Application of Concept and Andragogy for Education and Training of Civil Servant

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Abstract: *The concept of adult education is an important aspect of education and training. The reality on the ground, the emergence of problems how tips and strategies of learning adults.*

Keywords: *Andragogy Concept, Andragogy Method*

1. PRELIMINARY

The concept of adult education is an important aspect of education and training. In fact, there are various problems how tips and learning strategies the adult. Adults as learners in learning activities can't be treated like ordinary students who are sitting in training. Therefore, it must be understood, adults who grow as individuals and have the maturity of self-concept move from dependence as it did in childhood toward self-reliance.

The maturity of adult psychology as a self-directed person promotes a profound psychological need for the desire to be seen and treated by others as self-directing, not directed, coerced, and manipulated by others. Thus, when an adult faces a situation that does not allow himself to be himself, then he will feel depressed and feel unhappy. Adults are not small children, so education for adults can't be equated with the education of schoolchildren. It needs to be understood, what is the driving force for adults to learn, what obstacles they experience, what they expect, how they can learn best, and so on (Lunandi, 1987).

Understanding of the development of adult psychological condition of course has an important meaning for widyaiswara in the face of adults as learners. The growing understanding of such adult psychological conditions grew in a theory known as andragogy. Andragogy as a science that has a broad and deep dimension of learning theory and way of teaching. In brief, this theory provides essential support essential for adult learning activities. Therefore, adult learning needs a special approach, and must have a firm grasp on the concept of theory based on the assumption or understanding of adults as learners.

Adult education is primarily training, the learner is an adult. Therefore, the implementation of training and training requires a separate approach. By using the theory of andragogy of adult learning activities within the framework of development or realization of the achievement of lifetime education (long life education) can be obtained with the support of theoretical concepts or the use of technology that can be accounted for. One of the problems in the definition of andragogy is his view which suggests that the purpose of education is transmitting knowledge. But on the other hand, changes such as technological innovation, population mobilization, changes in economic systems, and the like are so rapid. Under these conditions, knowledge acquired by a person will quickly become obsolete due to the speed of the process of change. If so, then education as a process of knowledge transmission is not in accordance with modern needs (Arif, 1994).

The purpose of this paper is to examine the superiority of andragogy from various aspects that may be done in an effort to learn of adults (andragogy) as one alternative problem-solving siciness, because education and training today is no longer formulated just as an attempt to transmit knowledge, but formulated as a lifelong educational process or lifelong learning.

2. THEORY/DISCUSSION STUDY

2.1. The Nature of Andragogy

Dugan (1995) defines andragogy more to its origin, andragogy comes from Greek. Andra means mature human, not children, in terms of, andragogy means science that studies how parents learn. According to Sudjana (2005), andragogy comes from the Greek "andra" and "agogos". Andra means adults and Agogos means to lead or guide, so that andragogy can be interpreted by the science of how to guide adults in the learning process. In addition, andragogy is often interpreted as an art and science that helps adults to learn (the art and science of helping adult learn). The definition is in line with the thought of Knowles (1950) states that: andragogy as the art and science to help adult a learner.

Elias and Sharan B. Merriam (1990) mentions maturity in a person include: age, psychological maturity, and social roles. What is meant by an adult by age, is everyone who turns 21 (though not married). In line with that view, Hurlock (1968), adult (adult) adulthood is addressed at the age of 21 for early adulthood and is often calculated from 7 or 8 years after a person reaches sexual maturity, or from puberty. The age-based approach is done by jurists, thus giving birth to differences in legal treatment of offenders. Adults viewed from the standpoint of biological dimensions can also be seen in terms of physical, where adult humans have typical characteristics such as: able to choose a partner living, ready to marry, and reproduction (reproductive function).

Adults based on psychological dimensions can be seen and divided into three categories: early adults from ages 16 to 20, middle adults from 20 to 40 years, and late adults from 40 to 60 years. Hutchin (1970) and Rogers, (1973) view the age limit of about 25 to 40 years, golden age. In this adult dimension is more aimed at the maturity of an individual. Anderson in Psychology of Development and Personal Adjustment (1951), summed up seven characteristics of maturity for an individual namely: 1) Individual maturity can be seen from the interest that is always oriented to the tasks performed or done, and does not lead to feelings of self or for personal gain (not on self and or ego). 2) The goals developed in the self-concept are clear and always have efficient work habits. 3) Ability in controlling personal feelings in the sense can always consider his personality in associating with people lian. 4) Have an objective view in every decision taken. 5) Ready to accept criticism or suggestions for self improvement. 6) Responsible for all efforts undertaken. 7) In reality it can always adapt in new situations. The maturity of an individual can also be a benchmark for social maturity, this can be observed from his readiness in accepting responsibility, doing and completing his personal and social tasks primarily to meet his learning needs (Freire, 1973 and Milton et al. 1985).

