1 Concept of Eclectic Method

The word ‘Eclectic’ comes from the Greek ‘eklektikos’ (meaning ‘selective’) from the verb root eklegien, ‘to select’. To select or elect means to ‘choose and pick up’ (Chisholm, 2011). The good ideas, concepts and principles from various schools of thought are chosen or picked up and blended together to make a complete philosophy. ‘Eclectic’, in the context of teaching methods here, means that it is a combination of analytic and synthetic methods deriving from many other principles, techniques and processes. Kumar (2013) defines the eclectic method as ‘a combination of different methods of teaching and learning approaches’. He supports the Eclectic Approach and declares, ‘the purpose of advocating eclectic method is to connect life experiences to the ideas presented in learning of the language. The types of learning activities the teachers select are often directly related to their experiences in the real world.’ Eclectic method is in fact a combination of analytical and synthetic methods, in the sense that it combines positive aspects of both these methods. The eclectic method is thus a new and popular method of teaching followed by the teachers all over the world for language teaching. According to Muthesius (n.d.) this method combines various approaches and methodologies to teach language, depending on the aims of the lessons and the ability of the learners.

Brumfit (1984) emphasized that eclecticism was a right approach for language teaching and he further commented on language learning, ‘it should provide a balance of activities such as accuracy and fluency. Accuracy focuses on the form and fluency on exchanging meaning, accomplishing tasks and reaching outcomes.’ Furthermore, Gao (2011, p.1) describes ‘eclectic approach’ as not a ‘concrete, single method, but a method which combines listening, speaking reading and writing and include some practices in the classroom’. He proposes that a teacher should integrate many methods to take advantages of all and avoid any single one’s disadvantages. Thus, many teaching experts have supported the Eclectic Approach for teaching languages.

The philosophical theory of the eclectic approach was initiated in 1990s and became popular this decade. This method was developed by C. J. Dodson for communicative language teaching (Dash, N. and Dash, M. 2007). Later, the term ‘Eclecticism’ was advocated and used by Larsen-Freeman (2000) and Mellow (2000) who describes it as ‘a coherent, flexible, and pluralistic approach to language learning and teaching’. There are many philosophical theories

regarding the educational process. At one pole of this diversity is idealism based on spirituality; and at the other is naturalism based on materialism. The truth lies somewhere in between, namely a pragmatic approach. This is what allows us to choose the principles on which to build the curriculum correctly. Many of the most remarkable philosophical ideas and concepts are integrated into education and form a harmonious eclecticism. Thus, eclecticism is a philosophy of choice; a combination of merits of all diverse philosophies into a new one. Brown (2002) argued that 'eclecticism' provides the solution because the approach allows the teacher to select what works within their own dynamic contexts. Gilliland, James and Bowman (1994) stated that the justification for the eclectic approach lies in the weaknesses of the single approach because a single method has a narrow theoretical basis and has a delimited set of activities and is therefore inflexible. In this regard, Li (2012) highlights that it is hard to successfully teach all the skills or to cater for the particular needs of each student using a single technique. Alizadeh & Hashim (2016) therefore consider eclecticism as a conceptual approach that does not merely include one paradigm or a set of assumptions, and instead, adheres to or is constituted from several theories, styles, and ideas in order to gain a thorough insight about the subject, and draws upon different theories in different cases. This approach is characterized by keen flexibility since teachers can choose whatever works to achieve learning objectives (Wali, 2009).

The eclectic method can be applied in all fields of knowledge such as psychology, martial arts, philosophy, teaching, religion and drama (Alizadeh & Hashim, 2016). As it is applied in many subject areas, it refers to a combination of methods, strategies, materials, content, etc. For example, in chemistry, the analytic and the synthetic methods can be used to study chemical reactions. The analytic method is used to understand the physical processes and synthesis is the process of putting the findings into a system that can be applied (Scott, 2023). It is important to note that the eclectic approach is not a rigid approach, because its components are mixed with those of other instructional strategies. Thus, all these factors have led to the emergence of the eclectic teaching approach, which is claimed to be the suitable approach for teaching adults.

18.5.2 Process of Eclectic Method

In the eclectic method, we select a few generative sentences or phrases or words and are broken into syllables and letters by using the analytic method and then we again construct new words from letters, phrases from words, and phrases to sentences by using the synthetic method of teaching. Using eclectic (combination of analytic and synthetic) method, students can break the word into syllables and letters by understanding various elements in a given situation and forming the new words and reading those words they made. Eclectic method of teaching literacy can be schematically represented as follows in Fig.18.3.

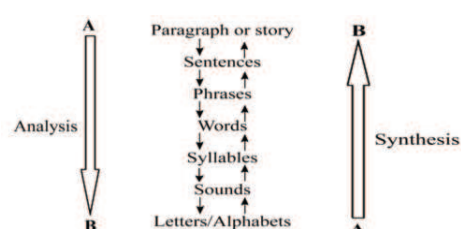


Fig. 18.3: Eclectic method of teaching literacy

This method is learner-centered; it does not mean that the teacher will not do anything. It rather recognizes the duties of both the teacher and the learner, and more responsibility on learners for their learning. The teacher has a duty of introducing the lesson by way of mentioning the topic and providing direction by way of question and answer or he/she can simply explain to learners before engaging them into communicative activities. The communicative activities will make learners practice the rule or structure being learnt in meaningful contexts. For example, teachers pay much attention to learning grammar to make it easier for students to work with the material. Flashcards and visuals are used as teaching tools, which increase the participation of learners and improves their vocabulary. Students consistently understand the meaning of words, phrases, sentences, and grammar to translate efficiently. Learner participation is encouraged and they can participate through the classroom activities such as group work, pair work, role play, simulation or class work. 'The types of learning activities that the teachers select are often directly related to their experiences in the real world' (Kumar, 2013:2).

The following pre-requisites are needed for the success of eclectic method of teaching:

- i) **Teachers' understanding of the approach:** In order for the eclectic approach to be appreciated by both teacher and learner, the teacher should have thorough understanding of the approach. The eclectic teacher should be knowledgeable and versatile about language and language teaching. He should know the various methods and techniques of language teaching and have the ability to choose appropriately which methods and techniques to integrate in a lesson to achieve the learning and teaching goals. Thus, it is reiterated that applying the eclectic approach requires teachers' understanding of the approach.
- ii) **Application of the approach:** It is important that the teacher should not only understand the approach but also how it can be applied in different teaching and learning contexts.
- iii) **Continuous teacher's development:** The research studies recommended teachers in explicit training to adopt the eclectic approach successfully. Every teacher must know what to combine after one has learnt how the individual methods work both in theory and practice. With the eclectic continuum, the point is that teacher development through the use of the eclectic approach is continuous and progressive.
- iv) **Selection of study materials:** The teacher should carefully select the materials to suit the learning context and make the teaching process more motivating and interesting. Widermann (2001) affirmed that good teachers spend much time in collecting attractive and interesting teaching materials to gladden their teaching. Therefore, eclectic teachers should be creative in selection and using materials and objects.

18.5.3 Types of Eclectic Method

Of the many, Aristotle's analytic-synthetic method, Pappus' analytic-synthetic method, and Eclectic method used in Bangladeshi English Language Learning are presented in this unit.

1. Aristotle's Analytic-Synthetic Method

Aristotle's analytic-synthetic method is the method according to which, to find a deduction of a given conclusion from given prime premises, one looks for premises from which the conclusion can be deduced by syllogism. The premises are obtained from the conclusion either by Aristotle's procedure for finding premises by syllogism, or by induction. The premises must be plausible. If the premises thus found are not among the given prime premises or statements already deduced from them, one looks for new premises from which the previous premises can be deduced by syllogism. The new premises are obtained from the previous premises either by Aristotle's procedure for finding premises by syllogism or by induction. The new premises must be plausible. And so on, until one arrives at premises that are among the given prime premises or statements already deduced from them. Then the process terminates. This is analysis. At this point, one tries to invert the direction and obtain a deduction of the conclusion from the given prime premises. This is synthesis. Aristotle's analytic-synthetic method can be schematically represented as follows in Fig.18.4.

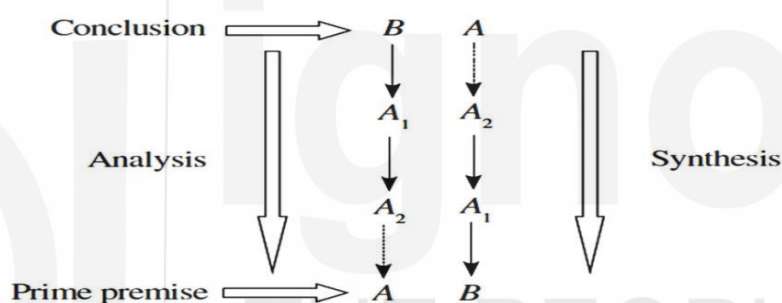


Fig. 18.4: Aristotle's Analytic-Synthetic Method

Source: Cellucci, 2013

According to Aristotle, the analytic-synthetic method is not only a method for acquiring scientific knowledge, but rather a general method for solving problems in every field – not only theoretical fields, such as mathematics, but also practical fields, such as medicine, oratory and politics, which require deliberation to reach a desired end (Cellucci, 2013). Indeed, Aristotle says that doctors, orators, statesmen start from the end, since ‘the end is the object for which one acts’ (Simpson, 2019). And, ‘when the end has been set, they consider how and by what means it is to be attained’ (Rackham, 1934). Then they consider ‘by what other means’ these ‘ends will be achieved,’ and so on, ‘until they arrive at the first cause, which in the order of discovery is last’. At that point, they try to invert the process and, starting from the first cause, try to do what contributes to their desired end.

2. Pappus' Analytic-Synthetic Method

After considering Aristotle's analytic-synthetic method, let us now consider Pappus' analytic-synthetic method. According to Pappus, the analytic-synthetic method consists of 1) a general description of analysis and synthesis, and 2) a distinction between two kinds of analysis: theorematic and problematic analysis (Hinitikka and Remes, 1974, p. 86).

Pappus' analytic-synthetic method is the method according to which, to find a deduction of a given conclusion from given prime premises, one assumes the conclusion and considers a conclusion that can be immediately deduced from it. The conclusion must be plausible. If the conclusion thus obtained is not among the given prime premises or statements already deduced from them, one looks for a new conclusion that can be immediately deduced from it. The new conclusion must be plausible. And so on, until one arrives at a conclusion that is among the given prime premises or statements already deduced from them. Then the process terminates. This is analysis. At this point, one tries to invert the direction and get a deduction of the given conclusion from the given prime premises. This is synthesis (Cellucci, 2013).

Pappus' analytic-synthetic method can be schematically represented as follows in Fig. 18.5.

