IMPROVING THE PHYSICAL, EMOTIONAL AND SOCIAL COMPONENTS OF THE LEARNING ENVIRONMENT: SEVERAL CLASSROOM CONSIDERATIONS TO ENHANCE ADULT LEARNING

Jelani Sulaiman

ABSTRACT

This paper focuses on the three components of the learning environment or climate within the framework of the classroom, namely the physical, emotional or psychological, and social environments which need to be shaped in order to enhance adult learning. It describes some of the instructional considerations necessary to improve the quality of the adult learning climate. Recommendations toward creating a conducive adult learning environment are highlighted.

1. INTRODUCTION

Adult learners, or now commonly referred to as nontraditional students, are becoming increasingly visible in educational settings today, and are expected to provide an increasing proportion of the learning market in the near future. Snyder (1987) states:

> The number of older students has been growing more rapidly than the number of younger students. Between 1970 and 1985, the enrollment of students under age 25 increased by 15 per cent. During the same period, enrollment of persons 25 and over rose by 114 per cent. In the later part of this period from 1980 to 1985, enrollments of students under 25 decreased by 5 per cent, while the enrollment of persons 25 and over increased by 12 per cent (p. 116).

Lightner (1984) predicts an increase of 30% in the number of students 35 years old and over from 1984 to 1994. This shifting student pupulation means that educators face the challenge of designing appropriate learning environments that provide the nontraditional older students who want to upgrade their existing skills or acquire new skills with the possible means to do so (Lumsden, 1985).

It has been accepted that these older students differ from the traditional

younger students in many respects (Courage, 1984). One which is evident concerns their learning needs. Ross and Stokes (1984) believe that an understanding of the learning needs of nontraditional students is vital "for communication professionals to develop strategies meeting the nontraditional student's needs" (p. 6).

Emphasizing the urgency of addressing the instructional needs of adult learners, Buchanan and Sherman (1981) stated :

> Adult learners are the growing clientele of higher education. Demographics indicate clearly that the future of post-secondary education, at least through the end of this century, lies in addressing the needs of this population. Census figures reveal that the predominant group in our society is adults over the age of twenty-five, and this group has shown an increasing interest in making use of education to gain its own ends. They come to us as independent consumers and, if we do not serve their needs, they will leave our institutions for other agencies or organizations...which will provide the effective education which they seek. (p. 2)

In response to the above statement, this paper attempts to look at some instructional considerations which would assist educators toward establishing a conducive learning environment for adult learners. It is the writer's hope that the discussions put forward in the paper would be able to highlight and suggest some of the learning-teaching strategies relevant to the development of a quality learning environment for adult students, an issue which has been an increasing concern among educators in the past decade.

Overall, this paper focuses on three components of the learning environment or climate. They are the physical, emotional or psychological, and social environments which need to be appropriately set up in order that effective teaching and learning of adult learners be achieved.

Various aspects of learning environments have been defined and discussed by several educators and scholars such as Tagiuri (1968), White (1978), Gibb (1978), David (1979), Vosko (1984), Galbraith (1989, 1990), and Fellenz and Conti (1989, 1990), and Darkenwald and Valentine (1986, 1989). The different ways in which people view learning environments imply the complexity of these environments.

For the purpose of this paper, the writer adopts the definition given by Hiemstra (1991) which recognizes the learning environment as "all of the physical surroundings, psychological or emotional conditions, and social or cultural influences affecting the growth and development of an adult engaged in an educational enterprise" (p. 8). This is, in fact, similar to the definition propagated by Galbraith (1989, 1990) which suggests that the educational climate consists of both the physical environment and the psychological or emotional climate (for example, what takes place during the first session to establish a supportive, challenging, friendly, informal, and open atmosphere).

Discussions of the learning environments in this paper are confined within the framework of the classroom. Classroom is defined as any organized group learning situation which includes lectures, group, discussions, conferences, workshops, and training programs.

2. ENHANCING LEARNING AMONG ADULT LEARNERS BY IMPROVING THE PHYSICAL, EMOTIONAL, AND SOCIAL LEARNING ENVIRONMENTS OF THE CLASSROOM

Adult learners come to the classroom equipped with various experiences, attitudes, perceptions and ideas. Each learner will organize his or her thoughts differently, and each will be able to absorb new knowledge and ideas in his or her own way.

For learning to take place, the learning environment must be conducive. Effective accumulation of new knowledge and experience would be greatly retarded if negative feelings of pain, fear, or anxiety persist.

Most of the time, the learning climate setting is used as a metaphor for effective teaching and learning, namely with adult learners. Apps (1989) confirmed this in that the process makes a number of assumptions regarding adults as learners and regarding the aims of educators and their beliefs about content and process, and the teaching-learning transaction.

The Physical Component of the Learning Environment

Considerable speculation about the relationship of learners to physical environments has occurred during the past fifty years but too little critical research on learning and physical environments has been reported during this same period (Fulton, 1991). This is because educators often rely on studies in noneducational settings such as hospitals, prisons, and offices. Futhermore, even when the relationships of a setting's physical attributes to learning have been considered within an educational framework, findings frequently have been limited to children, and may or may not be applicable to adults.

Vosko and Hiemstra (1988) stated that physical features seem to have been primarily ignored in adult education. In fact, Weinstein (1981) relegated physical environment as clearly secondary in importance. Fulton (1991) believed it is not true that little is known of the impact of the physical environment on adult learning and thus ignored, but little of what is known is understood within a larger conceptual framework. There is thus, a great need for adult educators to not only analyze the physical attributes of learning environments, but also develop an organizational scheme for understanding the research findings.

There has been research carried out to find out the relationship of physical

setting to learning. In the 1950s and 1960s, certain members of the Adult Education Association of the United States of America were actively investigating such relationship (Fulton, 1991). These resulted in several interesting findings.

