

Toward an Instructional Philosophy: *A Theoretical Framework for Teaching and Training at Salman Bin Abdulaziz University (SAU)*

Yasine A. Qandile¹ & Wajeeh Q. Al-Qasim¹

¹ Salman Bin Abdulaziz University, Al-Kharj, Saudi Arabia

Correspondence: Yasine A. Qandile, Center for Academia Development, Salman Bin Abdulaziz University, Al-Kharj. Mail address: P.O. Box 220515, Riyadh 11311, Saudi Arabia. Tel: 966-50-694-8480. E-mail: yqandile@yahoo.com or y.qandile@sau.edu.sa

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Abstract

The purpose of this study is to construct a clear instructional philosophy for Salman bin Abdulaziz University as a fundamental basis for teaching and training as well as a theoretical framework for curriculum design and development. The study attempts to answer the main questions about pertaining to the basic structure of contemporary higher education instructional philosophy and the essential content of SAU instructional philosophy. The researchers utilize the analytical descriptive method to analyze the available literature in the fields of philosophy of education, philosophy of higher education; educational psychology and pedagogy in order to develop the intended structure of the SAU instructional philosophy. The study concludes with recommendations for designing and implementing curriculum and training programs at SAU. The University should acknowledge (a) the nature of adult learners and the need to relate instructional goals to their life experiences and careers, (b) the need to collaborate with them to develop the learning outcomes, (c) the crucial importance of incorporating the learners' needs and prior-experience, and (d) the importance of using an eclectic approach or a blend of learning strategies suitable for increasing students or trainees participation and involvement in learning activities.

Keywords: Instructional philosophy, Adult learners, Higher Education, Faculty training

1. Introduction

Philosophy always attempts to answer basic questions related to the mind, human nature, knowledge, life, and moral values. Philosophers have used critical thinking to exercise argument and logic. Philosophical work aims to reach a comprehensive system of ideas about human beings and the nature of the reality. It tackles our daily lives and their pervasive dilemmas offering a certain outlook at people, natural phenomena and the universe at large.

Philosophy of Education is an applied philosophical discipline and a major area of interest for researchers in the field of education. It applies the findings of philosophy to education. Philosophy of education is the impetus for educational policy-making, and it partly regulates curriculum and teaching methodology.

Although philosophy of education remains a subject of incessant debate, both philosophers and educators concur to its contributions in fighting ignorance, dogmatism and fanaticism. It helps to restructure the principles of education based on educational research findings and society's variant changes (Winch, 2012). Winch (2012) noted that it has an important role to play in preparing for a teaching career as it enables teachers to:

- Acquire a firm grasp of the conceptual field of education and find their way around the contested views within its topics.
- Understand the scope and limitations of empirical research in education and the relationships between that research and the theoretical issues in teaching, learning and education in general.
- Acquire a better conceptual understanding of debates that involve the issues relevant to teaching, learning and the subjects that they teach.

2. Background and Problem

The main goal of higher education is to prepare students to work efficiently in different businesses in positions requiring advanced knowledge, skills and critical thinking. However, higher education has a broader responsibility towards society to enhance the growth of students emotionally and intellectually, and to enable them to be more

independent, life-long learners and responsible citizens who can better serve society and enhance the development of their community.

Higher education broader goals cannot be achieved without well-prepared educators who possess a clear vision of these goals and a particular instructional philosophy aligned with the educational philosophy of the institution they work at.

Therefore, philosophy of education is an important part of the teacher education and the professional development of educators in the broader sense of the term as it explores how philosophy of education should both turn inward, engaging with concepts and arguments developed in academic philosophy, and outward, encouraging educational public to apply philosophical approaches to educational policy and practice (Wortham, 2011).

The literature review in the field of philosophy of education indicates that philosophers of education are not only focusing on debates related to educational foundations, but that they are also primarily concerned with teaching and learning theories, tackling a diversity of subject domains (Hayden, 2012). Hayden's study covered publications for period of 2000-2010, that were mainly theoretical investigations into education in general, with a focus on teaching pedagogies and practice in the field of education. Theoretical explorations of education, inquiries about teaching, pedagogies, and practice, and investigations of what is being taught or learned.

Thus, instructional philosophy is the area of philosophy of education that focuses on the fundamentals and problems of teaching and learning. Each educational institution, such as, a university, a college or a department has an instructional philosophy which represents its philosophical orientation for teaching and learning. It states their views about students and how they learn, and shapes specific approaches to teaching based on a well-structured educational theoretical framework.

