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ANDRAGOGY: AN EMERGING TECHNOLOGY FOR ADULT LEARNING

Malcolm Knowles

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Farewell to Pedagogy

Most of what is known about learning has been derived from studies of learning in children and animals. Most of what is known about teaching has been derived from experience with teaching children under conditions of compulsory attendance. And most theories about the learning-teaching transaction are based on the definition of education as a process of transmitting the culture. From these theories and assumptions there has emerged the technology of ‘pedagogy’ – a term derived from the Greek stem *paid* – (meaning ‘child’) and *agogos* (meaning ‘leading’). So ‘pedagogy’ means, specifically, the art and science of teaching children.

One problem is that somewhere in history the ‘children’ part of the definition got lost. In many people’s minds – and even in the dictionary – ‘pedagogy’ is defined as the art and science of teaching. Even in books in adult education you can find references to ‘the pedagogy of adult education’, without any apparent discomfort over the contradiction in terms. Indeed, in my estimation, the main reason why adult education has not achieved the impact on our civilization of which it is capable is that most teachers of adults have only known how to teach adults as if they were children.

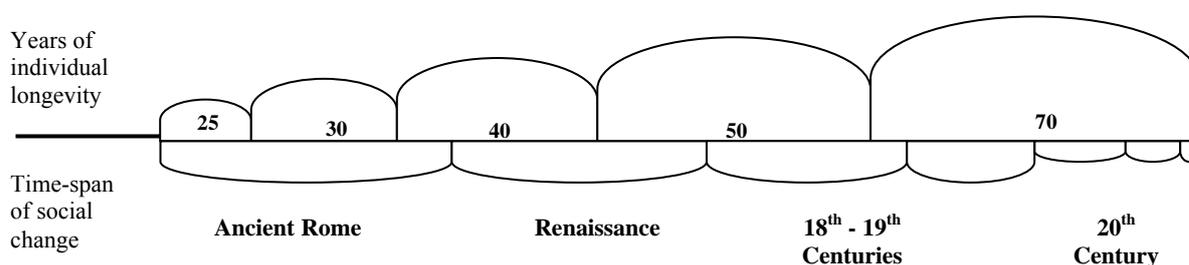
Another problem with pedagogy is that it is premised on an archaic conception of the purpose of education, namely, the transmittal of knowledge. As Alfred North Whitehead pointed out a generation ago, it was functional to define education as a process of transmittal of what is known so long as it was true that the time-span of major cultural change was greater than the life-span of individuals. Under this condition, what a person learns in his youth will remain valid for the rest of his life. But,

Whitehead emphasized, ‘We are living in the first period of human history for which this assumption is false...today this time-span is considerably shorter than that of human life, and accordingly our training must prepare individuals to face a novelty of conditions.’¹

Up to the early part of the twentieth century the time-span of major cultural change (e.g., massive inputs of new knowledge, technological innovation, vocational displacement, population mobility, change in political and economic systems etc.) required several generations, whereas in the twentieth century several cultural revolutions have already occurred and the pace is accelerating. Under this new condition, knowledge is gained by the time a person is 21 and is largely obsolete by the time he is 40; and skills that made him productive in his twenties are becoming out of date during his thirties. So it is no longer functional to define education as a process of transmitting what is known; it must now be defined as a lifelong process of discovering what is not known.

Skilful adult educators have known for a long time that they cannot teach adults as children have traditionally been taught. For adults are almost always voluntary learners, and they simply disappear from learning experiences that don’t satisfy them. So the practice of adult education has in fact been departing from traditional pedagogical practices for some time. And often this deviation has been accompanied by misgivings and guilt feeling over the violation of long-established standards, for adult educators have not had a coherent theory to justify their treating adults as adults.

Figure 1: The relationship of the Time-span of Social Change to Individual Life-span



This lack is now on the way to being remedied. For adult-education theorists in both Europe (especially in Germany and Yugoslavia²) and in North America are rapidly developing a distinctive theory of learning.