In several later research, White (1972) found one-fourth of learning as dependent on facility. Hiemstra (1976) regarded the environment as important to the task of sustaining learner's commitment. Vosko (1984) concluded from a review of the literature that while physical environment does effect activity and productivity, how it does do depends on the learners' perceptions. Borthwick (1983) discovered that concern for the older learner and the physiological changes of aging have led some adult educators to recommend changes in the physical environment to compensate for learner deficiencies.

The physical setting is often presented as one of the many tools which an educator can manipulate in instructional design. Lane and Lewis (1971), viewing the physical environment from an administrative standpoint, agreed that requirements for physical facilities for an adult learning laboratory will vary with the purpose of the laboratory, its organizational affiliation, and the availability of space. They also assummed that adult learners are more likely to be influenced by their surroundings than children, and their motivation may be increased through adequate space, appealing decoration, and useable furnishings.

Studies carried out both in higher education settings and in primary and secondary schools have indicated a relationship between place or space and learning. Becker, Sommer, Bee, and Oxley (1973) stated that the physical arrangement of most college classrooms reveals much about the learning process. Nevertheless, they concluded that simply altering the physical structure without an accompanying change in the social structure, will not produce real change.

Gilford (1976) discovered that communicative behavior was adversely affected by negative feelings resulting from the inhospitable, physical attributes of the college classroom. Wollin and Montagne (1981) revealed that the background of an interaction between a teacher and student can have a strong effect on the quality of that interaction.

Models of the physical classroom setting have been built based on studies of how individual conceptualize the physical environment. Getzels (1974) suggested four types of classroom designs: the rectangular classroom for the empty learner, the square classroom with moveable furnishings for the active learner, the circular classroom with opportunity for interpersonal interaction for the social learner, and the open classroom, which appears to be chaotic and sensory-enriched for the sitmulus-seeking learner.

The SPATIAL (satisfaction - participation - achievement-transcendent/immanent attributes-authority-layout) model was developed by Rodney D. Fulton as a preliminary effort to better understand the physical environment and the complex interactions with learning activities hypothesizes that: 1) individual perception of space affect learner satisfaction, participation, and achievement; 2) certain aspects of a space, as perceived by

learners, are subjective or beyond the visible physical attriubtes; and, 3) authority and layout are external qualities that can be changed.

The SPATIAL model establishes three levels in understanding the relationship of physical environment to learning. The first level, which defines learning, acknowledges that the physical attributes can affect the three learning dimensions, yet in opposite directions. For example, a certain seating arrangement may increase satisfaction but may decrease participation if a particular individual learner wants to remain relatively anonymous in a new setting, or a multisensory presentation may increase achievement while decreasing a person's satisfaction if a nonpreferred learning style is utilized. The second level in the model addresses reality. It deals with aspects of the physical environment that are beyond the individual learner's control, such as temperature, lighting, density, ventilation, and noise levels-all objective realities, which on one hand may be measured objectively on some scale, but on the other hand, are tempered by the immanent perceptions of the individuals in the environment. Thus, both the transcendent and immanent attributes of the setting should be taken into consideration in educational planning. The third level in the SPATIAL model addresses the nature or locus of control. This refers to the varying power of the learner across settings to evaluate the adequacy of a place and to change attributes of the physical environment. This very much depends on the educational philosophy of the instructor and on whether or not students are encouraged to take control of their own environment. The layout of the physical setting includes heating, ventilation, air conditioning, type of lighting, furniture, audiovisual equipment, and the students themselves occupying the space. Together with the learning program, they determine many physical dimension requirements. For example, a sociopetal (a semicircular) arrangement that facilitates face-to-face sightlines among learners, enhances participation when discussion is the objective. Since both layout and authority should not be considered independently, the third level emphasizes the interrelationship of authority and layout in order that a better understanding of how a particular educational setting is perceived by the learners (see Appendix A for a Checklist of SPATIAL Needs).

No doubt, adult learners require an ideal learning facility that is comfortable, safe and secure, and projects the image of caring and concern for the learner's needs. In order to achieve such a conducive environment, Leed and Leed (1987) suggested the following guidelines:

1. Eliminate any learner distractions or annoyances caused by faulty facility plans and design,
2. Determine the quantity of space necessary and the quantity of media and personal support,
3. Determine the level of quality required and desired, and
4. Keep the facility focused on learner needs.

The effects of the physical properties on learning have always been an area of concern among ecological psychologists. They emphasized that the physical environment requires provision for animal comforts (temperature, ventilation, easy access to refreshments and rest rooms, comfortable chairs, adequate light, good accoustics, etc.) to avoid blocks to learning. They found that more subtle physical features may make even more of an impact. For instance, that color directly influences mood; bright colors tend to induce cheerful, optimistic moods, and dark or full colors the reverse.

Alford (1968) said that ecological psychologists suggest that the size and layout of physical space affects learning quality. He mentioned that in planning the Kellog Centers of Continuing Education, great emphasis has been placed on providing small discussion-group-size rooms in close proximity to larger general-session-size rooms. All of them have been provided with round, oval, or hexagon-shaped tables to encourage interaction among the adult learners.

Relating his personal experience, Knowles (1990) said:

> If you are saying, "But what can I, a mere educator, do about the color of my institution?" let me share an experience I had several years ago. I was meeting with a class of about 50 students in a large classroom in the basement of one of our university buildings. The windows were small and transmitted very little light, so we had to have the yellow ceiling lights on all the time. The walls were painted dusty institutional beige, and two walls were ringed with black chalkboards. During the third meeting of the class, I became conscious of the fact that this class wasn't clicking the way most classes do, and I shared my feeling of discouragement with the students. It took them no time at all to diagnose the problem as being the dolorous environment of our meetings.
>
> One of our learning-teaching teams agreed to experiment with out environment at the next meeting. They went to the dime store and bought brightly colored construction paper and a variety of other materials and objects, the total cost of which was under $5, and made collages for the walls, mobiles for ceiling and simulated flagstones for the floor. What a happier mood characterized our fourth meeting (p. 12).