Furthermore, Lovell says that: "Adulthood is the time to learn and practice skills. There can be many factors influencing the way in which an adult approaches a new learning experience. Some related to the characteristics and cognitive styles to individual differences in age, experience, motivations and self-perception. Other relative to social context in which the formal teaching is planned and carried out and evaluated (Lovett, 1988:1)

Fundamentally, the most basic characteristic of an individual's maturity lies in his responsibility. When the individual has begun to have the ability to assume responsibility, where he is able to face his own life and self-directed. If they encounter a new situation of not having the skills of directed inquiry, then they will find it difficult to take the initiative, especially in having their learning responsibilities. Not a few individuals who have had a higher education background are not prepared to accept the further responsibility of the learning outcomes. So these individuals become unemployed, experiencing anxiety, frustration, and failure. Being passive in the face of the everyday world and helpless or brave in the face of the future.

Maturity in adulthood can be characterized by the ability to meet their needs, leverage their experience and identify learning willingness. As the ability to learn about the problem of life becomes increased, then the attitudes of dependence on others will diminish. Adults who have a mature self-concept can assume the responsibility of life, realizing where he stands at the moment and knowing

where his life purpose is. In addition, they are capable of making decisions and able to participate in the community and will be able to direct themselves, select and assign relevant work. Adults who are genuinely mature psychologically will not escape or escape the problems at hand (Knowless, 1977).

In dimensions as learners, the adults in many ways have several advantages. In terms of self-concept, they have psychological maturity; responsible, have a passion and a strong motivation to learn and be able to direct himself. They can learn and learn on a wider scale and choose better, more effective, more directed and self-directing learning strategies. From the learning experience, adult learners have a stack of experience as resource persons and total life impressions in relation to others. They can be rich sources and learning materials, especially in supporting group learning and learning together with experts. The learning system in adult learners can be directed into various forms of learning activities in accordance with their needs and the needs of resources and learning materials, such as: discussion groups, role playing, simulation, training, (group discussion, team designing, role playing, simulations, Practice sessions) (Inggalls, 1973; Knowless, 1977; and Unesco, 1988).

In terms of readiness to learn, adults view that "all living is learning. Learning is not only preparation for living the very essence of living, the very essence of living itself ". Each learner has a different readiness pattern with other citizens especially in terms of motivational power (inner motivations) such as: needs for esteem (self esteem), urge to grow, the satisfaction for accomplishment, the need to know something specific and curiosity to learn ".

In general, adults have the ability to read, write and calculate and master verbal skills and decision-making skills relevant to their personal needs and social demands. They design and establish their learning interests and needs, diagnose their needs according to the demands of their lives and so on. Learning can act as a resource person, guide, guide, facilitator or friend of learning (Inggalls, 1973, Knowless, 1977, Unesco, 1988, Saraka, 2001).

Naturally, adults have the ability to set learning goals, allocate learning resources, design learning strategies and evaluate progress toward achieving self-reliance. Tough further states that: Adult learners are more likely to be involved in self-initiated education or self-directed education, rather than in self-directed learning. The process and its activities are described as self-directed learning or self-directed education or self-teaching, learning projects or major learning efforts (Brookfield, 1986: 47).

From the perspective of time and learning orientation, adults view learning as a process of problem-solving and problem solving and problem-solving, both in relation to contemporary issues and future life problems. Adults refer more to the task or problem of life (task or problem oriented). So adults will learn to organize their life experiences. (Knowless, 1977, Unesco, 1988, Kamil, 2001, Saraka, 2001).

Based on these conditions and the conception of andragogy, the term adult education may be defined as education aimed at learners who have grown up or aged 18 years and above or have married and have maturity, and to meet the demands of a particular task in life.

Derkenwald and Merriam express the notion of adult education is "is a process whereby person of social roles characteristic of adult status undertake systematic and sustained learning activities for the purpose of bringing about changes in knowledge, attitudes, values, or skills". Adult education is a systematic and sustainable learning process in an adult person with a view to achieving a change in knowledge, attitudes, values and exposure. The conditions that can be derived from the definition are: (1) Adults are motivated to learn according to their needs and interests; (2) The adult learning orientation is centered on life; (3) Experience as a source of wealth for adult learning; (4) Adults expect to relate themselves to appropriate needs; (5) Individual differences among individuals develop according to age.

Knowles (1976) continues the understanding of C. Linderman, revealing that the condition of adults in learning is different from children. Even if the children used the term "pedagogy" so interpreted with "the art and science of teaching children" or science and art of teaching children. In his view, why is there any difference between the learning activities of children and adults, it is because adults have: 1) self-concept, 2) life experience (the role of the learner's experience); 3) Readiness to learn; 4)

Orientation of learning (orientation to learning); 5) Knowledge needs (the need to know); and 6) Motivation (motivation).