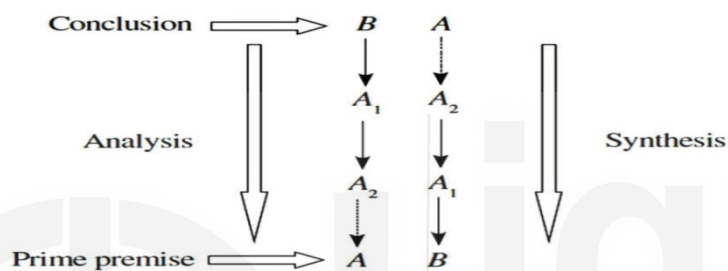


Fig. 18.5: Pappus's Analytic-Synthetic Method

Source: Cellucci, 2013

While, in Aristotle's analytic-synthetic method, analysis is an upward path and synthesis a downward path, in Pappus' analytic-synthetic method, analysis and synthesis are both downward paths, both being deductive processes.

3. Eclectic method used in Bangladeshi English Language Learning

Some of the befitting good ideas, principles, and techniques are synthesized and blended harmoniously in eclectic method. Here a teacher should consider the abilities, background and problems of learning. One particular method is not good enough to make students communicatively competent. But eclectic method is a possible solution as the focus is on speaking, listening and two other skills. We know that the real life practice in classroom context is different from our own perceptions (Sumya, 2021). The Direct Method was introduced in 1900 as an alternative for teaching a foreign language or a second language from other previous methods. It aims at establishing the direct bond between thought and expression, experience and language. The main objective of this method was to develop communicative competence among the students. Later, Communicative Language Teaching (CLT) or Communicative Approach was introduced in 1970s and 1980s and became very popular in English Language Teaching. The concept mainly emphasizes on active learning, not on passive leaning. Eclectic method is more preferable than any other methods in designing course curriculum as it is the juxtaposition of all principles.

In the language classroom, a teacher has to provide multiple opportunities for students so that they can learn very effectively. In such a situation, eclecticism encourages the use of a variety of language learning activities, each of which may

have very different characteristics and objectives and underlying assumptions. The teacher can use a variety of strategies to make language comprehensible, monitor student's comprehension, and make adjustments as necessary.

18.5.4 Major Features and Characteristics of Eclectic Approach

The major features and characteristics of eclectic approach are described hereunder.

Major features: It is extremely important to note that the eclectic approach is not rigorous, and its features are combined with other teaching methods. Parupalli (2018) indicated some *prominent features* of eclecticism as follows:

1. Eclecticism makes teaching more enjoyable and innovative.
2. It enhances the active interaction between students and teachers.
3. It caters to the individual needs of learners.
4. Enhances practical teaching as it facilitates retention and builds self-confidence.
5. Eclecticism enables instructors to achieve the learning objectives easily.
6. It is a problem-based approach to teaching languages that solves the problems encountered by the students in class.
7. Testing is not a separate element but a part of this approach.
8. Learners would have a clear vision of what they are learning.
9. This approach utilizes various tasks such as higher interaction, lively learning, correlative learning and fast results.
10. Eclecticism connects life experiences of learners to the ideas presented in language learning.

Characteristics: The main characteristic of this approach is variety in adapting methodology and technique to gain the main aim of teaching goal. Another characteristic of the approach is that it is subjective, because it refers to how different teachers will conceive what may constitute the Eclectic method. The other characteristic of eclectic approach is situational or context-specific. Still other characteristic of this method is error correction as it helps the learners to change their earlier knowledge, which could be wrong. Error is viewed as a process of learning and it is considered as a normal part of the learning process. Ali (1981) attempted to explain the major characteristics and principles of eclecticism as follows:

1. Teachers are free to select different types of teaching techniques in each class to attain the aims of lesson.
2. Teachers are free to select any method or aspect that suits teaching inside the classroom.
3. Learners are free to use kinds of teaching techniques or different teaching aids that make lessons more stimulating and interesting.

4. Teachers and learners would be in a better situation to overcome difficulties that may arise from the textbook materials.
5. This approach saves much time and effort in the presentation of language activities.
6. The eclectic approach is subjective since it is constructed by teachers according to the learning context.

18.5.5 Advantages and Disadvantages of Eclectic approach

The eclectic approach is live, motivating, participatory, context-sensitive, learner-centered and includes using a variety of classroom tasks and activities. Since it is context sensitive, learning is relaxed and fun for learners. It breaks the monotony of the class. It allows the teachers to use variety and combination of pedagogical methods and techniques, thus it makes the learning more dynamic. In addition, the eclectic approach is flexible to the learners' needs of diverse backgrounds; it maintains and keeps the learning process interesting. Like any other teaching method, the eclectic teaching approach has advantages and disadvantages.

Advantages: The advantages of eclectic approach are presented hereunder:

1. As many good ideas, principles, and techniques are synthesized and blended harmoniously in eclectic method, the eclectic method focuses on the skills of speaking, listening, reading, and writing.
2. Since eclecticism is context-sensitive, learning is fun and innovative, the eclectic method breaks the monotony of the class.
3. The eclectic method supports the implementation of a personal strategy for education and resolving societal issues.
4. Many studies recommended that the adoption of the eclectic approach due to its importance to avoid boredom in the class and accurately address the learning objectives.
5. The eclectic approach enables instructors to choose the resources that are most effective in their classrooms given the dynamic context (Brown, 2002). This method has a wide range of theoretical underpinnings including adaptable set of activities.
6. Recent research on the eclectic approach by Biloon (2011) shows that it is more effective at meeting the unique demands and learning preferences of students. Through the usage of the eclectic approach, learners are able to internalize, utilize, and recall the material given to them more quickly since the method is tailored to their unique learning requirements and styles.
7. According to Gao (2011), eclecticism is a teaching strategy that incorporates practice in the classroom together with all language skills such as speaking, listening, reading, and writing.
8. It connects classroom experiences to the daily life activities of the learners. This helps learners to understand new knowledge by drawing on what they already know. Thus, learning is not strange because the activities are life-like.

9. This approach stimulates the development of creativity and instills self-confidence in them. With this method, learners find exciting new ways to learn.

Disadvantages: The eclectic approach is said to have the following disadvantages (Weidemann, 2001):

- a) It cuts teachers off from a reconsideration of their professional practices. In a word, it discourages them to reflect upon their teaching. They have made up their minds; they will use anything that works, which can obtain results and is safe from ideological excesses;
- b) Adopting the eclectic approach can be unsafe as a teacher may fall victim of the methodological baggage that comes with it;
- c) Mixing all manners of methods and approaches may result in gathering in one's teaching arsenal; but using such a mixed bag can lead to all kinds of conflicts;
- d) When introduced to new methods and techniques, teachers, in their haste to integrate these into their traditional styles of teaching, forget about the rationale for the techniques altogether; and
- e) If an innovative technique is used only occasionally, and mixed in with other (potentially contradictory ones), the effect of the new is diluted.

Nonetheless, the eclectic approach is more advantageous than disadvantageous; most of the limitations of this approach are justifiable when teachers are poorly prepared for the classroom (Weidemann, 2001).

18.5.6 Relative significance of Synthetic, Analytic and Eclectic methods

While purely analytic method fails to give the learner the adequate skills needed for word recognition, purely the synthetic method has the disadvantage of learning material being not necessarily related to the learners' interest (Reddy, 1993). Further, if we follow only analytical method we fail to present the facts in a systematic way. The analytical proof is lengthy but it is based on a sound footing and if forgotten also it would be much easier for the pupil to recall and reconstruct the proof for himself. Similarly, synthetic method shows that every step is true but does not reveal the process adopted and the reason for selecting a particular sequence for reasoning. The synthetic proof is shorter but it has no sound footing. Once forgotten it cannot be reconstructed easily. Therefore, to make the teaching effective, both the methods should be applied together.

Thus, the eclectic approach was developed as an effective alternative to analytical and synthetic methods as both had advantages and disadvantages; and that no one method was adaptable to the dynamic classroom environment. Since, the eclectic method is based on the shortcomings of both analytical and synthetic methods, we quote here the words of Arthur Schultze, which justify that the 'Analysis is the method of discovery, and Synthesis is the method of concise and elegant presentation'. The analysis consists of breaking up facts into simpler elements, and synthesis is the process of presenting those facts in a

systematic manner. Since, each learning situation is different, methodological prescription is pedagogically unacceptable, the eclectic approach therefore responds to the diversities in the classroom and learning contexts. Thus, these methods are applied together in the eclectic method to make the teaching more effective and relevant.

In the eclectic method, both synthetic and analytic methods of teaching are borrowed and adapted to suit the requirements of teachers and learners. Both of these methods are inter-dependent or complementary to each other. The literacy teachers, who combine the teaching techniques and strategies in eclectic method, can always present the subject matter in accordance with the preferences of students. They are imaginative, energetic and willing to experiment for the purpose of keeping lessons varied and interesting. The students are encouraged through analytical method to cooperate with the teacher and then teacher may use synthetic method to provide knowledge and it helps the students to learn the subject matter (Nupur, n d). The eclectic approach enables the teacher to use a variety of methods to explain the content to the students. It also enables individuals to examine objects from several perspectives since it uses various ways. Further, eclectic method is based on the study of the interests and needs of learners. To meet all their needs and solve all the issues that they face, teachers must know and apply more than one methodology. Thus, the eclectic method combines both the approaches and methodologies of analytic and synthetic methods to teach literacy depending on the aims of the lesson and the abilities of the learners. By combining both the above methods, the teaching becomes very interesting, relevant as well as complete.

Check Your Progress

- Notes:** a) Write the answer in the space given below the question.
b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

5. How is the Eclectic Method developed to make the teaching literacy more effective? Explain its process?

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6. What are the different types of Eclectic Method?

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7. Explain the significance of Synthetic, Analytic and Eclectic methods.

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18.6 LET US SUM UP

In this Unit, we have presented you an overview of different methods of teaching literacy to adults, viz., Synthetic, Analytic and Eclectic methods. We have understood the synthetic model of teaching, types of synthetic methods and the merits and demerits of synthetic method. Similarly, we have also focused on the analytical model of teaching literacy, types of analytical methods and the merits and demerits of analytical method. Further, we have comprehended the eclectic method of teaching literacy, types of eclecticism, different types of Eclectic Methods, viz., Aristotle's Analytic-Synthetic Method, Pappu's Analytic-Synthetic Method, and Eclectic method used in Bangladeshi English Language Teaching. We have also discussed about the features and characteristics of Eclectic Approach; advantages and disadvantages of Eclectic approach and the significance of Synthetic, Analytic and Eclectic methods.