The above experience proves that the physical setting has an impact on the quality of learning that takes place in the classroom. Also, it tells us that educators and students have a role to play in modifying the current physical set up of the learning environment to fit the needs of students, and thus enhancing the teaching-learning transaction that takes place.

A supportive and challenging physical setting is vital in enhancing adult learning, especially for adult learners with little formal education or without recent educational experience. Adult learners should feel secure and

welcome from the first class meeting itself. Facilities which learners are likely to find hospitable and encouraging ought to be included. Such facilities include not only rooms for total group or subgroup meetings but also the areas that conference centers should have for recreation, eating, sleeping and informal conversation. Appropriate facility design can increase active participation, and reduce fatigue and distraction, thus increasing listening concentration, contemplation, and openness to new ideas (Knox, 1986).

Older adult students are declining physically. This has to be considered in setting up the physical environment of the classroom in order to promote comfort, care, and safety for them. Recognizing this, Draves (1984) made the following interesting comment:

Abraham Lincoln may have been able to read at night by firelight, and children may have learned in straight-backed wooden desks in drafty log cabin schools, but today's adults can detect and be influenced by the slightest changes in comfort. Adults are more attuned to comfortable surroundings, more sensitive to discomfort (p. 9).

He suggested, among other things, that an adult educator should:

1. make sure the setting is comfortable, neither too warm nor too cold,
2. make words, charts, objects clear to the learners,
3. make sure there is enough overhead lighting,
4. choose a room that is reasonably free of outside street noises, or noises from other rooms in the same building.
5. design his or her place so as to always be heard by learners, and they can hear each other, and
6. seat participants so that they can see each other, and engage in discussions and learn more from each other.

Westmeyer (1988) believes that physically, a classroom for adults should recognize their adulthood, be comfortable for them, and suggest that it is for learning as opposed to being for enjoyment or entertainment or for eating or for holding a formal meeting. He felt that adult students should not have to sit in tablet-arm that restrict their movement or in hard chairs that put the top of the legs to sleep after ten minutes. He also suggested that if a group is to have a meeting-type discussion, there should be a table around which they can sit.

The Emotional or Psychological Component of the Learning Environment

In building an appropriate emotional component of the learning environment, considerations have to be given to the psychological characteristics of adult students so that a fit exists between the learning environments that educators create for them, and their own unique psychological

needs.

Having compared psychological needs of nontraditional students to traditional students, Venable (1986) reported that the "older" students are less available, more independent, more motivated, less flexible, more responsible, more learning focused, more experienced, and exhibit less socialization expectation and more mutuality with the instructor. Intellectually, the adult students demonstrate lower abstract reasioning, higher knowledge, lower complex data organization, lower short term memory, higher long term memory, and equivalent ability to learn when compared to younger traditional students.

Several researches have pointed out the decline in abstract behavior with increased age (Botwinick, 1978). Older people had an extremely difficult time completing learning tasks involving abstract elements (forms, colors, numbers) but when the elements were changed to more concrete items (beverages, meats and vegetables), the older learners accomplished the task more easily (Arenberg, 1968).

Studies have shown that older learners perform poorly on learning task if they are too anxious or so motivated as their emotional state interferes with cognitive processes. One way of overcoming this overarousal is by providing a supportive learning situation where correct responses are rewarded, and wrong ones are appreciated and corrected in a nice way. Rewarding the learner, particularly the older adult for making errors of commission as well as correct responses improves performance (Leech & Witte, 1971). By being supportive and rewarding any response, right or wrong, the chances for the individual becoming inappropriately aroused (thus interfering with learning or memory) or anxious are reduced (Kooken & Hayslip, 1984).

Smith (1982), as a result of a career-long exploration of the development of adult's learning-to-learn capacities identified four basic characteristics of adult learners - their special orientation to learning, their experiential base, their particular developmental changes and tasks, and their anxiety regarding learning. These characteristics generate certain conditions for learning which include the following:

1. Adults learn best when they feel the need to learn and when they have a sense of responsibility for what, why, and how they learn.

2. Adults use experience as a resource in learning so the learning content and process must bear a perceived and meaningful relationship to past experience.

3. Knowledge to be learned should be related to the individual's developmental changes and life tasks.

4. The learning method used should foster in varying degrees, the adult's exercise of autonomy.

5. Adults learn best in an atmosphere that is nonthreatening and supportive of experimentation, and in which different learning styles are recognized.

Knowles (1984) recognizes that adults have "... a deep psychological need to be seen by others and treated by others as being capable of self-direction. They resent and resist situations which they feel others are imposing their wills on them (p. 56).

Regarding the emotional or psychological climate in adult learning, the andragogy model calls for a setting of mutual respect and collaboration (Westmeyer, 1988). Several guidelines have been presented to adult instructors to achieve such an environment, such as

1. Never talk down to students (including young students) even though they (the instructors) should speak with them in their own language or at their own level.

2. Respect students by listening to them as well as inviting them to participate.

3. Build upon the rich experiences in class through collaboration rather than competition.

Knowles (1980) used the term "educative environment" as analogous to climate setting to enable the growth and development of adult learners. He suggested that such an environment should have:

1. respect for personality,

2. participation in decision making,

3. freedom of expression and availability of information, and

4. mutuality of responsibility in defining goals, planning and conducting activities, and evaluating.