The opinions of experts are in line with several definitions developed by other experts, including: the definition expressed by Morgan, Barton et.al (1976) that, adult education is an educational activity conducted by adults in everyday life using only part of his time and energy to gain intellectual enhancement. In line with that definition, Reevers, Fansler, and Houle stated that, adult education is an effort undertaken by individuals in the framework of self-development, where done without coercion (Suprijanto, 2007:13).

UNESCO sharply defines adult education as an organized educational process both in terms of content, methods and levels, both formal and informal, that continue and replace education in schools, colleges, universities, and job training that make people considered mature by the community develop ability, enriches his knowledge, improves his technical and professional qualifications, and leads to a change in his attitude and behavior in a full perspective of personal development and participation in balanced social, economic and cultural development. (Townsend Coles, 1977; Sudjana, 2004:50).

In the practice of adult learning conducted in educational institutions still looks like teaching children. Principles and assumptions that apply to a child's education are considered applicable to adult education activities. Nearly all that is known about learning is drawn from research studies related to children. The same is true of teaching, drawn from the teaching experience of children, for example, in conditions of obligation to attend and all theories about transactions and trainees widyaiswara participants based on a definition of education as a process of cultural transfer. However, adults as mature individuals have a need to set the learning area around their own life problems.

3. ADULT LEARNING NEEDS

Malcolm Knowless states that what we know about learning so far is the conclusion of various studies of specific childhood and animal behavior. In general, what we know later about teaching is also the result of the conclusions of teaching experience to children. Most teaching-learning theories are based on the formulation of educational concepts as a process of cultural diversion. On the basis of theories and assumptions that blaze the term "pedagogy" whose roots are derived from the Greek, "paid" (childhood), "agogos" (lead). Pedagogy thus means leading a child, or a definition defined specifically as "a science and art of teaching a child". Finally pedagogy is defined generally as "the science and art of teaching children".

Adult education is defined as the overall organized educational process, regardless of what form of content, degree of status and method used in the educational process, both formal and non-formal, either in the context of continuing education at school or as a substitute for education at school, at Place of course, job training and in college, which make the adult able to develop ability, skill, enrich the treasury of knowledge, improve the qualification of sencirity or professionalism in effort to realize double ability that is in one side able to develop person intact and can realize its participation in social development culture, economy, and technology in a free, balanced, and sustainable manner. This, in view of the existence of double pressure for the embodiment to be developed in activity activities in the field. First to realize the achievement of each individual development, and secondly to realize increased participation in social activities of each individual concerned. In addition, adult education encompasses all aspects of the learning experience required by adults, both men and women, in accordance with their respective areas of expertise and abilities.

Thus, it can have a positive impact on the success of adult learning that appears in the presence of behavioral changes toward fulfillment of achievement of adequate skills. Here, every individual dealing with other individuals will be able to learn together with confidence. Behavior change in terms of cooperation in various activities, is the result of a change after the learning process, namely the process of attitude change that was not confident to be a complete change in confidence by adding knowledge or skills. Behavior change occurs because of the change (addition) of knowledge or skills and the change in mental attitude is very clear, in terms of adult education is not enough just to provide additional knowledge, but must be equipped also with a strong sense of trust in person. Increase of knowledge alone without a strong confidence, undoubtedly able to give positive changes in the form of a real physical and mental renewal, thorough and sustainable.

Behavior change for adults occurs through a learning process related to the development of itself as an individual, and in this case, it is possible that participation in social life to improve the welfare of yourself, as well as welfare for others, due to increased productivity. For an adult the fulfillment of his needs is fundamental, so that once that need is met he can move towards the fulfillment of other needs that more still need as a refinement of his life. In relation to the fulfillment of fundamental needs, the author refers to Maslow's theory of pyramid needs as follows.
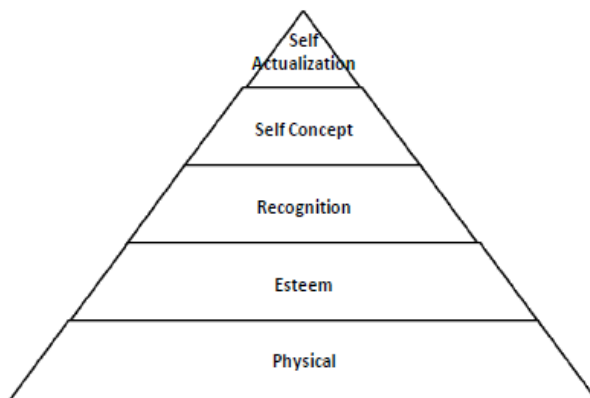

Figure 1. *Pyramid of Needs by Maslow Theory*

Each individual must fulfill his most basic needs (clothing and food), before he can feel the higher needs as a refinement of the basic needs, namely the need for security, appreciation, self-esteem, and actualization himself. When the most basic needs of physical needs in the form of clothing, food, and the board has not been met, then every individual has not needed or feel what is called as self-esteem. Once the basic needs are met, every individual needs a sense of security away from fear, anxiety, and anxiety about his own safety, because insecurity will only give birth to prolonged anxiety. Then if the security has been fulfilled, then every individual needs an appreciation of his/her human rights recognized by every individual outside of himself. If all is fulfilled then the individual feel to have self-esteem. In this connection, of course, adult education that has self-esteem and identity requires recognition, and it will be very influential in the learning process. Psychologically, by knowing the needs of adults as participants of education/training activities, it will be easy and can be determined the learning conditions that must be created, what material content should be given, strategies, techniques and what methods are suitable to use.

