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ABSTRACT

Although the emphasis on adult literacy/basic education is increasing, the high dropout rate from programs in these areas is a concern. Why learners choose to participate or not to participate in such programs can be understood in terms of three sets of factors. Learner-inherent factors include self-evaluation, goals, and capabilities. Life factors include the conditions and circumstances surrounding an individual that affect enrollment and participation in adult education programs; three such factors are information, transitions, and barriers. Program factors, the nature of the educational programs available to adults, include organization, content, procedures, and personnel. It is not enough to understand these separately and independently. A more complete understanding of participation/nonparticipation is reached by applying Bateson's (1958) model of differentiation/congruency in examining how these three sets of factors interact. Devising and implementing an adult education program is both a complex and complicated task. The program must provide for interaction between instructor and students, students must understand how what they are learning relates to their life goals, and provision must be made for involvement of the learners in their learning. (36 references) (YLB)

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UNDERSTANDING LEARNER PARTICIPATION IN ADULT LITERACY PROGRAMS

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UNDERSTANDING LEARNER PARTICIPATION IN ADULT LITERACY PROGRAMS

Abstract

While there is an increasing emphasis on adult literacy/basic education, concern is expressed for the high drop-out rate from programs in these areas. Why learners choose to participate or not participate in such programs can be understood in terms of three sets of factors: learner inherent factors, life/personal factors, and program factors. However, it is not enough to understand these separately and independently. A more complete under-standing of participation/non-participation is enhanced by applying Bateson's model of differentiation/congruency in examining how these three sets of factors interact.



UNDERSTANDING LEARNER PARTICIPATION IN ADULT LITERACY PROGRAMS

There is an increasing awareness of the importance of adult education, especially that area which focusses on literacy development and academic upgrading up to, and including the completion of high school. TV and other media advertising, funding, programs, and volunteer organizations have proliferated within recent years. Furthermore, there is no lack of learner candidates seeking admission to literacy and academic upgrading programs (Edmonton Association for Continuing Education and Recreation, 1989). However, there is considerable concern about the drop-out rates from adult education programs (Cross, 1981; Rigg and Kazemek, 1983; Harman, 1984; Fagan, 1988) and the value of programs for the adult learners. Fahy (1984) who interviewed instructors and administrators of a large urban Adult Basic Education program reported that "The major curriculum concern ... was for students who were not benefitting from their courses" (p. 126). Rigg and Kazemek suggest that one reason for this is that adult learners have no input into the nature of the program and programs are not meaningful in terms of their lives. While this reason is no doubt valid, it is unlikely that it explains the high attrition rate. In this paper the author examines a number of factors relating to learner participation which are brought together into an overall framework. These factors are presented in Figure 1.



[Insert Figure 1 About Here]

Learner Inherent Factors

These comprise within-individual factors and include self-evaluation, goals, and capabilities.

Self-Evaluation

The role of self in learning is best understood in terms of self-concept and self-esteem. According to McCarthy and Schmeck (1988) "self-concept is the most significant structure organizing an individual's experience, while self-esteem is the most influential affective evaluator of this experience" (p. 131).

Covington (1983) proposes a constructionist view as a way of understanding self-evaluation. That is, individuals construct or create their own subjective realities, which quide their actions. Motivations lend sense purposefulness and direction. When individuals are able to pursue their needs without interference, cognition acts in an integrated way as a planner or clarifier of needs. However, if motives are threatened or thwarted, cognitions serve a defensive, self-protected purpose. As Covington states, "Motives and reason operate in joint harness" (p. 142). An individual's need for achievement is mediated both cognitively and affectively. Cognitions evaluate the various factors that enhance or thwart learning, which, in turn, engender various affective reations. Before embarking on a particular goal, such as enrolling in an adult education program, learners evaluate their strengths and limitations



in terms of perceived demands. Erickson (1982) who studied four groups of adults (those who completed an adult education program, those who withdrew after the first session, those who registered but did not attend, and those who did not register but were aware of the opportunity) concluded that "self-evaluation ... was the best single variable differentiating participating from non-participating subjects" (p. iv).