And from this theory is evolving a new technology for the education of adults. To distinguish it from pedagogy, this new technology is being given a new name: 'andragogy', which is based on the Greek work *anēr* (with the stem *andr-*), meaning 'man'. Androgogy is, therefore the art and science of helping adults learn. [...]

Some Assumptions of Andragogy and their Technological Implications

Andragogy is premised on least four crucial assumptions about the characteristics of adult learners that are different from the assumptions about child learners on which traditional pedagogy is premised. These assumptions are that, as a person matures, (1) his self-concept moves from one of being a dependant personality toward one of being a self-directing human being; (2) he accumulates a growing reservoir of experience that becomes an increasing resource for learning; (3) his readiness to learn becomes oriented increasingly to the developmental tasks of his social roles; and (4) his time perspective changes from one of postponed application of knowledge to immediacy of application, and accordingly his orientation toward learning shifts from one of subject-centeredness to one of problem-centeredness.

Each of these assumptions will be described briefly and some of its implications for the education of adults will be explored.

Self-concept

Children enter this world in a condition of complete dependency. Their every need, except for biological functions, must be taken care of by someone else. The first image a child gets of himself as a separate entity is that of a dependant personality whose life is managed for him by the adult world.

This self-concept of dependency is encouraged and reinforced by the adult world. In fact, society defines the normal role of a child as that of a learner; this is his full-time occupation, the source of his rewards and self-fulfilment. And on the whole, this role is defined as the more or less passive one of receiving and storing up the information adults have decided children should have.

As the child's self-identity begins to take shape, he begins to see himself as having the capacity to start making decisions for himself, at first experimentally and in small matters that don't impinge on the adult world. But increasingly, as he matures, the child's self-concept moves in

the direction of greater self-direction, and during adolescence his need to take significant responsibility for managing his own life becomes so strong that it often puts him in open rebellion against control by the adult world. [...]

But something dramatic happens to his self-concept when an individual defines himself as an adult. He begins to see his normal role in society as no longer being a full-time learner. He sees himself increasingly as a producer or doer. His chief source of self-fulfilment are now his performance as a worker, a spouse, a parent, a citizen. The adult acquires a new status in his own eyes and in the eyes of others, from these non-educational responsibilities. His self-concept becomes that of a self-directing personality. He sees himself as being able to make his own decisions and face their consequences, to manage his own life. In fact, the point at which he perceives himself to be wholly self-directing. And at that point he also experiences a deep need to be perceived by others as being self-directing.

For this reason, adults have a need to be treated with respect, to make their own decisions, to be seen as unique human beings. They tend to avoid, resist, and resent situations in which they feel they are treated like children – being told what to do and what not to do, being talked down to, embarrassed, punished, judged. Adults tend to resist learning under conditions that are incongruent with their self-concept as autonomous individuals.

Often there is another ingredient in the self-concept of an adult that affects his role as a learner. He may carry over from his previous experience with schooling the perception that he isn't very smart, at least in regard to academic work. This fact about the adult psyche has several consequences for adult education. In the case of some adults the remembrance of the classroom as a place where one is treated with disrespect is so strong that it serves as a serious barrier to their becoming involved in adult education activities at all. If these adults are to be enticed back to systematic learning, the rewards of learning must be made so great that they outweigh the anticipated pain of learning. But even adults who overcome this barrier typically enter an educational activity expecting to be treated like children, and this expectation is frequently so strong that adult students often put pressure on their teachers to behave toward them in this way. Once a teacher puts adult students into a

dependant role, however, he is likely to experience a rising resistance and resentment.

