A SELF-DIRECTED INSTRUCTIONAL MANUAL FOR HEALTH PROFESSIONALS

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by

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ABSTRACT

In this project the author establishes that health teaching is a major function of all health professionals, but very little emphasis is given on teaching-learning principles in their curricula. Based on literature review the author develops a self-directed instructional manual for health professionals. Teaching-learning principles with examples are introduced throughout the manual. Twelve health professionals from medicine, nursing, occupational and physiotherapy have evaluated the manual for its content and process.

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CHAPTER I

INTRODUCTION

Purpose

The purpose of this present study is to develop a self-directed instructional manual on the teaching-learning process for those health professionals who want to increase their knowledge in that area. This manual is designed to provide structure and organization to facilitate this learning.

Objectives

To develop a self-directed instructional manual on the teaching-learning process for health professionals.

To evaluate the content and process of the manual by various health professionals.

To modify the manual based on evaluation feedback.

Definition of Terms

Learner: This refers to anyone actively gaining knowledge and skill related to health care, its maintenance, and promotion and/or the disease prevention area, for example, medical students, nursing students, occupational therapy students, physiotherapy students, social work students, patients and clients.

Educator: This refers to health professionals in their facilitator role in a teaching learning situation with, for example, clients, colleagues and students.

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Health Professional: This refers to anyone providing health care to patients/clients directly or indirectly, for example: doctors, nurses, occupational therapists, physiotherapists, social workers.

Rationale

In order for health professionals to fulfill their goal to promote health care they must be knowledgeable about health care (the subject) and be able to convey the knowledge to the patients, students and other health professionals (the process). Thus, health professionals are educators and as such must employ the most appropriate and effective teaching-learning methods to successfully convey their subject.

The role of the educator is an extremely influential one. The educator has an effect, either positive or negative, on a learner's affective and cognitive growth. The kind of relationship an educator establishes with learners is stressed as being important because it sets the tone for all other interactions that occur in the classroom. Therefore, competence in a variety of roles enhances the educator's ability to facilitate both cognitive and affective growth of learners. These roles include serving as a role model, observer, group participant and resource person. Appropriate modeling by an educator can be helpful in assisting learners to learn desired affective behaviour to use when dealing with themselves, or when interacting with other learners. Patterson (1973) states that, "Although modeling may not be the only way, it is probably the most affective way of teaching, especially if combined with some explanation."

The educator in group process needs to be an informed observer to gather information about the functioning of the group. Ultimately, this role makes possible appropriate intervention to facilitate individual or group development, productivity and to help learners evaluate their present situation and future possibilities.

There are three major areas on which the educator needs to focus. Based on a Gestalt holistic conceptual framework, the educator as an informed observer avoids concentrating her observations on the cognitive contributions of the learner. She also focuses on the feelings and values being expressed by a learner. She needs to observe a learner's perceptions of themselves and their environment. (Another area for concentration of educator observation is the relationships among learners).

To summarize, the educator as observer gathers information, sorts and discriminates it, assesses the learning situation and intervenes appropriately as a participant. She next observes the effects of her intervention and evaluates it accordingly.

The educator as a participant must offer concrete, behavioural feedback as an essential component of an educator's role. But the art of giving feedback is a very difficult one. The use of effective communication skills is essential for effective feedback. The educator with a broad resource background base in cognitive content, communication and group process is well prepared to personalize learning for each learner.

Therefore, it can be said that, "An educator's acquisition of a large body of knowledge in her specific field is not assurance that she is able to transfer her knowledge of the learner" (Barrows, 1980). Educators need to have knowledge of various teaching-learning principles and have skill to utilize these principles in a learning situation. Unlike some subjects that are taught, the acquisition of health care skills is not solely for intellectual stimulation and development, rather it benefits both body and mind. As such, the inability to 'learn' health care skills by the learner can have serious physical and mental consequences. Because of this, the importance of employing an effective teaching-learning strategy by health professionals should be a primary objective of all health care workers.

Unfortunately, none or very few curricula for health care programs, including nursing and medicine, have seriously considered process or teaching-learning principles. Some schools may claim that teaching-learning process are part of their integrated curriculum. No doubt learners graduating from health care programs are competent in their subject area but the question that remains unsolved is: Are these graduates competent to transfer effectively their expertise to other learners? The author raises this question as there is no present study to answer the question. In this chapter the author has tried to establish that health professionals need knowledge and skill of teaching-learning principles to provide effective health teaching. It is important to note that health education does not necessarily alter a learner's behaviour.

The educational process is most effective when there is an interactive exchange of knowledge between teacher and student. The student's lack of knowledge is expressed, and the teacher's knowledge is drawn upon to provide necessary information to the student. It is believed by some people that education should be guided by a democratic philosophy (McKeachie, 1978). Yet according to Cooper (Cooper as cited by Tarnow, 1979) "learning can be done only by the learner." There also exists the paradox: students should be taught in order to learn just as "men should be led to freedom" (Little, as cited by Verduin, 1977). It is for these reasons that McKeachie states "it might be more realistic for teachers to think of themselves as individuals who facilitate certain kinds of learning. They can neither learn for their student nor stop them from learning" (McKeachie, 1978).

The facilitator, or teacher requires two distinct groups of learning behaviours: "one to guide and promote his own change (of knowledge), and one to guide his activities in a relationship which promotes the learning process of [his students]" (Verdiun, et al., 1977). It is the need to possess these two learning behaviours that often leads people to think "great teachers are born and not made" (McKeachie, 1978). However, teachers like other professionals, can be taught their skill. Teacher education must therefore develop teaching-learning skills. Teaching methodology and knowledge about learners, as well as knowledge of the subject to be taught are the focus of teacher education (Verdiun, 1977). After the educator has acquired such behavioural skills, he can begin to focus attention on

teaching. It is the main purpose of the learning process to alter behaviour. "Behaviour is the key consideration for adult educators, and learning [or changing behaviour] is the primary focus of the instructional act" (Verdiun, 1977).

To bring about learning, or changing behaviour, involves interaction between teacher and student, and among students themselves. The traditional lecture format does not usually promote such interaction. It is didactic, and involves an active lecturer and a group of passive students. McKeachie notes the extreme but often realistic example of the lecture student, " [they] are usually passive and sometimes asleep - a condition not conducive to maximum learning" (McKeachie, 1978). One setting that is conducive to learning is that of a group of students and a teacher (a group setting). Here the student does not only play an active role with the teacher but also is active with other group members. The effect of such a group setting is not only the activation of students, but enables students to express their problems and goals in the learning atmosphere. The group setting enables students to use others to overcome such problems and reach personal goals.

Group activity enhances communication, comprehension, acknowledgement, and sharing of students and teacher through group interaction (MacQueen, et al., 1986). As well as enhancing active communication, the group setting is an atmosphere that encourages student members to give support to others in their pursuit of goals, as well as receiving support for their own goals. Another psychosocial attribute of the group is its ability to allow competition to thrive among members in an open, and constructive manner. Members can clearly identify challenges and are given support to accomplish these demands. The ability of this setting to allow group members to offer

both support and challenge is one reason why the group settings is one of the better atmospheres for adult learners (MacQueen, et al., 1986).

As already stated, learning which must be done by the learner, is a personal internal altering of behaviour by an individual towards a particular subject. However, learning cannot be acquired without external sources and objective observations. MacQueen et al. recognizes this when stating "without input from others, the individual learner can become stalled in self-perpetuating errors and false assumptions" (MacQueen, et al., 1986). It is the group that develops interdependent students who can effectively teach each other to self-learn. This interdependency enables individuals to share experiences, knowledge, and resources with others in such a way that self-esteem is enhanced and not threatened (Tarnow, 1979).

A small informal group is the least threatening, most appropriate and effective setting in which adults can learn. Group activities such as role playing and problem-solving are possible in such a setting. Role playing enables adult learners to observe and react in realistic ways. This activity enables the learned experiences of the group to be carried out in normal everyday life. Problem solving, a little less superficial than role playing, is also an effective activity for adult learners. Such activities enables each learner to share experiences related to a problem, and together the group can maximize and broaden the learning base on which to solve that problem (Tarnow, 1979).

It is not simply because the groups provide active, interdependent atmospheres that promote learning that they are most appropriate, effective forums for learning, but it is the suitability of groups for the adults that is responsible for success. McKeachie views adult behaviour as learned. The opportunity to practice adult behaviour must be provided, or else such

behaviour will not be learned (McKeachie, 1978). This somewhat confusing statement is similar to the popular saying 'to have intelligence you must use intelligence, otherwise you lose it.'

Adult learning is dynamic and has few limitations. The learning process is said to be a "dynamic equilibrium between change and stability, structure and process, content and activity" (Brundage, 1980). The learning process, that which involves changing or altering of individual behaviour, must take place in relation to personal environments. Time, social contexts, past experiences, present situations are factors that make up such an environment in which adults, and therefore adult learning exists. It is been stated that adults up until the moment of death are capable of learning (Brundage, 1980).

Adults, and therefore adult learning, are unlike children, and child learning. Adults constantly place newly acquired knowledge in relation to already obtained knowledge. Not only is new knowledge compared to 'old' knowledge, but its main purpose is to enrich previous knowledge through change or enhancement. The newly acquired facts are not simply stored in memory, but rather are carved into jigsaw puzzle pieces, and placed in the appropriate place in the puzzle. Adult learning is therefore both the:

> process which individuals go through as they attempt to change or enrich their knowledge, values, skills, or strategies, and to the resulting knowledge values, skills, strategies and behaviours process (Brundage, 1980, p.5).

Or, for our analogy, the puzzle piece and the puzzle.

The acquisition of knowledge, values, skills and strategies is a process that involves the altering of behaviours. More specifically, altering of behaviour, adult learning, is carried out by individuals through specific activities: Activities designed to test knowledge, values, skills and strategies. For Brundage the purpose of such activities is to expose

adults to organizing principles in learning activities, and thus enable them to begin to develop such principles by themselves through discovery and development (Brundage, 1980). It is only when these principles are personalized through internalized comparison with pre-existing principles and experiences that an adult can begin to learn.

Adult learning has some similarities to child learning, but the two processes are on the most part dissimilar. Similar to child learning, adult learning enables learners to experience a sense of well-being and reward as they learn. Adults also experience this positive state when they are encouraged by others (Brundage, 1980). However, unlike children, adults have established self-concepts and self-esteem, and it is these self-qualities that enable adults, but not children, to act independently of others. Adults require to be addressed and treated as individuals, and do not require the sanctity of being part of a larger group. It is this independence that enables adults to function productively in a group. They are capable of expressing individual experiences, and they extract from group discussion what is relevant to them on a personal basis. It is also adult independence that has deleterious effects in other learning situations. Lecturers do not allow independence, nor do they encourage it. It is independence that both develop and hinder the education process.