This theoretical framework should clarify why we do what we do in classrooms. It explains how learning takes place and expresses the principles educators should use to guide their teaching practices in order to bring the students' learning into fruition and yield real, observable outcomes (Beatty, Leigh, & Dean, 2009). Identifying instructional philosophy is important due to its role in directing teaching orientation, and leading to continuous examination of the alignment between philosophy and daily teaching practices. Furthermore, it empowers educators to focus on testing and verifying this philosophy through teaching practices and, hence, change these practices if needed in order to ultimately foster professional and personal development (Chism, 1998).

Salman Bin Abdulaziz University (SAU) has established a quality assurance system to guarantee the implementation of teaching approaches that enhance the students' activities and initiatives during the learning process and ensure that the quality of learning outcomes is observable as well as measurable. The Strategic plan of the University and its quality assurance system is to adopt and implement the student-learning centered approach of teaching through instructional approaches, strategic goals and objectives.

The University conducted workshops to develop faculty awareness of this philosophical trend; however, there is evidence reflecting a vague understanding of the conceptual framework as well as a lack of the skills needed to accomplish its applications on the part of most faculty members. This vagueness leads to three main problems:

- Wrong teaching/learning practices among faculty members.
- Inaccurate assessment and evaluation procedures.
- Below the average learning outcomes for different university programs.

As part of the mission of the Center for Academia Development (CAD), the researchers implemented a pilot study to collect data about the problem. This pilot study attempted to answer two main questions:

- Does the faculty perspective of teaching match the instructional philosophy that the university tries to advocate?
- Do the teaching practices fit into the university instructional philosophy?

The researchers asked faculty members to write their own definition of teaching. The data collected from their written sheets (N=238) indicate that 81% of the faculty members define teaching as a transfer of knowledge while 19% mentioned that it is an interactions between students and faculty to help student to learn.

In addition, five classrooms were observed for 10 days to check what types of teaching activities take place in these classrooms. Lecturing using either white board or Power Point Presentations were the observed practices. There was no substantially observable student participation or engagement in the learning process in these classes.

This reveals the failure of the faculty members to assimilate and hence, reflect the new trends of teaching that the University seeks to foster. These findings underline the need to enhance the faculty members' awareness of

contemporary higher education instructional philosophy, and to consolidate this awareness through practice.

It can be inferred from these findings that the presence of this defect in both the content and methodology of the related faculty training programs needs to be addressed. Reviewing the content of the training workshops held for faculty during the last two years revealed major concerns about the importance and priority of focusing on instructional philosophy. It also showed that there is a need to have a clear common understanding among trainers about the meaning of instructional philosophy, and how it can be implemented in daily learning and training practices within the university community.

3. Problem Statement and Significant of the Study

The study aims to provide a clear, well-defined framework of SAU instructional philosophy. This philosophical framework would act as a fundamental base for program design and development, teaching and learning processes as well as faculty professional development and other community training programs. Within this context, the study aims to answer the following main questions:

- What is the basic structure of contemporary higher education instructional philosophy?
- What is the essential content of SAU instructional philosophy?

The study is significant for educators in higher education institutions as it brings into attention the theoretical bases that they can rely on to justify their practices in two main areas:

- Professional development for faculty and staff, and implantation of their training programs.
- Curriculum development and designing of student learning activities and teaching strategies.

4. Definitions of Key Concepts

For the purpose of this study, the researchers have defined the key concepts related to the major issue of the study as the following :

4.1 University Adult Learners: the students age 18- 24 (or perhaps older), and faculty members age 30-65 (or occasionally older).

4.2 Instruction: the practices of the faculty members to deal with the teaching process, including instructor-learners' interactions which lead to the learning incidence. A student will be more independent and has the responsibility for learning .

4.3 Training: an educational activity including systematic procedures that enable trainees to achieve utmost learning. This excludes direct instruction, practicing or drilling. In training, the focus is on "how" and "why" of certain things. This implies positive changes in trainees' knowledge, skills and attitudes.

4.4 Learning: an active social and mental process through which learners (students or trainees) build their knowledge and skills; draw their values and attitudes. As a result of learning, the learners would be able to apply what they have learned in new situations and to re-conceptualize their environment and solve its problems.

5. Methodology

Based on the problem statement and questions the study tries to answer, the researchers worked to achieve two main objectives:

- Review the relevant literature in the field of philosophy of education to construct a reasonable structure for SAU instructional philosophy.
- Review the relevant literature in the field philosophy of higher education, educational psychology and pedagogy to create a solid theoretical framework that fits the structure of SAU instructional philosophy.