According to Lunandi (1987) the most important thing in adult education is: "What learners learn, not what teachers teach". That is, the assessed outcome is what adults get from an educational and training meeting, not what the widyaiswara did at the meeting.

4. PRINCIPLES OF ADULT EDUCATION

Adult growth begins in the middle of adolescence (adolescence) to adulthood, where each individual not only has a tendency to grow in the direction of self-moving, but actually he wants others to see himself as an independent person, who has an identity. Thus, adults do not want people to look at them, let alone treat themselves like children. He expects the recognition of others for his autonomy, and is guaranteed his tranquility to maintain his identity with the rejection and displeasure of any attempt of others to suppress, compel, and manipulate the behavior directed against him. Unlike children who are still a number of objects of supervision, control of others, the supervision and control of adults who are around, against him.

In the training activities, adults are no longer the object of socialization that seems to be formed and influenced to adapt itself to the desire to hold authority above himself, but the purpose of adult learning activities would be more directed to the attainment of the identity of himself, to be himself own; or, if you borrow the term Rogers in Knowles (1979), learning activities aimed at delivering individuals to be personal or find their true identity. In terms of learning or education, it is a process of becoming a person. Not the process of formation or process of being shaped, namely the process of control and manipulation to suit others; or, if borrowing the term Maslow (1966), learning is a process for achieving self-actualization.

The above description is in accordance with Rogers's conception in Knowles (1979) about learning is more client centered. In this approach Rogers bases on some of the following hypotheses:(1) Every individual lives in an ever-changing world of experience in which he is central, and everyone reacts as he experiences and defines the experience. This means that he emphasizes that meaning that comes from the meaning possessed. Thus, learning is self-learning and who knows how far he has mastered what he is learning is himself. With this hypothesis, then in the learning activities, active involvement of learners has a very important and profound position. (2) A person learns meaningfully, only when something he or she learns is useful in the development of his or her structure. This hypothesis emphasizes the importance of learning programs that are relevant to the needs of the learner, which is learning which is beneficial to him/her. And of course, he will question the habit of learning with subjects imposed upon him, so as if he is meaningless. (3) The structure and self-organization appear to be rigid in threatened situations, and will relax, if free from threats. This means that an experience that is considered incompatible with itself can only be assimilated if the self-organization is relaxed and expanded to incorporate that experience. This hypothesis shows the reality that learning often creates insecurity for learners (learners feel depressed). Therefore, it is recommended the importance of providing a safe climate, acceptance, and mutual assistance with the beliefs and responsibilities of the learner (quantum learning method). (4) Different perceptions of each learner are given protection. This means that in addition to the need to provide a safe learning climate for learners, it is also necessary to develop individual autonomy from each learner. The above hypothesis, strengthening the development and formation of theories about adult learning theory, and further influence the development of learning technology of adults.

As has been explained above, in adult as a learner who has grown maturity of his concept arises the need for deep psychology, the desire to be seen and treated others as a whole person who directs himself. According to the theory of Peaget (1959) on the development of psychology from approximately 12 years and over the individual is able to think in the form of adulthood, namely in terms he has reached the development of formal thinking operation. In this stage of development, individuals have been able to solve all problems logically, think scientifically, can solve complex verbal problems, or briefly achieved the maturity of its cognitive structure. In this period, individuals begin to develop a sense of self or identity that can be conceptualized apart from the outside world around it. Thus it is clear that adults have the ability to think for themselves, and realize that there is a conflicting state between the values held and the behavior of others.

Furthermore, Knowles (1970) developed the concept of andragogy on four basic assumptions different from pedagogy. The four basic assumptions are as follows: First, a person grows and matures his self-concept moving from total dependence toward self-direction. Or briefly can be said to the children the concept itself is still dependent, while in adults the concept itself is independent. Because of the independence of this self-concept adults need the rewards of others as human beings who can direct themselves. When he faces a situation where he does not allow himself to be self-directing it will arise an unhappy reaction or refuse. Secondly, as the individual grows mature will accumulate a large amount of experience where it causes itself to be a rich source of learning, and at the same time gives him a broad base to learn something new. Therefore, in andragogy technology there is a decrease in the use of transmitting techniques such as those used in traditional education and especially developing experimental-technique. Then the use of discussion techniques, laboratory work, simulation, field experience, and more widely used. Third, that education is directly or indirectly, implicitly or explicitly, certainly plays a major role in preparing children and adults to fight for their existence in society. Therefore, schools and education has become a powerful tool for integrating and social disintegration in the community (KartiniKartono, 1992). With that, we assume that every individual is mature, the readiness for learning is less determined by academic coercion and biological development, but more determined by the demands of developmental tasks to perform their social roles. In other words, adults learn something because it requires the level of development of those who have to face their role whether as workers, parents, leaders of an organization, and others. Their learning readiness is not solely due to academic coercion, but because of the necessities of life and to perform their social role duties. Fourth, that children are conditioned to have a subject oriented learning orientation because learning for the child seems to be an imperative imposed from the outside. Adults tend to have a learning orientation that focuses on problem-centered-orientation. This is because learning for adults seems to be a necessity to face the problem of life. These four basic assumptions are used as a comparison between the concept of pedagogy and andragogy.