It is important to emphasize here that many authors believe that children have self-concepts and self-esteem and are capable to act independently. Self-esteem has been defined by Coopersmith (1967, p. 4-5) as "the evaluation which the person makes and customarily maintains with regard to himself: it expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, significant, successful and worthy." Coopersmith suggests that self-esteem

is one of the dimensions of self-concept involving subjective evaluation of worthiness.

Coopersmith (1967, 1984) believes that self-esteem is quite stable over time once an individual reaches middle childhood. This is supported by Rubin (1978) on the basis of test-retest consistency in his longitudinal study. His study also indicates that adolescents are capable to act independently of others.

It is recognized that adults have established organized ways to focus, absorb and sort information (Brundage, 1980). It is this self-directed process that has labelled adult learning as androgogy. This term, meaning adult (aner) is defined as the art and science of helping adults learn through self-directed learning (Knowles, 1975). In contrast, the term used to describe child learning, pedagogy, means child (paid) directed (agogus) or guided. Thus self-directed learning, androgogy, enables adults to continue to use their established ways of focussing, absorbing, and sorting information. The belief that this process remains relatively constant throughout adulthood (Cawley, et al., 1976, McKenney and Keen, as cited by Brundage, 1980) reinforces the self-directed approach to adult learning.

The self-directed approach to adult learning enables the educator or teacher to overcome some of the obstacles raised by the learner. The acknowledgement that learners learn in response to their own needs, and not those of the teacher (Verdiun, 1977) is allowed when implementing self-directed learning. The allowance of the adult to assess her own needs is made by the self-directed method, and Tarnow states that this "needs assessment is the first step in preparing an effective adult learning experience (Tarnow, 1979). The interest of the learners must be captured in order for learning to take place. And, the only way to ensure that all

individuals are interested is to allow them to express their interest through self-direction. Free will of adults must be expressed in order to maintain interest and satisfy egotism.

The ability of the self-directed learning approach to accommodate the attributes or characteristics of adults is one reasons why it is an effective, appropriate learning style for adults. The typical adult has evolved a particular outlook on perception of the environment, and as such it is not surprising that all experiences (learning and otherwise) are perceived with a particular focus. This means that each learner perceives a learning experience (be it either an exercise or activity) differently from that which the teacher perceives. "Consumption does not equal presentation" (Kidd, 1973, cited by Brundage, 1980). In addition to differences in perception, the teacher and learner each have their own definition or interpretation of the learning goals. This difference in goals does not pose any problems when using self-directed learning. The implications of different goals is that the teacher must recognize these differences and allow learning to take place in relation to each individual's goals.

Another adult characteristic that coincides with self-directed learning is that of self-responsibility and self-reflection. Adults, unlike children, are capable of internalizing the responsibility of teaching themselves, as well as conceptualizing their own learning process. They do not rely on others to teach them (pedagogy), but they rely on themselves for reflection and direction of their individual learning process. This self-direction and reflection, as well as self-concept enable adults to set their own learning objectives, as well as learning pace. It is this ability to be self-directed that relatively and logically links self-directed learning with the self-directed adult.

In order to establish a self-directed learning process certain conditions must be met. Firstly, the learning atmosphere - content and context, must be unthreatening to the individual. Any threats will hamper the adult's ability to concentrate on self; and threats will force the learner to concentrate on defending herself from the threats. Secondly, the content of material involved in the learning process must contain some personal relevance to each individual. The ability to use relevant material or subject matter enables the learner to apply what is being learned to her own experiences and situations. Relevancy will also play a role in maintaining the learner's interest. Presentation of this relevant material must be made using varied approaches, and directed towards different sensory modes. This is important not only to maintain the learner's interest, but it enables the teacher to maximize input, and appeal to different modes of perception for a variable effect. The last condition that must be met in order to establish a self-directed learning process concerns communication. Communication must be bidirectional between teacher and learner with considerations to allow the learner to talk and self-reflect, and the teacher to listen and self-reflect (Brundage, 1980). Only when these conditions are met can the self-directed learning process produce effective results or learning (by both teacher and learner).

Self-directed learning is focused on the individual. Individual students use their prior learning experiences as a basis for their future learning. They do not have to begin the learning process by eliminating prior experiences, instead they are encouraged to use their past experiences concerning the learning process itself as well as the material under discussion as a foundation on which to compare and develop new learning skills and knowledge. Self-directed learning not only recognizes that each

individual is unique in personal values, skills, and goals, as well as individual perception and conceptualization, but self-directed learning accepts, respects, and accommodates this individualism (Brundage, 1980).

In order to define the process of self-directed learning, misconception as well as purpose and conceptions must be examined. The misconception that self-directed is synonymous with unstructured, must be addressed. In the lecture format process learning objectives and the manner to obtain these objectives (structure) are formed by the teacher prior to learning. In fact in post-secondary teaching institutions a list of such objectives and structure must be submitted months before any teacher has any contact with those who are expected to accomplish these objectives (the validity of this process is sometimes questionable - to say the least!). However, in the self-directed process of learning the student defines personal objectives, and with the help (guidance) of the teacher devises an appropriate structure to fulfill these objectives. Objectives and structure are essential elements of self-directed learning, and as such are clearly defined at the outset and are followed closely throughout the process. Another misconception about self-directed learning is its sociability. Some see the process as an antisocial pursuit of individual knowledge to fulfill individual goals and needs. However, the achievement of these goals and needs without a teacher or a book to automatically provide the required knowledge, forces the student to seek out such knowledge. This pursuit is one that makes the learner go to a resource center to find information, ask a professional in the area concerned, or at the very least ask a tutorial leader, a friend, or a colleague. It is estimated the average self-directed learner consults up to ten human resources in the pursuit of each project, assignment, or activity (Tough, et al., 1982).

Once misconceptions have been addressed, the purpose and basis of the self-directed learning process can be defined. Tough and colleagues define the self-directed process as one that is:

> designed to assist in the development of an individual who, through continuous learning, can grow and adapt as a worker, family member, and citizen in a rapidly changing society (Tough, et al. 1982, p.98)

Thus the purpose of learning is not restricted to the particular objectives and needs of the learner, but also a role in the growth and development of the whole individual in their environment and in society.

The method in which this process is enacted is based on the four steps of this learning method. The first step involved assessment of individuals: Their needs, goals, values, and previous experiences. This step allows the learner to define personal objectives. Once these objectives are stated, the next step is the development of an appropriate structure or plan that will enable the individual to accomplish their objectives. The third step is one that utilizes group members, learners and teacher, to explore past experiences. Knowledge from these experiences can be used to discuss and solve problems posed in the group. After these tutorial group sessions the final step of self-directed learning can be made. This step involves the application of knowledge obtained through the problem-based seminar groups to real situations. This act of using what is learned reinforces knowledge, as well as supplying a sense of accomplishment for the learner. These four steps or stages provide self-directed learning with a basic outline. This outline incorporates the individual's objectives and the structure to obtain these objectives while providing a devise that is ordered and structured in itself.

To explain more specifically why self-directed learning achieves its purpose of individual development, a discussion concerning experience,

motivation, and respect and how they are handled in the self-directed process is necessary. Self-directed learning draws on these experiences as a vital teaching resource. Learning, as previous stated, is a process that is aimed at changing behaviour. However, to change behaviour one must deal with the present state of behaviour. Brundage states this when saying "previous experience [and therefore behaviour] must be counted as a factor in current learning" (Brundage, 1980).

The use of previous experiences as a basis for self-directed learning has many functions. Firstly, past experiences can provide either a liberal or conservative attitude towards learning. A liberal, enthusiastic approach towards learning may have developed due to previous rewards (e.g., sense of accomplishment, job promotion, etc). Contrasting this is the conservative, disinterested attitude towards learning that may have developed due to feelings such as discouragement or inferiority that evolved from previous experiences. Another use of past experiences in self-directed learning is to build a sense of self-respect and mutual respect for the individual learner. When previous experiences are examined by the individual they come to realize how valuable their past is, and develop a sense of self-worth and self-respect in relation to past actions. In addition to self-respect, the disclosure of past experiences by the learner in the group setting enables the learner to gain respect for others.

Past experiences are not only regarded on a superficially level (to analyze existing actions and reactions) but also on ulterior level. Underlying reasons and patterns for acting a particular way in specific situations reveals personal values, skills, and goals. Perception and interpretation of each individual's environment is partially revealed. Past experiences also provide a state of reality. For adults the influence of

'time' as a state of reference is important to the learner. Brundage depicts this reference as perceived by the learner. "An adult [learner] tends to perceive time as including an ever-increasing past, a fleeting and pressured present, and a finite future ... The ever-increasing past provide an ever-increasing model of reality which can both help and hinder learning" (Brundage, 1980). Finally, past experiences that a learner has that are related to current learning problems or objectives may distort these objectives due to the different context or circumstances of the past experience. The learner may need help to reassess the experience according to the new circumstances. Past experiences are essential factors in forming adult behaviour. Similarly past experiences must be examined, assessed, analyzed, and addressed so that self-directed learning, or change in behaviour, can proceed.

In addition to drawing upon past experiences as an instrument to achieve self-directed learning, motivation must be addressed. Motivation in relation to the learning process is driven by two underlying issues: the want to match or overcome unmet needs, and the desire for growth and development. The former element is often associated with the feeling of being threatened or pressured as well as the self-concept of being powerless or incompetent in a particular subject or particular situation. It is this link with self-concept that can hinder or help the learning process. To engage in learning in order to meet the expectations or demands of others is contrary to the learning process. Only the learner can learn, and they can only learn for themselves, not for the satisfaction of others. However, this pursuit of knowledge that begins with the desire to meet the needs or goals of others may turn inwards. The desire to learn for the personal accomplishment of learning may result from an initial external threat to

learn. The second type of motivation, that of personal growth and development, is in agreement with the concept of adult self-directed learning. Whether for ulterior or personal reasons, motivation is a key issue that must be assessed in relation to self-directed learning in order to ensure that the reasons behind learning and its success are compatible with the learning process.

The success and failure of learning is closely linked to learner motivation. Motivation and how it relates to past experiences affects learning. Individuals who have been successful will tend to be more eager and adventurous as they encounter new problems, thus facilitating the learning process. Conversely, individuals who have experienced frustration and failure will be less likely to approach new experiences with an eager attitude, thus impeding the learning process. Thus motivation as well as past experience are issues that need to be assessed by the individual and the teacher in order to proceed towards learning.