According to the nature and objectives of this study, the researchers adhered to the analytical descriptive method to achieve its goals by analyzing and exploring the relevant literature to develop the intended structure of the SAU instructional philosophy.

6. Study, Exploration and Discussion

Literature has various points of view regarding the dimensions and limitations of the instructional philosophy structure. Coppola (2002) identified a key question to understand and articulate the instructional philosophy. The question is: "How does learning take place?" He also mentioned that the teaching philosophy statement should give the reader a preview about the institution's values, pedagogical style and motivation approaches as well as reflect the assertion of commitment regarding the student's learning and teaching assessment (Coppola, 2002). In the same direction, Combs

(2010) argued that the purpose of education, the role of the student and the role of the teacher are three main components of the statement of the instructional philosophy (Combs, 2010).

Washington University Teaching Center has another direction for the components of instructional philosophy as they identify the philosophy statement to be an answer to the following four fundamental questions (St.Louis, 2007) .

- Why do we teach?
- What do we teach?
- How do we teach?
- How do we measure teaching effectiveness?

The Ohio State University Center for the Advancement of Teaching identified three components of the philosophy of teaching: the conception of teaching and learning, description of how to teach, and justification for why we teach that way (University, 2009).

In addition, the literature, provided by OSU indicates that educators should manifest their knowledge of the models of how students learn, how to encourage learning effectively, and how to assess whether learning occurs in accordance with their instructional philosophy. Moreover, they should be able to discuss how they would apply their written philosophy in different teaching situations.

To sum up, the notions the University espouses concerning perception of students, the teaching and learning process, the description of how educators teach, and the rationale behind teaching in a particular way, together with the institution's values form the basis of a university instructional philosophy.

Based on this conclusion, the researchers have identified the following four essential components for structuring SAU instructional philosophy (Figure 1):

- The University values and perspectives about the target learners.
- Characteristics of the target learners.
- The adopted learning theory (or theories), which explain how the target learners learn.
- The teaching and training approaches that align with the adopted learning theory, university core values, and perceptions about learners.

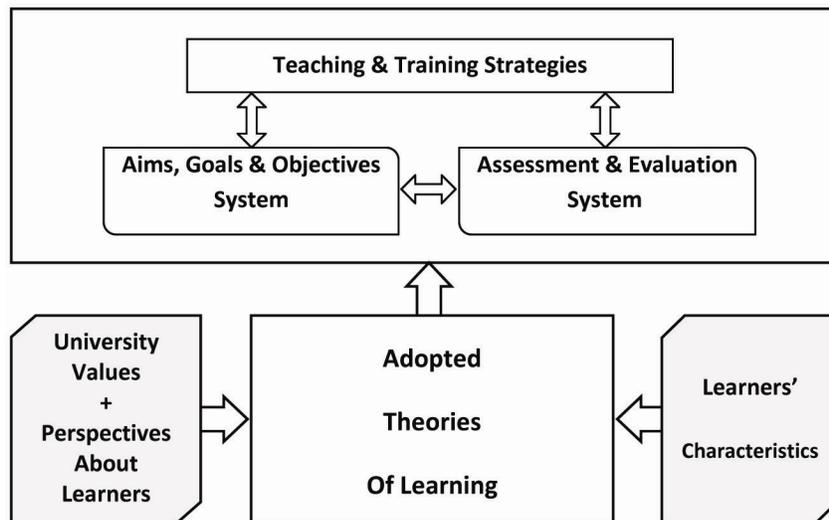


Figure 1. Structure of SAU instructional philosophy

6.1 The University values and perspectives about target learners

SAU, like most contemporary universities, is partly a continuous learning community. This community includes students, employees, trainees from the faculty and society as well. Universities in 21st century encourage the student to be an active learner, and they adopt philosophies which promote independent learning.

The student and their learning process are the core interest of SAU. The University Strategic plan considers the student to be the focus of the plan and the highly appreciated human component as indicated in vision, mission, strategic goals

and objectives. The first strategic goal is “to maintain high standards of support and services provided to students”. The remaining nine strategic goals referred to students in one way or another as they targeted developing highly-qualified faculty members, university quality assurance, learning process, sophisticated university infrastructure, financial resources and supportive organizational structure.

University students are considered to be adults. According to developmental psychology, an adult is one who has attained maturity or legal age. They are full-grown, mature organisms, fully developed (McMahon, 1997). This implies that they are capable of accomplishing all the educational tasks allocated to their level.