The difference between pedagogy theory and andragogy is more obvious when we understand that pedagogy is education or learning is transferring knowledge to students (students), and andragogy is more emphasized to cultivate encouragement and interest to learn independently. These differences can be seen from the assumptions of learning for adults.

4.1. Self-Image

A child's self-image is that he is dependent on others. As the child becomes mature, he becomes aware and feels that he can make decisions for himself. Self-image change of dependence on others into self-image is referred to as the achievement of the level of psychological maturity or stage of adulthood. People who reach adulthood will be discouraged if treated as children. In this day and age, a person has a willingness to self-directed to learn. The impulse to learn continues to grow and often develops so strongly to continue the learning process indefinitely. The implication of the situation is that in terms of the relationship between teacher and student in the andragogy process, this relationship is mutual and mutually helpful. While in the pedagogic process the relationship is more determined by the teacher and is directed.

4.2. Experience

The adult in his life has many diverse experiences. In childhood, the experience was a whole new thing. Childhood does have many things, but it has not happened so often. In the approach of andragogic process, the experience of adults is considered to be a very rich source of learning. In the pedagogy approach, the experience is actually transferred from the teacher to the student. Most of the learning process in pedagogic approach is implemented by way of one-way communication such as lecture, mastery of reading ability. In the process of andragogy is more a two-way communication or many directions such as group discussion, simulation, role playing, discussion groups, and team learning. In such a process, all learners' experiences can be utilized as a learning resource.

4.3. Readiness to Learn

The third difference between pedagogy and andragogy is in terms of selection of learning contents. In the pedagogy approach the teacher decides the content of the lesson and is responsible for the election process, and the time when it will be taught. In the andragogy approach, learners decide what to learn based on their own needs. Here, the teacher only serves as a facilitator whose main task is to identify the learning needs of learners and to form learning groups according to the interests of learners. In a pedagogical approach, the grouping of students is structured on the basis of particular class levels where the curriculum is fully determined by the widyaiswara.

4.4. Time and Learning Direction

Education is seen as an effort to prepare children for the future. In the andragogy approach, learning is viewed as a problem-solving process rather than as a process of giving certain subjects. Therefore, andragogy is a process of finding and solving real problems in the present. The direction of its attainment is the discovery of a better situation, a deliberately created goal, a corrective experience or a possible development based on the present reality. To find where we are now and where to go is the center of activity in the andragogy process. Learning in andragogy approach is solving today's problems. While the pedagogical learning approach is precisely the process of gathering the information being studied that will be used in the future (future).

5. ADULTS LEARNING CONDITIONS

The lessons given to adults can be effective (faster and stick to their memories), when the widyaiswara does not dominate the class much, reduces the talkative, but strives that the adult individual can find alternatives to develop their personality. A good widyawara, should try to listen to and accept someone's ideas, then assess and answer questions they ask.

An adult is essentially a creative being, when one is able to move/explore the potential within them. In this effort, special skills and tricks that can be used in the lesson are needed. In addition, adults can learn more actively if they feel involved in learning activities, especially if they are involved in contributing thoughts and ideas that make them feel valuable and have pride in front of their friends. That is, the adult will learn better if his personal opinion is respected, and would be happier if he could give brainstorming suggestions and put forward his idea of mind, rather than widyaiswara

merely cramming his own theories and ideas to them. Since the nature of learning for adults is subjective and unique, regardless of right or wrong, all opinions, feelings, thoughts, ideas, theories, systems of value need to be respected. Not appreciating (underestimating and excluding) their self-esteem, will only kill the passion of adult learning. However, adult learning should also gain the trust of the widyaiswara, and ultimately they must have confidence in themselves. Without such confidence, then a conducive learning atmosphere will never be realized.

Adults have different value systems, have different opinions and standpoints. With the creation of a good atmosphere, they will be able to express their hearts and contents without fear and anxiety, even though they differ from each other. Adults should have the feeling that in any learning environment/situation, they may disagree and may do wrong without being threatened by any sanction (humiliation, dismissal, scorn, etc.). The openness of a widyaiswara is very helpful for the advancement of adults in developing their personal potential in the classroom, or at the training place. The nature of openness to express themselves, and open to listening to ideas, will have a good effect on their psychological, psychological and psychological health. In addition, all forms of consequences must be avoided that make adults mockery, humiliation, or humiliation. The best way is to create an atmosphere of openness in everything, so that alternative alternatives of freedom of expression of ideas can be created.