Another issue that is addressed and developed in the self-directed learning process is respect. Respect between teacher and learner, and among learners is a vital component of self-directed learning. Respect of a learner's past experiences enables the learner to value her own past as a potential learning resource. Lack of respect can cause the learner to become defensive or apologetic, and therefore regard past experiences as they relate to others, and not oneself. No learning can occur when externally directed. Respect among learners also reinforced the individual learner's sense of self-worth, self-value, and self-definition. Mutual respect provides a non-threatening atmosphere, where individuals are encouraged to look at themselves and reveal their true strengths and weakness, and in so doing can strengthen weakness and capitalize on

strengths. Respect not only reinforces self-value, self-worth, and self-definition but also develops these self-characteristics. The learner is encouraged to feel confident and capable in herself, and this confidence and capability can be carried over into the learning process.

In addition to the development of self characteristics through an atmosphere of respect, development of individual learners in a group in relation to the group as a whole is achieved. Equality of group members can be established by an atmosphere of mutual respect. Respect is also an essential component of trust. Tough and colleagues defines trust in the learning process as: "the integrity of inter-dependent partners to rely on the other to be there" (Tough, et al., 1982, p.17) Once trust has been established among group members and the teacher, individual group members can begin to deal with problems in the group in an honest and open manner (Tough, et al., 1982). Finally, respect between teacher and student enables interdependence between the two to be established. This interdependence enables teacher and student to learn and teach each other.

The self-directed learning process draws upon individual's past experiences, develops motivation, and creates an atmosphere of mutual respect in order to promote individual learning and development. The self-directed approach to learning enables the individual to set and achieve personal goals. These goals have direct and indirect relationships to an individual's daily life, environment, and problems encountered. The learning process which involves altering of behaviour causes the learner to react to her concerns, needs, and problems in a new manner. A self-directed learner will be able to apply what she has learned to her reality. Not only will the self-directed learner act and react differently, but confidence doing these actions will be increased. The individual who has learned in

the self-directed manner will be able to apply what she has learned to everyday life. This ability to adapt will also affect the way an individual reacts to problems and situations that are not related to those discussed in the learning groups. The individual who has set her own goals, and achieved these goals in the learning environment, can apply similar goal setting and achievement objectives to daily problems outside the learning setting.

The self-directed learner has developed as an individual, and in so doing has developed, through the learning process, an independent learning process. The self-directed method enables the learner to make sense of the chaos and confusion of raw experience; it enables the learner to reduce the unknown aspects of life to a manageable level; it teaches the learner to develop ways to predict how best to respond to, inter-act with, and influence her own particular life (Brundage, 1980). The learner is capable of assessing situations, problems, and experiences in an objective manner. The individual has through the self-directed learning process created her own version of this process, and in so doing has become an ongoing learner even after the groups are terminated.

It is the ability of the self-directed learning approach to teach the individual how to teach herself that is the most valuable quality of this learning method. Conventional methods have taught the student particular subjects and information. Whether the student in such circumstances actually learns the material is questionable. The attainment of knowledge is only part of the learning process. McKeachie reinforces the multivariant purpose of teaching when stating:
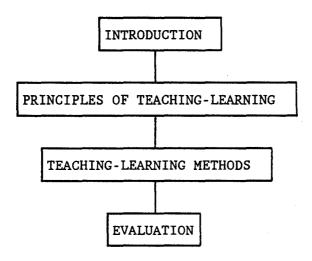
> there are many important goals of ... teaching. Not the least of these is that of increasing the student's motivation and ability to continue learning after leaving [the formal learning atmosphere] (McKeachie, 1978).

The goals of teaching can be as diverse as the goals of each individual learner. The self-directed learning process addresses and achieves both the teaching and learning goals through its focus on the individual, her past experiences, motivation, and want of respect. It is this individual focus that enables the learner to teach herself. For as Brundage states: "we believe that, in the end, it is the individual who learns" (Brundage, 1980, p.1).

CHAPTER III

DEVELOPMENT OF TEACHING-LEARNING MODULE

DIAGRAMMATIC ORGANIZATION

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                    │      INTRODUCTION       │
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          ┌─────────────────────┴───────────────────┐
          │     PRINCIPLES OF TEACHING-LEARNING      │
          └─────────────────────┬───────────────────┘
                                │
            ┌───────────────────┴─────────────────┐
            │     TEACHING-LEARNING METHODS        │
            └───────────────────┬─────────────────┘
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                    │       EVALUATION        │
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CONTENT OF TOPICS

SECTION I

INTRODUCTION TO THE MANUAL

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NEED

GOAL

ORGANIZATION

DIRECTION
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Need

Books on learning theories, teaching-learning principles or on application of teaching-learning principles for teachers, professionals from various fields and even for health professionals are not only available but are numerous. The books usually contain details of theories and principles or focus on practical applications. It is difficult to use them as a quick reference or as a guide for one's day-to-day life. As health professionals we are used to quick reference manuals which provide theory as well as practical hints with explanations, **for example:** 'C.P.S.' for pharmacology or "pocket manual for patient diagnoses". Therefore, the author has decided to develop a teaching-learning manual for health professionals with a balance of theory and practical hints.

Goal

It is the goal of this manual to assist health professionals to employ the most effective teaching strategy, which will ultimately benefit the health professional, as the educator, and students and patients, as learners.

Organization of the Manual

This manual focuses in Section II on teaching-learning principles and factors that affect the teaching-learning process. Section III describes wide variety of teaching-learning methods and the use of various audio visual aids. Lastly, Section IV deals with the evaluation process.

Direction for Use of the Manual

The manual is based on self-directed adult learning principles. Readers are expected to identify their needs and then refer to the manual to advise their specific learning needs. Readers are not expected to read the

manual from 'A' to 'Z'. They will consult the manual according to their own needs and situation so that they can be more comfortable, confident and effective in their educator roles.

SECTION II

PRINCIPLES OF TEACHING-LEARNING

OBJECTIVES

RATIONALE

DEFINITION

PRINCIPLES OF TEACHING/LEARNING

FACTORS AFFECTING TEACHING/LEARNING

Objectives

At the end of this section, the learner will be able to:

o   construct educational objectives

o   identify the basic principles of teaching and learning

o   list ways in which the educator may apply these principles in a teaching situation.

o   list the factors that may affect the learner and educator and thus influence the outcome.

Rationale

The purpose of teaching-learning is to effect a change in knowledge, attitude and/or skills. The change must be relevant to and based on the needs of the learner. It must also be clearly defined in terms of the tasks to be performed. This section focuses on the definition of teaching and learning, the theory and principles of the teaching-learning process and the factors that can affect it.

Definitions

Teaching is an art which involves specific skills in helping people to learn. Teaching actions include the planning and provision of learning experiences that are designed to bring about changes in behaviour (knowledge, attitude and skill) and is an integral part of the learning process.

Learning is a process that takes place in the individual and is a pattern by which behaviour changes in an individual. Learning is an internal process and each individual has his or her own pattern of learning.

Principles of teaching and learning represent the existing wisdom which guide the educator to plan, implement and evaluate teaching. These principles have been derived from human experience, research and fields such

as psychology and sociology.

Educational Objective is a statement which indicates the behaviour changes the learner is expected to achieve or the type of activity required for the learner (Staropoli, 1978).

Teaching and learning must be based on educational objectives.

There are three kinds of educational objectives:

o   Knowledge involves understanding. **For example**, knowledge of medications can promote an understanding of the wise use of drugs. Knowledge or understanding objectives are called the cognitive domain.

o   Attitude or behaviour involves feelings, emotions, interest, appreciation, etc. Attitude objectives are classified under the term affective domain (Henderson, 1985, Morris, 1978). **For example**, the learner could voluntarily develop a plan of physical exercise to be incorporated into a weekly schedule of activities.

o   Skills or activities that are concerned with doing or practicing are classified as being the psychomotor domain. **For example**, the learner could demonstrate the specific skill involved in feeding an infant, or taking vital signs.

Writing Educational Objectives

Educational objectives are best written using action verbs. In other words, they are stated in a way that describes intended behaviours that can be observed and measured. **For example**, the educator may want the learner to "know basic nursing skills". How does the educator observe that the learners know? Since one cannot observe "knowing", it cannot be measured. If, however the objective is restated that "the learner will be able to describe symptoms which call for doctor's intervention or will demonstrate

how to take body temperatures correctly", then the demonstrated behaviour can be observed and measured. In other words, the objectives should be expressed in such a way that the desired behaviour can be observed and evaluated. **For example**, a learner may be required to 1) take a temperature of an adult, 2) record the temperature, and 3) describe the post-use care of the thermometer.

There are two other considerations that need to be made while determining the behaviour to be demonstrated. These are:

o   The criteria or standard that will be used to evaluate the result and the situation in which the learner is required to demonstrate the behaviour.

o   The criteria or standard defines the level the learner is required to reach. **For example**, the educator may be satisfied if the learner knows most of the symptoms which call for a doctor's intervention. The objective may be stated as follows: the learner describes five out of seven symptoms to recognize when to call for a doctor's intervention.

o   The situation refers to the condition or circumstances in which the learner will demonstrate the behaviour. **For example**, "Demonstrate how to take the body temperature of a senior citizen who is ill but conscious." Taking the temperature of an unconscious or delirious person may require a different set of skills (McKeachie, 1978). Similarly, a dressing applied in the operating room differs from one applied at home.

In summary, the objectives should be stated in action verbs and in such a way that the behavioural changes that are to be observed and measured are indicated. When appropriate the <u>condition and criteria</u> are also indicated.

A clear and precise statement of the objectives helps in determining the goals to be achieved as well as in evaluating how far these goals are achieved by the learner and the educator.

Summary with examples:

o   The learner will demonstrate the administration of an oral medication using the "Five Rights" of Medication to a person ill at home.

o   This objective involves a practical skill (psychomotor domain) i.e., to administer an oral medication. It identifies the situation in which the task is to be performed, i.e., the medication is to be administered as to an ill person who is at home. It identifies the minimum level of acceptable performance, i.e., using the "Five Rights" of Medication.

o   The learner will select and review one book on audiovisuals and list the five most commonly used audiovisual aids.

This objective involves an intellectual skill (cognitive domain), i.e., the task is to select and review one book on audio visuals. It identifies the situation in which the task is to be performed, i.e., only the learner is involved. It identifies the minimum level of acceptable performance, i.e., list the five most commonly used audio visual aids.

Principles of Teaching

Knowledge of principles of learning helps us to formulate principles of teaching. **For example**, it has been demonstrated that repetition strengthens learning, so when planning lessons allow time for practice. Similarly evaluation is an essential part of teaching as it provides valuable feedback on the effectiveness of the teaching methods (McKeachie, 1978). Some other teaching principles are:

Establish a respectful educator-learner relationship: this is not always an easy task but it is important. An understanding of the learners' needs, their previous knowledge and experience, readiness for learning and motivation, will facilitate teaching.