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On the other hand, when adult learners are first exposed to a learning environment in which they are treated with respect, are involved in mutual inquiry with the teacher, and are given responsibility for their own learning, the initial reaction is usually one of shock and disorganization. Adults typically are not prepared for self-directed learning; they need to go through a process of reorientation to learning as adults – to learn new ways of learning. Once an adult makes the discovery that he can take responsibility for his learning, as he does other facets of his life, he experiences a sense of release and exhilaration. He then enters into learning with deep ego-involvement, with results that are frequently startling both to himself and to his teachers. Teachers who have helped their adult students to achieve this breakthrough report repeatedly that it is one of the most rewarding experiences of their lives.

Technological Implications

Several implications for the technology of andragogy flow from this difference in assumptions about the self-concept of the child and the adult.

1. The Learning Climate. Certainly it has a strong implication regarding the nature of the environment in which adults learn. It suggests that the psychological environment should be one in which adults feel at ease. Furnishings and equipment should be adult-sized and comfortable; meeting rooms should be arranged informally and should be decorated according to adult tastes; and acoustics and lighting should take into account declining audio-visual acuity.

Even more importantly, the psychological climate should be one what causes adults to feel accepted, respected, and supported; in which there exists a spirit of mutuality between teachers and students as joint inquirers; in which there is freedom of expression without fear of punishment or ridicule. A person tends to feel more ‘adult’ in an atmosphere that is friendly and informal, in which he is known by name and valued as a unique individual, than in the traditional school atmosphere of formality, semi-anonymity, and status differentiation between teacher and student. [...]

The behaviour of the teacher probably influences the character of the learning climate more than any other single factor. The teacher conveys in many ways whether his attitude is one of interest in and

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respect for the students of whether he sees them essentially as receiving sets for his transmissions of wisdom. The teacher who takes the time and trouble to get to know his students individually and who calls them by name (especially by first name) obviously conveys the first set of attitudes. But probably the behaviour that most explicitly demonstrates that a teacher really cares about a student and respects his contribution is the act of really listening to what the student says. [...]

2. *Diagnosis of Needs.* The adult's self-concept of self-directivity is in direct conflict with the traditional practice of the teacher telling the student what he needs to learn. Indeed, it is even in conflict with the social philosophy that society has a right to impose its ideas about what he needs to learn on him. Of course, an adult will learn what others want him to learn if their power to punish him for not learning is strong enough. But he is more deeply motivated to learn those things he sees the need to learn.

In andragogy, therefore, great emphasis is placed on the involvement of adult learners in a process of *self-diagnosis* of needs for learning. This process consists of three phases; (1) Constructing a model of the competencies or characteristics required to achieve a given model of performance; it is in the model-building phase that the values and expectations of the teacher, the institution, and society are amalgamated with those of the learner into a composite picture. (2) Providing diagnostic experiences in which the learner can assess his present level of competencies in the light of those portrayed in the model. (3) Helping the learner to measure the gaps between his present competences and those required by the model, so that he experiences a feeling of dissatisfaction about the distance between where he is and where he would like to be and is able to identify specific directions of desirable growth. This experiencing of self-induced dissatisfaction with present inadequacies, coupled with a clear sense of direction for self-improvement, is in fact a good definition of 'motivation to learn'.

3. *The Planning Process.* Every individual tends to feel committed to a decision (or an activity) to the extent that he has participated in making it (or planning it). Teachers of adults who do all the planning for their

students, who come into the classroom and impose preplanned activities on them, typically experience apathy, resentment, and possibly withdrawal. For this imposition of the will of the teacher is incongruent with the adult's self-concept of self-directivity.

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Accordingly, a basic element in the technology of andragogy is the involvement of the learners in the process of planning their own learning, with the teacher serving as a procedural guide and content resource. When the number of students is small enough, they can all be involved in the planning directly; when the number gets much over 30, adult educators make use of representative councils, committees, task forces, teams, or other devices through which the learners feel that they are participating by proxy.

The function of planning consists of translating diagnosed needs into specific educational objectives (or directions of growth), designing and conducting learning experiences to achieve these objectives and evaluating the extent to which these objectives have been accomplished. In andragogy, responsibility for performing this function is a mutual one between the learners and the teacher.