18.7 ANSWERS TO 'CHECK YOUR PROGRESS' QUESTIONS

1. The term 'Synthetic' is derived from the word 'synthesis' which means opposite of analysis. It refers to the mental process of combining the detailed elements of language (the sounds of the consonants and of vowels) into larger units' viz., words, phrases, sentences, etc. In this method, we proceed 'from known to unknown', 'cause to consequence', from 'simple to complex' and from 'general to more specialized'. In this method, synthesis starts with letters or alphabets or their sounds in the beginning and then by joining the letters or sounds to make words and sentences. Thus, the alphabets are taught individually and then these are combined into syllables, words, phrases which then form sentences and stories.
2. The commonly used synthetic methods of teaching literacy to adults are i) The Alphabetic Method, ii) Traditional Method, iii) The Phonetic Method, and iv) Sound Technique.
 - i) *The Alphabetic Method:* In this method, alphabets having similar structure are grouped on each page of the primer for enabling the adults to learn to write the alphabets. These alphabets are drilled by them through connected or unconnected words. The letters are introduced with the help of pictures or models. These pictures help the learners to recognize the alphabets and words.
 - ii) *Traditional Method:* This method is based on grouping of the alphabets according to the similarity of their shapes and also associating them

with illustrations or pictures. The picture of an object or a person is shown to the learners and they are asked to tell the name or title of the same. The alphabets, representing these sounds are shown to them separately or in combination of other alphabets forming the word. In the 'Improved Traditional Method', teachers select the most common alphabets or those which can be easily written or those which can be grouped together on the basis of similarity of their shapes and begin by teaching such alphabet(s) by shear drill, e.g. ग, म, भ, and न as one group.

iii) *Phonetic Method*: In the words of regular spellings, there are letters and groups of letters called 'Phonograms' or 'Phonetic' elements. The teacher by inviting the attention of students to sounds of certain phonograms can teach reading easily. This method is an improved form of the phonic method, which introduces a new system of symbols so that there is a separate letter for each separate sound. The students by combining these sounds can easily read the new words.

iv) *Sound Technique*: In this method, the participants are familiarized with the sound of alphabets instead of their names. When the participants pronounce several alphabets together, then meaningful words are formed by joining of alphabets e.g. क, ल, म. When pronounced together make the word 'कलम'. Thus, the participants start learning words from letters and phrases and so on.

3. The analytic method refers to the mental process of breaking down words into their constituent elements or smallest parts — phonemes, or the smallest units of sound — syllables and letters. In his method, analysis moves from the whole to its parts and from the consequences to the causes, unknown to known; and abstract to concrete. Thus, we start from wholes i.e. words, phrases, sentences, paragraph or story, etc., and then we break them into small parts, i.e. syllables, letters and sounds. Thus, it helps the new learner to understand how words are made up and how to read them.

4. There are two types of analytical methods used in the teaching-learning process: i) **The Word Method, and ii) The Phrase and Sentence Method.**

i) *The Word Method*: The word method is based on the assumption that the student learns the name of things or sentences. At first, the new words are taught with the help of charts, pictures, models, etc. when the learner is able to recognize the word, the model or picture is removed. If they are directed to read the word by joining the two forms they will find it easier to study them.

ii) *The Phrase and Sentence Method*: The Phrase or Sentence method is the extension of word method. Some psychologists hold the opinion that the eye movement stretches to a phrase or sentence and the student looks at the combination of the words with one eye movement. Therefore, the start should be made by a phrase or a sentence and then they should be broken into words and letters.

5. The eclectic method combines various approaches and methodologies to teach language and literacy. 'Eclectic' means that it is a combination of

analytic and synthetic methods deriving from them many other principles, techniques and processes. This method is learner-centered; but the teacher has a duty of introducing the lesson by way of mentioning the topic and providing direction by way of question and answer, or engaging the learners into communicative activities. In this method, we select a few generative sentences or words and are broken into syllables and letters by using the analytic method, and then we again construct new words from letters, phrases from words, and sentences from phrases by using the synthetic method of teaching. Flashcards and visuals are used as teaching tools, which increase the participation of learners and improve their vocabulary. Learners can participate through various classroom activities such as group work, pair work, role play, simulation or class work.

6. There are three types of eclectic methods, viz., i) Aristotle's Analytic-Synthetic Method, ii) Pappu's Analytic-Synthetic Method, and iii) Eclectic method used in Bangladeshi English Language Learning.

i) *Aristotle's Analytic-Synthetic Method*: It is a method according to which, to find a deduction of a given conclusion from given prime premises, one looks for premises from which the conclusion can be deduced by syllogism. The premises are obtained from the conclusion for finding premises by syllogism, or by induction. The premises must be plausible. If the premises thus found are not among the given prime premises or statements already deduced from them, one looks for new premises from which the previous premises can be deduced by syllogism. The new premises are obtained from the previous premises by syllogism or by induction. The new premises must be plausible. And so on, until one arrives at premises that are among the given prime premises or statements already deduced from them. Then the process terminates. This is analysis. At this point, one tries to invert the direction and obtain a deduction of the conclusion from the given prime premises. This is synthesis.

ii) *Pappus' Analytic-Synthetic Method*: It is the method according to which, to find a deduction of a given conclusion from given prime premises, one assumes the conclusion and considers a conclusion that can be immediately deduced from it. The conclusion must be plausible. If the conclusion thus obtained is not among the given prime premises or statements already deduced from them, one looks for a new conclusion that can be immediately deduced from it. The new conclusion must be plausible. And so on, until one arrives at a conclusion that is among the given prime premises or statements already deduced from them. Then the process terminates. This is analysis.

iii) *Eclectic method used in Bangladeshi English Language Learning*: The Direct Method was introduced to establish the direct bond between thought and expression, experience and language. Later, the Communicative Approach emphasizes on active learning, not on passive leaning. In Bangladesh the 'Eclectic method' was used for designing course curriculum. In the language classroom, the teacher provides multiple opportunities for students so that they can learn

very effectively. He uses a variety of strategies to make language comprehensible, monitor students' comprehension, and make adjustments as necessary.

7. While purely analytic method fails to give the learner the adequate skills needed for word recognition, purely the synthetic method too has the disadvantage of learning material being not necessarily related to the learners' interest. Thus, the students are encouraged through analytical method to cooperate with the teacher and then teacher may use synthetic method to provide knowledge that helps the students to learn the subject matter. Further, it responds to the diversities in the classroom and learning contexts, and makes the teaching more effective and relevant. This method also enables the teacher to use a variety of methods to explain the content to the students. Thus, the teaching becomes very interesting, relevant as well as complete.

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18.9 UNIT-END EXERCISES

In your own interest, you may prepare the answers to the following questions which may be useful as a part of your preparation for your term-end examinations.

1. Explain different methods of teaching literacy.
2. What are the differences between synthetic and analytic methods?
3. Discuss the process of eclectic method of teaching literacy to adults.
4. How can teaching literacy be made more effective by using the Eclectic Method?
5. How is the eclectic method different from the synthetic and analytic methods?

18.10 UNIT-END ACTIVITIES

If you like to further enhance your interest, you may attempt to perform the following activity.

1. Visit any one of the non-formal or adult education centre located in and around your village/ town/city and try to understand the teaching methods followed there for imparting literacy or language to their respective target groups.
2. Visit the District Adult Education Office in your district and interact with its chief functionary and training staff about the literacy teaching methods followed to impart literacy or language in the district.

UNIT 19 ANDRAGOGICAL APPLICATIONS IN HIGHER AND PROFESSIONAL EDUCATION

Structure

- 19.1 Introduction
- 19.2 Learning Objectives
- 19.3 Andragogical Applications in Higher Education
- 19.4 Andragogical Applications in Medical Education
- 19.5 Andragogical Applications in Clinical Education
- 19.6 Andragogical Applications in Health and Nursing Education
- 19.7 Andragogical Applications in Social Work Education
- 19.8 Andragogical Applications in Remedial Education
- 19.9 Andragogical Applications in Religious and Spiritual Education
- 19.10 Andragogical Applications in Criminal Justice Education
- 19.11 Let Us Sum Up
- 19.12 Answers to 'Check Your Progress' Questions
- 19.13 References and Suggested Readings
- 19.14 Unit-End Exercises
- 19.15 Unit-End Activities

19.1 INTRODUCTION

You can recall that, in Unit-16, we have discussed the concepts of pedagogy, andragogy and heutagogy along with their underlying assumptions. In Unit-19 here, our focus will be on the nature, relevance and scope of applications of andragogy in different fields.

Clearly, by 1970 – and certainly by 1980 – there was a substantial enough body of knowledge about adult learners and their learning to warrant attempts to organize it into a systematic framework of assumptions, principles and strategies. This is what andragogy sets out to do (Knowles and Associates, 1984, p.7). We are aware that Malcolm Knowles defined andragogy as “the art and science of helping adults learn”. However, what is important to note in the context of its application is that the learning needs of children and adults are not dichotomous, but continuous in the process of lifelong learning.

The pedagogical and andragogical models result in two very different approaches to the design and operation of educational programs. The basic format of the pedagogical model is a *content plan*. In contrast, the basic format

of the andragogical model is a *process design*. An andragogical process design consists of seven elements: 1. Climate setting (Physical and psychological), 2. Involving learners in mutual planning, 3. Involving participants in diagnosing their own needs, 4. Involving learners in formulating their learning objectives, 5. Involving learners in designing learning plans, 6. Helping learners carry out their learning plans, and 7. Involving learners in evaluating their learning (Knowles and Associates, 1984, pp.14-18).

Pedagogical principles are used in all universities as well as in advanced training courses in different fields. The development of higher adult education as an organizational system in particular can be viewed from two perspectives; structures for management among universities at the national, regional, and state levels and structures for operation within individual institutions (Knowles, 1968). Andragogy is a better approach compared to pedagogy in the context of higher education. Considering application of andragogy as a better way, Knowles (1984, p.xiii) states “I have seen a growing hunger on the part of teachers, trainers, and administrators in business and industry, government agencies, colleges and universities, professional associations, religious organizations, voluntary organizations and even elementary and secondary schools to find out what that better way is”; and he answers it as “*Andragogy in Action*”. The andragogical approach has in fact changed the teaching philosophy of educators around the world.

Khudaybergenova, et al (2022) inquire into application of the modern approach to education -- andragogical approach, with reference to professional improvement of teachers based on characteristics and individualities of adult students. Implementation of andragogical method in the training of teachers involves the development and operation of andragogical model, the use of contemporary didactic technologies, and special pre-training of tutors-andragogists. However, according to Marzano (mentioned in Shilpa Joshi, 2017), the teaching and learning experience is about the collaborative interaction between the teacher-students-content trilogy. Proponents of both pedagogy and andragogy seem to miss this trilogy, in their arguments. Hence, meaningful teaching and learning occurs best in an *eclectic approach*, a moderate combination of the pedagogy and andragogy models.

Educators teaching adult learners need to know the concepts, assumptions and principles of the adult learning theory and be able to incorporate them into their teaching styles. Educators need to become facilitators of adult education by tailoring it to the adult learners to set and achieve their goals, actively involving them in the learning process to construct their own knowledge, enabling them to make sense of the learning, and enabling them to apply what is learned.

Applications of Knowles’ Andragogy

Andragogy has been applied in several fields – management education, manufacturing settings, training programs for technical personnel, supervisors and managers, career development through learning contracts, problem-based learning, colleges and universities (in undergraduate and graduate programs including external degree programs, distance education and faculty and staff development programs), professional development programs (medical education, nursing education, clinical legal education, social work, continuing

education for health professions) religious education, elementary and secondary education, and remedial education (Knowles and Associates, 1984).