Maintain open communication: communication must be effective. It is essential to maintain a two-way channel between the learner and the educator. Language should be simple, meaningful and understood by the learners so that they interpret the content correctly. Nonverbal communication such as facial expression, or body movements also convey meaning. An educator has to be conscious of using them for effective communication.

Interpersonal communication skills: an educator needs to be able to establish a comfortable relationship or rapport with the learner. Two important skills in this area are understanding the "other person" and allowing the other learner to understand the educator.

Understand the other person (educator or learner): One of the first skills in interpersonal communication is to be aware of the ideas, knowledge and experience of the adult learners in order to understand their needs. The educator may ask questions in order to establish a knowledge base.

The educator must make sure that she understands individual differences, respects and understands the feelings of others correctly. This helps in avoiding inaccurate perceptions because of the bias or lack of knowledge the educator has about others. It is essential to treat people with courtesy regardless of age, education, experience, economic status and cultural background; each learner is a unique human being and worthy of the educator's respect.

Allowing the learner to understand the educator: This communication

skill is aimed at informing the other person of the educator's reaction to her behaviour in a positive way, so that the learner is aware of how the educator perceives her. The skill of observation is very important in order to describe the other's behaviour. **For example**, when Jane is silent in a group discussion, the communication skill here is aimed at letting Jane know what behaviour the educator is responding to, by describing it clearly so that she knows what the educator has observed; that is, "Jane, you have not said anything today". Here the educator describes Jane's behaviour.

Sometimes it is necessary for the educator to help learners understand what she is feeling. This usually involves description of feelings by making an "I" statement. **For example**, instead of expressing feelings like "Can't you be regular in coming to group?" Rather, describe feelings: "I was worried that something happened to you when you did not come to group yesterday". All expressions, verbal or non-verbal are likely to be misread or may induce feelings of guilt. Describing the feelings helps the learner and educator to understand each other better and develop a relationship that helps in discussion.

Determine the learning needs: It is necessary to identify the learning needs of the learners to develop the learning objectives which are relevant to each individual. To correctly assess learning needs, the educator has to have accurate information about the learner. Formulate objectives as a guide for planning and evaluating. As previously stated, objectives give direction for the plan of action; the educator knows what is to be accomplished and whether or not goals have been reached.

Plan teaching carefully: Health education covers a definite content area that is to be covered within a scheduled time period. Application of learning principles is necessary for careful planning of the content and

process as well as the economic use of time and energy.

Evaluate the outcome of teaching and learning: Evaluation must be an ongoing process so that the learner and educator are aware of strengths and weaknesses as the teaching-learning process progresses.

Principles of Learning

Principles of teaching and learning stem from theories on education and serve to guide an educator to plan, implement and evaluate teaching. These principles are derived from human experience, and other areas of knowledge such as psychology or sociology. Teaching and learning principles are based mainly on knowledge of human behaviour (Hergenhahn, 1978).

This paper focusses on adult learner.

Malcolm Knowles[6] described adult learners as follows:

o   Adults are motivated to learn as they experience needs.

o   Adults' orientation to learning is life-centered; therefore they are more interested in application of the knowledge in real life situations.

o   Adults have a rich resource for learning, their own experience.

o   Adults like to be self-directed rather than being told what to do.

Therefore the educators role when dealing with adults is to help learners to "learn how to learn" and encourage learning.

Most health care educators are responsible for guiding the learning activities of adult learners. Adult learners are usually highly motivated, feel the need to grow, increase knowledge and skill and bring with them their past experiences. In other words, the learner is in search of change, new improved knowledge, skill and experience; he decides on what to do with the new information, or how it fits into his life. The learner may have strong feelings of anxiety, frustration, inadequacy. Therefore, the

educator's role is more to facilitate his efforts to learn as the learner takes the major responsibility of learning. As a facilitator, the educator of adults needs to have (Rogers, 1969).

Adequate mastery of the subject they teach and the understanding that individual differences include different rates of learning. Therefore, teaching should be flexible and learning should be individually based. Knowledge of teaching methods, the ability to develop and maintain effective relationships and a positive climate, and the ability to recognize and accept the educator's own limitations as facilitator of learning should also be considered.

Knowledge of the subject

This refers to areas such as knowledge of health care issues, topics, medical science etc. In teaching a health care issue/problem, the educator needs to have expertise in the specific subject concerned.

Respect and Understanding of Individual Differences

Individuals differ in their rate of learning; some may be slow learners, whereas others assimilate quickly. The learners also differ in their motivation to learn, attitude towards learning and in their past experiences. Therefore, teaching should be flexible.

Knowledge of Teaching Methods

There are various approaches to teaching. The preferred methods will depend on several factors, e.g., the method that the educator and the learners are comfortable with, the objectives to be achieved and the resources available. A lecture/discussion may be suitable for imparting knowledge or facts, such as "Good Health Habits" or "Behaviour Problems"; but for teaching psychomotor skills such as "Handling and Diapering", it is essential to demonstrate the correct method of lifting, carrying and

diapering the baby, and the learners need to practice the same.

The Ability to Develop and Maintain Effective

Relationships and a Positive Classroom Climate

Learning results from an interaction between individuals, the learner and the educator, or between two learners. Therefore, it is necessary to understand the learner and to allow learners to understand the educator. Interaction also takes place between the learner and his environment, such as books, the physical set up, the room temperature and humidity, the social climate, etc. Therefore the individual must be able to interact with her environment positively.

The Ability to Recognize and Accept Educators'

Limitations as Facilitators of Learning

The adult learners are responsible for achieving their own objectives. Therefore, if the learner fails to learn, the educator and learner together have to find the reasons. Is the educator doing her best? Is she capable of teaching? Or does the learner show a lack of interest or motivation? This would help not only in modifying her plan, but also in making self-assessment to identify the educator's own limitations.

FACTORS THAT AFFECT TEACHING

There are many factors that affect the quality of teaching process. These include:

o   The characteristics of the individual educator

o   Characteristics of the learner

o   The educator's preparation for teaching

o   The educator's skill in using teaching techniques[5]

The Characteristics of the Educator

It is difficult to list the qualities of a good educator but a few

essential requirements are a willingness to teach, willingness to learn, knowledge of the subject matter and the obesity to communicate effectively.

Some clues for effective teaching-learning:

Knowledge: The educator should have a sound knowledge of the subject matter, teaching method and evaluation procedures. This gives confidence to the educator as well as learners. In addition, the educator must be competent and current in the skills that she will be demonstrating.

Enthusiasm and sincerity: The learner is easily influenced by the educator's enthusiasm. The educator should appear alert and keen, listen to learners, give appropriate reinforcement feedback, and appear sincerely interested in the task.

Physical behaviour: One should create a favourable impression when facing the learners. Good grooming and neat appearance are important. Avoid awkward body movements but move freely around in the classroom. Use body gestures when needed, otherwise avoid them; gestures may be used for emphasis, description and reinforcement.

Communication: The educator's voice is an important part in communication. This includes volume, rate, pitch and articulation of speech. The educator should speak clearly and loud enough to be heard by all learners.

Characteristics of Learner

The educators work with a variety of learners. Learners may come from various age groups, ethnic or socio-economic groups. Therefore the teaching decisions that the educator makes will depend on her perceptions of the learner.

Beliefs, values and attitudes: What adults believe to be true is based on their faith (religion), knowledge, culture, superstition and so forth.

For example, what is their concept of health, illness, feelings for other people, their attitude and values towards education, their beliefs regarding learning etc?

Level of maturity: The learner may be in good health and aware of her health status. "Adultness refers to a level of maturity regardless of age". Maturity varies from person to person; each individual is a unique person. A physical health intellectual and emotional maturity are important. Children as learner is not discussed in this manual.

Intellectual: This refers to the level of formal education. Teaching becomes easier if the learners are fluent (verbal and written) in the use of language and when they possess a basic level of knowledge. The learners' prior experience will determine their needs. For example, a learner taking care of an elderly mother or father may already have more knowledge on care of the aged than another who has never lived with elderly people.

Social needs: Why do the learners want to take the course? Do they want to take the course for personal protection (safety) or to be a useful citizen? The Educator should clarify the learners' objectives for the course to help them avoid frustration, and achieve realistic goals.

Adults joining learning groups in the community do so for many reasons.[7]

- personal growth

- socialization

- social interaction

It is not an easy task to recognize the characteristics of the learner. The educator has to gain an insight and develop an understanding of learner attitudes, beliefs, needs and background. When a group of learners are involved in a teaching-learning process, the heterogeneous nature of the

learner's group makes this more difficult.

The Educator's Preparation for Teaching

The educator's perception for teaching is an important factor. It will be discussed in Section III. The educator's skill in using teaching methods and audiovisual.

Materials

Skills develop as a result of knowledge and experience. A skillful educator has acquired the theoretical knowledge of teaching/learning and also has had the opportunity to apply that knowledge in a practical setting/ experience. Teaching methods and use of audiovisual aids will be dealt with again in Section III of this manual.

FACTORS THAT AFFECT LEARNING

There are many conditions and strategies for learning. Some of them are listed below:

Perception, conditioning, imitation, trial and error, problem solving, development of concept, motivation, readiness, participation, previous knowledge and experience, repetition, reinforcement.

Perception: Individuals differ in their ability to perceive a thing. Two major processes are involved:

1) the sense organs such as eyes, ears, nose, mouth, or skin and the nervous system receive stimuli and

2) the brain receives and interprets the sensory information. Obviously, the physical state of the individual and the degree of function of her sense organs influence perception, errors are common and may be due to other factors such as fatigue or anxiety.

Therefore the educator needs to identify the perceptual difficulties of the learner and to consider means to enhance perception. **For example,**

learners with problems of hearing or vision may be asked to sit in front seats.

In addition, the educator should present only as much information as learners need to understand on a given subject, and emphasize clearly the most important points.

Conditioning: This is a process of learning through association. **For example,** a baby comes to know it is going to be fed by associating the sight of its mother's breast or the feeding bottle, and begins sucking.

Conditioning is an important part of behaviour modification and is an aid to learning. When the educator gives praise or a positive response to a learner for "good" behaviour (a correct answer to a question, or a skill demonstrated well) the learner associates praise with the correct behaviour and adopts the behaviour that is desired of him or her.

