

Metaphor in Education: Hidden but Effective

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Abstract

The aim of this paper is to illustrate the role of metaphor in education. The main thesis is that the metaphors shape our attitude towards education implicitly. With this aim in mind, first, the concept of metaphor is briefly introduced, and then three of the most famous metaphors that have been used in education (factories, gardening and travel), and their differences are discussed. Medical education is a long period that in different levels different purposes should be achieved. For instance, while in basic science teaching takes place in classrooms and labs, this will switch to bedside teaching in clinical years. It seems that none of the above mentioned metaphors is adequate for designing a curriculum in medical education and we need a combination of these three for a more comprehensive curriculum planning.

Keywords: EDUCATION, MEDICAL EDUCATION, UNDERGRADUATE MEDICAL EDUCATION, METAPHOR, HUMANITIES, CURRICULUM

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Introduction

Teaching is a very complicated task, and in contrast to physics that all objects are defined under predetermined general rules, teaching is totally different area. In teaching we are dealing with humans that have different motivations, characters and diverse background, therefore using predefined rules in teaching leads to ignore the detail and uniqueness. Hence, if teaching cannot be understood by setting rules, what other options do we have? One of the possible ways is analogical reasoning or benefitting from metaphors, because metaphors consider generality from one point of view and at the same time respect plurality and diversity.

In this article, we aim to illustrate the role of metaphor in education. It is believed that metaphor is shaping our concept of education,

without realizing it. With this aim in mind, first, the concept of metaphor is briefly introduced, and then three of the most famous metaphors that have been used in education, and their differences are discussed. And in conclusion, our opinion about the importance of using metaphor in medical education and its significance is discussed.

What is a metaphor?

The word Metaphor means borrowing (borrowing aspects of an object and transferring it to a second object) (1). Conceptually, it is using a word or phrase instead of another phrase because of the similarity between the two (2). In other words, by using a metaphor, we explain an unfamiliar thing with a known and familiar one (3); and we actually want to say that two dissimilar things are the same, it means that in all metaphors a situation is compared with an actual one although we know that situation is not precisely similar to the actual one (4).

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For example, when in the book “as you like it” Shakespeare says the whole world is a stage (5) it is obvious that the point is not the physical similarity between the world and stage, but he meant that in the world people are like actors and actresses that are on stage for a short period of time and then their role ends. With this action Shakespeare has extrapolated stage out of its usual context of application and used in a new context, give an insight on the world and people's lives.

Contrary to Aristotle's belief that metaphor only makes the language glorious and elite and at the same time reduces its clarity, Plato believed that metaphor is a way of thinking and depicting the reality (1). Note that concepts that shape and form our thoughts are not only mental issues, but also affect our daily performance, our perception of our surroundings and our interaction with others. Since the language we use is full of metaphors it can be concluded that our conceptual system is metaphoric in its nature and this explains the effects of metaphor in our thinking, perceiving, and actions (6).

Metaphors in Education

As mentioned above our metaphors about teaching shape our perception and formulation of teaching as well as us believes about it. The most famous metaphors that have been used in education are factories, gardening, and travel (7). In the rest of this paper, issues such as the role of teachers and learners, purpose of teaching, type of evaluation and curriculum evaluation in each of these metaphors will be discussed.

Learning environment as a factory

In this perspective of teaching, the learning environment is similar to mass production line of a factory in which learners are like raw material (and of course should have specific criteria to enter the production line i.e., student selection criteria) that are converted

into useful products with unified, transparent, predetermined standards during the production phase (teaching) and adapted to market needs (teaching based on purpose, teaching based on the society's needs).

This metaphor emerged during the industrial revolution that occurred in the late 18th century and early 19th centuries in some western European countries and North America. The industrial revolution not only had a great impact on industrial development but also provoked social and intellectual changes (8). Since the US congress passed legislation regarding access to free public education for all North American citizens in classes with an estimated area of 800 square feet with 28 students and a teacher, the classroom as a factory model became more explicit. This law, that was inspired by Horace Mann in 1843 in Prussia, and carried out for the first time in Massachusetts 150 years ago and then for a few decades in the rest of the states (9).