An adult's decision to re-enroll in an education program is influenced by past experiences with, and attitudes towards education. Snow (1977) noted that individuals re-entering education did so with many reservations. Spann (1977) indicated that such individuals are characterized by little self-directing behavior. Instead they tend to be dependant which Spann explains is due to their experiences in an education environment that was not responsive to their needs. A study by Fagan (1989) with 52 low-literate adults showed that the majority of them attributed their lack of school success to factors beyond their control - "the teacher didn't spend enough time with me", "the classes were too large". When asked suggestions as to how things might have been changed, onequarter of these adults felt they didn't know enough to make any suggestions, thus indicating they had become very dependent on external forces with regards to education almost to the point of being helpless.



<u>Goals</u>

Houle (1963) believes that one's goal orientation is more important than motivation. Gibbons and Phillips (1984) state that "Students learn most effectively when they are responding to challenges that they know will directly and significantly affect their lives" (p. 366).

Maehr (1983) proposes four goal categories that may guide individuals in an educational endeavour. These are task, ego, social solidarity, and extrinsic rewards. In a task goal, the individual participates in a task, either to get something specific out of it (2g. flower arranging, cabinet making) or is excited and challenged just by participating. In the first instance the individual notes the relationship between learning and doing, while in the second, the individual learns for the sake of learning. If a goal is ego oriented, the individual is guided by a sense of meeting a particular standard, usually defined in terms of a grade or mark. The individual is conscious of this standard in terms of others' performance; hence, this goal characterized by competiveness, by a desire to perform better than others. When grades on a paper or exam are returned to students, a common request is to know what was the "mean" performance.

Social solidarity and extrinsic reward goals tend to be external rather than internal based. A goal of a social solidarity nature is guided by the influence of others on one's learning. Thus individuals may enroll in programs



because of their wish to please someone, or to accompany someone they like, and they may strive to achieve for a similar purpose. It is possible that after enrolling in a program an individual may want to please the instructor and thus engage in considerable effort to learn.

Maehr likens extrinsic reward goals to a "contract" and these goals tend to define a work situation rather than a learning situation. Individuals who attend programs because financial support constitutes a source ΟÎ income, individuals who are referred to programs by social welfare, mental health, and law enforcing agencies, at initially, operate on goals within an extrinsic reward category. Bergevin (1967) believes that goals arise from three kinds of educational needs: symptomatic, felt, and real. A symptomatic need is not really an educational need at all. For example, what the individual might really want is a job, but with no job available and the offer of an educational program given, he/she accepts the latter. The individual does not see the connection between the program and a job. A felt need is imposed by another person. For example, a job may be available out the individual is told that he/she must have a high school certificate before being accepted. A real educational need exists when the individual becomes aware of some gap in his/her life that can only be filled through an education program - attending university (making it necessary to complete high school), learning how to arrange flowers, or developing greater self-awareness.



Individuals are never "goalless" - rather the goals may vary to the extent to which they are consistent or inconsistent with the program goals. Maehr (1983) states that "It is the meaning of achievement in ... (a) situation that determines achievement behavior" (p. 189). Bergevin (1967) maintains that "adult learning programs in which definite and concrete results are expected, may not achieve the expectations of the participants unless they recognize some clearly stated, educationally attainable goal" (p. 29).

Gibbons and Phillips (1984) believe that "Students learn most effectively when they are responding to challenges that they know will directly and significantly affect lives" (p. 366).

Capability/Personal Resources

Lawson (1983) maintains that a poor match between an individual's capabilities and the intellectual demands of an educational activity can result in poor performance. Bergevin (1967) indicates that "Everyone is limited to some degree in the amount of learning he (sic) can acquire. We are limited in two major ways: by our capacity, our learning potential, and by psychological restrictions we place on ourselves" (p. 117).

Individuals may be concrete or abstract oriented in their thinking. Those who are concrete operational based would likely have difficulty in mastering concepts that are hypothetical (Lawson and Renner, 1975). Learning styles, characterized as field dependent and field independent will



influence the nature of a person's learning (Lawson, 1983). Field dependent individuals, for example may be over attentive to various cues and may find it difficult to be selective in choosing information pertinent to a task, such as finding a main idea. Bergevin (1967) believes that individuals may have a certain resistance to learning, this resistance resulting from a need to feel secure, to be "bound to the familiar" (p. 93) rather than being a risk taker in a learning situation.

