SELF DIRECTED LEARNING (SDL) IN MEDICAL EDUCATION

(Dr. Shaista Saiyad, Associate Professor (HG), Department of Physiology, Smt. NHL Medical College, Ahmedabad.)

Self-directed learning (SDL) is a general term used for approach for learning, in which responsibility of learning is shifted from teachers to students.

According to Knowles, SDL is the process in which medical students take the initiative, with or without the help of others (e.g. instructors and colleagues), determine their learning needs, set learning goals, identify resources for learning, choose and implement learning strategies to acquire knowledge and finally evaluate learning outcomes.

Need for SDL:
- Current scenario– less staff-more students and information.
- Knowledge today will become obsolete tomorrow.
- Students will face different contexts during their professional career.
- Learning and engaging in continuing education.

Attribute of SDL and Life Long Learning has now been included as a part of medical curriculum by NMC in the graduate medical regulations. \

Four stages of SDL have been described by Grow:

STAGE	LEARNER	TEACHER
1	Dependent	Authority, coach
2	Interested	Motivator, guide
3	Involved	Facilitator
4	Self-directed	Delegator

Role of teacher in SDL

Concept should change from that of 'teacher' to that of 'facilitator of learning' to 'motivator' and 'designer of the learning situation '. Facilitator should-
- Be a role model for SDL
- Use all available technology
- Incorporate 'old' and 'new'
- Provide "authentic" and "autonomy supportive" environment to practice SDL skills
- Provide non-threatening environment.
- Provide feedback and encourage learner

Forms of SDL

Experiential learning: reflection, PBL, role plays, critical analysis, group work, hands-on participation, Inquiry based learning, Peer assisted learning, Integrating basic and clinical disciplines, E-Learning.

Action learning-

It is an approach wherein students are supposed to solve real problems that involves taking action and then, reflecting upon the results. This problem solving approach induces learning. Components of action learning are:

* Identification of problem.
* Formation of action learning group or team.
* Process of questioning to clarify exact nature of problem.
* Reflecting and identifying possible solution.
* Taking action on the problem.
* Teacher acts as action facilitator and helps in solving problem and reflections.
* Learning journals can be used to induce greater reflection and enhance learning.
* Learning is primary goal, though problem solving is real and important.

Situated learning:

The major elements around which situated learning revolves are:

* Content: In situated learning, no importance is given to retention of content, but is based on reflective and higher order of thinking.
* Context: Learning occurs within a context only, rather than abstract learning in classroom. According the situated learning theory, knowledge does not transfer across contexts, but learning occurs in the same context where knowledge will be used.
* Community: group where learner will create, interpret and reflect.
* Participation: working with others for problem solving.

Greatest advantage of situated learning is, it facilitates skills of learners in working as team members, helps in problem solving skills, provides opportunities to practice multiple skills: self-directed learning.

Greatest limitation to situated learning would be its implementation in traditional curriculum, where teachers are required to meet specific learning outcomes within limited time. Also, according to situated learning, there is no transfer of knowledge or skills between tasks (it is context specific). How do we explain application of previous knowledge to new tasks for faster learning? However, if feasible, it is pure SDL.

Strategies to promote SDL:

A few strategies to promote SDL are- problem based learning, flipped class, knowledge maps, reciprocal teaching, student-doctor concept, technology enhanced learning, group projects, learning contracts, reflective portfolios.

Advantages of SDL-

Lifelong learner- Initially we may be partially or totally dependent on mentors, but later on, a point comes, when even if mentors are not there, learning continues.

Candy, usefully distinguished three meanings of the term "self-directed learning": autonomy as a personal quality; auto didaxy as learning outside formal instruction; and learner-control (along with teacher-control) as an essential consideration of formal instruction. In those terms, this article uses "self-directed learning" to refer to the degree of choice that learners have within an instructional situation. Staged Self-Directed Learning Model proposes that learners advance through stages of increasing self-direction and that teachers can help or hinder that development. Good teaching matches the learner's stage of self-direction and helps the learner advance toward greater self-direction.

'To learn is human'. In fact, 'acquiring' (leaning) is basic human tendency, whether it is medicine or any other process. No doubt, certain learning processes may be innate, but if they lack direction, it can act as double edged sword. As was rightly quoted by Toffler, 'The illiterate

of the 21st century will not be those who cannot read and write, but those who cannot learn, **unlearn**, and **relearn**'. The process of learning enhances and becomes effective if learning is facilitated appropriately. Same applies to SDL: If learners are guided (taught) in appropriate direction, they reach highest stage of learning: lifelong learners. Teaching SDL can help learners become proactive.

It has been shown by studies that undergraduates can be guided towards SDL through wisely designed study material.

Monitoring of SDL:

Effective monitoring is the key to self-learning and should be longitudinal. Monitoring can vary from dependent stage to complete SDL stage of learner. It provides feedback to learners regarding their own learning. Ultimately, self-monitoring is hallmark of SDL.

SDL can be monitored by-

* Learning portfolios: These are purposeful selection of works by the students and their reflection on learning.
* Learning contracts: As the name suggests, it is written contract with inputs from teacher as well as learner regarding initiative, goals, process, assessment and evaluation of SDL.
* Student's self-assessment questionnaire, usually based on likert scale.
* Rubrics
* Teacher's assessment: Assessing students SDL behavior, teacher's self-assessment for scaffolding students for SDL.

Further reading:

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