***Chapter(1)***

***Definitions and importance of self-directed learning***

Globalization is dramatically shifting the nature of life and work. Knowledge is doubling every few years. Technology is transforming the way we live and the way we work. Work itself is transformed from the well-protected lifelong job to the precarious short-term performance contract. Students must know how to learn every day, how to adapt to rapidly shifting circumstances, and how to take independent initiative when opportunity disappears. Self directed learning (SDL) prepares students for this new world in which the active learner survives best *(****Mohammadi and Mahdi -Araghi, 2013).***

Current educational theories take into consideration the fostering of essential skills, such as self-directed learning in an educational environment which coincide with 21st century society’s turbulent demands ***(Bagheri et al., 2013)***

Learning theories can be grouped into four main categories: behaviorism (e.g. Skinner's theory), cognitive (e.g. Lewin's approach, Ausubels' theory, Kolb's learning styles), humanistic (e.g. Rogers' and Mezirow's theory) and social (e.g. Vygotsky's and Bandura's theory) perspectives on learning. The focus of the theories or approaches vary from passive (behaviorist) to active learning (others). The concept of self-directed learning is based on active learning and the principles of adult education *(****Montin and Koivisto, 2014).***

We usually expect learning to take place in educational institutions under the direction of a teacher based upon a textbook and a systematic course. However, this is a narrow view toward the learning process because learning does not cease outside the confines of the classroom. Learners usually conduct much of the learning process outside the boundaries of a formal classroom ***(Mohammadi and Mahdi- Araghi, 2013).***

Many similar terms like self-regulated learning, autonomous learning, self-planned learning, self teaching and independent study are used in the same meaning and context, and the differences between them are often subtle and inconsistent which has caused them being used interchangeably by many researchers *(****Saks and Leijen****,* ***2013)****.* In addition, SDL has been frequently used interchangeably with problem-based learning (PBL) *(****Murad and Varkey, 2008).***

Within cognitive psychology, self-regulated learning has been considered students’ independence in learning. Self-regulated learning is an active, constructive process whereby learners set goals for their learning and attempt to monitor, regulate and control their cognition, motivation, and behaviour, guided and constrained by their goals and contextual features on the environment **(*Jossberger et al, 2010).***

In a self-directed learning environment, students have more freedom to generate and pursue their own goals, and undertake critical evaluation of the materials they select. The self-directed learner initiates the learning task, whereas in self-regulated learning, the task can be set by the teacher *(****Robertson, 2011).***

However, the concept of self-directed learning continues to be elusive, with students and educators finding difficulty in defining it and agreeing on its worth ***(Murad and Varkey, 2008).***

The definitions depend on the kind of view that scholars had toward SDL. Some believed that SDL is an instructional process in which the learning is centered on all external factors of learners. Others emphasized personal characteristics internal to individual learners which enable them to pursue SDL successfully. Some other scholars approach SDL from the viewpoint of social, experiential, and political aspects *(****Mohammadi and Mahdi -Araghi, 2013).***

SDL is defined as “a process in which individuals take the initiative, with or without the help of others” to diagnose their learning needs, formulate learning goals, identify resources for learning, select and implement learning strategies, and evaluate learning outcomes***(Kan’an and Osman , 2015).***

Self -direction in learning refers to both the external characteristics of an instructional process and the internal characteristics of the learner, where the individual assumes primary responsibility for a learning experience*(****Saks and Leijen****,* ***2013).***

Hiemstra defined SDL as any study in which individual learners take the responsibility to plan, implement and evaluate their own learning process *(****Mohammadi and Mahdi -Araghi, 2013).***

Self-direction in learning is now recognized as a dynamic combination of attitudes and skills, essential for dealing with the complexity individuals face in all aspects of their lives ***(Guglielmino and Long, 2011).***

SDL is an approach to learning that relies on flexibility in time and place of learning and entrusts responsibilities of learning to the learner. *(****Mohammadi and Mahdi -Araghi, 2013).***

To be a self-directed learner is to have the ability to identify and achieve learning goals through the effective use of learning strategies and to understand, monitor, manage, evaluate, and reflect on one's own learning***(Bagheri et al., 2013).***