However, Covington (1983) cautions that ability is not fixed or unchanging but can be influenced by a number of factors. Among these are the way in which a person manages his/her time-on-task, the way in which information is presented, the learning strategies used, and the ability of the individual to monitor his/her learning behavior. Lawson and Snitgen (1982), for example, showed that the reasoning abilities of learners could be improved when carefully chosen strategies, consistent with their manner of learning, were selected for presenting the material.

Life Factors

These factors include the conditions and circumstances surrounding an individual in terms of their affecting enrollment and participating in adult education programs. Three life factors: information, transitions, and barriers will be discussed below.



<u>Information</u>

Prospective adult education enrollees receive information in varying degrees and from a variety of sources. Knox (1980) proposes a five stage process of information use. Initially, an individual becomes aware of opportunities. The next stage is characterized by the individual expressing an interest and seeking additional information. The third stage involves evaluation when the individual weighs the pros and cons of becoming involved. The fourth stage consists of "sounding out" the program, possibly attending a session or two to see if it is what he/she really wants. The final stage consists of acceptance and the individual makes a commitment to the educational program.

Erickson's (1982) research validated this five stage process of information use. He found that those individuals who were committed to the program and attended all sessions had been "far more aggressive in seeking out learning opportunities than the no-interest subjects" (p. 84). He pointed out that information availability and motivation are interactive in the sense that only those with high motivation will be affected by information on educational opportunities.

Erickson also emphasized the significance of information sources. In his study, the low achievers had received almost all information on the adult education course from friends and close relatives. These sources are



also significant for individuals enrolling in literacy programs (Prospects, 1990). Erickson suggested that more emphasis should be placed on interpersonal sources and less on mass media in providing information on adult educational opportunities.

Transitions and Barriers

Transitions refer to circumstances conducive to an individual participating in an educational program, while barriers refer to impediments.

A study by Aslanian and Brickell (1980) showed that in a survey of 744 adults, 83 percent named a particular transition in their lives as the motivating factor for engaging in higher learning. Fagan (1988) showed that structural/environmental support (or lack of it) was one of three key variables in understanding low-literate adults as learners. Pillay's (1986) study also pointed out the significance of support factors for adults re-entering education programs.

The significance of support factors for adult learners is frequently noted in briefs and submissions to policy making and/or funding agencies. Key among these are a stable income and monetary related concerns such as transportation and babysitting services (Adult Basic Education in Alberta: A Discussion Paper, 1985). Miller (1967) believes that social class is an important underlying variable in understanding the positive and negative impacts of support factors. He suggests that this relationship can be



understood in terms of a needs hierarchy, indicating it would be unlikely for an individual to strive towards self-actualization when faced with needs related to survival, safety and belonging.

The degree to which a situation is perceived as a barrier depends on the individual's meaning or perception for a particular situation. Individuals with definite goals and who are highly motivated are more likely to overcome barriers to learning opportunities. The magnitude and timing of changes in a person's life must also be considered (Erickson, 1982).

The Educational Program

The program includes the nature of the educational program available to adults. Educational programs will be discussed under the headings: Organization, Content, Procedures, and Personnel.

Organization

Bergevin (1967) indicates three subtypes of systematically organized programs for adult learning: the school type, the independent study type, and the participatory type.

The school type is based on the traditional model in which information is disseminated to learners by an instructor within a classroom. The instructional characteristics within this organization have been summarized by Briggs and Wager (1982) as follows:



- 1. The primary mode for delivering instruction is the lecture.
- 2. Instruction occurs in fixed time periods.
- 3. All students begin at the same place and are expected to go at the same rate.
- 4. The teacher's qualifications are based on his/her mastery of the content field.
- 5. The logic of the content dictates the organization of the instruction.
- 6. Information is disseminated through textbooks, handouts, and lectures.
- 7. Audiovisual media are considered supplementary sources of information.