Andragogy has become popular among educators and researchers in many countries, and its research body has been growing (Savicevic, 1991). According to Zmeyov (1998, p.107), the andragogical principles of learning are widely needed now, and not only in adult education but also in all sectors of educational services. Zmeyov suggests that the principles might be successfully applicable when learners: (a) have a good amount of practical and social experience, (b) are aware of a life goal and of the applicability of their knowledge and skills, (c) have adequate background of the selected field study, and (d) are trying to attain short-term educational goals. According to Savicevic, andragogy was adopted by at least ten European countries such as Germany, England, Poland, France, Finland, Netherlands, Czechoslovakia, Russia, Hungary, and Yugoslavia. The andragogical approach has been adopted in multiple disciplines such as education (Bolton, 2006), medicine (Bedi, 2004), criminal justice (Birzer, 2004), and management (Forrest & Peterson, 2006). Sang Chan (2010) presents different accounts that review the applications of Knowles' andragogy in a variety of fields.

Further, according to Knapke, et al (2024) andragogy has been applied to several other fields ranging from coaching of "master athlete" swimmers (Callary, Rathwell and Young, 2017) to chemistry (Okojie and Boulder, 2020). It is also found to be useful in several distinct educational fields including physical education (Sato, Haegele and Foot, 2017), early childhood education, teacher training (Novitasari and Sugito, 2018), outdoor science education (Remenick and Goralnik, 2019), police training (Birzer, 2003), military education (Culkin, 2018), and social work (Carpenter-Aeby and Aeby, 2013). Also, the value of an andragogical framework was explored in a study of blended learning among part-time adult learners pursuing vocational degrees through distance learning (Youde, 2018).

Significance of Andragogical Applications in Global Economy: Developing Human Capital

In order to survive in the global economy, businesses need to invest in advanced technology, modern machinery, and human capital to keep up with the changes in this volatile environment. Barney (1991) states that although competitors can easily imitate tangible assets such as technology and machinery these assets are not sufficient to maintain competitiveness. The competitive advantage can be best sustained through human capital, and the development of human capital denotes education. Zmeyov (1998) states, "The main goal of education today is to provide individuals with a multifaceted training, and principally with knowledge and skills for creative activities, for adapting to the changes in the natural social environment ... and for lifelong learning" (p.104). Further, globalization has become a common term in the 21st century. It brings about change in trade, economic, social, and educational issues (Merriam, Caffarella, & Baumgartner, 2007). Therefore, education is essential to the development of skills and knowledge to compete in the 21st century. Having just identified education as a potential source to competitiveness is not an end task to itself. One needs to continue asking questions regarding the kinds of education to offer in schools and other educational institutions, the approaches to use in

classrooms, and ways in which to involve learners in the teaching and learning process (Sang Chan, 2010). It is thus well established now that the andragogy in its diverse forms of applications has become *sin qua non* for progressive changes in different fields in the context of development of human capital.

In this Unit, we will attempt to highlight some of andragogical applications in selected fields only.

19.2 LEARNING OBJECTIVES

After going through this Unit, we expect you to be able to:

- Explain the relevance of andragogical assumptions and principles for application in different fields;
- Discuss how andragogy has been applied in different fields; and
- Analyse the diversity and effectiveness of applications and their significance in relevant fields.

19.3 ANDRAGOGICAL APPLICATIONS IN HIGHER EDUCATION

In this section, we will focus our discussion on andragogical applications in higher education.

Established originally for the exclusive purpose of serving teenage youth, our institutions of higher education have, within the past few decades, become institutions serving predominantly adult learners. With gradually aging population we have shifted from a youth-centred to an adult-centered society – with drastic implications for our whole educational enterprise. In a world of accelerating change – especially the knowledge explosion, the technological revolution, and the entry of women into the work force in a massive number – adults have become aware that higher education is a matter of survival for them too. So, college and university campuses have been flooded with a “new clientele (Vermilye, 1974). Of all our social institutions, colleges and universities have been among the slowest to respond to adult learners. However, recent developments involving andragogical models indicate a movement that may accelerate the pace of response.

In higher education, andragogy plays an important role in many aspects, more so in application of methods particularly to teach adults. Adults learn effectively only when they have strong inner motivation to develop a new skill or acquire a particular type of knowledge. They are practical in their approach to learning and wish to learn how it would serve their current and future needs. Their goals and purposes for learning, their style and application of learning are unparalleled. (Shilpa Joshi, 2017).

Adult learning principles develop through an analysis and synthesis of adult education, andragogy, teaching and learning in higher education. El-Amin (2020) investigates foundational assumptions relevant to the field of adult education with a focus on andragogy in higher education. Characteristics of adult learners and principles of adult learning in higher education bear focus through the lens of andragogy.

Loaker and Doherty (1984, pp.101-119) highlight an approach followed in undergraduate education reconciling the requirements of academic rigor along with an increasing delegation of responsibility for learning to the adult learners. One of its explicit goals included production of lifelong learners. It used three levels of learning contracts – college contract, program contract, and course contract -- with each learner. The case studies reported present three diverse learners indicating how learning designs and contracts at each phase meet the learner's developmental needs urging them to move forward toward self-direction. The andragogical applications clearly indicate that the three learners come out of different life experiences and reflect very different expectations of college-level education vis-à-vis their abilities to learn and the apprehensions of their success in learning.

Eldred (1984, pp.131-140) states that external degree programs are one of the most rapidly expanding elements of higher education as colleges and universities become more and more dependent on adults who cannot leave jobs and other responsibilities to live full time on campuses to earn their degrees.

According to Phillips (1984, pp.199-204), a growing concern of adult education is reaching people in isolated locations – “distance education”. He does not address the andragogical model directly, but it does describe how one key concept of andragogy – learner involvement – was applied to establishing learning groups in distance locations. In this context it is important to cite (p.200): “In 1970 Malcolm Knowles shared his experience at a continuing education conference in Toronto. By way of an apt illustration, he showed how a new concept could be introduced into a community, not by publicizing it to public gatherings or any large groups but rather by ferreting out and selecting an innovative and respected community leader and sharing the new concept with such a catalytic person. If that person accepted the concept, then close followers would observe and follow the leader. The new concept, now visible and being practiced by leaders, would inevitably reach the multitude, perhaps a year or so later. The ‘new way’ then would become an integral part of the life of the community – from within – from one of its own! The innovative leader could be found by asking leading citizens in the area, such as the school principal, clergy, bankers, and town officials, ‘Who makes this town move ahead?’”

Olivier and Mahoney (1984, pp.141-146) describe the processes used in “Project Alliance” as a part of an innovative non-traditional program in higher education aimed at providing a mechanism for a continuous dialogue between campus-based and community-based faculty in exploring better ways to serve adult learners. The project also demonstrated that interaction between campus-based and community-based faculty can help to increase a sense of collegiality and faculty identifying with an institution to which they have a part-time commitment.

Heie and Sweet (1984, pp.147-161) emphasize that an especially effective approach to faculty development is through “growth contracts”. Gross (1976, p.74) describes growth contracts as “a systematic approach to defining faculty roles, charting the direction of professional growth, and assessing one's performance.” Growth contracts are developed by applying the principles of adult learning.

Andragogy learning style is the instruction technique adult learners prefer in higher education settings (MacKeracher, 2004; Pratt, 1988). Knowles' theory of andragogy sought to highlight the distinctiveness of adult learning. Knowles (1984, mentioned in El-Amin, 2020) contended that adults are self-motivated and tend to assume responsibility for their role in the learning process. Thus, adult learning programs must accommodate this significant perspective. Andragogy influences accompanying trepidation about learning outcomes. For instance, adults need to know why they must learn specific learning material; adults need to learn experientially; adults approach learning as critical thinking, and adults learn best when the subject of instruction encourages confidence. In viable terms, andragogy implies that adults concentrate more on the process and less on assessment. Strategies such as contextual analyses, role-playing, simulations, and self-assessment are generally valuable to adult learners. Given the learning inclination of andragogy; educators and students should embrace their role as co-facilitators instead of lecturers or solely as students.

Schuttenberg (1984, pp. 285-295) describes the implications of andragogical assumptions for course design and conduct in a graduate course in "Principles of School Administration". It shows how each of the assumptions was implemented in a five-week course, describes the evaluation procedures used, and makes recommendations for improvement of graduate professional course in educational administration in general.

Knowles' theory laid the groundwork to apply andragogy to any adult educational setting. Boud and Prosser (1984, pp.175-187) describe how a course in science education for experienced science teachers was conducted according to the assumptions of andragogy. The course was designed jointly by staff and students. A collaboratively designed course cannot be undertaken lightly, for not only does it violate some of the norms of teaching in traditional higher education, but it place peculiar demands on both staff and students. These demands of sharing responsibility for learning in a science course are both of an interpersonal, group interaction kind and of a structural, organizational type requiring staff-student cooperation.

James (1984, pp.193-197) presents an imaginative application of the andragogical model to one of the most pressing issues – environmental protection. It describes the Eco-Action project in which adults are engaged in a self-directed experiential investigation of environmental problems with which they are concerned.

Thus, we can notice that the transformative power of application of andragogy and technology in learning is so phenomenal. Adult educators need to constantly respond to a shifting educational context – with the introduction of new technologies, practices, and open resources.

Check Your Progress

- Notes:**
- a) Write the answer in the space given below the question.
 - b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

1. Do you think that the andragogical approach has changed the teaching philosophy of educators around the world? Give reasons.

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19.4 ANDRAGOGICAL APPLICATIONS IN MEDICAL EDUCATION

According to Knowles (1984, p.205), people preparing for professional careers are adult learners – by virtue of having made one of the most adult decisions possible, choosing a career. It is therefore especially critical that programs of professional education be based on principles of adult learning. Fortunately, leaders in many of the professions – medicine, nursing, law, social work, education – got this insight over a decade ago. Accordingly, some of the most thoroughly tested applications of the andragogical model are in professional schools.

We will discuss these applications in different professions from this section (i.e. 19.4) through section 19.7 that follow in this Unit.

In medical education, the final desired outcome is to prepare the students to meet the challenges in delivering health care to individuals and the community in the most competent and professional manner. Neufeld and Barrows (1984, pp. 207-226) state: “As a result of the knowledge explosion and technological revolution in the last half of this century, the rate of obsolescence of human being has been increasing exponentially. In few areas of life has this obsolescence been more pronounced than in the medical profession. Doctors who know only what they knew when they got their M.D.s are obsolete within a few years, they must be skillful lifelong learners if they are to keep up to date. Accordingly, medical schools have been reevaluating the philosophy, curriculum, and techniques of medical education. They have been realizing that doctors must be taught as self-directed learners in medical school if they are to be lifelong learners.”