SDL is a learned phenomenon that is based on affective traits, love of learning and basic skills, and cognitive exercises *(****Mohammadi and Mahdi- Araghi, 2013).***

SDL integrates self-management (management of actions and resources), self-monitoring (the process by which the learners monitor, evaluate and regulate their cognitive learning strategies), and motivation and volition in initiating and maintaining the efforts***(Shahin and Tork, 2013).***

SDL is a state of learning in which making all the decisions related to learning are shouldered by the learner; however, main factors in implementing the decisions are necessarily given by authorities ***(Mohammadi and Mahdi- Araghi, 2013).***

Self-directed learners in a Concept-Oriented Reading Instruction (CORI) program demonstrated the ability to search for information in multiple texts, employed different strategies to achieve goals, and represented ideas in different forms such as drawing and writing *(****Shaikh, 2013).***

Considering all the definitions of SDL, it is worth mentioning that ‘self’ in SDL does not necessarily mean solitary learning or learning in isolation. However, there is important role of human resources such as friends, colleagues, and experts in that area of knowledge and material resources like books, magazines, and journals in providing help for SDL*(****Mohammadi and Mahdi -Araghi, 2013).***

Self-directed Learning Readiness’ is defined as the degree that the individual possesses i.e., the attitude, abilities and personality characteristics which are necessary for Self-directed Learning. Improving a student’s ability to be self-directed in learning has been accepted by many as an important goal of higher education*(****Devi et al, 2012).***

Given the continuous advances in the biomedical sciences, health care professionals need to develop the skills necessary for life-long learning. Self-directed learning (SDL) is suggested as the methodology of choice in this context ***(Murad et al.2010).***

[Self-Directed Learning](http://www.teachthought.com/learning/self-directed-learning-model-21st-century-learners/) is not new, but is perhaps misunderstood. Studied in terms of adult education and vocation for years, self-directed learning is increasing in popularity for a variety of reasons, including growing dissatisfaction with public schooling, and the rich formal and informal learning materials available online***(Heick, 2014).***

Self-directed learners demonstrate, in comparison to their peers, a greater responsibility to learn and independent monitoring of their learning, thus making their learning meaningful. They view problems as challenges, seek change, enjoy learning, inspired, determined, independent, self disciplined, self-confident and goal-oriented ***(Kan’an and Osman,2015).***

Self-directed or independent learning has been studied with different perspectives and methods, with some positive outcomes. Self-directed learning has been found to have many advantages. It increases students' options, self-confidence, independence, motivation and also the development of different skills for lifelong learning (***Montin and Koivisto, 2014).***

Self-directed learning in education and self-education are the foundations of lifelong learning. Continuous education designates how to respond to the changing requirements of the natural and social environment. It is not limited in time, accompanying the human being throughout life. Lifelong education is a responsibility of individuals, groups, organizations and institutions ***(Siminică and Traistaru, 2013)****.*

In educational institutions at all levels, the development of skills and attitudes supportive of self-direction in learning is now often an integral part of mission and goals statements. Accreditation standards of medical programs incorporate a requirement for evidence of preparation of future doctors, nurses, pharmacists, and physical therapists, among others, for future lifelong, self-directed learning ***(Guglielmino and Long, 2011).***

The Liaison Committee on Medical Education (LCME) endorsed accreditation standards in 2004 that promote flexibility and innovation in learning and provide medical students with skills necessary for self-directed learning. The Accreditation Council for Graduate Medical Education(ACGME) recommended that residents should become self-directed learners, evaluate their learning with innovative tools such as computerised diaries and portfolios, and facilitate the learning of others. The American Board of Internal Medicine (ABIM) recommends that a basic component of the maintenance of certification programmes that physicians become lifelong learners and be involved in a periodic self-assessment process to guide continuing learning. *(****Murad and Varkey, 2008).***

The development of basic skills such as self-directed learning is the foremost priority of experts in educational technology. Due to the close relationship between educational technology as a field of study on the one hand and technological progress as a fact on the other, the very nature of this field has undergone tremendous shift which has resulted in a transmogrification, changes which are evinced by the roles of specialists**. *(Bagheri et al., 2013).***

