

EDITORIAL

SELF-REGULATED LEARNING: A FAD OR A NECESSITY?

It has been ascertained that better patient care is directly linked to lifelong learning by physicians, which requires personal monitoring in the form of Self-Regulated learning (SRL). As a result, Continuing Medical Education (CME) and quality of healthcare go hand in hand with each other. However, effective CME is not possible without SRL. On the other hand, evidence concerning medical schools and postgraduate institutions successfully helping students become self-regulated learners, is scarce. This is despite presence of outcomes such as: 'lifelong learning' at both undergraduate and post-graduate levels across the world, indicating absence of any structured effort to train learners in SRL^{1,2}.

Nevertheless, literature not only reports features and practices of self-regulated learners but also clarifies strategies that can be used to engage in SRL, verifying the learnable nature of this skill. On the other hand, both uniform and methodical understanding of SRL is yet to be achieved as there have been numerous inconsistencies in defining SRL, subsequently leading to different interpretations and understanding of SRL. This naturally hampers sound comprehension at consumer level such as: teachers and students³.

Until now, SRL has been studied in a narrow perspective of self-assessment, which is meant to create awareness about one's knowledge and skills and to find ways to address respective weaknesses⁴. However, accurate self-assessment is a difficult task for physicians and especially for those who are least capable but most self-assured. On the other hand, precision in self-assessment is crucial as without it, it is tough to focus on self-education in one's weak areas, hence making it a prime focus of ongoing research^{5,6}.

SRL is a complex phenomenon influenced by each individual's psychological dimensions such as self-efficacy, motivation, beliefs, learning style, personal choices such as effort and learning

strategies, judgment (self-assessment, attribution) and personal actions, which include goal setting and adjustment⁷.

Integration of SRL into educational programmes in a logical way is considered central in promoting life long learning since early training in practicing SRL can bear good fruits in the long run especially when learners start working independently as physicians after graduation^{2,8}.

The hallmark of effective SRL is⁹ :

- Monitoring supported by
- Timely and specific feedback

In order to ensure that desired learning outcomes have been achieved. For realization of a reliable and evidence based SRL model across the continuum of medical education, educational psychologists have proposed four step cycle of SRL that comprises²:

1. Planning
2. Learning
3. Feedback/assessment
4. Adjustment

This 4 step cycle takes SRL beyond simple metacognitive awareness as it provides learners with a framework to^{2,10}:

- a. Set personal goals
- b. Ponder on what they contribute to a learning experience as unique individuals
- c. Monitor (i.e. self-assess) their learning
- d. Make adjustments to ensure that they meet their goals

Each step of SRL cycle, commencing from planning to its conclusion at adjustment, provides explicit guidelines to both students and teachers to engage in meaningful independent learning as explained below:

Planning

Effective self-regulation calls for setting of some personal goals. These goals influence our decisions regarding learning as goals are to be matched with relevant learning strategies to ensure achievement of goals. It is of note worthy that goals are specific measures against which we can self- assess our learning and performance and they have a strong impact on motivation to learn.

In the cycle of SRL, goal accomplishment positively influences self-efficacy (individual's belief in his or her ability to achieve specific goals), which augments motivation to remain engaged in learning and even pursue more challenging goals^{2,11}.

Learning

It is persistent change in performance or performance potential of an individual as a result of experience and interaction with the world. This definition highlights the unique nature of each individual's learning experience, which is, in turn, influenced by discrete perceptions and interactions with the environment as they are affected by personal characteristics such as intelligence, personality, beliefs, experiences and culture. It is important to note that there is no absolute way to define that how and when learning is most effective. In a nut shell, educators must understand that their own and their learners' beliefs about learning can influence each learning experience. In addition, role of individual learning styles in shaping up the effectiveness of learning, cannot be ignored either².

Feedback and assessment

Feedback and assessment are key components of SRL. Idealistic orientation suggests that self-regulated learners can independently generate criteria against which to monitor/assess their progress as they create their own goals for achievement, anticipating that they will systematically monitor and interpret their progress against goals and adjust, as needed. However, realism suggests otherwise since

learners' interpretation of their progress can vary in accuracy because they hold differing beliefs about learning and about their own self-efficacy. Likewise, every self-regulated learner may also not have awareness of his/her learning deficits since 'you don't know what you don't know'! Hence it may lead to erroneous monitoring of one's learning since a learner can imagine mastering what he or she intended to and terminates learning activities before accomplishing goals. Variety of reasons may be responsible for flawed self-assessment such as learners' selection of learning strategies. If the strategy and learning goals are not aligned with each other, the same faulty thinking that led to adoption of a particular strategy may contribute to incorrect judgment of progress towards goals. Therefore, it is critical that learners also receive timely, targeted and systematic external formative feedback from an expert, in addition to self-generated internal feedback. This will help them improve their learning and will foster skills for effective self-monitoring and SRL among them¹²⁻¹⁴.

Adjustment

Finally in SRL, learners need to integrate both internally and externally generated feedbacks in order to identify both progress or any failure and then take actions accordingly, called: adjustment. Adjustment is either in the goals or strategies and necessitates reflection for effective integration of feedback in addition to good understanding of attribution theory for appropriate action. Adjustment is at the heart of effective SRL and is positively influenced by encouraging external feedback and evidence of improvement in learning as both raise self-efficacy and motivation to pursue even more difficult goals. Negative external feedback, on the other hand, can diminish self-efficacy and motivation, especially when learners' emotions cloud their understanding regarding adjustment. If unrealistic goals and poor strategies are held responsible for inadequate performance, learners will modify them and are most likely to continue

with SRL. Whereas, placing the blame on self (not capable enough) or on others (teacher is biased) can adversely affect SRL and can also hamper realization of goals^{2,15-17}.

CONCLUSION

Lifelong learning is an essential pre-requisite for both maintenance of professional competence of doctors and for better patient outcome. Evidence suggests that without effective SRL, lifelong learning remains, unrealistic. SRL has distinct components with multiple educational dimensions, which can be mastered. Accurate self-assessment is the most prominent trait of SRL and requires skilled educators to train learners in more authentic self-assessment. Integration of SRL in the formal curriculum at both undergraduate and postgraduate levels can hone essential skills in doctors to actually become lifelong learners in their professional careers.

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