Application of andragogy in medical education especially clinical medicine will enrich the learning experience of students with respect to diagnosing their needs, acquiring knowledge, skills and appropriate attitudes. Various strategies such as problem-based learning, clinically associated teaching, critical reflection, role modeling and constructive feedback can be used to enhance the students’ competence and inculcate professionalism among the students (Mani, Danasekaran and Ramaswamy, 2014).

With increasing enrolment in medical education, the medical educators in India are faced with challenges of catering to a larger group apart from providing quality medical education and medical care. Studies assessing students’ preference of medical teaching methods in India and abroad (Papanna, et al, 2013; Dable, et al, 2012; Dable, et al, 2013; and Shrewsbury and Wiskin,

2012) show an increased preference for participatory teaching methods such as buzz groups, brainstorming bedside clinics and problem-based learning; hence a need to go beyond the traditional teaching styles with focus on andragogy techniques for quality medical education. They have identified a recognised need for faculty development and motivation to meet students' expectations. All andragogy theories stand to enhance adult learning and facilitate effective teaching. In medical education, this translates to achievement of medical competence, whatever the specialty. Any learning activity in medical education, as in other fields, should address the knowledge, skills and attitudes needed to gain competence. In addition, healthcare profession also involves a process of growing into the professional community (Abela, 2009). This aspect is of utmost relevance in clinical medicine, where the medical education should prepare the students to meet the individual and population health care needs. Medical educators should view themselves as both learners and educators for a successful adult learning practice in clinical medicine.

Mani, Danasekaran and Ramaswamy (2014) summarize the implications of andragogical applications for medical educators in facilitating effective learning (See Table 19.1).

Table 19.1: Implications of andragogy for medical educators

Imparting knowledge	• Encouraging “self-diagnosis” of learning needs (Pew, 2007). • Adopting varied teaching styles depending on learning stages (Training in proper history elicitation in initial clinical exposure; examination skills, discussion of differential diagnosis and treatment in subsequent years) • Relevance of subject taught should always act as background (Abela, 2009). • Incorporation of all relevant concepts in clinically associated teaching (Papanna, et al, 2013). • Multidisciplinary expertise for holistic learning of concepts (Papanna, et al, 2013). • Subject-oriented teaching methods: small group teaching for abstract or difficult concepts, e.g. reading radiograph or electrocardiograph; open discussions and brainstorming sessions for hot topics, e.g. ethical issues or medico-legal litigation (Papanna, et al, 2013; Abela, 2009). • Simple de-briefing sessions by students (Abela, 2009). • Encouraging self-evaluation and rediagnosing needs. • Incorporation of learning activities at all settings, be it bedside emergency department, operation theatre or community (Taylor and Hamdy, 2013).
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Teaching skills	• Opportunities for self-directed learning (Papanna, et al, 2013). • On-the-job teaching (Abela, 2009). • Peer-assisted learning • Constructive feedback by facilitator (Abela, 2009).
Developing attitudes	• Exposure to a mix of specialities (surgical specialities promote practical and hands on attitudes; specialities such as general practice, psychiatry and palliative care promote holistic assessment) (Abela, 2009). • Workplace learning (participation in practice) (Pew, 2007; Dable et al, 2013; Abela, 2009). • Family-centred experience to identify social aspects of health and disease and develop appropriate technical and emotional engagement in different situations (Birden, et al, 2013).
Inculcating professionalism	• Overall moral development apart from learning biomedical aspects. • Role modelling and mentoring (Birden, et al, 2013). • Early clinical contact. • Self-reflection and reflection with peers (Birden, et al, 2013).

Source: Mani, Danasekaran and Ramaswamy. (2014). Andragogy in clinical medicine: implications for medical educators, *Medical Science*, 2(1), p.78.

Association for Medical Education in Europe (AMEE) advocates students' engagement in management, provision of academic programs and their involvement in the local and academic community, and a medical curriculum for the students and by the students. The optimal model is to achieve student and teacher equity in learning. Nepal (2011) and Subedi and Pandey (2021) have applied adult learning theories into medical education optimizing student involvement in decision making and planning. They found that the medical students applying adult learning theories and principles in pursuit of their medical science education have applied self-directed learning, problem-based learning, skill-based teaching, building communication skills through simulation, and fun trivia and quizzes in improving their medical education.

Bedi (2004, mentioned in Sang Chan, 2010) also recommends the use of the andragogical approach in doctor consultations. To ensure effective consultations, doctors need to be an active listener to patients' ideas, concerns, and expectations. Using this patient-centered approach, doctors can establish understanding, collaboration, and enhanced relationships with patients. Bedi applied the andragogical approach in training medical registrars also.

A study by Knapke, et al (2024) point to the importance of having a strong evaluation component in team science training programmes for continuous improvement that accommodates learner needs. Andragogy was found to be a valuable and relevant theoretical lens for interpreting adult learner feedback in a team science education and training context in biomedical research.

The above applications throw enough light on the need and extent of andragogical applications that are happening, possible and expected in the field of medical education.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

2. While applying adult learning theories and principles, what do you think are popularly applied by the medical students in pursuit of their education?

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19.5 ANDRAGOGICAL APPLICATIONS IN CLINICAL EDUCATION

Applications of andragogy in clinical education enable the faculty and students of clinical education to be and to become competent clinicians and lifelong learners. These applications facilitate clinical learning in the students to explain their answers by using evidence-based decision-making and help the students link the classroom topics to what they experience clinically. For example, a student indicates that patient’s oral condition exhibits gingivitis. The student will be in a position to describe the condition from what was taught in the classroom and how it is exhibited clinically. They will also learn to explain how their clinical decisions would impact their process of care.

Bloch (1984, pp. 227-242) presents very comprehensive, systematic and detailed exposition on the application of the andragogical model to graduate professional education in general, to legal education in particular and more specifically to clinical legal education at a university. Four central elements of andragogy – adults’ self-concept as self-directing, role of experience in adult learning, readiness to learn, and orientation to learning – and their related methodological implications provide a theoretical framework for examining the appropriateness of the methods by which law is taught to adult law students both in clinical programs and throughout legal education. The clinical method is now an accepted technique for teaching law, notwithstanding the absence of either any empirical evidence of its effectiveness or any accepted educational basis for clinical program. Clinical legal education offers law students the opportunity to work together with faculty on cases that present the types of problems which law students want to learn how to solve.

Educational theories in clinical practice: There are four different types of educational theories applicable in clinical practice: self-directed learning,

self-efficacy, constructivism, and reflective practice (https://assets.ctfassets.net/u2qv1tdtdbbu/4GJd8iRTkviMDtsXw5BTmQ/68d503eead692d5622e223df5e77542d/FDM_-_2_-_Transcript.pdf). These have their bases in andragogical principles. The goals of clinical education are independent learning and autonomy. Students are adult learners who view their faculty through a different lens. Faculty can facilitate their clinical learning through these four educational theories.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

3. Name four educational theories applicable in clinical practice.

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19.6 ANDRAGOGICAL APPLICATIONS IN HEALTH AND NURSING EDUCATION

Although the threat of human obsolescence confronts all of humanity, given the accelerating pace of change in our society, it has a particularly strong impact on the professions – especially the health profession (Dubin, 1972). The half-life of the knowledge, skills, attitudes, and values required by physicians, nurses, allied health professionals, and pharmacists is shrinking with increasing speed. Citizens worry about being treated by health practitioners who have not kept up-to-date and have reacted by passing laws mandating relicensing and continuing professional education. The health care professions and institutions have responded to the threat by mounting massive programs of continuing professional education; in fact, this is probably the fastest-growing aspect of all education. And, since the clientele of continuing professional education consists of exclusively adults, these programs have increasingly tended to be based on principles of adult learning (Knowles, 1984, p.297).

Knowles (1978) presents five underlying assumptions that are crucial to an andragogical model of education: (1) The learner is increasingly self-directing, (2) The learner’s experience is a rich resource for learning, (3) The learner’s readiness to learn stems from his or her life tasks or problems, (4) Learning itself focuses on tasks or is problem-centered, and (5) The learner’s motivation is derived from internal incentives or curiosity. These assumptions have been followed in the health and nursing programs, among other things.

In conjunction with the five assumptions of learning, Knowles delineates the following six elements necessary to the andragogical model of education: (1) establishing a climate conducive to learning; (2) creating a mechanism for

mutual planning; (3) mutually formulating learning objectives; (4) designing a pattern of learning plans involving learning contracts and student projects; (5) conducting the learning experience with suitable techniques and resources; and (6) evaluating the learning outcomes and rediagnosing the learning needs. The learning contracts have been used for nursing students and others. Through the use of andragogical model of teaching and learning, nursing and health educators could be able to foster a spirit of collegiality and mutual respect in the learning environment, thereby facilitating a valuable educational experience for the registered nurses returning to school.

Although andragogy is a useful theoretical lens in a wide variety of fields, it has rarely been applied to health and nursing sciences disciplines.

Application of Andragogy in Health Education

In October 1980, University of Southern California launched a three-year Self-Directed Learning Project for Physicians to test an innovative program of continuing education for physicians, based on the andragogical model. This three-year study was designed to explore non-traditional avenue for continuing medical education. The project is based on the assumption that physicians can best determine and satisfy their own educational needs. The goal of the project is to provide a system that facilitates and supports the needs of the self-directed physician learner. Three educational strategies are integrated in this unique continuing medical education program: learning plans, educational brokering, and peer resource groups or networks (University of Southern California, 1984, pp.299-310). Knowles (1985) promoted the importance of andragogy in the continuing education of health professionals, given the rapid changes in the field and the mandatory nature of professional education.

Misch (2002) argues that the andragogical principle of intrinsic motivation is “simplistic, misleading, and counterproductive” when applied to medical students. Bennett, Blanchard and Hinchey (2012) suggested incorporating Knowles’ principles of andragogy into the teaching of medical residents. Another study (Bashir, et al., 2018) showed that incorporating learner self-direction in the form of a flipped classroom model yielded higher test scores for Emergency Medicine residents over time compared to traditional teaching methods. A study by McNamara and Shaw (2022) incorporated andragogical principles through the use of podcasts in undergraduate kinesiology courses.

Application of Andragogy in Nursing

Nurse educators are responsible for teaching and preparing students for the workforce. They help to ensure that nursing students acquire the necessary skills to provide safe, competent, and compassionate care to patients. Students need to learn various strategies to engage in critical thinking and develop the ability to anticipate and recognize potential issues they may encounter in practice. Traditional teaching methods such as lectures and PowerPoint presentations are passive, with little opportunity for students to engage in critical thinking, thus, limiting students’ ability to provide safe and effective patient care. Instead, most students use memorization techniques to retain the information rather than understanding what is being taught. It is of utmost importance that nursing students are taught with various teaching methodologies, which will enhance

critical thinking skills to provide outstanding patient care. Active learning and constructivism as adult learning theories are found to be helpful in helping nurse educators understand their role in teaching nursing students. Concept-based curriculum along with selected innovative teaching techniques associated with active learning and constructivism added to the quality of nursing education.

