https://doi.org/10.37723/jumdc.v15i4.1152

J. Univ. Med. Dent. Coll.2024;Vol.15(4): v-vi
ISSN (Print) 2221-7827, ISSN (Online) 2310-5542
https://www.jumdc.com

Editorial

Open Access

Bridging theory and practice: how adult learning theories shape interactive lectures

Mukhtiar Baig [a] , Saba Tariq [b], Sundus Tariq [c]

[a]Professor, Department of Clinical Biochemistry, Medical Educationist, Faculty of Medicine, Rabigh King Abdulaziz University, Saudi Arabia.
[b] Dean, Pharmaceutical Sciences, Professor & Head, Department of Pharmacology & Therapeutics, University Medical & Dental College, The University of Faisalabad/ Post-doctoral Fellow, University of Birmingham, England, UK.
[c] Professor, Department of Physiology, University Medical & Dental College, The University of Faisalabad, Pakistan/ Department of Physiology, International School of Medicine, Istanbul Medipol University, Research Institute for Health Sciences and Technologies (SABITA), Istanbul, Türkiye.
Correspondence: drmukhtiarbaig@yahoo.com*

How to cite this: *Baig M, Tariq S, Tariq S. Bridging theory and practice: how adult learning theories shape interactive lectures. Journal of University Medical & Dental College. 2024;15(4):v-vi.*

Many learning theories/approaches have been mentioned in the literature. These learning approaches have been categorized into three classes: "a) approaches primarily based on cognitive psychology: cognitivism, learners' engagement in information processing, knowledge construction and schemas, cognitive load theory, cognitive theory of multimedia learning, constructivism, experiential learning, and reflective practice, b) approaches based on humanistic psychology: adult learning principles and self-directed learning, c) approaches based on social anthropology: community of practice, situated learning, and cognitive apprenticeship" [1]. These diverse learning theories reflect that each has its own learning context, and researchers have approached learning events differently [2].

Each learning theory covers a specific type of learning. For example, cognitivism is suitable for teaching critical thinking, clinical reasoning, and self-directed learning; behaviorism is appropriate for imparting new skills; and constructivism is ideal for training in problem-solving, clinical decision-making, and communication skills. Therefore, educators should be familiar with all learning theories to design sessions and properly deliver effective teaching [3].

Active learning is considered the most important teaching and learning strategy in medical education. However, lectures remain a commonly used teaching tool for large-group instruction. Several educators and students consider them indispensable to teaching and learning activities. While lectures often motivate students to learn, they sometimes require students to rely more on them and engage less frequently with textbooks or reference materials. In medical education, interactive lectures have replaced traditional didactic lectures because of their ability to connect, motivate, engage, and prepare learners for real-world challenges.

Adult learners differ significantly from younger students. Malcolm Knowles' andragogical model emphasizes that adults are self-directed, problem-centered, intrinsically motivated learners. Besides, they have prior experiences and learn relevant content effectively [4]. Several theories, such as Knowles' adult learning theory, experiential learning, and transformative learning theory, provide a context that allows educators to create interactive lectures filled with relevance, independence, and practical application. These principles connect theory with practice, enhance learning experiences, and foster deeper understanding and retention. It is essential to align teaching methods with these attributes to ensure the effectiveness of teaching and learning strategies and to create meaningful learning outcomes.

Interactive lectures, which align with the principles of andragogy and constructivist learning theories, promote collaboration, reflection, and critical thinking in the classroom. The literature highlights the effectiveness of active learning approaches, including think-pair-share, audience polls, and case-based discussions, in increasing engagement and information retention [5]. Engaging activities support students in actively processing information, establishing connections, and applying knowledge in challenging situations. For example, using case-based learning (CBL), team-based learning (TBL), and problem-based learning (PBL) in medical education enables students to correlate theoretical knowledge with real-world situations.