Knowles (1990), in explaining the theoretical perspective of human and interpersonal climate stated:

> Cognitive theorists stress the importance of a psychological climate of orderliness, clearly defined goals, careful explanation of expectations and opportunities, openness of the system to inspection and questioning, and honest and objective feedback. The cognitive theorists who emphasize learning by discovery also favor a climate that encourages experimentation (hypothesis-testing) and is tolerant of mistakes provided something is learned from them (p. 122).

In creating a conducive emotional component of the learning environment, Vosko (1991) utilized his general observations and experiences on his numerous tours of diverse settings, especially in churches. He made comparisons and concluded that in most adult education programs, adult learners expect that some will be ready to facilitate something worthwhile in a place of learning that will be pleasant, and thus, it is still the adult facilitator or teacher who makes the class a good or bad experience. He suggested that adult educators should:

1. do a Space Needs Assessment (refer to Appendix B for a Checklist of the Analysis of Space Attributes),

2. extend an invitation to get comfortable,

3. be sensitive to quiet learners, and

4. regularly check for space-related problems.

Brookfield (1990) believes that the environment of trust is vital for effective adult teaching and learning. He mentioned teacher credibility and authenticity as among the important characteristics that make instructors more trustworthy in the eyes of adult learners. Teacher credibility refers to the ability of instructors to demonstrate a breadth of knowledge, depth of insight, and length of experience that far exceeds the students' own. Teacher authenticity comprises of being explicit about how the teaching and learning experience is to be organized and the evaluative criteria used, making sure one's words and actions as an instructor are consistent and congruent, being ready to admit errors, revealing aspects of oneself as a person outside an instructor's role, taking students seriously by listening carefully to their concerns, anxieties, or problems, and realizing the power of role modelling. All these tasks should be initiated with care consistency.

A study by Beder and Darkenwald (1982) resulted in the conclusion that teachers do in fact teach adults differently from children, and that adults are perceived as more motivated, pragmatic, self-directed, and task-oriented than pre-adult. A follow-up analysis of the data from this study tentatively supports the view that in adult education, instructors tend to be more learner-centered or responsive and less controlling or teacher-centered when teaching adults compared to teaching pre-adults.

To enable adult educators to clarify the issue of appropriate teaching approaches, and potential discrepancies between beliefs and actions, two instruments have recently been developed which may prove valuable. They are the Philosophy of Adult Education Inventory (PAEI) and the Principles of Adult Learning Scale (PALS). Zinn (1983) developed the PAEI which is a scale that describes the extent to which one subcribes to underlying principles of liberal, progressive, behaviorist, humanist, and radical philosophies of continuing education. The PALS which was developed by Conti (1985) is a forty-four-item Likert scale designed to assess the degree to which instructors subscribe to principles of teaching adults as reflected in the predoninant literature of the field. Both instruments, the PAEI and PALS have the potential to function as research instruments and as diagnostic tools for use by adult educators. (refer to Appendix C for the PALS).

The Social Component of the Learning Environment

The social component of the learning environment is created by the characteristics and interactions of students and instructor. Moos (1079) defined the concept of social environment of climate as the personality of a classroom or other social groups.

An adult learner is regarded to have achieved a degree of fit with the social environment when 1) the particular combination of social setting provides multiple opportunities for fulfilling a wide range of personal needs; 2) the person is accommodating to the demands of each social setting; 3) in negotiationg the environment to meet these needs and social demands, the individual is experiencing a degree of challenge that stimulated personal growth but is not overwhelming; and 4) in addition to satisfying personal needs, the person is progressing toward fulfillment of higher-order needs (Campbell, Wilson, & Hanson, 1980).

A question that usually arises concerning the creation of a social environment in the classroom is who exerts the primary control over the nature of the learning environment-the instructor or students? From a review of secondary school social climate research, Moos (1980) concluded that instructors are more important in creating classroom learning environments that students are. Nevertheless, in adult education, due to age-status equality, abundance and variety of life experience, and other characteristics of adult students, student influence on the nature of the learning environment is greater.

Experience has shown adult educators that placing an enthusiastic, caring teacher in a classroom of adult learners will not, in itself, produce desired results. Caring attitudes are important, but adult learners need more than that. The learners are in the course to acquire specific proficiencies. They will drop-out or discontinue to attend class if they perceive that they are not making progress toward their goal. Their age and experience give them the right to question authority, to resent regimentation or autocratic governance, and to expect to share in the decisions about course objectives (Ulmer, 1980).

In order to create a conducive social classroom environment, an instructor must possess the necessary teaching proficiencies, namely knowledge of content, knowledge of learners, and knowledge of methods. An instructor also needs to be able to reach across social lines by offering adult learners reinforcement of their desire to learn, understanding of their personal problems, appreciation of their cultural differences, and encouragement in the face of their wavering self-confidence and self-esteem, as well as whatever specific knowledge they impart. In other words, successful instructors encourage personal persistence as well educational content.

Some of the most effective adult education programs emphasize on efforts to enhance proficiency whereby both instructor and students make important contributions. Instructors can provide content and facilitate processing, while learners can actively and creatively use knowledge resources in relation to past experiences, current concerns, and future applications. This kind of supportive and learning-centered climate has to be maintained throughout the teaching-learning transaction.

Effective instructors assure that learners feel welcome and have an enlightening experience since the first session itself. The following methods are utilized:

1. Arrange for welcoming, introductions, ice-breakers, name cards, or other ways to help participants become acquainted.

2. Providing physical facilities that are comfotable and appropriate for adults and that lend themselves to educational activities and informal conversation between sessions.