Although the students are largely 18-25 years old, the university learning community admits other age groups ranging 30-65 years old, including post-graduate students, distance learning students in addition to staff members and community trainees. University educators are in need for being made aware of the characteristics of these adult groups in order to fulfill their developmental needs through teaching and training activities more efficiently.

6.2 Characteristics of target learners

It is important for educators to be aware of the physical features and cognitive abilities that take place throughout the different aging phases because they can have an effect on learning and should guide instructors' practices. The following are distinctive aging changes that appear in individuals.

6.2.1 Characteristics of early adulthood (18–24)years:

Most university learners are at early adulthood (late adolescence) stage. They have completed the process of physical maturation, reproductive growth, and have usually reached an adult's full height. Their emotional development has distinct features as they create their body image and develop certain feelings of strength. They also move into close relationships with their parents, seek adult advice happily, feel empathetic, and have greater affection skills and values framework.

Late adolescence stage marks the separation from care providers. Peers are important for them, but they can evaluate their influence and opinions rather than faithfully accept them without questions. One of the important characteristics is the acceptance of adult responsibilities.

The followings are the features of the cognitive development of university learners (SilbermanSchool, 2012):

- Move into adult roles and responsibilities and/or pursue higher education.
- Fully capable of understanding abstract concepts and aware of consequences and personal limitations.
- Capable of identifying career goals and preparing to achieve them.
- Protect their independence and build and test their decision-making skills.
- Develop new skills, hobbies, and adult interests.
- Establish abstract thoughts, future-oriented, able to understand, plan and pursue long-range goals, increased concerns with the future.
- Logical and idealistic with greater capacity to use intuition.

6.2.2 Characteristics of young adulthood(20-40 years):

It is believed about half of the university students are at the young adulthood stage, especially the post-graduate students. They have efficient physical senses, cardiac output and competence, but their metabolic rate decreases 2-4% every decade after age 20. The following are the features of cognitive development in young adulthood (Kail, 2004).

Critical and creative thinking skills improve; memory is high in the 20s age range.

- Behaviors associated with young adulthood include leaving home, taking on more adult commitments and responsibilities, shifting from being single to establishing a new family, developing parenting skills, making professional choices characterized by high goals and experimentation.
- Moral development appears by personalizing values and beliefs, reasoning may be based on ethical principles such as the principle of justice.
- Self-concept development appears through avoidance of substance misuse, late formation of family, frequent interactions with family and friends, behaving in an ethical manner.

6.2.3 Characteristics of Middle Adulthood (40-65 years):

This age group is very important for university development as the majority of faculty members, researchers, and staff

belongs to this age group. Physically speaking, the features of adults in this age group include: starting the decline in vision which becomes sharper after 40 and for the ensuing 15 years. Around age 70, hearing begins to decline sharply. Additionally, there is a decline in strength and coordination, patience sustains better than strength, reaction time slows, especially for motor responses, but experience compensates for physical declines. One of the major features in this age is the increase of blood pressure, and high probability to suffer heart attacks, but the person remains functionally reactive. The cognitive development in middle adulthood is multidirectional and has the following features (Brody, 1997, Cross, 1981 and Merriam et.al, 2007).

- Uneasy performances appear due to the influences of neurological aspects, which decline over age.
- Improvement of cultural understanding by aging.
- Fluid intelligence peaks during early adulthood and then declines, but adult intelligence appears relatively stable, at least until the sixth or seventh decade.
- Ability to apply mental powers to new problems, perceiving relationships, forming concepts, making inferences, going beyond abstract thoughts.
- Ability to remember and use stored information attained over a lifetime, and processing it automatically, relative to culture and level of education.
- Adults face real-life problems (practical problem solving).
- Adults rely on personal feelings and intuition as well as logic.
- Older learners have slower reaction times than younger learners do; they need more time to learn new things due to aging. However, adults can generally control the pace of their learning.

The characteristics of the above-mentioned three target groups are the main factors in deciding the approach and strategies that facilitate the effective learning of these group members during instruction or training. It is important to recognize that there is no one golden approach or strategy that fits all learners or educators. Thus, instructors or trainers are advised to select a hybrid of strategies deemed most appropriate for their subject matter and learners.

6.3 Adopted learning theories

Theory is a rational scientific generalization to explain phenomena and to interpret how things work. Theories enable us to discuss and elaborate on relevant issues and concerns (Costley, 2012). Learning theories attempt to present a certain understanding of how learning takes place. One of the most ancient learning theories is Behaviorism, which states that learning is an observable and measurable change in behavior; it happens when a correct response appears following a specific environmental incentive (Cross, 1981).

