

The implications of Behaviorism and Humanism theories in medical education

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ABSTRACT

The clinical environment remains a key area for learning, and practitioners continue to make a huge contribution to the education of students. Varieties of theories of learning are available for trainers to use in medical education, it is very important to identify the principles of learning and understand how individual differences affect the learning process. It is interesting to think about your own particular way of learning and to recognize that everyone does not learn the way we do. In this review the Behaviorism and Humanism theories have been explored within the field of learning. The distinction made between these two major approaches would seem to suggest that each might be appropriate for different kinds of learning situations. This way, educators who understand the rationale behind each of the two theories are provided with some key information for structuring their teaching around teaching models which can be the most successful for particular kind of learning.

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Behaviorism

The behaviorist learning orientation is particularly useful for the development of competencies and for demonstrating technical or psychomotor skills (1). This learning theory is most advantageous when a change in behavior is the desired outcome of an educational intervention. Behaviorist learning principles have made their way into medical education. For example, Joseph (2) state that it is also important that students receive immediate corrective feedback regarding incorrect concepts, either from expert tutors or by other means, a statement in which the behaviorist principle of contiguity – feedback only works if it

is administered immediately after performance of behavior – can easily be recognized (3).

Behavioral objectives movement

Behaviorist oriented individuals concentrate on the behavior which can be seen from the outside, they reject mind or mental activity. More over, behaviorist principles built upon the fundamental principles of the conditioned reflex. Behaviorism focuses on repeated behavior which eventually becomes habit (4). Thus, behaviorist theory focus on observable behaviors which can be measured (5). A behavioral objective states learning objectives in "specified, quantifiable, terminal behaviors" (6). Behavioral objectives can be summed up using the mnemonic device ABCD (7). For example, after having completed the unit the student will be able to answer correctly 90% of the questions on the posttest.

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- A - Audience - the student
- B - Behavior - answer correctly
- C - Condition - after having completed the unit, on a post test
- D - Degree - 90% correct

To develop behavioral objectives a learning task must be broken down through analysis into specific measurable tasks. The learning success may be measured by tests developed to measure each objective (7).

Criticisms of behaviorism

Many scholars criticize behaviorism as a one-dimensional approach to behavior. Moreover behaviorism can not be applied for learning if there is no a punishment or reinforcement.

It cannot account for all types of learning since it disregards mind activity.

Some situations do not have a correct response which leaves the learner unable to respond.

Strengths of behaviorism

Behaviorism is based upon observable behaviors, so it is easier to quantify and collect data and information when conducting research.

Effective therapeutic techniques such as intensive behavioral intervention, token economies, and discrete trial training are all rooted in behaviorism. These approaches are often very useful in changing maladaptive or harmful behaviors in both children and adults.

Humanism

Medical professionalism and humanism have long been integral to the practice of medicine, and they will continue to shape practice in the 21st century (8). Within the humanist framework, learning is viewed as a personal act necessary to achieve the learner's full potential. The goal of this approach is for the learner to become autonomous and self-directed. Humanist activities facilitate collaborative learning (9) with strong emphasis on

learners and instructors negotiating objectives, methods, and evaluative criteria. Humanism engages learners in intense and personal ways and is seen as the passion that animates professionalism (10). Programmes begin by helping learners identify individual learner-centred objectives drawn from experience. These objectives don't tell us what we should know as defined by someone else. We're responsible for our learning. In essence, the learner's motivation to learn is fueled by a desire to become all that he or she is capable of becoming (11).

As described by Gage and Berliner (1991) there are five basic objectives of the humanistic view of education (12):

1. Promote positive self-direction and independence (development of the regulatory system)
2. Develop the ability to take responsibility for what is learned (regulatory and affective systems)
3. Develop creativity (divergent thinking aspect of cognition)
4. Curiosity (exploratory behavior, a function of imbalance or dissonance in any of the systems)
5. An interest in the arts (primarily to develop the affective/emotional system)

Self-directed Learning

Self-directed learning is one of the most important and well-known educational principles of the humanist orientation. The plethora of literature available on the subject of self-directed learning indicates the level of educational interest in the concept (14). Self-directed learning is not a philosophy, nor is it a set of techniques to be applied by an institution wanting to teach a self-directed programme. It is an internalised process related to motivation and self-identity, (15) something that happens within a person, not something that is done to him. Where is the evidence for this? Tough (16) confirmed that when adults decide to learn they first invest time and

energy in checking the potential benefits; as Knowles put it, learners need to know why they need to know. But tough also found that those adults devalue their work if not validated by some external authority. Hence the rationale for Brookfield's principle of effective facilitation (15): the self-directed-learner must be supported and reassured. Yet it is he who points out that this has now become unchallenged academic orthodoxy (15).

The association between self-directed learning and the humanist approach is demonstrated by a number of learning principles reported by Rodgers 1969, as cited by Quinn, 1995 (13) which state the following:

- Learning is facilitated when the student participates responsibly in the learning process.
- Self-initiated learning, which involves the whole person of the learner, feelings as well as intellect, is the most lasting and pervasive.
- Independence, creativity and self-reliance are all facilitated when self criticism.
- Self-evaluation is basic and evaluation by others is of secondary importance.