Furthermore, it can't be denied, that adults learn in a unique and unique. Factors of the level of intelligence, confidence, and feeling under control must be recognized as a distinctive privilege so that decisions are not necessarily the same as that of others. Togetherness within a group does not necessarily have to be the same in person, for it would be so boring if it were the atmosphere that seemed to recognize only one truth without any criticism showing the difference. Therefore, the educational background, cultural background, and past experiences of each individual can give a different color to every decision taken. For adults, the creation of a conducive learning environment is a facility that encourages them to try new behaviors, to dare to be different, to act with new attitudes, and to try new knowledge they gain. Although something new poses a risk of error, mistakes and errors are themselves a natural part of learning.

In the end, adults want to know what it means to be in the study group. For adults, there is a tendency to know their own strengths and weaknesses. Thus, the need for joint evaluation by all members of the group is valuable for reflection, in which the meditation can evaluate itself from others whose perceptions may differ.

6. DECREASED ADULT PHYSICAL FACTORS IN LEARNING

Human learning process lasted until the end of life (long life learning). However, there is a negative correlation between age and adult learning ability. That is, each individual adult, the more age, the more difficult for him to learn (because all aspects of his physical abilities decreased). For example memory, physical strength, reasoning ability, ability to concentrate, and others all show decrease according to age. According to Lunandi (1987), rapid progress and development mean not being obtained by waiting for the experience across life alone. Progress that is balanced with the development of the times must be sought through education. According to Verner and Davidson in Lunandi (1987) there are six factors that can psychologically inhibit adult participation in an education and training program:(1) With age, the nearest point of sight or the closest visible point begins to move even further. At the age of twenty a person can clearly see an object at a distance of 10 cm from his eyes. Around the age of forty the point near the vision has been drifted up to 23 cm.(2) With age, the distant point of sight or the furthest point that can be seen clearly begins to diminish, that is, the shorter. Both of these factors need to be considered in the procurement and use of educational materials and tools.(3) The more age, the greater the amount of lighting required in a learning situation. If a person at the age of 20 requires 100 Watt of light, then at age 40 it takes 145 Watt, and at the age of 70 years as fresh as 300 Watt is enough to be able to see clearly.(4) Increasing age, color contrast perception tends toward red from the spectrum. This is caused by the yellowing of the cornea or the lens of the eye, so the light entering is somewhat alienated. The result is less indistinguishable soft colors. For clarity it is necessary to use contrasting bright colors for props.(5) Hearing or the ability to accept sounds decreases with age. In general, a person experiences a setback in his ability to distinguish the tone sharply in every decade of his life. Men tend to retreat more quickly in this case than women. Only 11 percent of people aged 20 years who have less hearing. Up

to 51 percent of people aged 70 years found to have less hearing. (6) The distinction of sound or the ability to distinguish sounds decreases with age. Thus, talking to other people is too quickly more difficult to capture and the sounds and sideways in the background as united with people talk. It is also more difficult to distinguish consonant sounds such as t, g, b, c, and d.

There are some things that need to be considered adults in learning situations have a certain attitude, it is necessary to note the things below:(1) The creation of learning process is a process of experience that every individual adult wants to realize. Adult learning process is obliged to motivate/encourage to seek higher knowledge.(2) Every individual adult can learn effectively when every individual is able to find a personal meaning for himself and perceive that good meaning relates to his personal needs.(3) Sometimes the adult learning process is less conducive, this is because learning is only oriented toward behavior change, whereas behavior change is not enough, if the change is not able to appreciate the noble culture of the nation that must be nurtured, in addition to the difficult method of traditional thinking changed. (4) Adult learning process is unique and special and individual. Each individual adult has his own tips and strategies for learning and finding the problem solving encountered in the lesson. With the opportunity to observe the tips and strategies of other individuals in learning, it is hoped that it can improve and perfect its own way of learning, as a more effective corrective effort. (5) Past experience factors are very influential in every action to be taken, so a good experience needs to be explored and cultivated in a more useful direction. (6) Learning is a transformation of science and also a process of developing one's intellect. Maximizing learning outcomes can be achieved if each individual can expand the range of his or her thinking pattern.

On the one hand, learning can be interpreted as an evolutionary process. This means that the acceptance of science can't be imposed at once, but can be done gradually through a certain sequence of processes. In educational activities, educators generally determine the material knowledge and skills that will be presented. They organize the content into the units, then select the most efficient tool to convey the units of the material, such as lectures, reading, laboratory work, movies, listening to tapes and others. Next develops a plan for delivering these content units in a sequence. In an andragogy, the educator or facilitator prepares a further set of procedures to engage the learner in a process involving the following elements: (a) creating a climate that supports learning, (b) creating mechanisms for joint planning, (c) formulate program objectives that meet learning needs, (d) plan the pattern of learning experiences, (e) conduct this learning experience with appropriate techniques and materials; and (f) evaluate learning outcomes and rediagnose learning needs.