In addition, technology in this era acts as a catalyst for enhancing learner engagement. Several apps, such as Socrative, Kahoot, Poll Everywhere, Padlet, and Mentimeter, engage students during lectures and provide real-time feedback. Another important strategy that directly reflects constructivism, cognitivism, and self-directed learning is the flipped classroom model, which allows learners to review material independently before engaging in application-oriented activities during lectures [6]. These apps and techniques also align with Kolb's experiential learning cycle, which emphasizes active engagement and critical reflection. Such activities during lectures engage a large number of students at once, accommodating diverse backgrounds and learning styles.

Relevance and practical application are significant in medical students' learning. Practical and real-world contexts optimize students' learning experiences. Interactive lectures that incorporate relevance and practical application automatically engage students and motivate them to learn. For instance, CBL, PBL, and interactive simulations are considered time-tested strategies for establishing relevance in the curriculum [7]. Instructors can begin lectures with clinical scenarios relevant to the lecture content to engage students and keep them focused. This approach stimulates and motivates students by demonstrating the relevance of the clinical scenario to theoretical knowledge.

Tips to Improve Interactive Lectures

The following are a few tips to enhance interactive lectures and improve motivation and engagement in the classroom:

Interactive components: Include activities in the lectures, use questions and prompts for discussion, and utilize Socrative or Poll Everywhere for class polling. Show an MCQ and ask for correct answers by hand-raising or polling.

Visuals: Add animations, interactive cases, diagrams, and videos.

Case studies: Incorporate clinical vignettes.

Involvement: Always involve students by asking and allowing them to ask questions during the lecture.

Variety: Use various educational apps and provide diverse levels of challenge to cater to all types of learners.

Breaks: Give at least one or two brief breaks during the lecture.

Interactive lectures based on relevance promote intellectual progress and confidence because students can perceive the immediate benefit of their learning. Incorporating interactive lectures grounded in learning theories into the teaching process poses a few challenges, including technological issues, insufficient faculty training, time constraints, faculty resistance, and compromises on lecture content. However, institutional support, continuous faculty training, and an educational shift toward promoting active learning can help overcome these challenges. Faculty development programs emphasizing adult learning principles and practical strategies would help educators prepare and deliver effective content aligned with learning theories [8].

Integrating learning theories into interactive lectures is crucial for improving the quality of medical education. These theories emphasize relevance, application, and independence while cultivating problem-solving and critical-thinking skills in learners to address real-world challenges. Bridging theory and practice is not only an instructional requirement; it enables adult learners to achieve their fullest potential and paves the way for lifelong learning. Educators should ensure that instructional methods align with the demands of today's diverse learner population, who are adept at using technological tools.

ACKNOWLEDGEMENT: None.
CONFLICT OF INTEREST: None.
GRANT SUPPORT AND FINANCIAL DISCLOSURE: None.

REFERENCES:

1. Dong H, Lio J, Sherer R, Jiang I. Some learning theories for medical educators. Medical Science Educator. 2021;31:1157-1172. Doi: 10.1007/s40670-021-01270-6
2. Philips DC, Soltis JF. Perspectives on learning. 3rd ed. New York: Teachers College Press; 1998.
3. Haghani F, Masoomi R. Overview of learning theories and its applications in medical education. Iranian Journal of Medical Education. 2011;10(5).1188-1197.
4. Knowles MS. The modern practice of adult education: from pedagogy to andragogy. Cambridge Books. 1980:42-49.
5. Prince M. Does active learning work? A review of the research. Journal of Engineering Education. 2004;93(3):223-231. Doi:10.1002/j.2168-9830.2004.tb00809.x
6. Bergmann J, Sams A. Flip your classroom: reach every student in every class every day. 2012.
7. Merriam SB. Adult learning theory: Evolution and future directions. In Contemporary Theories of Learning. Routledge. 2018:83-96.
8. Steinert Y. Faculty development: from workshops to communities of practice. Medical Teacher. 2010;32(5): 425-428. Doi: 10.3109/01421591003677897