In the past, inquiry focused upon the relationship between self-directed readiness and personality variables (17). However, more recent emphasis has been on the development of theory which has led to the generation of models to explain the meanings and contexts of self-directed learning (18). Accumulating evidence suggests that self-directed learning can play an important role in learning within educational institutions and highlights the variance in levels of readiness for self-directed learning in individual students (19, 20). In addition to computer-assisted simulations, self-directed learning methodologies may be manifest in problem-based learning scenarios, drill and practice exercises with immediate feedback, and role-playing exercises that emphasize self-

directedness and self-evaluation; the latter may be particularly important in helping learners to understand their specific role as part of the health care team (21).

Principles of self directed learning

- **Learners control:** Learners should identify their own knowledge gaps and critically appraise new information
- **Autodidaxy and self management:** Organising teaching and learning so that learning is within the learners' control
- **Self determinations:** A goal towards which learners strive so that they become able to accept responsibility for their own learning



Reflective practice

Reflection means letting future behavior be guided by systematic and critical analysis of past action and their consequences. Reflective capacity is regarded by many as an essential characteristic for professional competence (22). However, there is little empirical research to establish whether or not health professionals use reflection to integrate learning into clinical practice in discussing the principle of reflective practice (23). Learning is being effectively facilitated when the educator is prompting in learners a sense of the culturally constructed nature of knowledge, beliefs, values, and behaviors. To help learners develop reflective thinking, medical educators often begin by asking

them to recall a significant clinical experience. After the learner has had a chance to recall the clinical encounter (event) he or she is asked to describe what happened (reflection), summarize what was learned from this experience and speculate what could have been done differently. Reflective thinking as a cognitivist learning strategy can also be used in a wide range of teaching environments including hospital wards, lecture halls, small group sessions or simulated environments with standardized or virtual patients.

Educators assert that the emergence of reflective practice is part of a change that acknowledges the need for students to act and to think professionally as an integral part of learning throughout their courses of study, integrating theory and practice from the outset. The first reflection is so called 'in action' is the ability to learn and develop continually by creatively applying current and past experiences and reasoning to unfamiliar events while they are occurring (24). The second, "reflection on action," occurs later. It is a process of thinking back on what happened in a past situation, what may have contributed to the unexpected event, whether the actions taken were appropriate, and how this situation may affect future practice.

Behaviorism versus humanism

Behaviorism can effectively condition learners to do things in certain ways and familiarize us with the contents of a profession (recognize/know what). However, humanism is especially suited to help us deal with whatever problems come our way (formulate/reflection-in-action).

In contrast to the behaviourists who choose to study only extrinsic or external and environmental determinants, the humanists believe a comprehensive theory of behaviour must also include the internal or intrinsic determinants. The humanist thinks that learning theory has to be much more than just an objective science. To understand completely human behaviour they believe, the

subjective must be considered (i.e., feelings, desires, hopes and aspirations). To them every day phenomena of life such as experiences, feelings, meanings and humour are psychologically relevant (25).

One of the most serious criticisms of the humanist approach is the lack of empirical evidence to support its claims, as the theory relies mainly on observations and assumptions about human behaviour (13). However, despite this analysis, Curzon (26) suggests that it is important for educationalists to take account of the research undertaken in this area because those who are assisting in the educational growth of students should understand the basis of student motivation if instructional practice is to be successful.

The humanistic approach rejects the behaviorist's strong dependence on animal psychology. Therefore, rather than studying cats, rats, or pigeons, the humanists have chosen to deal with humans themselves. Maslow was convinced that we can learn a great deal more about human nature through consideration of subjective as well as the objective. He called the exceptional people he studied self-actualized individuals. They were those who discovered the true self and had developed the ability to utilize latent potential (27, 28). Nurturing the humanistic predispositions seems to be the key to ensuring that future individuals manifest the attributes of professionalism, as professionalism and humanism share common values and that each can enrich the other (8, 10).

One attitude which behaviorism and humanism approaches seems to share is that focusing on the activity of teaching leads down blind alleys while focusing on activity of learning results in understandings. Implementation of these activities will lead to change in behaviour which we call learning.

Strong links were forged between self-directed learning and adult education following the differentiation between andragogical and

pedagogical theories of learning. These theories, based on the assumptions of Knowles (1990) (29), argue that andragogy encourages a proactive approach to learning in which inquiry and autonomy (30) are predominant features. Perhaps one of the strongest needs of a human being is to know who s/he is and become that person fully. The self analyse approach might help him/her to observe the connection between learning and the consequent change in self and perceives this change as a good, he will want to continue to experience it and so he will continue to learn. The adult educator who encourages the adult learner to interact with his environment on his own terms and who does not impose his own perception on the learner will be more likely to facilitate self-directed learning in adult.

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