According to Edgar Dale in Arif (1994) that in the world of education, the use of learning materials often uses the principles of cone experience such as figure 2, which requires learning materials and tools, such as textbooks, self-made teaching materials by facilitators, and hearing aids.
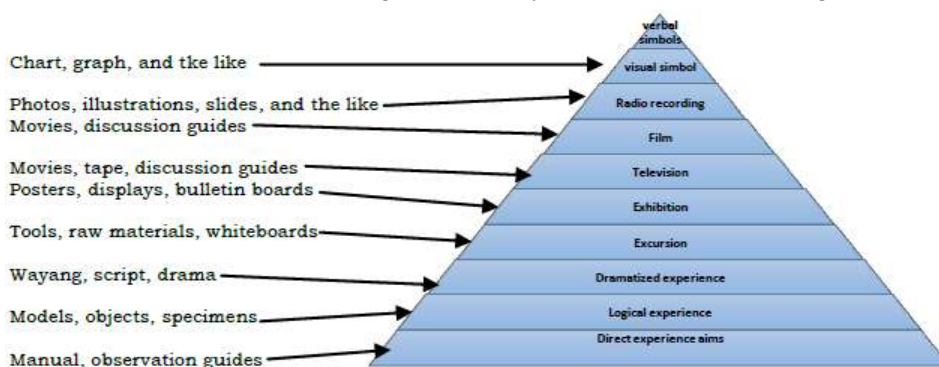

Figure 2. *Conical Experience Edgar Dale*

7. ADULT EDUCATION METHOD

In adult learning, many methods are applied. To achieve such learning objectives, any method applied should take into consideration the available facilities and infrastructure factors to achieve the learning objectives, i.e. to enable participants to have a quality learning experience. It is a big mistake, when in this case the widyaiswara unfairly determines the use of the method only because of his own consideration of using the method he considers the easiest, or simply because his desire is admired by the trainees in that class or there may be a tendency to master only one particular method only. Examine with it, according to Lunandi (1987), the learning process is seen in the following figure.
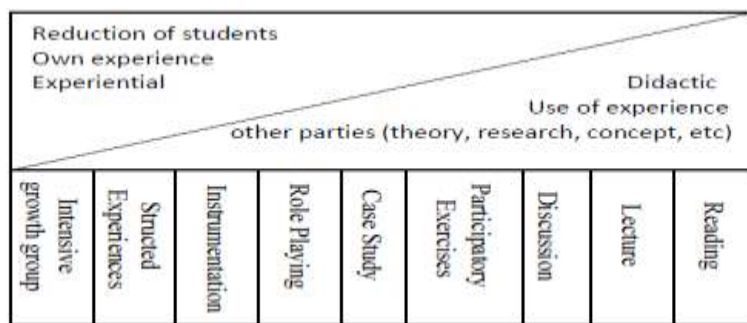
Figure 3. *Continum Learning Process*

Experience management The process of expanding process (rearrangement) the experience

Determination of the choice of method should be the teacher considering the aspect of the goal to be achieved, which in this case refers to the outline of the teaching program or learning scenario that is divided into two types: a) The design of the process to encourage adults is able to organize and fill new experiences with past experiences that have been experienced, such as skills training, question and answer, interviews, consultation, sensitivity training, etc. so as to give new insights to each Individuals to take advantage of what they already know. b) The learning process designed for the purpose of improving the transfer of new knowledge, new experiences, new skills, to encourage each individual adult can achieve as much as the science he wants, what his needs, the skills he needs, such as learning to use the required computer program where he works.

To elaborate on what is meant above, it is briefly detailed on how it relates to both ends of the continuum of the learning process, ie the arrangement (or rearrangement) of the learning experience at the other end, and the extension of the learning experience at the other end, as can be seen in the following table.

Table 1. *Structuring the Learning Experience*

Aspect	If the emphasis on the Structuring of Teaching Experience	Expansion of Learning Experience
Preparation and orientation should be:	Making good learners reveal their past successes and failures, prioritizing the meaning of past experience assessments to address similar problems in the future.	Prioritize problems students can't solve now, but they can be solved after new materials. Helping students to overcome their inability to learn new materials.
Atmosphere and speed of learning:	Contemplating a lot without being hastily influenced strongly by the reactions and abilities of the learner	Interesting and engaging is determined by the nature and content of the lesson
Roles that teach more:	Creating atmosphere, giving meaning to learning experiences, provoking experience, giving feedback, helping to make generalizations	Learn about student issues, explain course goals, provide new data and concepts, or show new behaviors.
Roles that learn more:	Disclose data about his experiences and opinions, analyze his experience, explore alternatives and benefits.	Processing new data and concepts, practicing new materials, seeing the application of new materials in real situations.
Success depends	The atmosphere is free from threats, a sense of the learner's need to find new approaches to solve old problems.	Clarity of new presentation, student awards for teachers, relevance of new materials for student assessment.