EXAMPLE:

> Nurses are concerned about Mrs. X's very limited fluid intake. She refuses to drink any fluid. You are assigned to Mrs. X this morning. During your conversation with her you find out she likes to watch T.V. in the sunroom. At 10:00 a.m. you take her to the sunroom for her favourite T.V. show. You bring a glass of juice and ask her to take a few sips while she is watching T.V. You remind her from time to time that the juice is there. She takes a couple of sips and you praise her every time. Whenever the nurses take Mrs. X to the sunroom to watch T.V. they offer her a glass juice. By the 3rd day you notice Mrs. X drinks a glass of juice every time she watches T.V. You have used 'conditioning' to increase Mrs. X's fluid intake.

Imitation: This is a process by which educator imitates or copies others' behaviour. Sometimes we may "pick up" a mannerism and not be aware of it. In learning, we consciously imitate the behaviour of others when we wish to learn a technique or skill.

The demonstration method of teaching, discussed in the next unit uses this process of learning. Therefore it is important that the educator

demonstrates the procedure correctly. It is very difficult to "unlearn" behaviour.

EXAMPLE:

> John is 6 years old and disliked by all health professionals because of his manners, especially his table manners. You know John likes you more than the other staff in the unit. You sit with John during meal time and eat your food maintaining proper table manners. You don't mention to John about his bad manners. You notice John tries to use his fork. John is using 'imitation' to learn new techniques.

Trial and Error: This method of learning is like "hit and miss"; one keeps trying to do something until it is done correctly. Time, patience and several trials are often required. The learner gradually gains the skill after making repeated errors. This principle can be applied while practicing a procedure. Adjusting the length in an overhead projector to get a maximum clarity can be learned by trial and error once the educator has demonstrated the technique.

Problem Solving: Problem solving is a technique used in everyday situations. It has four major steps:

1) Define the problem

2) Formulate a tentative solution (hypothesis)

3) Find out if the solution works (testing of hypotheses)

4) Arrive at a solution.

It is essential that the problem is identified correctly, and be based on accurate information and evidence. Once the problem is identified, the possible solutions (educated guess) are listed and of these, select the one that seems most likely, then test it in the actual situation to solve the problem. Next, examine the outcome to determine if the selected solution is satisfactory. If the solution is found to be inappropriate, the learner has to again start from step two of the problem solving method.

The adult learner is an active participant in the teaching-learning process. Therefore, problem solving underlies a great deal of learner-educator activity. In discussion method, the learner or the learner and educator together, provide the background information, make suggestions, verify suggestions and handle problems. The problem solving method is the core of self instruction. The educator may face various problems while teaching, **for example**, learners' personal problems, their learning problems, interpersonal problems etc. The books, guides or manual cannot provide all and every information and solution. Therefore every educator needs to learn the use of problem solving as a method of learning.

Development of Concepts: A concept is a mental picture that one holds of an objective, people, ideas, etc. We develop concepts of many things. Some may be simple concrete objects like "child", "car", "dog"; or may be complex and abstract, like "love", "cleanliness", "philosophical values", etc. The learner develops concepts within her own mind which may or may not be accurate. Teaching and learning experiences can alter and improve the individual's concept.

Motivation: Motivation is the force that stimulates the individual to do something. This could be an impulse or a sustained force. The latter helps an individual to reach the goal. Motivation in learning refers to whether the individual wants to learn. Therefore, an individual must be motivated in order to learn. The educator can assist the learner in such a way that encourages the desire to learn. The educator can present the learning material in a way that will make learning easier, but motivation can only take place in the individual learner and it can not be forced on the learner.

It can be said that an individual or a group of learners are motivated to learn, when some need has been identified. Perhaps they want to understand how to maintain good health or perhaps they have experienced health problems which they want to resolve or avoid in the future. However, if they show no interest in learning about a particular issue for whatever reason, then the educator will face a real challenge in overcoming their lack of motivation.

The task is not easy and there is no simple formula for motivating people. First, the educator has to identify the lack of interest and assess the reason for lack of interest. In most cases getting to know the learners, applying principles of learning and teaching appropriate to the situation and encouraging active learner participation will help the individual to develop motivation for learning.

EXAMPLE:

> Mrs. K. refuses to use her walker and prefers to stay in bed. You are her physiotherapist. During your conversation you find that Mrs. K. is very interested in card games. Three evenings a week the hospital arranges for a card game at the auditorium. You inform Mrs. K. about the card game and that you will be happy to walk with her. Of course you are willing to show her how to use the walker and you will assist her when necessary. Mrs. K. asks you if she can start using the walker today so that she can join the card game two days from now. You have used 'motivation' in this case.

Readiness: Readiness to learn refers to the physical and mental development of the individual which affect learning. In other words, is the individual able to learn at the given time? Physical readiness depends on neuromuscular development such as movement, balance, co-ordination, functioning of sense organs such as eyes and ears. The mental ability relates to intellectual ability, verbalization, concept formation, etc.

Participation: Learning becomes meaningful when the individual actively participates in the learning process. Therefore, the function of

the educator is to provide opportunities for participation if practical and to encourage the learner to ask questions, clarify ideas, lead discussions. (Refer to discussion methods of learning in the next unit).

Previous Knowledge and Experience: To learn new material, some previous knowledge is necessary. As we learn simple concepts we constantly use this knowledge to understand more complex ideas. Lessons should be organized in a particular sequence so that the learner and educator proceed from simple to complex and known to unknown material.

Repetition: Repeated practice strengthens learning through formation of habits. Similarly, lack of use of a learned behaviour can weaken a habit, e.g., use of a foreign language. Repetition is essential to develop good health habits as well as developing skill. Therefore when a procedure is being learned, practice under supervision is essential; not every learner requires the same amount of repetition. For learners who require additional practice time, special arrangements may be required.

Reinforcement: Reinforcement also strengthens learning. The process of making a learner aware of the progress of learning is called "feedback". Caution: if praise is used when not deserved, the reinforcement will fail to influence the intended learning. Immediate feedback while learning a motor skill is essential to show the learner she is learning correctly, and gives encouragement when the learner is afraid to handle equipment or to do a procedure. Giving feedback with completion of each task will give confidence to the learner. Evaluation is a type of feedback. The test results are a type of feedback. Once the learner gets satisfaction in learning a thing, verbal encouragement may not be necessary.

SUMMARY

Guilbert (1978) states learning is:

o   primarily controlled by the learner

o   unique and individual

o   affected by the total state of the learner

o   co-operative and collaboration

o   an evolutionary process

o   a consequence of experience

o   not directly observable

SECTION III

TEACHING-LEARNING METHODS

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OBJECTIVES

RATIONALE

DEFINITIONS

METHODS

AUDIO VISUAL AIDS
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TEACHING-LEARNING METHODS

Objectives

At the end of this section the learner should be able to:

o   identify an appropriate teaching-learning method based on the content to be presented to learners

o   state the advantages and disadvantages of selected audio visual aids.

o   develop a lesson plan for a specific teaching-learning situation.

Rationale

One of the most essential factors in education is the encounter that takes place between the educator and the learner. The learner is in search of change, new or improved knowledge, attitudes or skills. He or she then decides what to do with this information and how it fits into her life.

Teaching-learning methods and audio visual aids are used by the educator to assist learners to specific learning tasks. Lesson planning helps the educator to organize teaching materials and educational experiences so that learning takes place.

Definitions

Teaching Learning Methods: There are various teaching-learning methods of instruction for use of groups. The choice of the method or combination of methods depends on the objectives to be achieved, resources available, educational level of the learner and the educator's own experience with various techniques. Therefore an instructional technique is a method of transferring information to the learner. Each method has strengths and weaknesses. Often a combination of instructional techniques is used for effective learning.

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The following methods are described in this guide.

- Warm-ups

- Lecture Method

- Demonstration - performance method

- Discussion

- Field Trips

- Role Playing

- Questions and Answers

(Self-instructional materials are not described in this guide; evaluation tools are discussed in Section IV).

Audio Visual Aids

An audiovisual aid promotes student learning. As the words suggest, they stimulate learner sensory perceptions, create interest, hold attention and reduce the teaching time required in the care of complicated or involved concepts. The choice of audio visual aid depends on the content, learner, educator and cost/availability of materials.

Lesson Planning

The overall purpose of lesson planning is to enhance teaching-learning effectiveness. A lesson plan should help the educator to prepare a lesson that is in keeping with the educational objectives.

TEACHING-LEARNING METHODS

Warm-ups

Warm-ups, get acquainted, or "ice-breaking" activities are planned by the educators before a discussion session.

Ideally, the sitting arrangement should be such that everyone can look at everyone else. Once the learners have settled down, you could introduce activities where members share information about themselves and find out

about others. This may be done in small groups, or you might ask them to choose one person to speak with. Encourage learners to ask questions; instructions must be specific and visual presentations in the form of handouts, written on blackboard, or charts are useful. Establish ground rules i.e., smoking, lunch breaks, washrooms (breaks), etc.

These activities give the educator as well as the learner a chance to settle in, feel at home, get to know the group and provide an opportunity to have the basic questions answered. This gives an enjoyable start. Do not make a long speech and give a too detailed description of the issue to be discussed at the outset. Do not ask learners to introduce themselves at the very start of the discussion session, especially if the group represents various age groups. In a one-to-one situation, some steps could be followed to make the learner comfortable so that the educator could start to develop a rapport with the learner.

Lecture Method

The lecture method consists of the educator speaking a prepared text with little or no direct participation by the learner. It is a most commonly used technique (McKeachie, 1978).

For Effective Lecturing:

o   limit the duration of the lecturing to 20 to 30 minutes

o   use visual aids

o   ensure that learners have a full view of the educator

o   present no more than 5 or 6 major points

o   summarize at the end and if possible summarize during, which helps
     listener to catch any missing points

o   in the beginning of the session, instruct learners to ask
     questions at the end of the session and allow time for questions

o   use other methods to break the monotony and check learners
    interest. Mix activities such as questions, discussion sessions,
    give hand-outs, and stress the important issues, problem-solving,
    etc.

o   change position, move around, modulate voice, and occasionally use
    gestures as an attention catching device (do not overdo)

o   DO NOT READ NOTES. Present matter in a conversational manner, but
    in a logical sequence.

The lecture method is suitable for introducing a subject or for
presenting a substantial amount of information to large groups. It is
possible to present many ideas in a relatively short time, and information
can be well organized; no elaborate equipment is needed.

The disadvantage of the lecture method is that information imparted by
speech is not easily assimilated as listeners use only one sense, that of
hearing. It is difficult to provide for learner participation and
communication if one-way only. It is difficult to hold learners' interest,
especially when the material is complex and abstract. In addition, it is
difficult to assess effectiveness as learners tend to be passive.
Obviously, the lecture is unsuitable when learners do not have the same
educator's language skills.