During a nurse's training and professional career, innumerable competencies must be developed to meet the needs of the market and life in society. A constant search for information and learning is fundamental for this, and must be facilitated through teaching processes which are appropriate to these professionals' characteristics. In this context, it is important to note that andragogy brings together a set of principles which, if used appropriately, contribute to the learning's success and, consequently, promote improvement in Professional Training, Continuing Education, and Health Education. Arms, Chenevey, Karrer and Rumpler (1984, pp.273-284) state that the Schools of Nursing have a higher proportion of adult students than many other undergraduate programs because of the pressure on practicing nurses to acquire a baccalaureate degree. They describe a baccalaureate degree program that is based on the andragogical model. The program is especially noteworthy because it takes care to meet the dependency needs and expectations of students entering Bachelor of Science in Nursing (BSN) degree, which is basic requirement for many positions in nursing, and provides them with a sequence of experiences that enable them to become increasingly self-directed.

American Nurses' Association (1984, pp.311-321) believes it has the responsibility to develop standards for nursing education and to devise methods for gaining their acceptance and implementation through appropriate channels. ANA's guide for self-directed continuing professional education is so congruent with the andragogical model. Nursing education includes basic education, graduate education and continuing education. Continuing education in nursing consists of planned, organized learning experiences designed to augment the knowledge, skills, and attitudes of registered nurses for the enhancement of nursing practice, education, administration, and research to the end of improving health care to the public.

Albanetti and Carroll (1984, pp.335-340) describe how principles of adult learning were applied to the design and operation of an innovative program of in-service nursing education in which primary responsibility was placed on the clinical nursing units. The approach utilizes human maniac principles of adult education with an emphasis on active participation in striving toward personal and professional growth, and ultimately, improved patient care.

Dare (1984, pp.325-334) addresses an important dimension of the question 'whether the andragogical model can be used with highly technical subject matter?' For example, "Teaching Nurses Advanced Skills at a Metropolitan Hospital". It is difficult to think of any content more technical and demanding of proficiency than cardiovascular nursing. This is the actual course syllabus that is given to the learners to orient them to the philosophy and rationale for the self-directed leaning program, its objectives (in behavioral terms), pre-course instructions, the designing of learning contracts, the use of learning modules and other resources, and evaluation procedures.

Of the strategies, methods and programs, it was the workshops, the forums, the simulations and the preparatory modules for self-direction, which demonstrated evidence of success. The mentoring program, the use of Problem-Based Learning (PBL) and Distance Learning (DL) also stood out. In relation to DL, which is very common in Continuing Education, the sharing of experiences made it possible to learn concepts and stimulate reflection. The use of a bi-modal format (DL and learning where the student was physically present) for development of teaching staff in the areas of strategies and effective methods for learning-teaching and self-evaluation was shown to be effective to improve practice (Graling and Rusynko, 2001). DeCelle (2016) promoted the use of andragogy in online nursing education.

Practical placements, knowledge and skills with the assumptions of adults' learning were used for the development of tutors. The program for the improvement of tutors encouraged updating and the development of competencies to incentivize the process of reflection on competent and safe practice (Weitzel and MeeCahon, 2008; Walshe, 2003).

Check Your Progress

- Notes:**
- a) Write the answer in the space given below the question.
 - b) Check your answer with the one given under "Answers to 'Check Your Progress' Questions" of this Unit.

4. What are the stages of stimulating and supporting the student involved in andragogic theory while following a processual model mediated by the facilitator in promoting learning among the nursing education students?

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19.7 ANDRAGOGICAL APPLICATIONS IN SOCIAL WORK EDUCATION

Despite individual differences in learning, social work students, as adult learners, have some common characteristics. Knowles, the father of andragogy theory, identified six assumptions -- *learner's need to know*, *learner's self-concept*, *role of the learner's experiences*, *readiness to learn*, *orientation to learning*, and *motivation to learn* -- about adult learning (Knowles, 1990; Knowles, Holton, & Swanson, 2005). These assumptions are particularly relevant to social work students as adult learners in practice settings, and are therefore important for understanding how they approach their field practice (Gitterman 2004; Bogo, 2010; mentioned in Papouli, 2014). It is widely accepted in social work education that through the process of fieldwork placement, students can transform themselves from receivers into producers of professional knowledge,

values, and skills. But this transformation is not instant, because field learning is a developmental process.

Kilpatrick, et al (1984, pp.243-263) provide several illustrations of how they implement andragogy into the undergraduate social work (BSW) and graduate social work (MSW) programs at the University of Georgia. They believed that the examples used demonstrated a continuum approach, culminating in the most independent learning in the later stages of the MSW program. Naturally, the most elementary forms of andragogy are introduced at the baccalaureate level. Finally, they present guiding principles drawn from their experience, which they hope will be helpful to others who are applying the principles of andragogy. They conclude that Knowles's (1972, p.39) hypothesis was accurate: "Significant ... innovations will come when social work educators shift their thinking from transmitting the knowledge and skills they think social workers ought to possess to creating educational environments in which maturing professions can build ever improving models of the competencies required for their professional roles and in which they can develop these competencies through mutually self-directing inquiry."

Andy Farquharson (1984, pp.265-272), in the context of "Learning through Teaching among Undergraduate Social Work Students", cites one of the epigrams in educational mythology, "if you want to be sure to learn something, teach it" (p.265). He describes an innovative approach to designing learning experiences and evaluating learning outcomes by undergraduate social work students. He asserts that "Several key assumptions about the way in which the learning of adults can be facilitated may be used to inform the design of student assignments. Foremost among these is the notion of teaching as learning: the idea that the opportunity to teach others may be a preferred way of facilitating one's own learning" (p.266). In this approach principles of adult education have been used in the form of assignment that has been refined over a period of five years working with groups of students at three different universities and at one teaching hospital. The assignment has been termed a *learning kit*. In simple terms the students are required to research topics related to the focus of a course and then prepare a learning kit that would help others to learn what the students themselves have learned about their chosen topic. This programme outline, including all necessary resource materials, is the basis upon which a grade is assigned. This concept of a learning kit may best be understood by providing one or two descriptions of instructional programs produced by students in courses offered in a social work program. There has been no structured evaluation of the merits of the learning kit in facilitating the learning process, but there have been numerous references to this assignment in student evaluation of courses in which it has been used. The learning kit approach does appear to be a useful way to practically apply some of the assumptions about the effective promotion of adult learning to the design of undergraduate student assignments in social work programs.

Social work as a practice-based profession requires a combination of theoretical and practical learning. Both types of learning are important for students to become professional social workers, and they take place inside and outside the university classroom through the field education experience. In both classroom and field settings, the process of learning is critical for students to help them

acquire, practice, and improve the values, skills, and knowledge needed for the profession. Learning enables students to become competent and ethical professional social workers, and as such, it can be seen as a developmental process that normally begins from the early stages of students' entrance into their educational programmes and continues throughout their field placement with social work agencies (IFSW/IASSW, 2014). From this perspective, learning impacts the whole educational process and is therefore considered as a long-term developmental and critical process, the purpose of which should be not only to inform but also to change and transform (Dewey, 1997; Mezirow, 2000; Hager, 2005, mentioned in Papouli, 2014).

Field learning plays a leading role in social work education, and as such, social work educators and field instructors need to know how their students learn and develop during the field education experience; by being aware of the ways in which students learn and develop in social work agencies, educators and instructors can better understand students' educational needs and find ways to best support them through the learning process in practice. Papouli (2014) examines field learning in social work education in relation to the two dominant learning approaches for students as adult learners -- individual approaches (adult learning theory) and sociocultural learning approaches -- and looks at their application in field placement settings. Papouli highlights the multifaceted nature of field learning while suggesting that sociocultural approaches are closely associated with the nature of learning in field settings, and as such, they are particularly important for understanding the process of students' learning in social work field education.

However, too often social work educators and field instructors do not take the much-needed time to step back and reflect on the ways in which students learn and develop in classroom and field settings. In the field work practicum particularly, educators and instructors tend to focus more on the operational and task-oriented nature of learning than on the process of learning itself, while they also underestimate the value of critical reflection in student learning during the field experience. But being aware of how social work students achieve their learning objectives in field education is of paramount importance to understanding the ways in which they learn about their professional role in the practice of social work and formulate their professional identities from field experiences.

Kolb (1984), the modern father of experiential learning theory, said learning is more meaningful if it has been done through actual experience, because experience is the key to success in any endeavor. He considered experiential learning as a process that links education, work and personal development. Experiential learning enables students to acquire the necessary knowledge, values, and skills relevant for the social work profession through their daily contact with the real world of practice. Throughout their practical experience, students are able to work with actual clients, interact with experienced social work staff and other professionals and learn to develop interpersonal skills through contact with clients, peers, and role models. Noble (2001) points out that the process of "knowing and doing" through field learning helps students learn to make decisions in real situations.

Field learning is a type of experiential learning that social work students engage in through their placements in social work agencies. During the field practicum, social work students are moving from class-based learning to learning by doing, which marks their entrance into the world of the profession and the demands of learning through work. So field learning is regarded as the missing link between theory and professional practice (Parker, 2007). The whole process resembles a theatrical rehearsal, as students are gradually prepared to play the role of the future social worker. In particular, at the final stage of fieldwork practice, social work students seem to participate in a “prova generale” before entering into the professional arena.

Lager & Robbins (2004) concisely refer to the benefits that social work students can gain from fieldwork experience as follows: In the field, students have the opportunity to test what they learn in the classroom; integrate theory with practice; evaluate the effectiveness of interventions; contend with the realities of social, political and economic injustice; strive for cultural sensitivity and competence; deliberate on the choices posed by ethical dilemmas; develop a sense of self in practice; and build a connection to and identity with the profession. (p. 3).

Social work students’ interactions with the real world of the profession and its demands lead them to a new pathway of knowledge and action concerning the social reality and how it is mirrored in the workplace. In this regard, fieldwork practice can be viewed as a challenge for students wherein they apply theoretical knowledge taught in academic settings, connect practice with theory, acquire new knowledge, and gain practical skills necessary for the profession (Noble, 2001; Lager & Robbins, 2004). Regehr, Regehr, Leeson & Fusko (2002) summarise the merits of field learning saying that it is a “primary opportunity for students to integrate knowledge, values, and skills into their professional self concepts” (p.56).

The benefits of field learning for students not only relate to their professional development, but also to their personal development. Field learning in practice settings can contribute to students’ personal development in a number of ways; during the fieldwork experience, students come into direct contact or interact with different categories of individuals, groups and professionals, as well as people with different personalities, cultures, and philosophies with whom they are likely to work later in their professional lives. Through this interplay, social work students have hands-on opportunities to discover new ideas or think about themselves and their own values, prejudices, and attitudes towards others, while learning to manage emotions and feelings within real-world agency settings (Papouli, 2014).