Source: *Lunandi (1987: hal 27-28)*

From the table above, shows the existence of some adult education programs, which in the implementation of the program requires a combination of various methods that fit the situation and conditions necessary to achieve satisfactory results. The adult learning ability can be estimated as follows: (a) 1% through the sense of touch, (b) 1½% through the sense of touch, (c) 3½% through the sense of smell, (d) 11% through the sense of listener, and (e) 83 % Through the sense of sight (Lunandi,1987).
Accordingly, adults learn more effectively when they can listen and speak. Better still, besides that he can see also, and more effective if it can also do. The composition of these abilities can be described in the pyramid of learning as shown in Fig. 3.
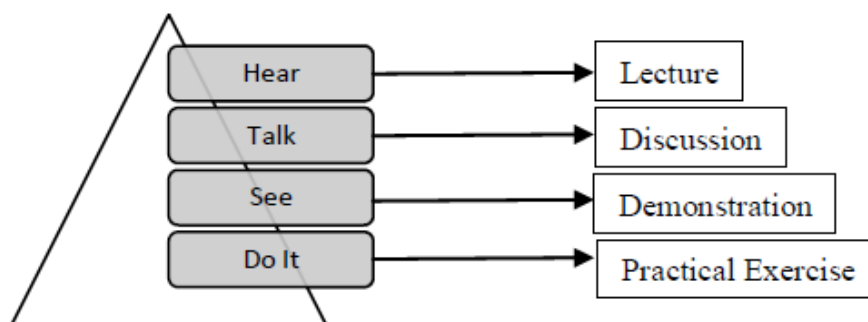
Figure 4. *The Pyramid of Adult Learning*

The picture above shows that the use of lecture method, the participants just listen. Function of talk only a little happened at the time of question and answer. For speech and listening discussion methods is balanced. In education by way of demonstration, participants at once hear, see and speak. When practical education/ training participants can hear, talk, see and do at once, so it can be expected to be most effective.

8. IMPLICATIONS OF ADULT LEARNING

Efforts toward the application of andragogic theory in adult education have been tested by several experts, based on four basic adult assumptions as described above: self-concept, accumulated experience, learning readiness, and learning orientation. The basic assumptions are described in the process of planning educational activities with the following steps:

- Create a structure for joint planning. Ideally this kind of structure should involve all parties who will be exposed to the planned educational activities, which include the participants, learning activities, and widyaiswara.

- Creating a supportive learning climate for adult learning-it is important to create a cooperative climate that values teachers and learners. An adult learning climate can be developed by setting physical environments that provide convenient comfort and interaction, such as arranging chairs or tables in a circle rather than marching backwards. Widyaiswara is more helpful rather than judgmental.

- Diagnose own learning needs. Diagnosis needs to involve all parties, and the result is a shared need.

- Formulation of goals. In order to be operationally workable, the formulation of the objectives should be worked together in the description of the behavior that will be produced to meet the above needs.

- Develop a common model. This is an art aspect of program planning, which should be harmonized with learning activities by creating learning groups in both large groups and small groups.

- Evaluation planning. Just as in the diagnosis of need, in evaluation must be in line with the principles of adults, i.e. as a person and can self-directed. So evaluation is more of a self-evaluation or joint evaluation.

The application mentioned above, is actually more of the principles or the signs as the control of the action to membelajarkan adults who must be known and understood by the trainees at training institutions that in fact the participants are adults. Therefore, the success will be more dependent on each implementation and of course also depends on the conditions faced.

The implications of technological development or andragogic approach can be attributed to the preparation of curriculum or teaching methods to the trainees. However, due to the attachment to the usual institutional system, the programming or curriculum using andragogy will be more developed using this andragogy approach.

9. CONCLUSION

Education is the process of becoming itself (process of beings) not a process of beings hoped according to the will of others, then learning activities must involve individuals or clients in the

process of what they want, find what can be done to meet Desire, determine what action to take, and plan and do whatever needs to be done to make that decision happen. It can be said here, the task of widyaiswara in general is to help people learn how to think about themselves, manage their own life affairs and consider the views and interests of others. Briefly help others grow and mature. In andragogy, the involvement of adults in the learning process is much greater, because from the beginning must be held a diagnosis of needs, formulate goals, and evaluate learning outcomes and implement them together.

10. SUGGESTION

The development of the concept of andragogy can only be done if it is believed that adults as mature individuals have been able to direct themselves understand themselves, can take decisions for something that concerns him. Without such beliefs there would be no andragogical approach. In other words andragogy will not be possible to develop if leaving the basic ideals of adults as self-directed person. For decision makers in terms of adult learning is expected to provide holistic consideration towards the development of skills and improvement of quality adult resources.

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