Demonstration - Performance Method

This is one of the oldest methods of teaching skills, where the
educatgor simply shows the learner how to do something and the learner
practices the skill (McKeachie, 1978). Demonstrations focus adult attention
on the correct procedure. The learner watches the educator perform a
specific skill, then prepares herself to practice the skill. Demonstrations

are a safe approach, especially for teaching hazardous tasks or life saving techniques.

Effective Demonstration

The presentation of a lesson, using the demonstration-performance method, can be broken down into five basic steps as follows:

Explanation: It is essential that the educator explain carefully all the main steps in the procedure to be followed, by herself in the demonstration, and by the learners during performance. This explanation may be done in the course of the demonstration.

Demonstration: The educator must demonstrate precisely and exactly how the steps in the skill, procedure, or technique are to be carried out by the learners. If the skill is a complex one, it may be necessary to show one step at a time.

Learner Peformance - Educator Supervision: Since these two procedures are always carried out concurrently, they must be considered together. The whole purpose of the demonstration-performance method is to assist the learner to acquire a skill, follow a procedure, carry out a technique. To do this, sufficient time must be available for the learner to practice. A good rule of thumb is to allow at least as much time for performance/ supervision as for explanation/demonstration.

Evaluation: Once the learner has had sufficient time to practice all the steps, with assistance and supervision, then the educator should evaluate what has been accomplished. This is done using a performance test, carried out within the lesson objectives. The educator must make the learners aware that this is the evaluation stage. This must be closely supervised, but when the evaluation test has been completed, the learners

should be informed of the results and the degree to which their performance met the criteria of the test.

There are many advantages to the demonstration-performance technique. Manual skill as factual knowledge can be taught. Learners use more than one sense; they see, hear and touch. Thus the learner with less skill in language can understand the lesson. When they perform, they learn by doing, thus learning is reinforced. Interest can be stimulated and maintained throughout and a good rapport between educators and learners is possible. Learners feel a sense of accomplishment immediately following the class. Any educator who has expertise can easily learn the basic rules of presentation. Demonstrations allow economic use of time, materials and equipment; ten to fifteen learners can be shown at one time.

To maximize effectiveness, the following points must be considered: the educator/learner ratio must be restricted to be effective, as each learner's performance must be supervised and assistance provided; the quality of the learner is vital for success as the demonstrations must be correct; the method can be time consuming as each learner has to develop the required skill under supervision.

Physical factors are important to the success of demonstration and practice. Arrange the physical set up in a way so that all learners can see the demonstration, and have sufficient space and equipment for practicing. Prepare self-checking questions for all procedures so that the learners can check themselves with minimum supervision. Do not tell the learners what they can see. Draw their attention instead to important points. Practice before demonstrating to check that all equipment is in working condition, that the steps in the procedure are logical and that all articles are at hand. A smooth presentation has a dramatic effect.

Discussion

This is a method of teaching in which a small group of learners and the educator talk in an informal way about some identified topic. The discussion is structured either through the leadership of the educator or by the presentation of the subject. The educator may act as facilitator of the discussion rather than a dispenser of knowledge. This method is most suited for a small group of learners.

For Effective Discussion:

o   Limit Group Size: Eight to twelve is a good number. If the class is large, it can be divided into subgroups.

o   Plan time required: It can vary from five minutes to one hour. Five to ten minutes of discussion at the beginning, during, or at the end lecture method of teaching is useful as the learners get the experience of sharing their ideas.

o   Schedule the discussions carefully and notify the learners as to the topic so that they can think about the subject beforehand.

o   List the content to be covered and objectives to be achieved.

o   Seating arrangements deserve special attention; an informal circle encourages communication.

o   Have a few start-up questions or statements and clarify objectives of discussion and the educator's role.

o   The educator or the discussion leader needs to be aware of the behaviour of the group members (Renner, 1983). **For example**, encourage silent members to participate; channel the energy of dominant members by appointing them as discussion leader in subgroups. Cues or key questions are useful in providing direction to the discussion; keep the group on the topic and tactfully correct errors or misunderstanding.

o   At the end of the lesson, summarize what has been discussed and

review the major points. This can be done by either the educator

or one of the group members.

The discussion method is useful in that it provides the learners with

opportunities to explore their own views, feelings, and opinions. This

sharing of ideas and experiences is not possible when teaching individual

learners. Discussion is useful when the teaching is intended to help

learners to appreciate, evaluate or apply. In other words, the learner not

only recalls the knowledge but uses it for deeper understanding and because,

the activities are learner-directed, the subject is more meaningful. The

climate of the physical set up and relationships is important; learners can

be a creative resource for each other and for providing feedback. In

addition, members of the group become aware that others have similar

problems of their own.

Discussion can be a waste of time and even boring when the learners do

not have sufficient knowledge or experience about the subject. It is a time

consuming method. It is well suited to a rather small group of learners.

When the group is large and the learners are to be divided in sub-groups,

more educators may be required to act as facilitators for each sub-group.

Field Trips

This method of teaching provides for a first-hand observation of a

process, procedure or events in a real-life situation. For example, to

discuss the issue of safety standards, a visit to a drug rehabilitation

programme, a hospital or chronic care facility or a visit to a factory to

observe safety standards may be useful.

Tips for an effective field trip:

o   Visit the place beforehand, discuss the objectives and

     requirements and determine the appropriateness. If possible, talk

     to the person who is assigned to explain the events so that the

     person knows how this trip fits with the issue to be discussed

     with the learners.

o   Make the arrangements with the agency, preferably in writing and

     call to confirm.

o   Prepare the learners. As the field trip requires learners' own

     travel time, the learners need to know about the schedule. Give

     clear instructions on the date, time and place. After the visit,

     discuss the trip.

o   Discuss objectives, important observations to be made and any

     notes or records to be kept.

o   Send a note of appreciation to the agency visited.

Field trips are suited for small groups, large groups should be divided

into smaller groups. The educator also needs extra time for planning the

trip, and for travel. When the educator has to depend on the agency person

provided at the location, control is minimal and the learners may miss some

information given or questions may go unanswered.

Role Play

Role playing can be structured or unstructured. When structured, the

learners assume parts and then work their way through an open-ended "script"

whereas in unstructured role play, the content of the play and the

characters emerge naturally.

In a role play session, an incident or case is brought to life by

members of the learner group. The learners become actively involved in the

situations under discussion by putting themselves in the shoes of the characters. This approach to learning creates excellent learner involvement. It can help develop a better understanding of the part that feelings play in a problem situation and it can focus the attention of the players and the observers on a particular aspect of an overall problem or situation. Sometimes it goes so far that a learner reaches a point of understanding of another person's feelings and situation.

An **example** of how this approach might be used follows:

Learner: "That sounds good in theory, but will it really work?" The educator's response might be "let us role play it. You be the care-receiver with the problem. I'll be the care-giver who is to perform the activity you think may not work in practice". The educator assumes the role of care-giver doing what the care-giver does or says in the situation under consideration. The learner acts as a care-receiver, and reacts as required. If well developed, this approach allows the group to look on and see the problem being addressed, explored and answered in a simulated but truer sense than if each of the learners were interacting as learner and educator (Renner, 1983).

Role playing provides the opportunity to develop problem solving skills, interpersonal skills and insights into one's own behaviour and other's motives. It encourages every learner to be an active learner. As well, the method assists in learning new behaviour in a relatively safe situation. Role play as a method of teaching must be used in conjunction with discussion or the lecture method for most effective learning. The educator must be skilled in conducting the role-play, otherwise over enthusiastic players may move away from the specific points to be learned. As in the demonstration class setting, the observers should all be able to

see and hear the role-play. Unfortunately, people who have never participated in such events may become anxious and reluctant to perform.

Tips for Effective Role-Playing:

A well run role-playing session requires good planning. Even for an unstructured role-play, the steps of introduction and conclusion are needed. A well run role-play has four steps:

o   setting the scene or preparing the group for role-playing;

o   assigning the roles, giving clear instructions to others who are observing;

o   de-brief or assist the players to summarize, and ask observers to report and interpret;

o   closure, or thank the group taking part in role-play and integrate the issues discussed in the subject being discussed.

In case of unstructured role-play, the steps of de-briefing and closure are necessary and the first two steps are less formal.

Questions and Answers

Questions are a basic part of the learning process and questioning learners is a valuable teaching skill. Questions are used to review material already covered to assess learners' absorption of information, and to determine the extent of their knowledge before new material is covered. The technique of questioning is covered in more detail toward the end of this section, under Evaluation.

Individual Instruction

Individual instruction techniques can be used in various ways. Most learners learn well in a group setting but some may find the issue too difficult and others may become bored with the slow pace of lessons. Individual instruction can be given on an informal or formal basis.

Individual instruction may be non-threatening and can be adjusted to suit a particular learner. Further, when one learner and the educator work together, the learner can be more active and it is possible to identify the learner's weakness in learning and guide her accordingly. **For example**, in an over weight counselling session, the educator can use learning journals (or diaries) for guidance, to identify weaknesses.

Learning journals ask learners to record personal impressions, experiences and questions as the teaching-learning process progresses. The individual may or may not share it with others but the educator discusses the journal with the learner, explaining and clarifying issues. This individual exercise further helps learners in keeping track of their experiences, and can also be used as a reference.

Self-instruction materials such as programmed instruction, modules, or workbooks are also available and may be used at the discretion of the educator.

Simulation Games

One of the more stimulating teaching methods is simulation. Educator-training programmes often include experience in simulating instruction. For example, microteaching has been widely publicized as a potentially valuable tool for instructing prospective educators. This method could be more beneficial when the learners are from various health care programmes. When the learners are patient/learners this method should be carefully implemented (McKeachie, 1975).

TEACHING AIDS

The materials that can be used for teaching purposes are unlimited. Teaching materials help in learning but how they are selected and used are important points for consideration. The materials should be appropriate and

should not distract from the educator, but function as aids to learning.

General Purposes of Using Teaching Aids:

o Stimulates sensory perceptions. **For example**, in addition to listening the learner's also sees, touches and handles when the educator uses a model.

o Creates interest and holds attention. While giving a lecture, when the educator shows a film or writes on a blackboard, learners are directed from the educator's voice and are less bored.

o Assists the educator to explain a complicated skill/procedure. As the learner sees a complicated procedure, the need for a detailed explanation may be reduced. Thus a teaching aid helps economize time and makes learning, a complicated skill, easier.

The choice of materials depends on the content, the characteristics of learner, cost and availability of materials. Types of materials include blackboards (chalk boards), flannel boards, bulletin boards, audiovisual presentations, "handout" notes, and models.

