ScientificScholar®
Knowledge is power
Publisher of Scientific Journals

www.aujmsr.com

Adesh University Journal of Medical Sciences & Research

Educational Forum

Let's be FAIR to our students

Swapnil Paralikar

Department of Physiology, Government Medical College, Bhavnagar, Gujarat, India.

***Corresponding author:**
Swapnil Paralikar,
Department of Physiology,
Government Medical College,
Bhavnagar, Gujarat, India.

drsparalikar@gmail.com

Received: 24 March 2022
Accepted: 25 April 2022
EPub Ahead of Print: 16 May 2022
Published: 20 June 2022

DOI
10.25259/AUJMSR_10_2022

Quick Response Code:

ABSTRACT

In order that learning of the students is enhanced, it is necessary that teachers practice the FAIR principles. These include: Giving effective feedback to the students regularly, practicing active learning approaches in the classroom, making an endeavor to tailor learning to the needs of individual students, and making the basic sciences relevant. This paper discusses these FAIR principles.

Keywords: Medical education, Active learning, Feedback, Flipped classroom, Vertical integration, Early clinical exposure

The National Medical Commission in India has rolled out a Competency Driven Curriculum from the year 2019. The two key stakeholders of any curriculum are the teachers and the students. In order that students learn better, the pioneering medical educationist, Ronald Harden, has proposed the "FAIR" principles for medical education. FAIR stands for:
F – Feedback
A – Activity
I – Individualization
R – Relevance [Figure 1][1]

Let us now consider each component of the FAIR principles separately.

FEEDBACK

Feedback is information provided to the leaner to modify his thinking or behavior to improve learning. Teachers seldom give constructive feedback to their students. Previously, feedback was provided in a judgmental manner. At the other side of the spectrum, recently, many faculty fails to convey negative performance in a meaningful manner to the learners. This manifests in what is known as the MUM Effect – Mute about Undesirable Messages. This may result from the communicator's concern about the student's feelings or adhering to the current social norm of "matey" behavior. This MUM effect leads to a DAD Effect – Delay in giving the message, Avoiding giving the message, and Distorting the message or "sugar coating" the feedback. As a result, teachers fail to give constructive feedback. This escalates into a tendency to fail to fail the students or inflates their grades. Obviously, the student fails to achieve the desired competency.[2]

The success of the Competency Driven Curriculum rolled by the National Medical Commission will depend on the success of competency-based assessment. The latter, in turn, is dependent on the quality of formative assessment. Feedback is the central for effective formative assessment. In

addition, it is now known that feedback has a powerful effect on student learning. According to Hattie and Timperley, "the most powerful single thing that teachers can do to enhance achievement of their students is to provide them with feedback."[3] Hence, it is paramount to obviate the MUM and DAD effect while providing feedback to students.

While there is a myriad of models for giving feedback, Kern has advocated the DISC method for giving feedback to students. This involves:

Description – Describe the learner's performance in a clear and unambiguous language.

Impacts – State the impact of the performance on the learner and the organization.

Specify – Specify what modifications or corrections need to be done.

Consequences – Explain the consequences of not taking corrective action unambiguously to the learner. In addition, motivate the learner by highlighting the benefits of taking corrective action.[3]

The DISC method could be a vital armament in a teacher's repertoire to overcome the MUM and DAD effect while giving feedback to students.

ACTIVITY

Conventionally, knowledge has been imparted by the teachers to their students as a one-way street. William Osler, the father of modern medicine, summed up the age-old practice of lecturing, with these poignant words, "Lecture is something where the notes of the teacher are passed to the notes of the student, without passing through the brain of either." However, medical students are adult learners. According to the principles of adult learning, these students would learn better by engaging in an activity. In his seminal paper, "Where is the evidence that active learning works?" Joel Michael vehemently puts forth the case for active learning. He cites the basic tenet of "constructivism" to support his argument. According to him, not only would students learn better by actively constructing knowledge, there would be an added advantage that the gained knowledge does not remain "inert." This is ensured by a valid "transfer" of the knowledge, that is, application in a new setting.[4] Recently, a meta-analysis of 225 studies of outcomes in undergraduate Science, Technology, Engineering, and Mathematics courses clearly demonstrated superior outcomes for active learning approaches. Thus, there is now ample evidence to support active learning approaches.[5]