This is the type of organization which most adults were familiar with as children. For adults entering basic education programs, this organization also represents the framework within which they previously failed.

Independent study type courses are common within university settings. These courses are characterized by a student contacting an instructor regarding an area of study, for which there is a mutual interest on the instructor's part. The student and instructor decide how this area shall be studied and evaluated. The manner of study can range from reviews and summaries of library material to observing or engaging in field projects. Variations of independent study courses, especially in terms of time constraints may be found in high school settings. For example, the Advancement



Based on Competency (ABC) program "allows students to progress at a rate at which they are capable. It opens up the opportunity for students to take less than or more than the normal amount of time to complete a course. It's a way of meeting particular educational needs" (Edmonton Examiner, 1989, p. 12). Correspondence courses may also be included within this organizational mode. A common criteria of independent study courses is that more onus for learning is placed on the learner.

Within a participatory type adult education program the focus is on the learners as individuals and not on the subject matter being taught. "People should have something to say about some of the forces that shape them. Adults can be trained to use opportunities to determine together the content of their learning, the procedures to be used to accomplish it, and how teaching-learning personnel will be utilized. ... Telling us that we must be responsible persons is not effective; we need to practice being responsible in the learning activity" (Bergevin, 1967, p. 56).

Since the time of Bergevin's writing, the term "ardragogy" has been used to describe a participatory type of program organization. "Andragogy", according to Knowles (1984), "values the learner's life experience and need to be self directed, draws the learner into a commitment to learn by responding to the learner's needs and involves the learner in directing the content and process" (p. x). The



characteristics of an andragogical or participatory model of learning, as summarized by Knowles (1984) are:

- 1. The physical and psychological climate must be conducive to learning. Psychological aspects of climate include mutual respect, collaborativeness, mutual trust, supportiveness, openness and authenticity, pleasure in learning, and humaness. The program leader is considered a facilitator rather than a teacher or instructor.
- 2. Learners are involved in mutual planning.
- 3. Participants are involved in diagnosing their own needs for learning.
- 4. Learners are involved in formulating their learning objectives.
- 5. Learners help design their learning plans.
- 6. They help carry out these plans.
- 7. Learners are involved in evaluating their learning.

The participatory or andragogical organization may be likened to an independent study type program implemented within a group setting.

Content and Procedures

Program content refers to the area of study or the knowledge focus, such as mathematics, social studies, reading or writing skills, ceramics, or self-assertiveness. Procedures refer to the nature of the interaction between instructor and learner in meeting the learner's goals regarding the knowledge/skills to be acquired. One would



expect a high correlation between procedures and program organization and this is true to a certain extent but is not as definitive as some writers would lead us to believe. One would also expect a high correlation between instructional procedures and learner strategies. Covington (1983) states that poor learners tend to engage in rote memory which may be "sufficient for answering rote type test items but insufficient for the demands of the productive use of these facts" (p. 156). However, one must also assume that the tendency to engage in rote memorization is fostered by the nature of the instructional procedures, including the nature of the evaluation which always exerts considerable control on the procedures employed. Resnick (1983) prefers a form of evaluation that focusses on performance from which knowledge may be inferred, rather than on the demonstration (often regurgitation) of knowledge per se. She continues that by conceiving of evaluation in this way, "the objectives of instruction are likely to change - in directions that promote transfer and further learning" (p. 34).

Program Personnel

Program personnel include policy makers, program developers and instructors who play a role in providing, promoting, and executing a program.

Policy makers and program developers may be considered "behind the scenes" personnel. These tend not to have direct contact with the learners but operate within a set of guidelines. Short (1982) indicates that program or



curriculum development should be practical, purposive, realistic and judicious. Thus while not in direct contact with the learners, program developers must be cognizant of their learning needs.

Too often institutional or program goals are stated so abstractly as to be almost meaningless. An example is as follows: "A significant task of adult education is to teach us how to live a full, productive life in which the ability to make a living and stay well is important, but equally important is the knowledge of what to do culturally and spiritually with out lives and talents. ... clearly, we must strive to become an educated people or we'll have no society at all" (Bergevin, 19657, p. 101).