Blackboard (or chalk boards)

It is one of the most available devices in a classroom. This can be used to write difficult and important terms, to explain with a simple diagram, to list instructions or emphasize an important concept. For effective use, the boards and erasers must be cleaned regularly, writing must be clear and visible, and colours can be used when necessary. The board should be used only when it is needed as writing takes up valuable time. Use of a pointer while referring to material on the board is helpful.

Flannel Boards

These can be purchased or may be constructed easily and are portable. The 2' x 3' size is handy. Figures or cut-outs may be fashioned from or

glued to pieces of felt which can adhere to the cloth-covered board.

Bulletin Boards

Bulletin boards vary in terms of materials used, size and accessories, such as built-in lights. Items to be displayed are printed materials, diagrams, or other objects. For effective display, the following points should be considered.

- place at a height which allows for comfortable reading;

- arrange materials attractively;

- organize logically or with brief explanation;

- light well.

Flip Charts

These are portable, and can be used much as blackboards.

Posters

These are colourful and descriptive

Films and Video Tapes

These are a good substitutes for actual experience. Although it is possible to demonstrate lifting a person with suspected spinal injury or head injury in a simulated situation, it is always more dramatic when a film or video tape is used while giving the lecture on principles or theory. Film is an expensive teaching aid, so the educator has to explore the availability of rent-free or low cost projector and films. Films and tapes should always be previewed to check suitability.

Overhead Projector and Transparencies

This equipment is common, popular and easily available, and replaces the chalkboard in the classroom. For effective use, the projector should be placed so as to project as large an image as possible. Unlike chalkboards, the educator can face the audience while writing which gives a better

rapport between educator. The educator does not have to rewrite a point once the frame is removed from the screen as the frame can be rolled back, and summarization is easy. Use of colour makes the presentation more attractive. Commercial transparencies are expensive. An ordinary clear plastic bag could replace the commercial transparencies.

Handout Notes and Pamphlets

These are a most valuable, inexpensive and readily available teaching aid.

The handouts are usually educator-made aids and the greatest advantage of such materials is that they may be designed to meet the needs of particular groups or a specific situation and can be prepared easily. Pamphlets are printed materials often used for distribution of health related materials for health education.

Models and Actual Objects

These include items such as equipment, bandages, slings and so forth that may be used in a demonstration. A model of an organ such as a kidney, eye, heart, etc. could be used for teaching a specific health issue. For effective use of the aid, the material should be visible to all learners, use only when it is needed and put out of sight after use.

LESSON PLANNING

Regardless of whether teaching is conducted informally or formally, effective teaching is planned teaching. Even informal sessions are part of the flexible overall teaching programme and the broad framework of objectives.

A lesson plan is a written outline of a specific lesson. This can be written in different ways but the common features include: learner's objectives, methods of teaching and teaching aids, content, educator and

learner's activities, summary and evaluation. Some authors recommend pre-assessment and post-assessment procedures. If the group is self motivated and highly interested, pre and post evaluation will be an encouraging factor. But if the group has not been exposed to formal teaching for some time and there is a lack of confidence, evaluation may discourage both the learners and the educator.

Effective instructing is no different from other things. To succeed it has to be planned so that it is in harmony with both objectives and the principles of instruction. This is not only true of an inexperienced educator but for an experience one as well. Every educator, even the most qualified one, will do a more effective teaching job if she plans carefully. In fact, the best educators usually plan more.

Purpose

A lesson plan helps the educator in many ways. The most important ones are:

o   Helps the educator to prepare the lesson

o   Ensures adequate coverage of the material to be presented

o   Provides lists of teaching aids to be used in teaching the lesson and the order they will be used

o   Gives confidence to the educator

o   Provides a realistic allocation of time

o   Helps the evaluation of learner understanding and performance

o   Provides a means of checking the effectiveness of the instruction

Guidelines on Lesson Planning

o   General consideration: this includes data on the background of learners, size of group, duration of the class, topic headings, methods of teaching and the teaching aids, and objectives.

Equipment may be listed for a demonstration of a procedure.
Statement of the overall topic of the lesson defines the scope of
the content.

o   Objectives: need to be stated clearly in specific and precise
terms. Only those objectives that can be reasonably accomplished
during the lesson are to be included. These objectives are stated
in terms of the expected behaviour at the end of the lesson.

o   Learners: This refers to the group to be taught or for whom the
lesson is planned.

o   Introduction: This can be done in two ways:

-   to introduce the lesson topic - state how you are going to
attract your learners' attention and interest and explain the
purpose of the class

-   if the lesson is based on the previous class, review material
and ask questions to evaluate the learners' knowledge and to
determine whether the learner is ready for this lesson.

o   Subject Matter: This refers to the content and organization of
the content matter. The major points in the lesson are listed and
organized in a logical sequence. Steps of the demonstration may
be outlined.

o   Educator and Learner Activities: With the objectives defined,
content identified and outlined, the educator decides upon the
possible educator-learner activities. They may include talking,
directing discussion, questioning, use of teaching aids and
illustrations from life experience, distribution of handout notes,
demonstrations, practice or any other activity the educator or the
learner uses for learning.

o   Summary: This refers to the summary of the lesson content. When the topic is complex and the lecture method is used for teaching, a summary may be given at the end of each major point of the content. The educator may review the lesson or ask questions. Make sure that everyone has an opportunity to clarify points.

o   Evaluation: Evaluation in the lesson plan indicates how the educator will determine that the objectives have been achieved. This may be done by simple questioning, quiz, or assignment, or through application in practice and tests. Evaluation will be discussed in detail in the next chapter.

The plans are flexible and educators can modify the plan in whichever way they find most suitable. A lesson is a tentative plan and, as an educator gains experience, she realizes that plans may have to be modified at the time the lesson is being given.

The teaching planning model (Figure 1) shows that the plan of teaching consists of various activities. A sample of a lesson plan shows how the plan be prepared.

FIGURE 1. Teaching Planning Model*

1. Assess your (educator) own skills, knowledge, interest, strengths, weakness.	2. Assess learners and and their previous knowledge, interests, experience and	3. Identify philosophy objectives of the lesson, unit or the course to be offered

9. Evaluate as you go along and at conclusion, learners' learning as well as your teaching. Make necessary changes for improvement.		4. Identify and determine the learning object- ives or what you want the learners to know, do or feel at the completion of instruction.

THE PROCESS IS ONGOING BUT AT THE OUTSET, BEGIN WITH STEP NO.1.

8. Teach. Be flexible with your plan and note down the strong and weak points of your plan as you use it.

7. Prepare the teaching plans for each lesson with learning objectives, content outlines, educator- learner activities and evaluation	6. Determine how you would evaluate the learners' learning at the end of a lesson, unit or course.	5. Evaluate resources or what teaching aids, physical facilities and personnel are available, access- ible or appropriate

* Modified from: Peter Franz Renner "The Instructors Survival Kit," Training Association Limited, Vancouver, 1983, pp.97.

SECTION IV

EVALUATION

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┌─────────────────────────┐
│      OBJECTIVE          │
│                         │
│     DEFINITION          │
│                         │
│      PURPOSE            │
│                         │
│   INFORMAL METHOD       │
│                         │
│    FORMAL METHOD        │
│                         │
│   SELF EVALUATION       │
└─────────────────────────┘
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Objectives

- To understand the meaning, purposes and types of evaluation

- To become familiar with methods of formal evaluation

- To identify the methods of questioning

Definition

Evaluation: It has been discussed before that learning brings about behavioural changes and that educational objectives are best stated in observable and measurable terms. Evaluation is the process of determining the learner's progress and the achievement. This is one of the most difficult but important parts of teaching. We evaluate something every day in our lives. **For example**, when we say "I have done that job well", "He is the most helpful neighbour", or "It was a bad movie", we have evaluated something. Therefore, evaluation is a process of estimating the worth or value of something, such as a person, object, or activity.

One of the major purposes of evaluation is to determine how well a learner has achieved the objectives. It is equally important to find out how the learners are doing and what to review and revise.

Measurement Tools: A measurement tool is a test which is designed to measure changes in knowledge, attitudes and skills. An effective measurement tool possesses four important qualities: validity, reliability, objectivity and practicability (Megenity, 1982).

Validity: A measurement tool is valid when it measures exactly and only what it is supposed to measure.

For example, when a student is asked to describe (on paper) the physical changes that occur with aging, her expertise as a writer should not enter into the measurement process.

Reliability: A measurement tools must also be reliable; that is it

should consistently and repeatedly give the expected (intended) results.

Objectivity: A measurement tool should be objective. Objectivity is defined as the extent to which independent expert examiners agree on "what constitutes a good right/wrong etc., response" to a test item.

Practicability: Tests should be practical. This refers to the completion time from both educator (examiner) and student perspectives. Tests should be economical in terms of time and simple in their use.

Purpose of Evaluation

o   To determine the fulfillment of the objectives. As stated previously, evaluation should flow from the objectives set for the session and each segment of it. **For example**, if the objective is "the learner will demonstrate a baby bath" then the evaluation procedure should include the observation of each learner when she actually gives a baby bath.

o   To motivate the learners. **For example**, success in tests provides encouragement for learning.

o   To provide learners with a guide as to how they are doing and where to concentrate their efforts.

o   To enable educators to shape their lesson. If on an evaluation, half the learners did not know how to bathe a child, it is a significant sign that the educator should go back over this content. To an important degree, tests determine what people study and how they study. If you test exclusively on normal healthy children, then do not expect your learners to know how to care for an ill child. If you have only written tests, then you cannot judge a learner's ability in giving a baby bath. You can test only what is taught and the knowledge part.

TYPES OF EVALUATION

Informal Evaluation

Information evaluations are like diagnostic instruments which let the educator know what is getting across and to whom, without the burden of an official test or quiz. This is done for every lesson, while giving the lesson, at the end of the lesson, or while reviewing the previous day's lesson.

Observation: The educator should be alert and observe the learners. Are the learners attentive? Do some have a puzzled look? Are there people who never participate in the discussions? These should be identified as you are giving the lesson.

Questioning: Asking questions is a means of evaluation as well as instruction. Therefore it should be built into every lesson. Are most of the responses in line with the instructional material given? Are there any questions which seem to take a long time for learners to answer correctly? Assuming you spread your questions around, do certain learners miss more questions than average?

Trial Practices: After you have explained how to do something, can every one demonstrate it properly? Are there any common errors when the learners first try out? Do they repeat the errors after you have redemonstrated the procedure? Answers to these questions will give you clues to your teaching as well as the learners' ability to learn.

Formal Evaluation

Formal: Formal evaluations are the means by which the learners' knowledge and skill are officially assessed. They let the learner and the educator know where the learner stands. Tests should not be restricted to the end of the lesson or group of lessons, but should occur at regular

intervals, which will diminish the fear of such examinations.