As university community learners are adults, the focus will be on the learning theories that can be adopted to interpret how adults learn. Malcolm Knowles (a pioneer of the phenomenon of adult learning) proposed a theory called "Knowles Andragogy". It emphasizes process over content. He defines andragogy (Greek: "man-leading") as "the art and science of helping adults to learn," while pedagogy (Greek: "child-leading"), is the art and science of helping children to learn.

Knowles developed five basic assumptions underlying andragogy and described adult learner. Building on humanistic psychology, Knowles' concept of andragogy presents the individual learner as one who is independent, free, and growth-oriented. He elaborated on the two dimensions of andragogy: the characteristics of adult learners, and the elements of the adult education process that involve these characteristics. These assumptions (Principles) are (Jonassen, 1994):

- Self-concept: Adults are independent or self-directed.
- Experience: Adults have a rich repertoire of experiences that helps and supports their learning.
- Needs: Adults have needs closely related to their lives, jobs and social roles.
- Readiness to learn: Adults are motivated to learn by internal rather than external factors.
- Orientation to learning: Adults' perspective is the immediate application of knowledge rather than gathering knowledge for future use i.e., adult learners become more problem-centered rather than subject-centered.

Knowles (1984) encouraged educators to use a seven-step process in order to implement and capitalize on the assumptions of andragogy. These steps include creating a cooperative learning environment; setting goals mutually; diagnosing learner needs and interests; helping learners to formulate learning objectives based on their needs and individual interests; designing successive activities to achieve these objectives; carrying out the design to meet those

objectives by means of certain selected methods, materials, and resources; and evaluating the quality of the learning experience for the learner including reassessing needs for continued learning. This premise implies that curriculum should be process-based rather than content-based to allow learners to develop content in accordance with their specific needs. The ability to make a connection between everyday life and learning in the virtual classroom validates learners as individuals endowed with knowledge applicable to other situations (Alkadhi, 2013).

The followings are the most well-known learning theories that highlight adult learning and are congruent with Knowles hypotheses of andragogy:

6.3.1 Humanism:

Humanist psychologists concentrate upon the study of each person as a unique individual and a whole person. They stress the personal worth of the individual, the centrality of human values, and the creative, active nature of human beings. They believe that behavior is related to the inner feelings and self-concept of the person. They reject the concentration of the behaviorist on reinforcement of stimulus-response behavior, and their dependence on animal research. Besides that, they offer a new set of values and a wide horizon to understand human nature and the human condition. Humanists consider learning a personal act to achieve development.

The focus of the humanist perspective is on the self. Humanists recognize and respect the learner as a self-directing, self-actualizing and active participant who learns through a series of interpersonal relationships and will not learn if they do not want to. Learners are free to choose their own behaviors, rather than merely reacting to environmental stimuli and reinforces.

Humanist psychologists assume that each person has a free will, is basically good, and has inherent need to make themselves and the world better. The humanist approach emphasizes the personal worth of the individual, the centrality of human values, and the creative, active nature of human beings. They reject scientific methodology like experiments because they consider it dehumanizing to the person and is unable to capture the richness of their conscious experience.

In addition, the humanist approach is optimistic and emphasizes the noble human capacity to overcome poverty, pain and sadness (Knowles, 1984).

6.3.2 Cognitivism:

The concept of learning is the main viewpoint in the Cognitive Learning Theory; it is a change of the learner's state of knowledge. It is an active mental process that occurs within the learner. Mental processes are influenced by both intrinsic and extrinsic factors which eventually bring about learning in an individual. The learner is an active participant in this process which includes information processing, insight, memory, awareness, and meta-cognition. Cognitive psychologists visualize the learner mind as an information processor (like a computer).

Cognitive psychologists share with behaviourists the belief that the study of learning should be objective and that learning theories should be developed from the results of empirical research. They believe that the different processes regarding learning can be explained by analyzing the mental processes. They assume that effective cognitive processes will make learning easier and enables the mind to store new information in the memory for a long time. On the other hand, ineffective cognitive processes will lead to learning difficulties.

Cognitive psychologists have a major interest in mental structures. They believe that the mental structures are active and memory can be constantly reconstructed through the integration of current experience with prior knowledge. According to Schema theory, our prior knowledge is stored in the form of schemata. Schema is an organized set of mental representations, each of which includes all the knowledge of a given type of object or event that we have acquired from past experience. It contains the sum of knowledge of the world from different aspects of the environment, exists at a higher level of generality than our immediate experience with the world, consists of concepts that are linked together in a proposition, dynamic, amenable to change by general experience or through instruction, assimilation, and accommodation, and provides a context for interpreting new knowledge as well as a structure to hold it (Winn & Snyder, 1996).

