

THE IMPORTANCE OF IMPLEMENTING AUTHENTIC TEACHING AND LEARNING TECHNIQUES IN MEDICAL SCHOOL

Ibrahim Kamil Luttfi^{1*}

1. M.Sc. in Health Professions Education, Ministry of Health, Home Health Care Riyadh KSA

*Corresponding author – **Ibrahim Kamil Luttfi**

Email id – ibrahim.kamil24@gmail.com

Received: 09/08/2020

Revised:22/08/2020

Accepted: 25/08/2020

ABSTRACT

Authentic learning is the actual life learning. It is a style of learning that promote the students to create a valuable product. Authentic learning concentrate on real-world, complex problems and their solutions. The teacher becomes a guide on the side as a facilitator. Authentic learning catches all the senses allowing students to make a significative, favorable, and shared outcome. The importance of authentic teaching and learning include Students are more likely to be interested in what they are learning, students are better prepared to succeed in college, careers, and adulthood, Meet the students' learning needs, Stimulate personal motivation, Assure the much needed mental comfort and confidence, Encourage learners to assimilate and connect knowledge that is unfamiliar, Enhance transferability and application of theoretical knowledge to the real world and Students practice higher-order thinking skills. The outcome of any education system should be to send students into the world prepared for both their personal and professional lives. Education and life should not be isolated from each other. What we can do is teach our students to be adaptable and creative thinkers who are able to utilize the skills and knowledge they do have to create new solutions to problems. By giving students the opportunity to learn through authentic, real-life, relevant learning experiences, we are giving them the ability to apply their learning, to learn through doing, to see their abilities, to adapt and change, and to form the habits required to do this successfully in their lives beyond medical school.

Keyword: Authentic learning, Clinical Teaching, Team- Based Learning, Problem-based Learning

INTRODUCTION

Authentic learning is the actual life learning. (1) It is a style of learning that promotes the students to create a valuable product. Authentic learning concentrate on real-world, complex problems and their solutions.(2) The teacher becomes a guide on the side as a facilitator. (3) Authentic learning catches all the senses allowing students to make a significative, favourable and shared outcome.(4)

Educational standards for authentic curriculum and assessment:

1. Higher-Order Thinking:

This scale measures the grade to which students utilize higher-order thinking proficiency.(5)

2. Depth of Knowledge:

This level evaluates the students' depth of information and knowledge.

Knowledge is looking deep when students can "make apparent distinctions, solve problems and construct explanations. (5)

3. Connectedness to the World:

This measures the extent to which the education has importance and value.

The students act on an issue that the teacher and students see as connected to their personal experiences. (5)

4. Substantive Conversation:

This scale estimate the degree of communication to learn and understand the matter of a subject.

High levels of substantive conversation have three features:

- a) Considerable interaction with the subject substance which includes evidence of higher-order thinking.
- b) Participation of ideas that are not controlled.
- c) The dialogue that builds on participants' ideas to improve collective understanding of the topic.(5)

5. Social Support for Student accomplishment:

The social support measures the culture of the learning society. (5)

The characteristics of authentic teaching and learning: (4-5-6-7-8-9)

1. Authentic learning is centered on authentic, relevant, real-world tasks that are of interest to the learners.
2. Students are actively engaged in exploration and inquiry.
3. It requires integration of content from several disciplines and leads to outcomes beyond the domain-specific learning outcomes.
4. Students become involved in complex tasks and higher-order thinking skills.
5. Students produce a product that can be shared with an audience outside the classroom.
6. Multiple interpretations and outcomes.
7. Sustained investigation like time and effort to arrive at solutions.
8. Scenarios with multiple roles and perspectives and where expert performances and processes are modeled.
9. Collaborative activities to produce real-world performances.
10. Reflective practice as a basis for professional learning.
11. Scaffolding and coaching at critical times.

12. Assessment of authentic learning should be seamlessly integrated with a learning activity that is practical, realistic and challenging.
13. Students have opportunities for social discourse, collaboration, and reflection.
14. Ample resources are available.

The importance of authentic teaching and learning: (2-3-10)

1. Students are more likely to be interested in what they are learning.
2. Students are better prepared to succeed in college, careers, and adulthood.
3. Meet the students' learning needs.
4. Stimulate personal motivation.
5. Assure the much needed mental comfort and confidence.
6. Encourage learners to assimilate and connect knowledge that is unfamiliar.
7. Expose learners to different settings, activities, and perspectives.
8. Enhance transferability and application of theoretical knowledge to the real world.
9. Create opportunities for learners to collaborate, produce polished products and to practice generic problem-solving and professional skills.
10. Build capacity to exercise professional judgments in a safe environment and attachment to professional knowledge and principles.
11. Students practice higher-order thinking skills.
12. Students develop patience to follow more extended arguments.
13. Students improve the flexibility to work across disciplinary and cultural boundaries. Examples of authentic teaching and learning practices:(11)
 1. Problem-based Learning.
 2. Inquiry-Based Learning (Open Learning Initiative).
 3. Team-Based Learning.
 4. Simulation-Based Learning.
 5. Working with Research Data.
 6. Clinical Teaching.
 7. Role-playing exercises.
 8. Case studies.
 9. Virtual communities of practice.