Field learning has always been an integral part of the social work curriculum, given the practice nature of the profession. Clearly, social work educators and field instructors who are well prepared and knowledgeable about approaches to learning in field education can better understand and explain the complexity of learning in field social work placements and design programmes for students that meet their educational needs both individually and collectively.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

5. What are the two broad approaches to learning, as followed in social work?

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19.8 ANDRAGOGICAL APPLICATIONS IN REMEDIAL EDUCATION

People who failed, dropped out or did not keep up with their classmates in school present special problems when they return to school as adults to catch up. They are in a double bind: they are adults in age, size, life roles, experience, and self-concept, but they are learning what they perceive to be childish content – reading, writing and arithmetic. It is therefore especially important that they be treated as adults – that their dignity and self-esteem be respected, that their learning materials and tasks be geared to application in the adult world, and that their adult experience be taken into account and made use of as a resource (Knowles, 1984, p.399).

Remedial education allows students to fill-in any learning gaps and consequently be successful, confident, and independent in the general education classroom. Remedial education aims at re-teaching and reinforcing previously taught basic skills to improve student outcomes in current or future coursework. Its focus is on filling learning gaps. However, as with any program or method, there are both advantages and disadvantages for students receiving these services.

In general, remedial education is implemented to help primary school level students who experience difficulties in mastering the skills of reading, writing, and counting and also to help those who have dropped out from schooling so as to bring them back to school. Students who have consistently performed poorly in at least one core academic content area, like reading, writing or math, are considered for remedial teaching in order to help them make successful with their grade level coursework. It is often the first step in addressing the needs of a student who is struggling in a core content area.

Further, if the strategies from remedial education also do not help close the learning gaps, that student may be recommended for evaluation to determine eligibility for special education services. Students might also receive remedial coursework within their special education services plan as well.

An example of an attempt to apply principles of adult learning to education in the military services is the Predischarge Education Program (PREP) of

the Department of Defense (DOD) Schools, Pacific (Department of Defense Schools, 1984, pp. 401-408). It describes how the program is presented to the military personnel it has been designed to serve. It is one of the clearest and most enthusiastic portrayals of the role of learning-facilitator. DOD, Pacific functions on a cross-service basis by operating on Air Force, Army, Navy, and Marine installations throughout the Pacific and Southeast Asia areas. Responsibility for providing educational program which is equal to (or exceed) stateside accreditation standards spans elementary, secondary and adult needs of United States service men and their dependents. Although PREP is primarily for active-duty military personnel, United States government civilian employees and adult dependents may enroll on a space-available, tuition-paying basis. PREP is offered throughout the continental United States by county school systems and community colleges, and in overseas commands by DOD schools and private colleges wherever United States servicemen are stationed. Many students who enroll in PREP see the necessity for improving reading, language arts, and math skills while moving toward high school diploma completion. Others need encouragement that they can succeed. PREP students are unique individuals, but they have certain similarities. Many are burdened with unpleasant memories of past high school experiences. They “dropped out” because the traditional school system was not relevant to their lives. Many still feel hostility toward authority, and some harbor a feeling of helplessness about how to broaden career opportunities within the service or what to do once their tour of duty is ended. Many people lack a positive self-image and have a fear of failure. They have little confidence, especially where “school” is concerned, and this lack of certainty may carry over into their assessment of their own worth.

Each teacher in PREP does not really “teach” in the usual sense: he or she is seen in the role of facilitator helping the student learn how to learn. The role of this “learning leader” perhaps is more important than in a traditional classroom – important because the teacher is influencing internal and personal motivation of the students by promoting self-confidence and arousing a desire for learning. However, the teacher in a Learning Center is not an authority figure but, rather, attempts to relate to the learners on an equal, human basis by acting as a leader, tutor, counselor and friend.

DePaula (1984, pp.409-416) describes an andragogical approach to teaching English as a Second Language (ESL) by more dynamic and imaginative teachers. ESL is a special program designed to meet the needs of foreign-born students for whom English is a second language. It is taught with two basic objectives: (1) to overcome the communication problem in order to promote a quicker adjustment within the life of the community (foreign nationals, legal residents, and intracompany transferees are not required to have a high school diploma to enter this program); (2) to make an easy transition from a person who has little or no proficiency in English to one who is a proficient, happy, adjusted and useful citizen. These students are seeking English for professional and social purposes. The assumptions of andragogy are totally valid, and many of its methods and techniques are applicable during all phases of teaching ESL to adults.

In remedial education, an important aspect is the role of the remedial teacher in identifying potential learning gaps that are hindering the student’s progress

in the general education classroom. Accordingly, the remedial teacher should provide materials, give consistent feedback, and monitor progress of the student concerned. Since different students requiring remedial education are at different levels of learning the basic skills, the remedial education teachers need to apply differentiated pedagogy to effectively address the specific learning needs of the students in systematic manner. Further, the remedial education teachers are also expected to possess required competencies in terms of knowledge, skills and readiness to undertake the relevant tasks of a remedial teacher either for children or for adults. The differentiated pedagogy has equal relevance to remedial teaching of learners, depending upon their levels of learning. Therefore, what matters in ensuring the success of remedial education is enhancing the competencies of the remedial education teachers to apply differentiated pedagogy or anadragogy to the concerned target groups of learners, be they children or adults.

Differentiated pedagogy: Wan (2015) explains that differentiated pedagogy is a teaching method that considers the diversity of students in relation to learning readiness, interests and learning profiles. Differentiated pedagogy also refers to teaching methods, modifications to the content of lessons, teaching strategies, and accommodating students' skills according to their abilities (Lavania & Nor, 2021). Differentiated pedagogy is a teaching method that provides all students with equal opportunities to follow the learning process in accordance with their individual needs. Differentiated pedagogy is a flexible method of teaching, and involves teaching methods being adapted according to the diverse traits of students in a class, to ensure that they all achieve the learning objectives. Implementation of differentiated pedagogy is flexible, as teachers are free to plan their teaching lessons so that they adapt to the needs of students in order to produce better learning. Differentiated pedagogy can increase students' opportunities to achieve perfect learning, because every student is given the required opportunities to meet their specific learning needs.

Differentiated pedagogy can be implemented in remedial education classes, because it can provide opportunities for advanced and weak students to interact (Magableh & Abdullah, 2020). This is why the competency of remedial education teachers to implement differentiated pedagogy is important, as it enables teachers to identify appropriate and interesting teaching strategies that can be implemented during their teaching sessions.

All teachers, including remedial education teachers, must possess the knowledge, skills, and readiness to implement differentiated pedagogy when planning lessons and preparing learning materials. This means, there are teachers who have not been exposed to the implementation of differentiated pedagogy and do not apply this pedagogy in their teaching. Remedial education teachers need to be aware that, if they use the same teaching method for all students, it will be difficult to address the diversity of skills of all the students in the class (Mansor, et al., 2020). Remedial education teachers should understand the needs and background of each student, so that they can plan lessons that are thorough and meet the needs of each student. Hence, differentiated pedagogy must be implemented in classrooms to meet the needs of diverse students.

Bestian and Rashid (2024) conducted systematic review of literature with a view to review the competency of remedial education teachers for differentiated

pedagogy. The study focused on competency of remedial education teachers regarding levels of knowledge, skills, and readiness to implement differentiated pedagogy. The results revealed that remedial education teachers' competency for differentiated pedagogy was at different levels for all three elements – knowledge, skills and readiness. Research reveals that remedial education teachers' competency for differentiated pedagogy in terms of knowledge, skills and readiness are essential, though not at high level in each factor. Teachers had deep knowledge and understanding of the concept of differentiated pedagogy, and they were ready to implement it in their teaching sessions, but lacked the skills to practice differentiated pedagogy in their classrooms. On the other hand, some teachers had sufficient knowledge and skills but are not ready to implement differentiated pedagogy due to associated practical difficulties. Therefore, remedial education teachers should receive leadership support and attend professional teacher development events so that they can successfully implement differentiated pedagogy.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

6. What is the type of pedagogy that has great relevance to implementation of remedial education?

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19.9 ANDRAGOGICAL APPLICATIONS IN RELIGIOUS AND SPIRITUAL EDUCATION

Religious institutions of most denominations have been shifting their focus from a primary concern with the instruction of children and youth to at least an equal concern for the education of adults. Many denominations and an increasing number of local churches have added adult education specialist to their staffs, with the result that their programs have become more congruent with principles of adult learning (Knowles, 1984, p.341).

There is often much confusion about what the term “spirituality” means and how it is distinguished from religion. In general in contemporary literature, spirituality is seen as being about an individual's personal experience with the sacred, which can be experienced anywhere — in a secular setting, in a religious context, or in the natural world. Religion, on the other hand, is about an organized community of faith, with an official creed, and codes of regulatory behavior. When spirituality is defined as an individual's personal experience

with the sacred, it can indeed be experienced anywhere including the classroom. Recent writers have discussed the influence of spirituality and soul in how it affects learning of an individual at a cultural level and what it suggests for educating adults more generally or as culturally responsive education in classroom settings or in the arena of workplace learning or in community work for the common good. The strong influence of spirituality is also still present in those educating for social justice in myriad adult education settings (Elizabeth J. Tisdell, 2009). Thus, spirituality and religion are important considerations for the adult learner, because with adulthood comes an increased identification with spirituality.

In 1966 the term “andragogy” was hardly known in the Church and adult education methods were little used. Adults were still being taught like children. And yet, there were stirrings. Hughes (1984, pp.351-361) describes the dramatic evolution of a comprehensive program of adult education based on the principles of adult learning in an Archdiocese. It describes a seventeen-year longitudinal case study that documents the steps for successfully converting a social system – a Catholic archdiocese – into a learning community. It also demonstrates that major organizational change can be achieved through application of andragogical principles in religious education and transforming a social system into a learning community.

It wasn't until the 1990s that spirituality and its relationship to adult learning began to appear in our literature in direct discussion, though as English (2005) observes, it was an underlying influence for many in the field who have been advocates for social justice.

Adults often report learning important life lessons through significant spiritual experience. There are many types of spiritual experiences. Those commonly reported in research studies happen in the context of births, deaths, and close brushes with death; through dreams and synchronicities; experiences in meditation, and nature; and through bursts of unanticipated creative expression that may relate to the integration of some aspect of one's identity, around culture, gender, sexuality or life role status. Often these types of spiritual experiences happen through unconscious and symbolic knowledge construction processes people tap into some earlier event or meaning stream through images, symbols, music, stories, or ritual from one's earlier life, and as a result of the experience reintegrate it in some new way. People construct knowledge in powerful ways through spiritual experiences, or those that tap into the symbolic and imaginal realm. The ability to create, imagine, and come to further insight through symbol, metaphor, and art is part of the experience of being human that is so often ignored in education; yet it sometimes gets to the heart of spirit. Thus, attending to spirituality in adult learning involves making space for its expression, attending to paradox, sacredness, and the graced moments in teaching and learning that lead to unexpected insights (Elizabeth J. Tisdell, 2009). Understanding the role of spirituality/religion as a matter of cultural influence for the adult learner thus becomes even more of an imperative part of andragogical applications in spiritual/religious education.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

7. What is the difference between religion and spirituality? How is andragogy applicable to spiritual education?

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19.10 ANDRAGOGICAL APPLICATIONS IN CRIMINAL JUSTICE EDUCATION

Criminal justice is a generic term that refers to the policies, procedures, institutions, and laws at play before, during, and after the commission of a crime. The various objectives of the *criminal justice* system are: to punish the wrongdoers, and to prevent the further occurrence of crime in society.