4. Conducting Learning Experiences. In traditional pedagogical practice the function of the teacher is defined as 'to teach'. The teacher is expected to take full responsibility for what happens in the teaching-learning transaction. The learner's role tends to be that of a fairly passive recipient of the teachers instruction.

In contrast, andragogical practice treats the learning-teaching transactions as the mutual responsibility of learners and teacher. In fact, the teacher's role is redefined as that of a procedural technician, resource person, and co-enquirer; he is more a catalyst than an instructor, more a guide than a wizard. Andragogy assumes that a teacher can't really 'teach' in the sense of 'make a person learn', but that one person can only help another person learn. [...] An andragogical learning situation, whether it be a course, an institute, a training program, or a conference, is alive with meeting of small groups – planning committees, learning-teaching teams, consultation groups, project task forces – sharing responsibility for helping one another learn.

5. Evaluation of Learning. Probably the crowning instance of incongruity between traditional educational practice and the adult's self-concept of self-directivity is the act of a teacher giving a grade to a

student. Nothing makes an adult feel more childlike than being judged by another adult; it is the ultimate sign of disrespect and dependency, as the one who is being judged experiences it.

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For this reason, andragogical theory prescribes a process of self-evaluation, in which the teacher devotes his energy to helping the adults get evidence for themselves about the progress they are making towards their educational goals. In this process, the strengths and weaknesses of the educational program itself must be assessed in terms of how it has facilitated or inhibited the learning of the students. So evaluation is a mutual undertaking, as are all other phases of the adult learning experience.

In fact, what is happening in practice is that precisely the same procedures that are being used for the diagnosis of learning needs are being employed to help the learner measure his gains in competence. For instance, by comparing his performance in solving a critical incident at the end of a learning experience with his performance in a similar critical incident at the beginning of the experience, a learner can quite precisely measure the changes produced by the experience. Because of the similarity of these two processes, I find myself now thinking less and less in terms of the evaluation of learning and more and more in terms of the *rediagnosis* of learning needs. And I find that, when my adult students perceive what they do at the end of a learning experience as re-diagnosing rather than evaluating, they enter the activity with more enthusiasm and see it as being more constructive. Indeed, many of them report that it launches them into a new cycle of learning, reinforcing the notion that learning is a continuing process.

This shift from evaluation to self-evaluation or rediagnosis places a heavy burden on the teacher of adults. He must set the example of himself being open to feedback regarding his performance. He must be skilful in establishing a supportive climate, in which hard-to-accept information about one's performance can be looked at objectively. And he must be creative about inventing ways in which students can get comprehensive data about their performance. [...]

Experience

Every adult enters into any undertaking with a different background of experience from that of his youth. Having lived longer, he accumulated a

greater *volume* of experience, but also has had different *kinds* of experience.

There is, it seems to me, another rather subtle difference between children and adults as regards their experience. To a child, an experience is something that happens to him; it is an external event that affects him,

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not an integral part of him. If you ask a child who he is, he is likely to identify himself in terms of who his parents are, who his older brothers and sisters are, what street he lives on, and what school he attends. His self-identity is largely derived from external sources.

But to an adult, his experience *is* him. He defines who he is, establishes his self-identity, in terms of his accumulation of a unique set of experiences. So if you ask an adult who he is, he is likely to identify himself in terms of what his occupation is, where he has worked, where he has travelled, what his training and experience have equipped him to do, and what his achievements have been. An adult *is* what he has *done*.

Because an adult defines himself largely by his experience, he has a deep investment in its value. And so when he finds himself in a situation in which his experience is not being used, or its worth is minimized, it is not just his experience that is being rejected – he feels rejected as a person.