By operating judiciously, the program developers involve both instructors and learners in program planning. Bergevin (1967) maintains that "If the program is to succeed, the expectations of those who sponsor it and of those who participate in it must be reconciled to some degree" (p. 168-169). To do this necessitates a spirit of cooperativeness.

But programs must also be realistic in terms of constraints imposed by outside agencies or factors. For example, the two main sources of funding for students attending Alberta Vocational Centre are Alberta Vocational Training (AVT) and Canada Employment and Immigration (CEIC). According to the AVT Guidelines, funding is provided "to facilitate and encourage 'disadvantaged and disabled'



persons to undertake training programs which will enable them to enter or re-enter the labour force" (in Fahy, 1984, p. 85). CEIC regulations state that "training ... will, in the opinion of the manpower officer, ... increase his (the learner's) earning capacity or his opportunities for employment (in Fahy, 1984, p. 85). Other constraints include a provincial curriculum which must be followed in providing for certification of the completion of subjects at the high school level.

An additional guideline for program development is that it must be theory based. Theory is too often related to the esoteric and obtuse rather than to the practical and realistic. Theory should guide program developers in selecting what is to be included in a program, and how the components should be arranged and organized. Theory also allows one to explain why expectations do or do not occur, and finally theory provides a framework which allows for control (understanding) and prediction of events (Shrag, 1967).

The program personnel closest to the learner are the instructors. A report from the Department of Defense Schools Pacific (1984) indicates that adult learners are person oriented rather than subject oriented; consequently the rapport they establish with instructors is important. The report states that "Very often in their past, adult learners have known little personal involvement with teachers. Often it is this teacher-student relationship - this personal



touch - that helps break down the learning barriers of initially reluctant students, enabling them to develop a more positive attitude toward themselves and to feel motivated beyond anything they had previously known" (p. 403). A study by Fagan (1987) of 52 adults showed that their early school experiences were generally marked by poor teacher-student relationships. However, the teacher that stood out most in their minds was the one that was "nice, considerate, a great teacher, talked to me, paid attention to me, sat down with me and really helped me when I needed it, was fun, let me do what I knew best" (p. 137).

Amoroso (1984) who investigated the needs of adult learners noted that a "need for teachers to be caring and supportive is central to the concept of literacy as an act of becoming someone" (p. 19). All adults interviewed "were unanimous in their insistence that literacy teachers be emotionally involved with their students" (p. 19).

Interactive Forces

One of the constraints of language is that incommation must be presented sequentially which often corveys the impression of "order". The fact that "Learner Inherent Factors" were discussed first, does not mean that the se must be first considered as one attempts to understand learner participation. Initially, Learner Inherent and Life Factors operate independently of Program; however, as soon as the learner enrolls in an educational program, all three sets of factors must be considered interactively. Taking motivation



an example, Harman (1977) says that this must be considered on two levels: initial motivation which would be significant in terms of the learner seeking out a program, and secondary motivation, which is formed in reaction to the particular program. Likewise, in terms of goals, Bergevin (1967) states that "Everyone comes to a meeting or class for a reason" (p. 127). Whether a person stays will depend upon additional information, the extent to which the program goals coincide with the learner's expectations, and the degree of success experienced in attaining these goals (capabilities). Transitions and <u>barriers</u> also interplay throughout the program; the learner may receive unexpected "break", such as transportation assistance, or could be thwarted from continued attendance, through such situations as losing a babysitter and being unable to find a replacement, or finding a job that conflicts with the program schedule. Gibbons and Phillips (1984) believe that when all forces "become congruent and are directed towards goals that are both clear and valuable to subjects, the potential for learning is almost unlimited (p. 366).

The congruency of Inherent and Life Factors, on one hand, and Program factors, on the other, may be understood in terms of Bateson's (1958) work which investigated the notion of differentiation among individuals. If differentiation is slight, and any negative forces are counterbalanced by positive ones, then a state of harmony or mutuality exists. If, however, differentiation is not



redressed, it may take two forms - complementary or symmetrical schissogenesis. The congruency (or lack of it) between internal and life factors on one hand, and program factors on another may be understood within Bateson's concepts of differentiation.