3. Encouraging participants to say something about their backgrounds and reasons for participation.

4. Setting a tone of informality and mutual respect.

5. Clarifying procedures ad logistics to encourage participants to concentrate on educational activities and objectives.

6. Allowing participants to help formulate or modify program goals and objectives.

7. Encouraging sharing of experience and insights, which will also draw in reticent participants (Knox, 1980).

Adopting a variety of learning activities helps to sustain learner interest and persistence. By modifying the rate of presentation and pacing would allow learners to progress accordingly. There are several ways in which instructors can effectively help with important learning dynamics early in an educational activity, and at the same time contribute to a two-way learning process. They include:

1. Use of discussion or written exercises to find out participant's current knowledge and attitudes related to the topic, so that the resulting recognition of cognitive structure can be used to minimize interference.

2. Use of advance organizers in the form of handouts that present simply and clearly the basic concepts that undergird details about the topic to be explored.

3. Use of discussion among participants on relevant issues, problems, and questions as they perceive them and discussion of content to help them obtain answers and solutions.

4. Use of reading or resource persons to present concrete and vivid examples that reflect standards of excellent performance related to the topic discussions among participants on their current proficiencies and the desirability of moving toward standards of desired proficiency.

5. Use of materials and methods such as case analysis that help participants explore how they would apply concepts in the future.

6. Use of attention to assumptions and values related to why procedures are desirable as well as how to use them. (Knox, 1980).

Adult learners have diverse feelings, thoughts, and questions as they begin a new learning experience. Pratt (1984) developed a checklist of questions for instructors to address to learners in the first class session to

help deal with those feelings, thoughts, and questions. He stated:

> People need a predictable basis for interacting and will do so whether an instructor guides to process or not. Norms and expectations evolve naturally and inevitably. Yet, when the process is left to chance, problems arise due to ambiguity or misunderstanding. Such problems usually relate to purpose, expectations, roles, or content (PERC) and can be avoided or reduced if these elements are clarified at the outset. (p. 7). (refer to Appendix 3 for Instructor's Questions for the First Class Session).

By spending some time, during the first session to address the natural feelings and questions adults usually have, an instructor is able to create a positive and open climate of learning which would eventually enhance growth and development of adult learners.

3. SUMMARY

This paper describes some of the instructional considerations necessary to enhance the quality of the adult learning environments in order that effective teaching and learning be facilitated. The three components of the learning environment discussed are the physical, emotional, and sosial features.

The impact of the physical environment on adult learning has somewhat been ignored by educators in the past. However, more recently, research carried out acknowledge its importance. Physical environment does affect activity and productivity. Thus, it is often regarded as a tool to be manipulated to suit the diverse needs of the adult learner, and to compensate for the defiencies due to aging. It is recommended that alterations to the physical setting should be accompanied with changes in the social climate to produce positive results.

Studies revealed that the quality of the instructor-student interaction is affected by they physical background of that interaction. A negative and inhospitable physical setting would hinder student's active participation in the teaching-learning transaction. Conversely, student's motivation to contribute to the whole learning process in enhanced by a comfortable and reassuring physical background.

In order that instructors may better understand the relationship between the physical environment and the complex interactions with learning activities, the SPATIAL model was developed. In addition, models of the physical classroom setting were proposed based on research.

The contributions of the ecological phychologists toward the formation of a conducive physical learning environment cannot be denied. Their emphasis on the impact of the provision of animal comfort, the more

subtle physical features, the space and layout of a setting toward the quality of learning is taken into consideration.

Both instructors and learners have a vital role to play in creating a supportive and challenging physical environment. They should propose and make changes to enhance the learning process. Appropriate facility design means that the recreational needs to students have to be fulfilled.

The process of aging and declining physical capabilities are important factors in setting up an appropriate physical environment of the classroom for adult learners. Consideration has to be made in the arrangement of seats, the acoustics, the size and quality of the chairs and tables, the lighting, and the overall instructional materials.

To be able to create a conducive emotional or phycological features of the adult learning enviornments, the psychological needs of the adult learners have to be looked at. Studies indicated that among other things, adult learners are more independent, more experienced, less flexible, more responsible, and show more socialization and more mutuality with the instructor. They perform poorly on learning task when too anxious or emotionally unstable. Thus, by being supportive and rewarding them for their contributions, instructors could help them in reducing much of their emotional problems.

Teaching styles should suit the characteristics of adult learners. Studies showed that they learn well when the knowledge presented is related and applicable to their experiences and life situations. They want to be able to exercise their autonomy in the learning process, and would resist inhibitions in whatever forms which would curtail their will to express freely.

Adult education should prevail in an atmosphere of mutual respect and collaboration. Teacher credibility and authencity are important characteristics from the perspective of the adult learner toward developing trust and confidence in an instructor.

The PAEI and the PALS are two instruments used to determine appropriate teaching approaches and potential discrepancies between beliefs and actions. These instruments aid instructors in comparing their own actual performance in class to accepted andragocial models of teaching.

The social environment of adult learning describes the nature of the interactions between the instructor and the learners. In adult education, learners play a major role in determining the social climate of the classroom. This is because adult learners and instructors are almost equal on age and life experience.

Adult educators should have the ability to direct and motivate learners to participate in class discussions, and share ideas in decision-making pertaining to their academic experiences. They should possess teaching proficiencies and the ability to reinforce learner's persistence in education and assists them in facing non-academic problems.

The first class meeting can be very important. It presents an opportunity for instructors to establish a good understanding with the learners, and to

maintain a pleasant as well as an enlightening experience through the learning process. The use of ice-breakers, providing comfortable and adequate physical facilities, getting to know each other, setting a tone of informality and mutual respect, and clarifying on procedures to encourage active participation in the learning programs to come, are several activities that can be implemented as positive initial efforts to generate an appropriate social environment in the classroom.

Diversifying learning activities, modifying the rate of presentation, and pacing would enable adult educators to maintain learner interest, and persistence. Employing important learning dynamics early in an educational activity, such as the use of advance organisers, use of group discussions, use of resource persons help to make learning a collaborative effort.