Historically, much of the teaching-learning transactions in criminal justice classrooms have been teacher-centered. Teacher-centered approaches are rooted in the behavioral and cognitive theories of education. Andragogy, a philosophical orientation for adult education, receives little attention in the criminal justice literature. Yet the tenets of andragogy form an organizing framework that is consistent with many contemporary and evolving criminal justice practices.

Whenever and wherever crime occurs in civilized society or there is serious social problem, it is essentially the police who enter the scene and take up the matter. Birzer (2003, mentioned in Sang Chan, 2010) examined how andragogy was applied in police training. Many training programs have followed behaviorist and militaristic approaches which are not best for police training and can cause subsequent problems as well. Birzer argues that police officers should be self-starters in solving problems in the community. Applying the andragogical approach helped police officers develop problem-solving skills and become self-directed in dealing with community issues such as drug, crime, fear of crime, and urban decay. These skills allow the officers to prevent small disorders from becoming serious crime related problems. Moreover, andragogy promotes the use of relevant learning experiences which is also a key element in police training. The instructor can create case scenarios in the classroom and encourage learners to utilize their experiences to solve the problems.

Birzer (2004) proposes the application of the six principles of the andragogical practice in criminal justice education, as follows:

Andragogy and Its Applications

1. *Establish a physically and psychologically conducive learning atmosphere.* In criminal justice classrooms, good physical and psychological climates help the instructor create mutual respect and a collaborative environment to ensure learning effectiveness in the classroom. Moreover, a psychologically conducive atmosphere helps promote trust during the first meeting, which is crucial in the justice program.
2. *Involve learners in mutual planning:* The instructor and students can jointly plan the learning process and adjust a syllabus based on learning interests and activities.
3. *Involve learners in diagnosing learning needs:* The instructor can help students determine the level of competency in the area of interest.
4. *Encourage students to formulate the learning objectives:* The instructor can facilitate the students formulate the appropriate learning objectives.
5. *Encourage learners to identify resources to accomplish the learning objectives:* The instructor works closely with students to identify resources and sets up strategies to use those resources to reach the objectives. However, this requires students to be self-directed and motivated to achieve the objectives with the instructor's assistance.
6. *Involve learners in learning evaluation.* A learning assessment is important in andragogy. Not only does the instructor assess student performance, but students also assess themselves. This process helps reduce bias from a single judgment of the instructor.

Birzer (2004, mentioned in Sang Chan, 2010) examined the application of the andragogical principles in criminal justice programs. Birzer notes that behavioral and cognitive learning approaches have become embedded in criminal justice classrooms, and these two approaches have two problems: (a) teachers control the teaching and learning process with little learner participation, and (b) learners are taught in the same consistent manner without differentiation between a child and an adult. Instead, the andragogical approach provides a guidance to design learner-centered instruction to enhance competencies and traits necessary for criminal justice professionals. It may be useful for criminal justice educators who desire to experiment with innovative approaches to foster a more effective teaching-learning transaction.

Patrick Filipe Conway (2022) synthesizes literatures relating to the fields of andragogy and prison education. It is a key moment to reflect on teaching practices inside carceral settings. As Pell Grant availability for incarcerated students is set to expand dramatically, many college and university faculty are soon likely to be entering prisons as instructors for the first time. Conway contends that the tenets of andragogy provide a useful framework for structuring prison education course syllabi, activities, assignments, and evaluation methods. With the aim of valuing students' life experiences and assisting in the process of self-direction, andragogy can help combat some of the most harmful dynamics inside prisons, encouraging students to maintain an important degree of agency over their own learning.

Check Your Progress

Notes: a) Write the answer in the space given below the question.

b) Check your answer with the one given under “Answers to ‘Check Your Progress’ Questions” of this Unit.

8. What is criminal justice education? What are the andragogical principles followed in the practice of criminal justice education?

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19.11 LET US SUM UP

Although andragogy is the art and science of teaching adult learners, it is recommended that the approach be applied in the teaching of children and adolescents, as well. Active learning is more effective than passive learning, regardless of age. It is believed that passivity in a classroom does not help students to learn more effectively. Though children do not meet the andragogical assumptions, it does not necessarily mean that the andragogical approach would not be effective with them. The focus of andragogical practice could expand beyond that of the adult learner to also consider social, political, and cultural contexts. Learners, irrespective of their age, are influenced by the surrounding contexts which shape their thinking and action. Thus, applications of andragogy assume great relevance and significance in different fields. In this Unit, we have highlighted a range of andragogical applications with special reference to higher education, medical education, clinical education, health and nursing education, social work education, remedial education, religious/spiritual education and criminal justice education. Of course, the andragogical applications have their relevance in many more diverse fields other than those discussed in this unit. However, the discourse of the andragogical applications in only a few fields highlighted in this unit will be helpful to you in understanding and reflecting on many other fields that are and can be influenced by the andragogical applications.

19.12 ANSWERS TO ‘CHECK YOUR PROGRESS’ QUESTIONS

1. The andragogical approach has changed the teaching philosophy of educators around the world. In the present educational scenario, the pedagogical approach has become less effective in teaching adult learners, for the following reasons.
 - The adults need to be involved actively in the learning process to construct their own knowledge through participatory learning.
 - The teaching fraternity should be exposed to gain mastery in many new and emerging technologies and they should incorporate adult learning theories into current structure of learning.

- It is very essential for the instructors to accept the changes within the educational sector, be adaptive in order to cope with the ever-changing cultural and technological environment; and be innovative, and must maintain an effective instructional environment within an evidence-based teaching approach.
 - The educational institutions must organise various training programmes and workshops for their staff members for enabling them to integrate technology into classroom instruction which can result in increased retention and comprehension of presented course material resulting in higher performance of participatory learning.
 - The policy making bodies can make the approach more effective by inducing the teaching fraternity to adapt andragogical environment.
2. The medical students applying adult learning theories and principles in pursuit of their medical science education have popularly resorted to self-directed learning, problem-based learning, skill-based teaching, building communication skills through simulation and fun trivia and quizzes, among other things, in improving their medical education.
 3. Four different types of educational theories applicable in clinical practice are: self-directed learning, self-efficacy, constructivism, and reflective practice.
 4. There are eight stages of stimulating and supporting the student involved in andragogic theory while following a processual model mediated by the facilitator in promoting learning among the nursing education students. These include the following: preparing the student for self-direction; establishing a climate of learning; creating mechanisms for joint planning; knowing and satisfying the learning needs; formulating learning objectives; designing and conducting learning experiences; evaluating; and stimulating self-evaluation.
 5. The two broad approaches to learning as adapted in social work include: Individual approach based on adult learning theory developed by Knowles; and Sociocultural approaches to learning as developed by Lave & Wenger's overall view of learning.
 6. Differentiated pedagogy has great relevance in implementation of remedial education. Differentiated pedagogy is a teaching method that considers the diversity of students in relation to learning readiness, interests and learning profiles. Differentiated pedagogy also refers to teaching methods, modifications to the content of lessons, teaching strategies, and accommodating students' skills according to their abilities. Differentiated pedagogy is a teaching method that provides all students with equal opportunities to follow the learning process in accordance with their individual needs, abilities and pace of learning. Differentiated pedagogy is a flexible method of teaching, and involves teaching methods being adapted according to the diverse traits of students in a class, to ensure that they all achieve the learning objectives.

7. In general, in contemporary literature, spirituality is seen as being about an individual's personal experience with the sacred, which can be experienced anywhere — in a secular setting, in a religious context, or in the natural world. Religion, on the other hand, is about an organized community of faith, with an official creed, and codes of regulatory behavior. When spirituality is defined as an individual's personal experience with the sacred, it can indeed be experienced anywhere including in the classroom.

While the assumptions underlying andragogy are firmly based in the potential of adults to learn, grow and develop, nowhere is the spiritual dimension of the human being directly addressed. It wasn't until the 1990s that spirituality and its relationship to adult learning began to appear in our literature in direct discussion, though it was an underlying influence for many in the field who have been advocates for social justice.

8. Criminal justice is a generic term that refers to the policies, procedures, institutions, and laws at play before, during, and after the commission of a crime. The various objectives of the *criminal justice* system are: To punish the wrongdoers, and to prevent the further occurrence of crime in society. Birzer (2004) proposes the application of the six principles of the andragogical practice in criminal justice education, as follows:

- a) *Establish a physically and psychologically conducive learning atmosphere.* In criminal justice classrooms, good physical and psychological climates help the instructor create mutual respect and a collaborative environment to ensure learning effectiveness in the classroom. Moreover, a psychologically conducive atmosphere helps promote trust during the first meeting, which is crucial in the justice program.
- b) *Involve learners in mutual planning:* The instructor and students can jointly plan the learning process and adjust a syllabus based on learning interests and activities.
- c) *Involve learners in diagnosing learning needs:* The instructor can help students determine the level of competency in the area of interest.
- d) *Encourage students to formulate the learning objectives:* The instructor can facilitate the students formulate the appropriate learning objectives.
- e) *Encourage learners to identify resources to accomplish the learning objectives:* The instructor works closely with students to identify resources and sets up strategies to use those resources to reach the objectives. However, this requires students to be self-directed and motivated to achieve the objectives with the instructor's assistance.
- f) *Involve learners in learning evaluation.* A learning assessment is important in andragogy. Not only does the instructor assess student performance, but students also assess themselves. This process helps reduce bias from a single judgment of the instructor.

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19.14 UNIT-END EXERCISES

In your own interest, you may prepare the answers to the following questions which may be useful as a part of your preparation for your term-end examinations.

1. What are the main andragogical principles? How do they assume relevance and significance from the point of view of their application in multiple fields?

2. Explain the relevance of andragogical applications in higher education.
3. What are the broad implications of andragogy for medical educators?
4. Explain how andragogical applications in clinical education are helpful to the faculty and the students.
5. Explain the nature and significance of andragogical applications in health and nursing education.
6. How do the andragogical applications help enrich the practice of social work education?
7. Do you think andragogical applications are useful in remedial education?
8. How can spiritual education be improved through andragogical applications?
9. What are the andragogical principles applicable for improving the criminal justice education?

19.15 UNIT-END ACTIVITIES

If you like to further enhance your interest, you may attempt to perform the following activity.

1. What do you think are the other areas or fields of education than those discussed in this Unit, where andragogical theory and principles can be applied effectively? Reflect upon those areas vis-à-vis the nature, relevance and significance of application of different principles of andragogy.
2. Do you think human capital development through applications of andragogy is the better way to give fillip to global economy at all times? Justify your answer with examples.