The diagrams in Figure 2 depict the possible patterns of interplay between the various factors.

[Insert Figure 2 About Here]

In diagram A all factors are fairly compatible. In this would expect high situation one learner type of participation and the successful attainment of Diagram B represents what Bateson calls complementary schizonogenesis. The participant is a passive learner; he/she is on the periphery, rather than at the center of the action. Any of the factors may account for this. example, the individual may not have been highly motivated to attend in the first place, or negative life circumstances may have arisen which now consume almost all of the participant's mental energy. Diagram C represents a conflict type situation. A learner may disagree openly with one or more aspects of the program (fight) or withdraw from the program (flight).

Establishing Congruency

One of the implications that may be drawn from the above discussion is that devising and implementing an adult education program is both a complex and complicated task. Providing for actual or participatory learning is neither an



either-or situation, nor is it that simplistic. Any program must operate within a number of constraints, some internal to the learner, some internal to the program, and some external to the learner and the program. Perhaps the area greatest flexibility in providing for for learner participation and responsibility is in the interaction between instructor and students. It is not always necessary (nor is it feasible) for students to decide what is to be learned and how it is to be learned. What is crucial, however, is that the students understand how what they are learning relates to their life's goals. For example, if a course objective is that "The student should be able to find and restate the main idea of a passage by identifying words or phrases which show the writer's point of view or biases on the topic", then one must consider how this relates to the learner's goals. Is it enough to say that this is part of being a reader? When and why would a reader need to find a main idea as stated in the objective? For each objective, learners should participate in discussing the meaningfulness of the objective for them. For example, in the case of the mair idea, a discussion might focus on editorials, letters to the editor, and other opinion writing. Assuming that the learners see a need to read such material, the focus can move to point of view and biases, and they may consider their own in writing or speaking about a particular topic. Such participation includes a sense of responsibility for the learners must decide how course content relates to their



lives and how their lives might change through learning it. Provision can also be made for participatory learning by having the learners discuss why understanding certain concepts are easy or difficult for them. For example, suppose students had been assigned exercises on choosing the main idea of editorials. After completing the exercise, they could be asked to rate their performance on a 5 point scale. If a student rates less than 5, he/she may be asked to verbalize why this rating was chosen. If the student says that he/she did not think that all the words indicating bias had been noted, then a discussion may follow as to how this might be checked. If a sense of trust, which is based on honesty, acceptance and cooperation (Department of Defence Schools, Pacific, 1984) has been established, then this could involve group sharing.

Unless provision is made for some involvement of learners in their learning, the perception is that "Programs often fit the administrator's pattern better than they do the learner's need" (Bergevin, 1967, p. 91). Such a perception is likely to affect motivation, goals and learning outcome - and unfortunately in a negative manner.



References

- Adult Basic Education in Alberta: A Discussion paper.

 (1985). Edmonton, AB: Alberta Advanced Education.
- Amoroso, H. C. (1984). Adult conceptions and assumptions about literacy. (April, 1984). Paper presented at the American Educational Research Association, New Orleans.
- Aslanian, C.B., & Brickell, H.M. (1980). Americans in transition: Life changes as reasons for adult learning.

 New York: College Board.
- Bateson, G. (1958). <u>Naven</u> (2nd edition). Stanford, CA:
 Stanford University Press.
- Bergevin, P. (1967). A philosophy for adult education. New York: The Seabury Press.
- Briggs, A.L., & Wager, W. (1981). <u>Handbook of procedures for</u>

 the <u>design of instruction</u>. Englewood Cliffs, NJ:

 Educational Technology Publications.
- Cross, K.P. (1981). <u>Adults as learners.</u> San Francisco, CA:
 Jossey-Bass Publishers.
- Covington, M. V. (1983). Motivated cognitions. In S. G.