As adult learners perceive their new learning experience differently, educators need some guidelines to determine elements of purpose, expectations, roles, and content in the learning process. Those elements will act as the basis for interaction and in dealing with environmental needs of adult learners. The PERC checklist has been developed to identify them.

4. RECOMMENDATIONS

The physical, emotional, and social components of the adult learning environment need to be upgraded to ensure effective teaching and learning be resulted. Based on the literature gathered in the paper, to create a conducive learning climate, the following steps are recommended:

1. More research should be undertaken on the relationship between the different components (physical, emotional, social, organizational, etc.) of the learning environment and adult learning. This will generate more up-to-date and scientific information on creating a conducive learning climate for adult learners.

2. The physical features of the learning environment such as room size, seat arrangement, lighting, and the acoustics should be considered in the initial planning and construction of buildings and other instructional facilities.

3. Classrooms and other educational venues should be modified or replaced to enhance the quality of teaching and learning.

4. Evaluation of the learning environments should be regularly carried out (maybe once a year) using appropriate measuring instruments to identify and overcome deficiencies.

5. Instructors should adapt, adopt, and diversify teaching methods and styles to suit the different needs of the adult learners.

6. Adult educators need to update their knowledge concerning in-

structional developments in adult education through workshops, training sessions, conferences, and courses.

7. Only those possessing the necessary experience, adequate educational and teaching qualities, and appropriate personality should be allowed to teach adult students. This step may seem rather radical but it appears most practical when the educational demands of adult learners are considered.

5. CONCLUSION

The setting up of an appropriate learning environment in adult education will remain an important issue in the future. As more and more adult learners appear in educational settings, the search for the most comprehensive approach in dealing with their diversity of learning needs and wants should be intensified. Schlossberg, Lynch, and Chickering (1989) reiterated:

> What we need now in higher education is a comprehensive, integrated approach to create an eductional environment responsive to the diverse characteristics, conditions, and needs of the adults trying to use the rich resources that higher education in the United States has to offer. (p. xiii)

As such, establishing positive physical, emotional, and social settings which would facilitate effective teaching and learning should be viewed as an immediate mission.

In this paper, the writer attempts to describe and prescribe instructional considerations in building an effective climate for learning in the context of the classroom. Recommendations are put forward based on the literature gathered, and are presented by viewing the learning environment as a single entity. It is hoped that more research on adult learning environments would be carried out in the future in order to enlighten adult educators on ways of creating educational experiences responsive to the learning needs of adult learners.

APPENDIX A

Checklist for Addressing SPATIAL Needs

Satisfaction, Participation, and Achievement

_____ 1. Have learners been asked how satisfied they are with the space being used?

_____ 2. Have distracting physical features been removed or eliminated whenever pos sible?

_____ 3. Do learners stay on task in the setting that is provided?

_____ 4. Does body language indicate a desire to leave?

_____ 5. Does the place allow learners to use appropriate learning strategies

_____ 6. Can auditory, tactile, and visual learning styles be used?

Transcendent and Immanent

_____ 7. Are the location and room size appropriate for the planned learning activities?

_____ 8. Do the furnishing "fit" the people who will be using them?

_____ 9. What messages about learning could be assumed by the learners from the condition of the space?

_____ 10. Is there potential for some individuals to be challenged or offended by some aspect of the space?

Authority and Layout

_____ 11. Can changes be made in the learning environment?

_____ 12. Who can make changes?

_____ 13. Does the space meet minimal safety and comfort standards?

_____ 14. Are necessary special requirements such as appropriate audiovisual equipment available?

APPENDIX B

Checklist of the Analysis of Space Attributes

Outside the Classroom

1. Clear signage showing identification and direction.
2. Barrier-free access along walkways and in the building.
3. Adequate lighting for safety and security.
4. Availability of coatrooms, restrooms, student lounges, and vending machines.
5. Location of emergency exits and clear directions to them.

Inside the Classroom

6. Adequate lighting for evening classes.
7. Availability of emergency lights.
8. Cleanliness of classroom.
9. Barrier-free accessibility to and in the classroom.
10. Classroom painted with cheerful colors.
11. Windows and blinds or shades that are operable
12. Adequate control over ventilation, heating, and cooling.
13. Flexible furnishing.
14. Available media equipment.
15. Adequate sightlines for everyone in the classroom.

Rearrangement of the Classroom

16. Familiarize yourself with the space. Walk all around the room. Notice how it feels in different locations.
17. Set up the room to suit your needs as a teacher.
18. Explore the options to suit class members' needs.
19. Try to imagine which arrangement will work best for which learning activity.
20. Check for sightlines, glare, lighting, crowding, access, and work space convenience in each arrangement.

Miscellaneous

21. Search for another classroom if yours is not right.
22. Conduct a space needs assessment with the learners.
23. Invite the learners to help rearrange the space.
24. Encourage comfort and friendliness.
25. Do a formative evaluation of the space performance.
26. Do a summative evaluation for the administration.
27. Thank the learners for helping create the instructional environment.

APPENDIX C

Principles of Adult Learning Scale (PALS)

Directions: The following survery contains several things that a teacher of adults might do in a classroom. You may personally find some of them desirable and find others undesirable. For each item please respond to the way you most frequently practice the action described in the item. Your choices are Always, Almost Always, Often, Seldom, Almost Never, and Never. On your answers sheet, circle 0 if you always do the event; circle number I if you almost always do the event; circle number 2 if you often do the event; circle number 3 if you seldom do the event; circle number 4 if you almost never do the event; and circle number 5 if you never do the event. If the item does not apply to you, circle number 5 for never.