Jean Piaget was one of the most influential cognitive psychologists who believes that thinking is action-based and that learners acquire knowledge through their own actions. Thus, education should be built on the interest of the learner and their natural tendency to react with their world in their attempts to understand it. Knowledge is most meaningful when learners construct it themselves rather than having it imposed upon them (Miller & Vernon, 1997).

Therefore, to help learners to learn successfully, the learning environment should be active, discovery-oriented, support the activity of the learner, helps active self-discovery, and encourages learner to initiate and complete their own activities. The learner's interactions with their peers are important for cognitive development: peer interactions are

essential for helping learners move beyond egocentric thought. Hence, learning relies mainly on active experimentation and discovery, where learners practice active roles, and learn mostly by discovery techniques, with an emphasis on creation. It is necessary to adopt instructional strategies that make learners aware of conflicts and inconsistencies in their thinking equilibration, i.e. learners must experience disequilibrium, or an imbalance between their current cognitive structures and new information to be assimilated in order to enable them to move toward a new stage of development.

To summarize, Cognitivism gives two fundamental assumptions: memory is an active organized processor of information, and prior knowledge has a crucial role in learning.

6.3.3 Social Cognitivism:

This theory includes the following basic assumptions that illustrate processes and aspects of learning:

- People learn, gain knowledge and adapt or change their behavior by observing behaviors of other people.
- People repeat their behavior by putting them in a comfortable environment with suitable sufficient accessible materials. This will motivate them to retain the newly learned knowledge and behavior as well as apply them.
- People improve their newly learned knowledge or behavior by applying it.
- Effective learning, especially for adults can be achieved when the learner makes good coping mechanisms against stressful environment and negative personal characteristics. People have the ability to control their behaviors even within unfavorable environments.

Social Cognitivists rely on the idea that people learn by observing what others do and will not do (first assumption). The individual person (and therefore cognition) is an important factor in determining moral development (Farlex, 2002 & Sincero, 2011).

Social Cognitivists describe learning in terms of the interrelationship between three interrelated types of factors that affect learning: behavioral, environmental and personal factors (McLeod, 2007) as represented in Figure 2, which implies that the learner should have positive personal features, show suitable behaviors, and live and interact in a supportive environment to achieve effective learning. This implies that the learner acquires knowledge as their environment converges with their personal characteristics and personal experience. New experiences are evaluated with respect to prior experiences, which helps guide the learner to how the present situation should be investigated.

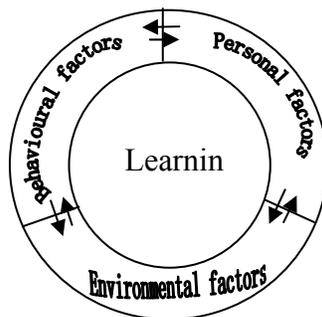


Figure 2. Factors Affecting Learning According to Social Cognitivists Theory

6.3.4 Constructivism:

Constructivism is a synthesis of multiple theories merged into one formula. It is an integration of ideals of both behaviorism and cognitivism. Constructivists believe that learning is a change in meanings constructed from experience. Learning is a process of constructing meanings; it is how people make sense of their experience. When reacting with their environment, the learner constructs meanings depending upon their previous experiences. The environment influences internal processes and at the same time, internal processes influence the environment (Merriam, Caffarella, & Baumgartner, 2007). This mutual reciprocal effect shows that the person uses their cognitive abilities and their perceptions to understand their environment. This implies that person uses a self-directed learning style, which matches well the current adult learning theory.

When applying this theory to independent learning, it is essential to consider the cultural environment in which learning happens. Although adult learning is self-directed, it must have input from outside influences, this may be

investigations, social interactions, or more prescribed learning environments. This implies that curriculum should be designed around the experience of students.

Constructivists believe in student-centered learning. This learning will support the commitment and involvement of self-motivated learners because of their high level of interaction. Currently, there is a trend for incorporating technology into the classrooms to support instructional learning methods. Yet, recent studies have revealed technology is not effectively integrated with the concepts of constructivism. Nevertheless, constructivist methods of instruction by employing computer technology have been developed to meet the instructional goals and conditions. Regardless, the method of instruction utilizing technology can be applied in various approaches.

Constructivists' main theme pertaining to learning is that it is a process in which the learner is able to build on present and previous knowledge. The student is able to take information, create ideas and make choices using a deliberate process. It is important to assure that instruction builds on what has already been learned. This corresponds to the adult learning theory which underscores experiential learning.