Active learning needs to be incorporated routinely in our teaching-learning activities. During lectures, some of the feasible interactive strategies even in a large class are as follows:

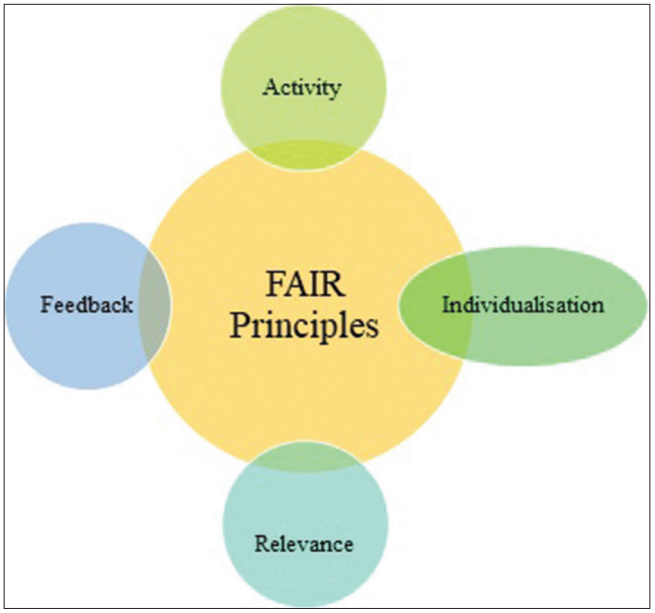

Figure 1: The "FAIR" principles.

- Questioning
- Brainstorming
- Think-pair-share
- Buzz Groups

Small group teaching, by its very definition, should incorporate active learning. The Jigsaw method is a useful technique to foster engagement in a small group teaching session. The Flipped Classroom is a newer pedagogical tool wherein the lecture and homework elements of the course are reversed. The lecture time can then be utilized to engage students in group work to facilitate better understanding, fostering problem solving, and critical thinking skills.[6] Thus, practicing active learning during our teaching-learning will go a long way to enhance students' learning.

INDIVIDUALIZATION

Ideally, the teaching-learning activities need to be tailored to each individual student. However, in our context, individualization is among the most difficult to implement.

Electives in the curriculum are a "goldilocks" educational strategy to individualize the learning experience for students. These are learning experiences that provide the learner to gain immersive experience of a career stream, discipline, or research project. Students can customize their own curriculum by selecting, directing, and organizing their learning experience based on their needs or interest.[7,8]

The new Competency Driven Curriculum has created such learning opportunities for students. It envisages a future doctor who not only is a "physician of first contact," but also a scholar. This quantum leap from doctor to scholar requires

transition through various stages such as specialist, scientist, and a researcher. During an elective, the student thus works in a clinical-, research-, laboratory-, or team-based setting. Such an experience is bound to have a profound impact on the budding physician. It may lay the foundation of a future professional pathway. The elective could be an "eye opener" for the student, by enabling him to match the ground experience with the realities of a profession.[7,8] Progression of students in an elective can be documented through portfolios. These are evidence of events which are documented in a log book.[7] However, research on electives is scarce. One study has documented the perception of students on electives. To set the ball rolling, research needs to provide evidence regarding the best practices for electives such that they provide a "satisfactory" learning experience for the students.[8]

The power of technology can be leveraged to individualize the learning experience for the students. The Flipped Classroom is a teaching model wherein the lecturing and home-work elements of the course are reversed. In 2007, Karl Fisch created a video called "Shift Happens" and has been credited with the coining of the term "Flipped Classroom." This model has been popularized by a physics professor at Harvard University, Eric Mazur, who claims that learning gains are nearly tripled with this approach.[9]