Methods: Quizzes and written tests are the most familiar instruments of evaluation. These are also called the pencil and paper test. There are many ways of writing test questions - true or false, multiple choice, fill in the blank, matching items, short answer question, or essay type (describe, explain, summarize, compare, etc.).

Tests does not have to be taken in a classroom situation but can be taken at home. These are usually essay types of questions which require putting together a number of facts to solve a large problem and require learners' time to think and organize a response.

The four-part multiple choice question (MCQ) is the format most commonly used in testing theoretical knowledge. MCQ allows for exact, objective measurement of knowledge while placing less emphasis on written expression and other writing skills.

For example, pressure sores are caused by:

- poor circulation

- pressure

- immobility

- all of the above

The question consists of a statement with four possible endings, only one of which is the correct answer. The learner is required to make a rapid and precise recall of the subject matter and mark the correct response. Standardized tests are available and are reviewed and evaluated by experts. However the technical 'know how' will enable the educator to develop short quizzes for information evaluation.

Skill tests: A demonstration is used when the learners must actually show how to perform a task for purposes of formal assessment.

Project: Projects allow the educator to test areas requiring knowledge and skills for which classroom testing is impossible. Projects take time and extra resource.

Questioning Technique

Oral and written questioning is a basic classroom teaching technique used for evaluation. Therefore, questioning is a part of classroom instruction. It is essential to know "why to question" and "how to question".

Purpose

Questioning is as much a part of the educator's skill as is lesson planning and lecturing. Questions are used for various purposes:

o   The use of questions brings about learners' involvement. Questions serve to clarify ideas and facilitate the exchange of ideas.

o   It helps educators to assess what the learners know as well as what they need to learn.

o   Questioning also stimulates interest and curiosity. It helps in exploring issues and ideas.

o   Summary and review questions emphasize major points. The educator can find out if the learner "is following me".

Type

Basically there are three types of questions:

Recall Questioning: Recall questions are related to the subject matter taught and call for recognition and memorization of information. These types of questions are asked most often for summary and review. The educator can find out whether the learners have followed the lesson immediately after the lesson. The verbs such as "state", "name",

"identify", "list", "give", "locate" are used in recall questions. The questions may begin with "what" or "when" also.

Evaluative Questioning: These questions require the learners to analyze, judge, compare, appraise, differentiate or estimate. Evaluative questions require the learners to think, apply factual knowledge and promote discussion.

Example:

- What would you do if John touched a hot pot and burnt his finger?

- Why should you burp the baby after feeding?

Creative Questioning: This level of questioning asks the learners to create or invent something different or original. The problem solving method of teaching may bring about such results in that it helps in thinking beyond the subject matter presented.

Example:

- How would you advise a group who are vegetarians, regarding daily nutrition?

- What would you do when a patient refuses to take his medication?

Self Evaluation

Self-evaluation is the process by which the educator assesses her teaching ability and learner assesses own learning progress. In other words, how successful has she been in facilitating learning. She may ask for suggestions to improve learning such as what changes he or she should make in the teaching plan.

Most of the evaluation is done at the end of the session, but this means that the group giving the suggestions does not benefit. Providing opportunity for evaluation at more than one point of the course as well as at the end, ensures learners' benefit from the feedback.

Balance questions in such a way that learners can give both positive and negative comments. Discuss a summary of the suggestions made by learners. This indicates that the educator is not afraid and really cares about improving the teaching plan. When planning the next session, the educator needs to go through these suggestions. Self-evaluation could be done by the educator herself and by learners as well as by her peer group. Self-evaluation is an effective evaluation method. Adult learners must be encouraged to use this method to identify their own strengths and areas of improvement.

EVALUATION

The self directed teaching-learning manual for educators was evaluated in two phases.

Phase I

The manual was sent to twelve health professionals. Three M.D., three R.N., three OT/PT and three M.H.Sc. students were selected as evaluators. All of them had more than five years of clinical experience. Eight out of twelve of them practiced in a medical setting. All evaluators strongly believe that "health education is an essential component of patient care".

TABLE I

CONTACT WITH PATIENTS

Frequency of Contact	M.D.	R.N.	OT/PT	M.H.Sc. student
Daily	3	-	2	-
Twice a week		1	-	3
Once a week		2	1	-
Once every 2nd week				

Table I indicates that all three doctors and two occupational therapists had daily patient contact. The doctors and OT/PT and M.H.Sc. student had indicated that they had little or some previous knowledge in teaching-learning principles and had some experience in patient teaching based on teaching-learning principles. All nurse evaluators had expressed their previous knowledge in teaching-learning as extensive and they had considerable experience in patient teaching. Most of the evaluators

indicated objectives were stated clearly and were relevant to learn teaching-learning principles, the content presentation was logical and sequencing of content are appropriate and the content were presented in line with the stated objectives.

The following reasons were identified as to why they liked the manual.

Evaluators indicated the manual was concise, relatively complete, contained a great deal of information, had useful content, was helpful for planning teaching and comprehensive. Based on theoretical concept, good 'how to practical approach', good examples, excellent clarity and explanation of terminology, an excellent idea and would be most useful.

The following responses identified what they liked the least in the manual.

Why the manual needs to be done, proof read, grammatical errors, poor punctuation, difficult to read, lack of proper headings and sub headings, add more examples.

The manual was modified based on the evaluators' feedback. The following aspects were considered during the modification process:

o   Re-organization of the content

o   Addition of more examples

o   Re-arrangement of headings and sub-headings

Phase II

The manual was sent to three evaluators (one doctor, one nurse and one occupational therapist). The feedback received from the evaluators were as follows: - excellent organization, lots of appropriate examples, clear in reading - good flow.

The manual was then edited for style and language.

Recommendation

The effectiveness and usefulness of the manual were tested. The author would like to recommend a "field test" of the manual. A follow-up study could be done by asking those health professionals who are interested in increasing their knowledge of and skill in the teaching-learning process to use the manual.

The health professionals could use pre-and post-test methods of evaluation to examine the effectiveness of the manual. They also could give feedback on usability of the manual in the clinical field.

A continuous evaluation of the manual should be maintained as the effectiveness of the manual depends heavily on the characteristics of the learner (health professionals). Thus repeated field testing is necessary by various health professionals (e.g. M.D. Nurses, O.T.) and also in various clinical institutions/environments (e.g. medicine, surgery, community health).

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APPENDIX A

February 28, 1987

Dear

I have developed the attached package, "Self Directed Instructional Manual on Teaching Learning Process for Educators." All health professionals are educators, so you as an educator, your contribution would be valuable to evaluate the manual.

There is one evaluation form which will take 5-10 minutes to complete if you decide to participate in the study. You as an educator will be completing the form on "Evaluation of Instruction Manual" after reading the manual. A section entitled "Demographic Data" attached to the form, requests some general information about you. This section could be completed before you start reading the manual. Reading time for the manual will depend on your need and learning style. You may take several hours or several days to finish your reading. Please read the manual as many times as you wish.

Please do not include your name or any personal identification on the form. Please refrain from discussing the content of the manual or the form with colleagues until the study is completed. Also you may refuse to answer any question or withdraw from the study at the time. All information will be treated confidentially and reported as group data. The section of your form in the enclosed self-addressed stamped envelope denotes your consent to participate in the study. If you wish a copy of the research findings, it will be forwarded to you. All results will be reported in a summary form with no reference to individuals.

If you any questions, please contact me (416) 525-9140 extension 2726 or (416) 689-6740.

Thank you for taking the time to consider participating in the study.

Yours sincerely,
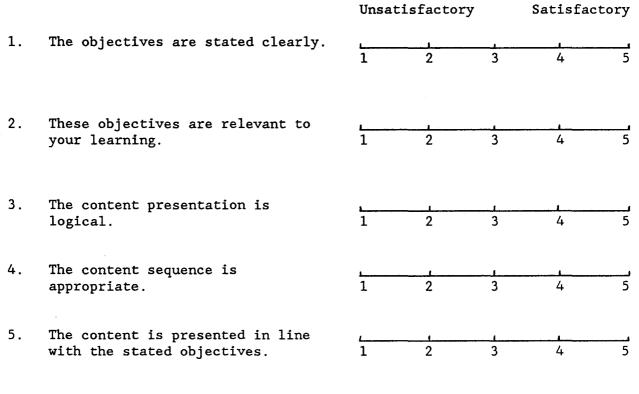
Basanti Majumdar
Associate Professor, Nursing

BM:cl

APPENDIX B

EVALUATION OF SELF-DIRECTED INSTRUCTION MANUAL ON

TEACHING-LEARNING PROCESS FOR EDUCATOR

Your feedback will be very helpful in modifying the manual.

Read the questions and check the appropriate rating number.

		Unsatisfactory		Satisfactory	

1. The objectives are stated clearly.

    1   2   3   4   5

2. These objectives are relevant to your learning.

    1   2   3   4   5

3. The content presentation is logical.

    1   2   3   4   5

4. The content sequence is appropriate.

    1   2   3   4   5

5. The content is presented in line with the stated objectives.

    1   2   3   4   5

6. List two items you like the most in the manual. Why?

7. List two items you like the least in the manual. Why?

8. Specific recommendation change.

APPENDIX C

DEMOGRAPHIC DATA

Please read and check (✓) the appropriate box.

1. Your profession.

   M.D.   [   ]

   R.N.   [   ]

   O.T.   [   ]

   P.T.   [   ]

   Other (specify):

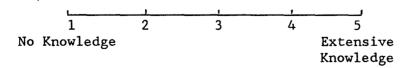2. Clinical experience.

   None   [   ]

   Less than 1 yr.   [   ]

   1-2 years   [   ]

   3-5 years   [   ]

   More than 5 yrs.   [   ]

3. Clinical setting.

   Medical   [   ]

   Surgical   [   ]

   Paediatrics   [   ]

   Maternal Child   [   ]

   Psychiatry   [   ]

   Primary/Ambulatory Care   [   ]

   Emergency   [   ]

   Other (specify):   [   ]

4. Any previous knowledge in teaching-learning principles.

```
   |_____|_____|_____|_____|
   1        2        3        4        5
No Knowledge                     Extensive
                                 Knowledge
```

5. Any previous experience in patient teaching based on teaching-learning principles?

```
|_____|_____|_____|_____|
1         2         3         4         5
No Experience                 Considerable
                              Experience
```

6. How often do you have contact with patients?

    Daily   [   ]

    Twice a week   [   ]

    Once a week   [   ]

    Once every 2nd week   [   ]

    Other (specify):   [   ]

7. Do you believe Health education is an essential component of patient care?

```
|_____|_____|_____|_____|
1         2         3         4         5
Strongly                      Strongly
Disagree                      Agree
```

BM/cl