	Almost			Almost	
Always	Always	Often	Seldom	Never	Never
0	1	2	3	4	5

1. I allow students to participate in developing the criteria for evaluating their perfor mance in class.
2. I use disciplinary action when it is needed.
3. I allow older students more time to complete.assignments when they need it.
4. I encourage students to adopt middle class values.
5. I help students diagnose the gaps between their goals and their present level of performance.
6. I provide knowledge rather than serve as a resource person.
7. I stick to the instructional objectives that I write at the beginning of a program.
8. I participate in the informal counseling of students.
9. I use lecturing as the best method of presenting my subject material to adult students.
10. I arrange the.classroom so that it is easy for students to interact.
11. I determine the educational objectives for each of my students.
12. I plan units which differ as widely as possible from my students socio-economic backgrounds.
13. I get a student to motivate himself-herself by confronting him/her in the presence of classmates during group discussions.
14. I plan learning episodes to take into account my students' prior experiences.
15. I allow students to participate in making decisions about the topics that will be covered in class.
16. I use one basic teaching method because I have found that most adults have a

similar style of learning

17. I use different techniques depending on the students being taught.

18. I encourage dialogue among my students.

19. I use written test to assess the degree of academic growth rather than to indicate new directions for learning.

20. I utilize the many competencies that most adults already possess to achieve educational objectives.

21. I use what history has proven that adults need to learn as my chief criteria for planning learning episodes.

22. I accept errors as a natural part of the learning process.

23. I have individual conferences to help students identify their educational needs.

24. I let each student work at his/her own rate regardless of the amount of time it takes him/her to learn a new concept.

25. I help my students develop short-range as well as long-range objectives.

26. I maintain a well disciplined classroom to reduce interferences to learning.

27. I avoid discussion of controversial subjects that involve value judgments.

28. I allow my students to take periodic breaks during class.

29. I use methods that foster quiet, productive desk-work.

30. I use test s as my chief method of evaluating students.

31. I plan activities that will encourage each student's growth form dependence on others to greater independence.

32. I gear my instructional objectives to match the individual abilities and needs of the students.

33. I avoid issues that relate to the student's concept of himself/herself.

34. I encourage my students to ask questions about the nature of their society.

35. I allow student's motives for participating in continuing education to be a major determinant in the planning of learning objectives.

36. I have my students identify their own problems that need to be solved.

37. I give all students in my class the same assignment on a given topic.

38. I use materials that were originally designed for students in elementary and secondary schools.

39. I organize adult learning episodes according to the problem that my students encounter in everyday life.

40. I measure student's long-term educational growth by comparing his/her total achievement in class to his/her expected performance as measured by national norms from standardized test.

41. I encourage competition among my students.

42. I use different materials with different students.

43. I help students relate new learning to their prior experinces.

44. I teach units about problems of everday living.

APPENDIX D

Instructor's Questions for the First Class Session

Directions: Use the following questions as guides for thinking about the first few hours that you spend with learners. The blank can be checked as you consider each one.

Purposes

_____ How can you help individual students relate the learning experience to their individual needs?

_____ How can the course help students face personal difficulties at home or work?

_____ How will the course relate to other courses that students may currently have or have already taken?

_____ Why should a student take this particular course?

Expectations

_____ What should you expect of students in terms of work load and the scheduling of time?

_____ How similar or dissimilar are the students and what are possible consequences of numerous dissimilarities?

_____ What individual problems or situations may exist for which you may need to work out special arrangements?

Roles

_____ How will you be perceived by various learners?

_____ What kinds of assistance can you give to various learners?

_____ What are your views about learners' disagreements with you in class and how can you communicate such views?

_____ How can you help learners feel at ease with their active planning and participation in learning experiences?

Content

_____ How can you communicate to learners what they can expect to learn and what they should study?

_____ What can you say about the time required and allowed for practicing and applying course information?

_____ How can you help individual learners feel comfortable about their abilities to compete with other course participants?

REFERENCE

Alford, H.J. (1968). *Continuing education in action: Residential centers for lifelong learning.* New York: Wiley.

Apps, J.W. (1989). Foundations for effective teaching. In E.R. Hayes (Ed.), *Effective teaching styles* (pp. 17-27). San Francisco: Jossey Bass.

Arenberg, D. (1968). *Learning and Aging.* New York: Van Nostrand Reinhold.

Brookfield, S.D. (1990). *The Skillful Teacher.* San Francisco: Jossey Bass.

Becker, F., Sommer, R., Bee, J., & Oxley, B. (1973). College classroom ecology. *Sociometry.* 36, 514-525.

Beder, H.W., & Darkenwald, G.G. (1982). Differences between teaching adults and pre-adults: Some propositions and findings. *Adult Education,* 32, 142-155.

Botwinick, J. (1978). *Aging and Behaviour.* New York: Springer.

Borthwick, T (1983). Educational programs and the older adult. *Experiential Learning* Project.Davis:University of California.

Buchanan, B.M.,& Sherman,D.C.C (1981,August). *The college readingteacher's role in higher education today.* Paper presented at the Annual Meeting of the European Conference on Reading.

Courage, R. (1984, November). *What's different about teaching adult student writers?* Paper presented at the Annual Meeting of the National Council of Teachers.

Darkenwald, G.G., & Valentine, T. Measuring the Social Environment of Adult Education Classrooms. In *Proceedings of the 1986 Adult Education Research Conference.* New York : Syracuse University Printing Services.

Darkenwald, G.G. (1989). Enhancing the adult classroom environment. In E.R. Hayes (Ed.), *Effective Teaching Styles* (pp. 67-75). San Franscisco: Jossey Bass.

David, T. (1979). *Students' and Teachers' Reactions to Classroom Environment.* Unpublished doctoral dissertation, University of Chicago.

Draves, W.A. (1984). *How to teach adults.* Kansas: The Learning Resource Network.

