

How do different educational theories influence the teaching of clinical skills? A literature review

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Aims

The objective of a contemporary medical education is to produce medical professionals with multiple competencies, one of which is clinical skills.

This review seeks to uncover the many different educational theories employed by clinical skills recourse centres (CSRCs) around the world that are used to impart knowledge to medical students. We aim to understand the intricacies of the teaching of clinical skills by analysing each of these educational theories. The merits and shortcomings of each theory will also be considered and investigated to better understand its effectiveness in achieving an objective.

Finally, this review aims to make recommendations on how different educational theories can fit effectively into the teaching of clinical skills.

Methods

To obtain a better grasp and understanding of the different educational theories, teaching sessions on musculoskeletal examinations and vital signs were conducted in the CSRC of the University of Liverpool for 1 month. We employed various different educational theories in every session to investigate its effectiveness in the retention of knowledge in year 1 medical students. Effectiveness of each theory was determined by giving the students a short quiz at the end of every session.

A literature search was performed using the online databases PubMed and Scopus to obtain the relevant papers on the topic. To refine the search and ensure consistency, a specific set of inclusion and exclusion criteria was agreed upon and applied to both databases.

Results

This review found that the teaching of medicine has changed dramatically over the years. It has evolved from a model of tutors imparting as much knowledge as possible to the student in a session, to one where active learning from the student is encouraged. This has resulted in a more autonomous and self-directed student. This shift of the student being just a passive

receiver of knowledge to becoming an active knowledge builder has proven to be very effective in the retaining of knowledge.

Educational theories are conceptual frameworks describing how information is absorbed, processed and retained during learning. This review discovered four educational theories consistently being employed in the teaching of clinical skills. This review expounds on these four theories and relates them to the teaching of clinical skills.

- > Curriculum theory – An academic discipline devoted to the observing and the influencing of education curricula.
- > Behaviourism – Assumes the learner is passive and behaviour is shaped through either positive or negative reinforcement.
- > Cognitivism – A theoretical framework of the understanding of the mind that focuses on how information is received, ordered, kept, and reclaimed by the mind.
- > Constructivism – States that knowledge cannot be passively transferred to a student; instead, it has to be understood in a way unique to the student.

Conclusions

This literature review analysed four different educational theories and correlated them to the teaching of clinical skills. Through this, it was clear that educational theories are not mutually exclusive and can be integrated into a clinical skills session more than one at a time.

By conducting a month's worth of sessions in the CSRC and correlating the findings to prior knowledge, we were able to appreciate how each educational theory can be integrated into the teaching of clinical skills and its effectiveness in relation to the objective. We found that no one theory was superior to the others in terms of effectiveness. We recommend that the theories be used either individually or in combination when appropriate to achieve the optimal outcome for the session. ■

Conflict of interest statement

I have no conflict of interest to declare.

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