Each individual in an organization must be constantly alert to opportunities to improve products, systems, or services; and they must be capable of learning what they need to know in order to do that. There can no longer be a few visionaries assessing the needs of organizations and passing the needs along to trainers who design programs. Change is happening too fast. The old training approach, normally based on a “carrots and sticks” mentality, has been demonstrated in research to actually reduce motivation for task completion and for learning in many situations ***(Guglielmino and Long, 2011).***

Over-reliance on extrinsic motivation both in business and in education is not only outdated, but often harmful. Referring to externally-imposed rewards and punishments as “carrots and sticks,” “can often achieve precisely the opposite of their intended aims”. Rewardsand punishments can extinguish intrinsic motivation; diminish performance; crush creativity; crowd out good behaviour; become addictive; foster short-term thinking; and encourage cheating, shortcuts, and unethical behaviour. In contrast, SDL approaches encourage intrinsic motivation, enhance performance, and are associated not only with creativity, but with a wide variety of other desirable characteristics ***(Guglielmino, 2013).***

The importance of self--‐directed learning has been discussed over four decades. Self-directed learning is described as a means of survival for individuals and the human race living in a new world.Self-directed learning is an effective mode of Learning for individuals since it encompasses the capacity to cope with constant changes. To elaborate the high speed of information changes in our society requires individuals to learn throughout their lives and to direct themselves in acquiring information and knowledge to be able to survive and compete with others*(****Prabjandee and Inthachot, 2013).***

Continuous education aimed at continuing training throughout the professional career (either to update knowledge and skills, or for training and retraining or reorientation and reintegration. In all civilized societies participation in community life entails the continuous learning necessity .The main factors that make continuous education necessary are accelerated changes in the technical and scientific domain, demographic explosion, machines taking over human functions, multiplying professions, social freedom gained because of democratization (***Siminică and Traistaru , 2013).***

In a self-directed learning process, students are encouraged to develop the ability to assess their knowledge deficit and then seek out relevant resources to help them address this deficit. They may use their own knowledge, explore the available resources, and make an informed judgment when selecting the solutions to problems ***(Shahin and Tork, 2013).***

The person who performs a productive self-orientation does not doubt his competence when the first failure is encountered. The individual analyzes and evaluates the successes and failures with criticism and concludes on the effectiveness of cognitive processes engaged in learning situation and the behavior adopted **(*Siminică and Traistaru, 2013).***

It is essential for students to be self-directed learners in order to experience effective university as well as lifelong learning. There is convincing evidence that people who take the initiative to learn tend to learn more and better than those who fail to do so. Students who exhibited more self-directed learning behaviors tend to perform better academically than students who did not ***(Bagheri et al., 2013).***

With the relentless advance of Internet technologies, online learning has gained greater attention from schools and private organizations. Online learning requires adult learners to have some preparations and skills beforehand. Factors such as adult learners’ fluency and perception in using Information and Communication Technology (ICT), particularly in network literacy, and their Self-Directed Learning Readiness (SDLR) can be critical elements in determining the effectiveness of online learning ***(Lai,. 2011).***

Self-directed learning as a prerequisite for online courses in the context of distance learning is confirmed. It was found that there is a positive relationship between the level of self-directedness, measured by a self-directed self-assessment test and the final course grades***(Mohammadi and Mahdi -Araghi, 2013).***

Despite the documented benefits of SDL, and despite the efforts of some outstanding educators, the standard approach to learning in most classrooms remains didactic instruction predominantly lecture and test, perhaps with some discussion. There are many possible reasons including the tendency to teach as one was taught; demands of highs takes testing for “coverage” and memorization, the ease of using or adapting old lecture notes and tests and assigning a grade based on primarily quantitative evaluation; increasing class sizes that make it more difficult to use authentic assessment ***(Guglielmino, 2013).***

There is also a negative student responses when a medical school faculty moved to a problem-based learning approach. The students, knowing they were facing comprehensive medical board exams, wanted to be told exactly what to memorise rather than gaining their knowledge by solving realistic problems***(Piskurich, 2011).***