 Paris, G. M. Olson, & H. W. Stevenson (Eds.), <u>Learning</u>

 and motivation in the classroon. Hillsdale, NJ:

 Lawrence Erlbaum Associates.
- Department of Defence Schools, Pacific (1984). In M.S. Knowles, <u>Andragogy in action</u>. San Francisco, CA: Jossey-Bass Publishers.



- Edmonton Association for Continuing Education and Recreation (September 12, 1989). Minutes, Literacy Subcommittee Meeting, Edmonton, Alberta.
- Edmonton Examiner. (December 31, 1989). Education Supplement, p. 12.
- erickson, D. V. (1982). A case study towards the development of a theory of participation in adult education.

 Unpublished doctoral thesis, The University of Alberta,

 Edmonton, AB.
- Fagan, W.T. (1987). Prisoners and non-institutional adults' perceptions of conditions affecting their learning. The Journal of Correctional Education, 40, 152-158.
- Fagan, W.T. (1987). Are you that teacher? <u>Reading</u>, <u>21</u>, 135-
- Fagan, W.T. (1988). A survey of a sample of adult illiterates in an urban area of Canada. <u>Prospects</u> (UNESCO), <u>18</u>, 395-403.
- Fahy, P.J. (1984). A case study of curriculum renewal in adult basic education. Unpublished doctoral thesis, The University of Alberta, Edmonton, AB.
- Gibbons, M., & Phillips, G. (1984). Challenging students to excel. In M.S. Knowles, <u>Andragogy in action</u>. San Francisco, CA: Jossey-Bass Publishers.



- Harman, D. (1977). A different approach to the teaching of reading to illiterate adults. In T. P. Gomman (Ed.),

 Language and literacy: Current issues and research.

 Teheran: International Institute for Adult Literacy

 Methods.
- Harman, D. (1984). <u>Functional literacy in the United States</u>.

 New York: McGraw-Hill.
- Houle, C.E. (1963). The inquiring mind: A study of the adult

 who continues to learn. Madison, WI: The University of

 Wisconsin Press.
- Knowles, M.S. (1984). <u>Ardragogy in action</u>. San Francisco, CA: Jossey-Bass Publishers.
- Knox, A.B. (1980). <u>Developing</u>, <u>administering</u>, <u>and evaluating</u>
 <u>adult education</u>. San Francisco, CA: Jossey-Bass
 Publishers.
- Lawson, Anton E. (1983). Investigating and applying developmental psychology in the science classroom. In S.G. Paris, G.M. Olson, & H.W. Stevenson (Eds.), Learning and motivation in the classroom. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Lawson, A.E., & Renner, J.W. (1975). Relationships of science subject matter and developmental levels of learners. <u>Journal of Research in Science Teaching</u>, <u>12</u>, 347-358.



- Lawson, A.E., & Snitgen, D.A. (1982). Teaching formal reasoning in a college biology course of preservice teachers. <u>Journal of Research in Science Teaching</u>, <u>19</u>, 233-248.
- Maehr, M. L. (1983). On doing well in science: Why Johnny no longer excels; why Sarah never did. In S.G. Paris, G.M. Olson, & H.W. Stevenson (Eds.), Learning and motivation in the classroom. Hillsdale, NJ: Lawrence Erlbaum Associates.
- McCarthy, P., & Schmeck, R. R. (1988). Students' selfconcepts and the quality of learning in public schools and universities. In R.R. Schmeck (Ed.), <u>Learning</u> strategies and <u>learning styles</u>. New York: Plenum Press.
- Miller, H.L. (1967). <u>Participation of adults in education: A force field analysis</u>. Boston: Center for the Study of Liberal Education, Boston University.
- Pillay, B. (1986). Motivation and impact: <u>The voice of illiterate women.</u> Unpublished master's thesis. The University of Alberta, Edmonton, AB.
- Prospects (A program for adult literacy) advisory committee meeting. (January 11, 1990). Edmonton, Alberta.
- Resnick, L. B. (1983). Toward a cognitive theory of instruction. In S.G. Paris, G.M. Olson, & H.W. Stevenson (Eds.), <u>Learning and motivation in the classroom</u>. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Rigg, P., & Kazemek, F.E. (1983). Adult literacy in the USA:

 Problems and solutions. Convergence, 16, 24-30.