In the Flipped Classroom model, the students learn the topic before class by watching video lectures. With the explosion of easily available and high-quality videos on YouTube and similar platforms, it is no longer incumbent on the teachers to indulge in the cumbersome task of making videos for their students.[10] Students can watch a particular video recommended by their teachers. Students have the "power" to pause and repeat a section of the video and master has the prescribed learning objectives. This element of self-paced learning personalizes (individualizes) the learning experience for the student. Such individualization can facilitate "mastery learning," a concept propounded by Benjamin Bloom in the 1960s. However, the concept ebbed away because most educational institutions found it too difficult to implement. However, two acclaimed that school teachers in the United States, Bergmann and Sams, have reintroduced the concept in their classrooms in Colorado, US. They have given wings to this game-changing idea in their seminal book "Flip Your Classroom: Reach Every Student in Every Class Every Day."[11] Today, in India, public health and medical education are on the radar of the central and state governments. Hence, resources for the same are not scarce. Technology can now be leveraged to facilitate such a learning experience for all students in medical colleges across India.

RELEVANCE

A major criticism of medical education is that early part of the medical course teaches many learning elements which hardly have relevance in future practice. The knowledge base increases exponentially every year. Furthermore, skills such as communication and development of professional attributes have traditionally been neglected. Hence, it would be prudent to sharpen the focus of the basic sciences. According to the principles of andragogy, students learn better when they know why they are learning a particular topic. If students are able to apply theory to practice, there is less likelihood of knowledge remaining "inert." In this context, relevance needs to be ingrained into the competency driven curriculum. Relevance can be fostered by:

- Early clinical exposure
- Case-based/Problem-based learning
- Vertical integration[1]

In 1979, Chickering and Gamson famously said that "Learning is not a spectator sport."[12] The "sage on the stage" approach was just one of the pitfalls of traditional teaching. The basic sciences tended to drift from their prime aim of facilitating a better understanding of the clinical sciences. In addition, the race to standardize education neglected the unique traits of each student. The MUM and DAD effect robbed the students of precious opportunities for learning. Considering these lacunae, the feedback, active learning, individualization, and relevance need to be woven into the tapestry of the teaching-learning experience. It is only then can we be FAIR to our students!

REFERENCES

1. Harden RM, Laidlaw JM. Essential Skills for a Medical Teacher: An Introduction to Teaching and Learning in Medicine. Amsterdam, Netherlands: Elsevier Health Sciences; 2020.
2. Bhagat P, Virk A, Saiyad SM, Mahajan R. Failing to fail: MUM effect and its implications in education. Adesh Univ J Med Sci Res 2021;3:59-63.
3. Hattie J, Timperley H. The power of feedback. Rev Educ Res 2007;77: 81-112.
4. Michael J. Where's the evidence that active learning works? Adv Physiol Educ 2006;30:159-67.
5. Freeman S, Eddy SL, McDonough M, Smith MK, Okoroafor N, Jordt H, *et al*. Active earning increases student performance in science, engineering, and mathematics. Proc Natl Acad Sci 2014;111:8410-5.
6. Educause Learning Initiative. 7 Things you should know about the Flipped Classroom; 2012. Available from: http/net.educause.edu/ir/library/pdf/eli7081.pdf [Last accessed on 2019 Jan 09].
7. Medical Council of India. Electives for the Undergraduate Medical Education Training Program. Medical Council of India; 2020. p. 1-30.
8. Ramalho AR, Vieira-Marques PM, Magalhães-Alves C, Severo M, Ferreira MA, Falcão-Pires I. Electives in the medical curriculum an opportunity to achieve students' satisfaction? BMC Med Educ 2020;20:1-3.
9. Singh K, Mahajan R, Gupta P, Singh T. Flipped classroom:

A concept for engaging medical students in learning. Indian Pediatr 2018;55:507-12.
10. Available from: https://doi.org/www.youtube.com . [Last accessed on 2022 Mar 24].
11. Bergmann J, Sams A. Flip your Classroom: Reach Every Student in Every Class Every Day. Washington, DC: International Society for Technology in Education; 2012.
12. Chickering AW, Gamson ZF. Seven principles for good practice in undergraduate education. AAHE Bull 1987;3:7.

How to cite this article: Paralikar S. Let's be FAIR to our students. Adesh Univ J Med Sci Res 2022;4:16-9.