These differences in experience between children and adults have at least three consequences for learning: (1) Adults have more to contribute to the learning of others; for most kinds of learning. (2) Adults have a richer foundation of experience to which to relate new experiences (and new learnings tend to take on meaning as we are able to relate them to our past experience). (3) Adults have acquired a larger number of fixed habits and patterns of thought, and therefore tend to be less open minded.

Technological Implications

Several implications for the technology of andragogy flow from these differences in experience:

1. Emphasis on Experiential Techniques. Because adults are themselves richer resources for learning than children, greater emphasis can be placed on techniques that tap the experience of the adult learners, such a group discussion, the case method, the critical-incident process, simulation exercises, role playing, skill-practice exercises, field projects,

action projects, laboratory methods, consultative supervision, demonstration, seminars, work conferences, counselling, group therapy, and community development. There is a distinct shift in emphasis in andragogy away from the transmittal techniques so prevalent in youth education – the lecture, assigned readings, and canned audio-visual

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presentation – toward the more participatory experiential techniques. Indeed, ‘participation’ and ‘ego-involvement’ are boldfaced words in the lexicon of the adult educator, with the assumption often being made that the more active the learner’s role in the process, the more he is probably learning.

2. *Emphasis on Practical Application.* Skilful adult educators have always taken care to see that new concepts or broad generalizations were illustrated by life experiences drawn from the learners. But numerous recent studies on the transfer of learning and the maintenance of behavioural change indicate the desirability of going even farther, and actually building into the design of learning experiences provision for the learners to plan – and even rehearse – how they are going to apply their learning in their day-to-day lives.

3. *Unfreezing and Learning to Learn from Experience.* A growing andragogical practice is to build into the early phases of a course, workshop, conference, institute, or other sequential educational activity an ‘unfreezing’ experience, in which the adults are helped to look at themselves more objectively and free their minds from pre-conceptions. Many diagnostic exercises help to serve this purpose, but the most effective technique of all is probably a sensitivity-training ‘microlab’ in which participants experience a short, intensive period of feedback on their behaviour. For one of the almost universal initial needs of adults is to learn how to take responsibility for their own learning through self-directed inquiry, how to learn collaboratively with the help of colleagues rather than to compete with them, and especially how to learn by analyzing one’s own experience.

Readiness to Learn

It is well accepted in our culture now that children learn best those things that are necessary for them to know in order to advance from one phase

of development to the next. These have been dubbed ‘developmental tasks’ by developmental psychologists:

A developmental task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while

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Failure leads to unhappiness in the individual, disapproved by the society, and difficulty with later tasks.³

Each of these developmental tasks produces a ‘readiness to learn’ which at its peak presents a ‘teachable moment’. For example, parents now generally accept the fact that they can’t teach a child to walk until he has mastered the art of crawling, his leg muscles are strong enough, and he has become frustrated at not being able to stand up and walk the way everybody else does. At that point, and only then, is he able to learn to walk, for it has become *his* developmental task.

Recent research suggests that the same phenomenon is at work during the adult years. Adults, too, have their phases of growth and resulting developmental tasks, readiness to learn, and teachable moments. But whereas the developmental tasks of youth tend to be the products primarily of physiological and mental maturation, those of the adult years are the products primarily of the evolution of social roles. Robert J. Havighurst, one of the pioneers in this area of research, divides the adult role into three phases - ‘early adulthood’, ‘middle age’, and ‘later maturity’ – and identifies ten social roles of adulthood; worker, mate, parent, homemaker, son or daughter or aging parents, citizen, friend, organization member, religious affiliate, and user of leisure time. The requirement for performing each of these social roles change, according to Havighurst, as we move through the three phases of adult life, thereby setting up changing developmental tasks and, therefore, changing readiness to learn.