Table (1): A Comparison of Four Modes of Instruction. (12,13,14,15)

	Lecture	Clinical Teaching	Team- Based Learning	Problem-based Learning.
Key Points	Active transmission of teacher specific knowledge to support learner note-taking for later study. Learners improve by organized presentations of expertise that will be included on the exam.	Confirm what students know, rather than what they do not know. It usually involves patients and clinical procedures. Learners improve through clinical processes and case presentation.	Emphasizes application of teacher-specific knowledge to address actual world problems in independent teams in a lecture-hall setting. Learners improve through problem-solving discussions in groups previously-learned information.	Emphasizes student-directed learning and use of knowledge stimulated by the challenge of solving real-world problems in tutor-led small groups.
Out comes	Content acquisition; conceptual Understanding.	Clinical practice improves the critical thinking and problem-solving abilities, specialized psychomotor and technological skills and a professional value system.	Content acquisition; understanding; improved capability to solve problems, communicate properly and work collaboratively in independent teams.	Improved ability to solve problems and reason critically; content acquisition; understanding; ability to communicate effectively and work effectively in tutor-led groups.
Role of Instructor	Set learning objectives; select content and identify learning resources. well-organized presentations with appropriate learning aids address learners' questions.	Display the capability to use a diversity of teaching techniques successfully. Have an overview and depth of subject matter along with a working knowledge.	Set learning objectives; select content and resources; assurance tests and applications to stimulate helpful group discussions.	Construct cases in such a way that they will stimulate learners to pursue relevant learning issues; facilitate small group discussions; give learners feedback and guidance as needed.
Role of Student	Attend class; study notes; prepare for end-of-unit exam.	The students inform well about working with patients whose values, illnesses and behaviors.	The Students are responsible for their pre-learning and teamwork.	Identify appropriate learning issues; do independent, out-of-class study; contribute to group discussions.
Importance	can be presented to large audiences. Can present vast amounts of information.	The Student develop their critical-thinking skills to maintain and enhance their competence. Students have opportunities to exercise professional judgments in a safe environment.	Excellent learning tool to increase productivity and ultimate success in academia. TBL is a specific instructional strategy to enhance learning in small or large classes. Students exhibited positive attitudes toward learning the material. The evaluation of cognitive learning	Solve problems. Development of Long-Term Knowledge Retention. Address real-life issues that require real-life solutions. Continuous Engagement. Development of Transferable Skills.

challenges	<p>Fail to provide instructors with feedback about the extent of student learning. Students are often passive. Are not well suited for teaching complex and not suited for teaching higher instructions of thinking such as application, analysis, evaluation; and influencing attitudes and value.</p>	<p>Inadequate supervision and provision of feedback. The number of clinical teachers is less than required compared to the number of students. The shortage of adequate preparation of clinical instructors before they embark on teaching impacts. Problems of clinical assessment and evaluation process.</p>	<p>level is more subjective than the traditional one. Social loafing. Lack of expertise amongst the teachers about team-based learning. The assessment is more time consuming than the traditional one.</p>	<p>The majority of the students enrolled in the universities are not prepared for a PBL curriculum. It requires more preparation time. Faculty busy with the “traditional” curriculum. Lack of expertise amongst the teachers about Problem based learning.</p>
Basic Instructional Methods	<p>Lecturers didactically provide content. Many lecturers use teaching aids such as a syllabus or lecture notes to guide student note taking. Learners capture content in notes. They study the notes in preparation for the end of unit exams. The lectures and notes often complement assigned readings.</p>	<p>A Teacher sees patient, the student observes Student interviews and examines patient, the teacher observes Teacher introduces the student to a patient, asks permission for a student to independently interview and examine Student presents case to a teacher at the bedside, teacher corroborates findings, discusses a diagnosis and plan Student charting, order writing, follow-up on test results from the previous day. Student and teacher debrief encounters, identifying questions, teaching points, and together determine self-directed learning plan Both reflect on diagnostic uncertainty, challenging communication issues, the joys of long-term physician-patient relationships.</p>	<p>Course directors clearly identify content learners are to learn. Learners come to class prepared to demonstrate their knowledge of this content on “readiness assurance tests,” first as individuals and then as groups. Learners then apply this knowledge to select and share solutions to given problems in intraand inter-group discussions.</p>	<p>Tutors progressively disclose previously prepared cases. Learners analyze disclosed information to identify important facts and surface deficiencies in their knowledge needed to “solve the case.” Between sessions, learners address knowledge deficiencies and come prepared to apply their new knowledge in tutor-led discussions.</p>

DISCUSSION

- The Outcomes and Effects of implementing authentic teaching and learning techniques in Medical school:

- Students are more likely to be interested in what they are learning.
- Students are better prepared to succeed in college, careers, and adulthood.