Fellenz, R.A., & Conti, G.J. (1989). *Learning and Reality: Reflections on Trends in Adult Learning.* Columbus: Ohio State University.

Fulton, R.D. (1991). A conceptual model for understanding the physical attributes of learning environments. In R. Hiemstra (Ed.), *Creating Environments for Effecting Adult Learning* (pp. 13-21). San Francisco: Jossey Bass.

Galbraith, M.W. (1989). Essentials skills for the facilitation of adult learning. *Lifelong Learning: An Omnibus of Practice and Research. 12(6),* 10-13.

Galbraith, M.W. (1990). Attributes and skills of an adult education In M.W. Galbraith (Ed.), *Adult Learning Methods.* Malabar, Fla.: Robert E. Krieger.

Getzels, J. (1974). Images of the classroom and visions of the learner. *School Review, 82,* 527-540.

Gibb, J.R. (1978). *Trust: A New View of Personal and Organizational Development.* Los Angeles: Guild of Tutors Press.

Gilford, R. (1976). Environmental numbness in the classroom. *Journal of Experimental Education. 44(3),* 4-7.

Hiemstra, R. (1976). *Creating a climate for agult learners.* Unpublished recommendation to the Management Training and Education Program, Lincoln General Hospital, Nebraska.

Hiemstra, R., & Sisco, B. (1990). *Individualizing Instruction: Making Learning Personal, Empowering, and Successful.* San Francisco: Jossey Bass.

Hiemstra, R. (1991). Aspects of effective learning environments. In R. Hiemstra (Ed.), *Creating Environment for Effective Adult Learning* (pp. 5-11). San Francisco: Jossey Bass.

Knowles, M. (1980). *The Modern Practice of Adult Education: From Pedagogy to Andragogy,* New York: Cambridge University Press.

Knowles, M. (1984, 1990). *The Adult Learner: A Neglected Species.* Houston: Gulf Publishing Company.

Knox, A.B. (1980). Helping teachers help adults learn. In A. B Knox (Ed.), *Teaching Adults Effectively* (pp. 73-99). San Francisco: Jossey Bass.

Knox, A.B. (1986). *Helping Adults Learn.* San Francisco: Jossey Bass.

Lane, C., & Lewis, R. (1971). *Guidelines for Establishing and Operating and Adult Learning Laboratory.* Raleigh: North Carolina State University School of Education.

Leed, B.L., & Leed, R.L. (1987). *Building for Adult Learning.* Cincinnati: LDA Publishing.

Lightner, A.S. (1984, September). *The emerging adult learner: 2001.* Paper presented at the National Conference of the Society of Educator and Scholars.

Lumsden, D.B. (1985). *The Older Adult as Learner.* Washington: Hamisphere Publishing Corporation.

Moos, R.H. (1979). *Evaluating Educational Environments, San Francisco:* Jossey Bass.

Moos, R.H. (1980). Evaluating classroom learning environments. *Studies in Educational Evaluation, 6,* 239-252.

Nelson, F. (1977). *Yes you can teach.* Minnesota: Carma Press

Pratt, D.D. (1984). Teaching adults: A conceptual framework for the first session. *Lifelong Learning: An Omnibus of Practice and Research, 7(6),* 7-9.

Ross, R., & Stokes, C.S. (1984, November). *Implications and strategies for instruction of the nontraditional student in the conventional basic speech communciation course.* Paper presented at the Annual Meeting of the Speech Communication Association.

Schlossberg, N.K., Lynch, A. Q., & Chickering, A.W. (1989). *Improving Higher Education Environments for Adults.* San Francisco: Jossey Bass.

Smith, R.M. (1982). *Learning How to Learn: Applied Theory for Adults.* Chicago: Follet.

Snyder, T.D. (1987). *Digest of Educational Statistics 1987.* Washington US Government Printing Office.

Tagiuri, R. (1968). The concept of organizational climate. In R. Tagiuri and G.H. Litwin (Eds.), *Organizational Climate: Explorations of a Concept.* Boston: Harvard University.

Taylor, M. (1988). Self-Directed learning: More than meets the observer's eyes. In D. Boud and Y. Griffin (Eds.), *Appreciating Adults Learning: From the Learners' Perspective.* London: Kogan Page.

Ulmer, C. (1980). Responsive teaching in adult basic education. In A.B. Knox (Ed.), *Teaching Adults Effectively (pp. 9-15).* San Francisco: Jossey Bass.

Venable, W.R. (1986). *Younger and Older Learners Together: Solving the instructor's dilemma.* Stillwater, Oklahoma: Oklahoma State University.

Vosko, R.S. (1984). *The Reactions of Adult Learners to Selected Instructional Envoironments.* Unpublished doctoral dissertation, Syracuse University.

Vosko, R.S., & Hiemstra, R. (1988). The adult learning environment: Importance of physical features. *International Journal of Lifelong Education. 7,* 185-195.

Vosko, R.S. (1991). Where we learn shapes oru learning. In R. Hiemstra (Ed.), *Creating Environment for Effective Adult Learning.* (pp. 23-31). San Francisco: Jossey Bass.

Weinstein, C. (1981). Classroom design as an external condition for learning. *Educational Technology,.* 21, 12-19.

Westmeyer, P. (1988). *Effective Teaching in Adult and Higher Education.* Springfield,Illinois: Charles C. Thomas Publisher.

White, S. (1978(. *Physical Criteria for Adult Learning Environments.* Washington, D.C.: Commission on Planning Adult Learning Systems, Facilities, and Environments, Adult Education Association of the U.S.A.

Wlodkowski, R.J. (1985). *Enhancing Adult Motivation to Learn.* San Francisco: Jossey Bass.

Wollin, D., & Montagne, M. (1981). College classroom environment: Effects of sterility versus amiability on student and teacher performance. *Environment and Behavior.* 13, 707-716.