For example, in a person’s role of worker, his first developmental task is to get a job. At this point he is ready to learn anything required to get a job, but he definitely isn’t ready to study supervision. Having landed a job, he is faced with the task of mastering it so that he won’t get fired from it; and at that point he is ready to learn the special skills it

requires, the standards that are expected of him, and how to get along with his fellow workers. Having become secure in his basic job, his task becomes one of working up the occupational ladder. Now he becomes ready to learn to become a supervisor or executive. Finally, after reaching the ceiling, he faces the task of dissolving his role of worker – and is ready to learn about retirement or substitutes for work. [...]

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Technological Implications

At least two sets of implications for the technology of andragogy flow from these differences in readiness to learn:

1. *The Timing of Learnings.* If the teachable moment for a particular adult to acquire a given learning is to be captured, it is obvious that the sequence of the curriculum must be timed so as to be in step with his developmental tasks. This is the appropriate organizing principle for an adult education program, rather than the logic of the subject matter or the needs of the sponsoring institution. For instance, an orientation program for new workers: Where will I be working? With whom will I be working? What will be expected of me? How do people dress in this company? What is the time schedule? To whom can I go for help. [...]

2. *The Grouping of Learners.* The concept of developmental tasks provides some guidance regarding the grouping of learners. For some kinds of learning, homogenous groups according to developmental tasks are more effective. For instance, in a program on child care, young parents would have quite a different set of interests from the parents of an adolescent children. For other kinds of learning, heterogeneous group would be preferable. For instance, in a program of human relations training in which the objective is to help people learn to get along better with all kinds of people, it would be important for the groups to cut across occupational, age, status, sex and perhaps other characteristics that make people different. In my own practice, I have developed a policy of making provision in the design of any adult learning activity for a variety of subgroups so as to give the student a flexibility of choice; and I find that they quickly discover colleagues with similar developmental tasks.

Orientation to Learning

Adults enter into education with a different perspective from children, which in turn, produces a difference in the way they view learning. Children tend to have a perspective of postponed application on most of their learning. For example, most of what I learned in elementary school I learned in order to be able to get into high school; and most of what I learned there I learned to prepare me for college; and most of what I

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learned in college I hoped would prepare me for a happy and productive adult life. To a child, education is essentially a process of the accumulation of a reservoir of subject matter – knowledge and skills – that might be useful in later life. Children tend, therefore, to enter any educational activity in a *subject-centred* frame of mind.

Adults, on the other hand, tend to have a perspective of immediacy of application toward most of their learning. Education is a process of improving their ability to deal with life problems they face now. They tend, therefore, to enter an educational activity in a *problem-centred* frame of mind.

Technological Implications

Several implications for the technology of andragogy flow from this difference in orientation to learning.

1. *The Orientation of Adult Educators.* Where the youth educator can, perhaps appropriately, be primarily concerned with the logical development of subject matter and its articulation for grade to grade according to levels of complexity, the adult educator must be primarily attuned to existential concerns of the individuals and institutions he serves and be able to develop learning experiences that will be articulated with these concerns. Andragogy calls for program builders and teachers who are person-centred, who don't teach subject matter but rather help persons learn.

2. *The Organization of the Curriculum.* [...] Because adult learners tend to be problem-centred in their orientation to learning, the appropriate organizing principle for sequences of adult learning is *problem areas*, not *subjects*. For example, instead of offering courses on 'Composition I' and 'Composition II' with the first focusing on grammar and the second on writing style, andragogical practice would be put in place 'Writing

Better Business Letters' and 'Writing Short Stories'. In the adult courses, matters of grammar and style would be treated in the context of the practical concerns of the learners.

3. *The Design of Learning Experiences.* The problem orientation of the learners implies that the most appropriate starting point for every learning

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experience is the problems and concerns that the adults have on their minds as they enter. Whereas the opening session of a youth education activity might be titled 'What This Course Is All About', in an adult educational activity it would be more appropriately titled 'What Are You Hoping To Get Out of This Course?' Early in the session there would be a problem census or a diagnostic exercise through which the participants would identify the specific problems they want to be able to deal with more adequately. This is not to suggest that good adult learning experience ends with the problems of the learners are aware of in the beginning, but that is where it starts. There may be other problems that the teacher or institution are expecting to be dealt with, and these are put into the picture along with the students' problems for negotiation between teacher and students.