Constructivists believe that learners build knowledge actively through their interaction with environmental stimuli. In other words, learning focuses on the learners' questions and exposure. Assessment should avoid standardized tests and grades such as achievement tests designed with multiple choices to test subject-specific knowledge. Assessment appears during the learning process, so that students play an important role in examining their own progress (McKee, 2006).

6.3.5 Social Constructivism:

Social constructivism is a variety of cognitive constructivism that emphasizes the collaborative nature of much learning. Vygotsky was a cognitivist, but he rejected the assumption of cognitivists that it is possible to separate learning from its social context. He believed that all cognitive functions originate from social interactions; therefore we must explain them as products of social interactions. Consequently, learning is the process by which learners integrate into a knowledge community; it is more than mere assimilation and accommodation of the new learned knowledge (Vygotsky, 1978).

To understand and apply the models of instruction imbedded in the social constructivists' views, it is important to identify the main assumptions underlying them. These assumptions are:

- Reality is constructed through human activity. Members of a society together invent the properties of their world. Reality cannot be discovered: it does not exist before it is invented by society.
- Knowledge is a human product, which is constructed socially and culturally.
- Through interactions with each other and with their environment, learners create meanings.
- Learning is an active social process. It does not happen only within an individual, nor is it a passive development of behaviors shaped by external forces. Meaningful learning occurs when individuals are engaged in social activities. The importance of culture and context in understanding what occurs in society and constructing knowledge is based on this understanding (McLeod, 2007). As a result, we create knowledge in our own heads and each of us may interpret that created knowledge differently.

6.4 Teaching and training approaches for adults

By reviewing the previous learning theories (Humanism, Cognitivism, Social Cognitivism, Constructivism, and Social Constructivism,) which highlight adults learning, we can extract the following learning major assumptions about the learner, the learning process, and the learning environment:

- Learning is an active, social process and reality is constructed through the learner's activities.
- The learner should actively participate in the learning process. They should be self-directed, creative, innovative, and responsible for their learning.
- The learner's prior experiences and existing neurological structures (schemata) are crucial to build on and create new cognitive structure.
- The learner should be involved in the diagnosis of their needs, suggestion of learning objectives, building learning environments, activities suitable for the needs, and cooperative learning.
- Learning environments should be democratic, safe, collaborative, social and communicative, motivating and helping exchange of ideas.
- Content of learning must be relevant to the learner's needs and life problems.

- Knowledge is actively constructed and not fed; it should be discovered as an integrated whole.

The afore-mentioned assumptions are compatible with the five assumptions underlying andragogy as Malcolm Knowles argued that the adult learner exhibits independent self-concept and can direct their own learning, has accumulated prior experiences, their learning needs are closely related to their social and work life, are problem-centered and interested in immediate application of knowledge, they are motivated by internal rather than external factors.

Depending on the seven previous suppositions and the researchers’ experiences, we believe that teaching and training require the application of many approaches and strategies that satisfy the individual learners’ differences, interests and needs. Most learning strategies from the constructivist point view rely on some form of guided discovery, hands-on experiences, develop social interactions, and fulfill the interests of learners.

Relying on these findings, the researchers call on educators to exploit the following approaches and strategies which literature has proven appropriate for adult teaching and training (Cafarella, 2011, EuropeanCommision, 2012), and SaskatchewanEducation, 1991).

We can classify the most recommended approaches according to this literature into two main categories relying on the role they gave to the learner during learning process. These categories are: Teacher-Learner-Centered approaches and Learner-Centered approaches. Teacher-Learner Centered Approach is represented by Indirect Instruction, while Learner-Centered Approach is represented by two types of learning namely: Interactive experiential learning, and Independent Learning.

Many strategies can be recommended to take place with these approaches. These strategies are: experimentation, research projects, field trips, group discussions, open-ended questions, reciprocal learning, and cooperative learning. Figure 3 illustrates a continuum of recommended strategies that extend from lower-learner participation to full-learner participation where the learner is completely independent during the learning process to achieve the desired outcomes.

This continuum also indicates how teaching or training activities should move from direct instruction to indirect or independent learning activities. This reasonable movement represents a transition from traditional teacher-centered to learner-centered approach. This implies that by giving the learner more freedom to manage their learning, and to be self-directed, the learner will be more motivated and will actively participate in the learning process. This has a crucial application to teaching and training adults based on most learning theories that are applied to learning paradigm in the twenty first century.

This eclectic combination has fundamental applications in adult teaching and training in line with the most contemporary learning theories and practices.