- Meet the students' learning needs.
- Stimulate personal motivation.
- Assure the much needed mental comfort and confidence.
- Expose learners to different settings, activities, and perspectives.
- Enhance transferability and application of theoretical knowledge to the real world.
- Build capacity to exercise professional judgments in a safe environment and attachment to professional knowledge and principles.
- Students practice higher-order thinking skills.
- This result mentioned agreed with Newmann, F., Marks, H., & Gamoran, 1995 study, Peterson, 2014 study and Mims, C. 2003 study.

CONCLUSION

The outcome of any education system should be to send students into the world prepared for both their personal and professional lives. – Education and life should not be isolated from each other. What we can do is teach our students to be adaptable and creative thinkers who are able to utilize the skills and knowledge they do have to create new solutions to problems. By giving students the opportunity to learn through authentic, real-life, relevant learning experiences, we are giving them the ability to apply their learning, to learn through doing, to see their abilities, to adapt and change, and to form the habits required to do this successfully in their lives beyond medical school.

REFERENCES

1. Marilyn M. Lombardi, May, Authentic Learning for the 21st Century: An Overview(2007) is available online at <http://m.alicechristie.org/classes/530/EduCause.pdf>.
2. Authentic Learning. (n. d.) The Glossary of Education Reform. ,(2014) Retrieved from <http://edglossary.org/authentic-learning>.
3. Newmann, F., Marks, H., & Gamoran, A. Authentic pedagogy: Standards that boost student performance. *Issues in Restructuring Schools*, (1995). 8, 1-12.
4. Blumenfeld, Phyllis C.; Soloway, Elliot; Marx, Ronald W.; Krajcik, Joseph S.; Guzdial, Mark; Palincsar, Annemarie ."Motivating Project-Based Learning: Sustaining the Doing, Supporting the Learning". *Educational Psychologist*. (1991). 26 (3&4): 369–398. doi:10.1080/00461520.1991.9653139.

5. Newmann, F. & Wehlage, G. Five standards of authentic instruction. *Educational Leadership*, (1993). 50 (7), 8-12.
6. Donovan, S., Bransford, J., & Pellegrino. *How People Learn: Bridging Research and Practice*. Washington, DC: National Academy of Sciences. (1999).
7. Lombardi, M. Authentic learning for the 21st century: An overview. *EduCause Learning Initiative*. (2007). ELI Paper 1:2007.
8. Mims, C. Authentic learning: A practical introduction and guide for implementation. (2003). *The Meridian Journal*, 6 (1), Article 6.
9. Rule, A. The components of authentic learning. *Journal of Authentic Learning*, (2006). 3 (1), 1-10.
10. Benefits of Authentic Learning. (n.d.) Curtin University. Retrieved March 5,(2014) from https://otl.curtin.edu.au/teaching_learning_practice/student_centred/authentic.cfm.
11. Peterson, L. Authentic Learning Environments. Retrieved April 9, (2014) from http://etec.ctlt.ubc.ca/510wiki/Authentic_Learning_Environments.
12. Baylor College of Medicine, September A Comparison between Three Modes of Instruction, Team Learning In Medical Education. (2002), is available online at http://www.su.se/polopoly_fs/1.288259.1466670903!/menu/standard/file/H2-TL_Comparison_btw_lecture.
13. Abdalla, M. E., & Gaffar, A. M. The seven steps of PBL implementation: Tutor's manual. (2011).
14. Pawson, E., Fournier, E., Haight, M., Muniz, O., Trafford, J., and Vajoczki, S. Problem-based learning in geography: Towards a critical assessment of its purposes, benefits and risks. *Journal of Geography in Higher Education* (2006). 30 (1): 103–16.
15. White CB, Thomas A Pediatric clerkships in community practices: outstanding educational experiences for junior medical students, (2004). *Teach Learn Med*;16(3):250-254.

How to cite this article: Luttfi I.K., The importance of implementing authentic teaching and learning techniques in medical school. *Int.J.Med.Sci.Educ* 2020;7(4):5-9