Some Assumptions About Learning and Teaching

The critical element in any adult education programme is, of course, what happens when a teacher comes face-to-face with a group of learners. As I see it, the andragogical approach to the learning-teaching transaction is premised on three additional assumptions about learning and teaching:

1. *Adults Can Learn*

The central proposition on which the entire adult education movement is based is that adults can learn. One of the great movements in the history of the movement occurred at the annual meeting of the American Association for Adult Education held in Cleveland in 1927, when Edward L. Thorndike reported for the first time his findings that the ability to learn declined only very slowly and very slightly after age twenty. Until that moment adult educators had based their whole work on blind faith, in direct opposition to the prevailing belief that 'you can't teach an old dog

new tricks'. But now their faith had been vindicated; there was scientific proof that adults can learn. [...]

The research to date on adult learning indicates clearly that the basic ability to learn remains essentially unimpaired throughout the life-span and that, therefore, if individuals do not actually perform as well in learning situations as they could, the cause must be sought in such factors as the following:

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- (a) Adults who may have been away from systematic education for some time may underestimate their ability to learn, and this lack of confidence may prevent them from applying themselves wholly.
- (b) Methods of teaching have changed since most adults were in school, so that most of them have to go through a period of adjustment to strange new conditions.
- (c) Various physiological changes occur in the process of aging, such as decline in visual acuity, reduction in the speed of reaction, and lowering of energy levels, which operate as barriers to learning unless compensated for by such devices as louder sound, larger printing, and slower pace.
- (d) Adults respond less readily to external sanctions for learning (such as grades) than to internal motivation.

2. Learning is an Internal Process

In our inherited folk wisdom there has been a tendency to look upon education as the transmittal of information, to see learning as an almost exclusively intellectual process consisting of the storing of accumulated facts in the filing drawers of the mind. The implicit assumption underlying this view of learning is that it is essentially an external process in the sense that what the student learns is determined primarily by outside forces, such as the excellence of the teacher's presentation, the quality of reading materials, and the effectiveness of school discipline. People holding this view even today insist that a teacher's qualifications be judged only by his mastery of his subject matter and clamor against his wasting time learning about the psychology of learning. For all practical purposes this view defines the function of the teacher as being to teach subject matter, not students.

A growing body of research into what really happens when learning takes place has put this traditional conception of learning in serious jeopardy. Although there is not yet agreement on the precise nature of the learning process (in fact there are many theories which seem to explain different parts of it), there is agreement that it is an internal

process controlled by the learner and engaging his whole being – including intellectual, emotional, and physiological functions. Learning is described psychologically as a process of need-meeting and goal-striving by the learner. This is to say that an individual is motivated to engage in learning to the extent that he feels a need to learn and perceives a personal goal that learning will help to achieve; and he will invest his

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energy in making use of available resources (including teachers and readings) to the extent that he perceives them as being relevant to his needs and goals.

The central dynamic of the learning process is thus perceived to be the experience of the learner, experience being defined as the interaction between an individual and his environment. The quality and amount of learning is therefore clearly influenced by the quality and amount of interaction between the learner and his environment and by the educative potency of the environment. The art of teaching is essentially the management of these two key variables in the learning process – environment and interaction - which together define the substance of the basic unit of learning, a ‘learning experience’. The critical function of the teacher, therefore, is to create a rich environment from which students can extract learning and then to guide their interaction with it so as to maximize their learning from it.