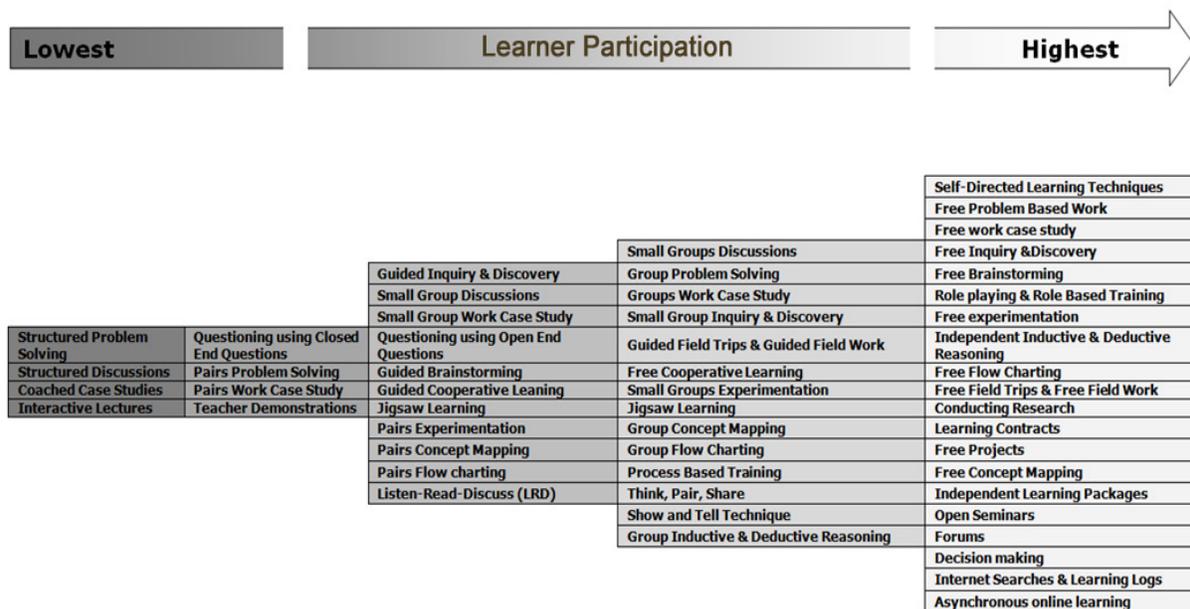


Figure 3. Continuum of Recommended Teaching and Training Strategies

7. Conclusions and Implications

Learning is simultaneously an active social and mental process. It takes place when the learner interacts with the environment and the mind creates new structures modifying already existing ones, and thereby the state of learner's cognitive experiences changes. This explains the mechanism learners constantly employ to re-construct their behaviors, skills and attitudes.

According to this bases, SAU framed its theoretical framework for teaching and training. SAU believes that teaching and training activities are a creative and collaborative process which includes learner-instructor, or learner-learner interactions in learning situations. To initiate and facilitate learner-environment interactions and to maximize the quantity and quality of learning outcomes, instructors, trainers and program designers are invited to reinforce the following principles:

- Adult learners are self-dependent, active, intrinsically and extrinsically motivated, goal-oriented, and (actively) participate in the learning process. Relating instructional goals to learners' lives and careers, by giving immediate practical applications, creating problem-based learning situations, and asking relevant open-ended questions, using ice-breaking techniques, motivating learners, giving them control over their own learning are important to engage learners actively from the beginning.
- Understand learners and collaborate with them to develop the learning outcomes; plan the learning environment to offer a safe, secure and democratic learning environment. This environment should be comfortable, collaborative, and rich with concrete learning resources; ensure mutual respect; maximize challenge and scaffolding, non-directedness; and respect the learner's dignity and experience.
- Experience is a key factor for learning; it is the pillar on which new knowledge is built. Therefore, assessing and exploring learners' prior-experience and needs are crucial factors to set and prioritize goals and to initiate a teaching-learning situation. Relating instructional goals to learners' lives and careers, by giving immediate life applications of the introduced knowledge and activities, creating problem-based learning situations, and asking relevant open-ended questions.
- Adults have various divergent abilities and learning styles, so "one size fits all" doesn't work here. Therefore, using blended learning strategies, accompanied by different learning techniques, work better in order to cope with the learners' individual differences and ensure meaningful learning.
- Assessing the learners' achievement and giving them constructive feedback about their progress guarantees the accuracy of the learning path, initiates true learning and guarantees their involvement.
- Adopt and implement a certain strategy or a hybrid of strategies suitable for learners, subject matter and the available resources.

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