- Short, E. (1982). Curriculum development and organization.

 In <u>Encyclopedia of educational research</u> (5th edition).

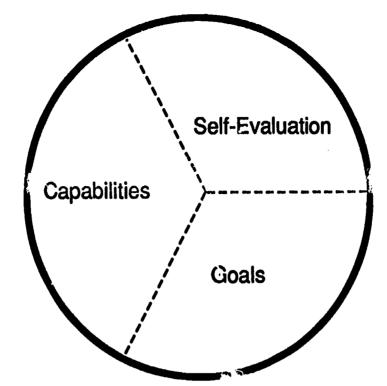
 New York: The Free Press.
- Shrag, C. (1967). Elements of theoretical analysis in sociology. In L. Gross (Ed.), <u>Sociological theory:</u>

 <u>Inquiries and paradigms.</u> New York: Harper and Row.
- Snow, J.J. (1977). Counselling the high-risk student. In J.

 Roueche (Ed.), <u>Increasing basic skills by developmental</u>

 <u>studies</u>. San Francisco, CA: Jossey-Bass Publishers.
- Spann, M. (1977). Building a developmental education program. In J.Rouche (Ed.), <u>Increasing studies</u>. San Francisco, CA: Jossey-Bass Publishers.





Individual / Inherent Factors

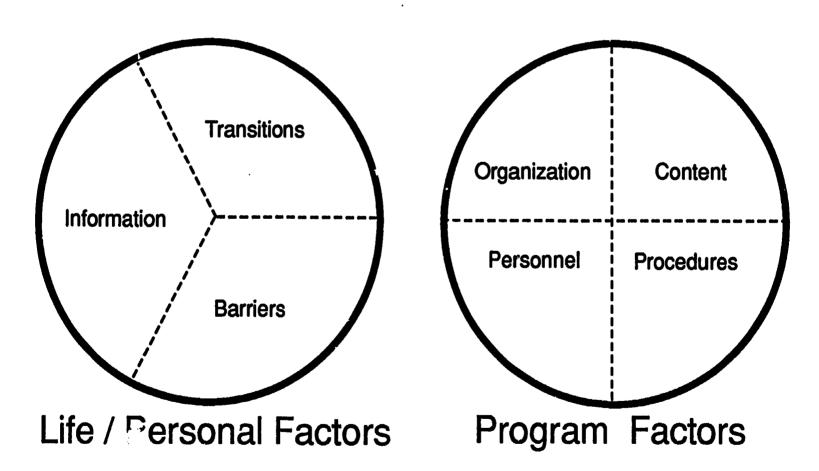
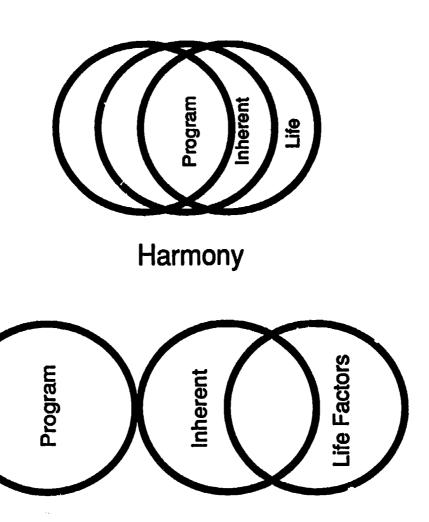
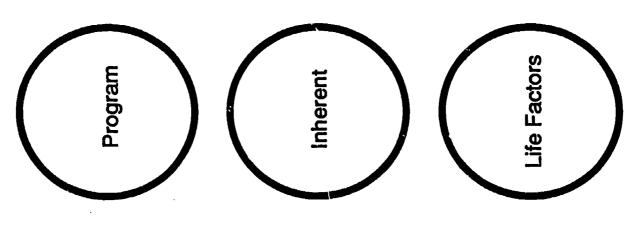


Figure 1: Factors Affecting Learning Participation





Complementary Relationship



Symmetrical Relationship

Figure 2: Nature of Interaction between Factors Affecting Learner Participation