The important implication for adult education practice of the fact that learning is an internal process is that those methods and techniques which will involve the individual most deeply in self-directed inquiry will produce the greatest adult learning. This principle of ego-involvement lies at the heart of the adult educator’s art. In fact, the main thrust of modern adult techniques for involving adults in ever deeper processes of self-diagnosis of their own needs for continued learning, in formulating their own objectives for learning, in sharing responsibility for designing and carrying out their learning objectives. The truly artistic teacher of adults perceives the locus of responsibility for learning to be a learner; he conscientiously suppresses his own compulsion to teach what he knows his students ought to learn in favour of helping his students learn for themselves what they want to learn. I have described this faith in the ability of the individual to learn for himself as the ‘theological foundation’ of adult education, and I believe that without this faith a teacher of adults is more likely to hinder than to facilitate learning. This

is not to suggest that the teacher has less responsibility in the learning-teaching transaction, but only that his responsibility lies less in giving ready-made answers to predetermined questions and more in being ingenious in finding better ways to help his students discover the important questions and the answers to them themselves. [...]

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3. There Are Superior Conditions of Learning and Principles of Teaching

It is becoming increasingly clear from the growing body of knowledge about the processes of adult learning that there are certain conditions of learning that are more conducive to growth and development than others. These superior conditions seem to be produced by practices in the learning-teaching transaction that adhere to certain superior principles of teaching as identified below:

CONDITIONS OF LEARNING

The learners feel a need to learn.

The learning environment is characterized by physical comfort, mutual trust and respect, mutual helpfulness, freedom of expression, and acceptance of differences.

PRINCIPLES OF TEACHING

- (1) The teacher exposes students to new possibilities for self-fulfilment.
- (2) The teacher helps each student clarify his own aspirations for improved behaviour.
- (3) The teacher helps each student diagnose the gap between his aspiration and his present level of performance.
- (4) The teacher helps the students identify the life problems they experience because of gaps in their personal equipment.
- (5) The teacher provides physical conditions that are comfortable (as to seating, smoking, temperature, ventilation, lighting, decoration) and conducive to interaction (preferably, no person sitting behind another person).
- (6) The teacher accepts each student as a person of worth and respects his feelings and ideas
- (7) The teacher seeks to build relationships of mutual trust and helpfulness among the students by encouraging cooperative activities and

The learners perceive the goals of a learning experience to their goals.

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The learners accept a share of the responsibility for planning and operating a learning experience, and therefore have a feeling of commitment toward it.

The learners participate actively in the learning process.

The learning process is related to and makes use of the experience of the learners.

The learners have a sense of progress toward their goals.

refraining from inducing competitiveness and judgementalness.

(8) The teacher exposes his own feelings and contributes his resources as a co-learner in the spirit of mutual enquiry.

(9) The teacher involves the students in a mutual process of formulating learning objectives in which the needs of the students, of the institution, of the teacher, of the subject matter, and of the society are taken into account.

(10) The teacher shares his thinking about options available in the designing of learning materials and the selection of materials and methods and involves the students in deciding among these options jointly.

(11) The teacher helps the students to organize themselves (project groups, learning-teaching teams, independent study, etc.) to share responsibility in the process of mutual inquiry.

(12) The teacher helps the students exploit their own experiences as resources for learning through the use of such techniques as discussion, role playing, case method, etc.

(13) The teacher gears the presentation of his own resources to the levels of experience of his particular students.

(14) The teacher helps the students to apply new learnings to their experience, and thus to make the learnings more meaningful and integrated.

(15) The teacher involves the students in developing mutually acceptable criteria and methods for measuring progress toward the learning objectives.

(15) The teacher helps the students develop and apply procedures for self-evaluation according to these criteria.

Notes

1. Alfred N. Whitehead, 'Introduction', Wallace B. Donham, *Business Adrift* (McGraw-Hill Book Co., New York, 1931), pp. viii-xix.

2. See Dušan Savićević, 'Training Adult Educationists in Yugoslavia', *Convergence*, vol. 1 (March 1968), P. 69.

3. Robert J. Havighurst, *Developmental Tasks and Education* (David McKay Co., New York, 1961), p.2.