In this view, before entering the production line (market), learners (products) are evaluated to have certain standards (standard tests to assess learners) and if they lack the necessary criteria, they are not allowed to enter the market (graduation). If the desirable and expected results are seen, it could be concluded that the output of the managers and workers of the factory is optimal (educational teachers and principals). In this approach, teachers are like the workers of a production line that prepare and monitor the raw material (learners) for transfer to the final product (graduates). In the newer model of factory approach, called Production Technology Approach, teachers no longer do a repetitive work as assemblers, but their main duty is troubleshooting and problem solving. Factory managers (the training and curriculum authorities) always try to compete with other manufacturers, and update their production plan (curriculum) and personnel (teaching principals and teachers) using effective techniques. Different levels of production, input, process and output (inputs such as inclusive education system- teachers and

references, teaching process and products and teaching consequences) are monitored continuously. Because of the importance of competition, learners' evaluation is similar to the rating and evaluation of factory products. Similar to factories, management in these educational systems is hierarchical, bureaucratic, and top-down (7, 10, 11).

The metaphor of learning environment as a factory has different implications. From one point of view this approach forces the educational system to review itself and determine its minimum necessary capabilities of the graduates and preparing the conditions for achieving these minimums as well as evaluating them before graduation. Therefore, the stakeholders of this educational system (such as the government and those in medical training) are sure that if a suitable target is present, the basic health needs of the community are addressed. Besides, this approach may facilitate training a large number of learners without compromising educational quality. But on the other hand it should be noted that the world of education is the world of uncertainties, so two completely similar learners not only cannot actually be found (as the final product of factory) but also do not learn in the same way. As there are different ideas and patterns among teachers, no inflexible course plan can be designed like the product line production plan. On the other hand, this approach is too mechanical to provide a suitable area for inspiring creativity and innovation in the learning environment. This approach can be useful in providing training program on the provision of essential minimum needs in the curriculum but definitely not useful in reaching all purposes in the whole training period (such as goals and objectives, including higher levels of knowledge and skills)

Teaching as Gardening

In this metaphor education environment is like a garden with different learners as plants and teacher as gardener whose practice is growing and cultivating plants. Unlike the

factory metaphor in which differences and varieties is not considered, in garden metaphor, they play a significant role.

This metaphor implies that the role of teacher (gardener) is to cultivate or care for the learner (seed), not change natural traits (12). It means that if the goal of the training program is to achieve specific goals, very precise factors should be considered during the initial selection of learners to assess the suitability of learners for achieving educational goals (13).

Gardener is not able both to completely control environmental factors such as sunshine, rain, etc. and to force the plant to thrive. As teacher could only facilitate growth conditions, teaching students is not possible but helping them to learn in the educational process is meaningful. Like the gardener that care the whole garden as well as each plant, the teacher does the same, so the whole class as well as each student as an independent personality have been taken into account (14). Therefore, the logic of existing both mandatory and optional programs or electives courses is revealed. Furthermore, as the gardener changes the irrigation program and fertilizer applications based on environmental conditions systematically (the impact of external factors on the needs of plants), the teacher regulates his/her plan according to changes in the external educational environment and asks students to make contribution in their own learning. Therefore, in curriculum planning both group learning and ability to change the program should be deliberately considered.

This approach toward teaching is flexible. Besides, the curriculum is humanistic, naturalistic and aesthetic in nature and can be applied in medical education for teaching empathy and communication skills.

Teaching as Travel

In this metaphor learning is considered as travelling (15). Travel is the movement of people between starting point and destiny (16). In the teaching as travel metaphor,

learners are passengers that under the guidance of a tour guide, travel through a path (education period) using a guide book (curriculum).

Here teaching is a dynamic process like traveling, and its purpose is not production, but a kind of engaging in a practice. The most brilliant points of this metaphor is understanding the concept of enjoying teaching and learning like the joy of traveling. Similar to progressing on a journey, progress in teaching makes sense and could be evaluated by both teacher and learners. Like a tour guide, the teacher is a qualified person that accepts his/her guiding role, and although familiar with the track but knows that each journey has its own conditions. The guide (teacher) should be ready and eager to change and learn from new things. The guide (teacher) warns passengers (learners), encourages them but does not travel (does not learn) instead of them. Students should learn on their own (16). This point that both teachers and learners are next to each other and both together in this process, is the most significant part of this metaphor.

In travel (curriculum), the tour guide (teacher) roughly describes the path (general training goals) to all passengers (learners) but for each of them has a specific plan (elective plans) based on their personal plans (17). Likewise, in different journeys, based on the passengers and the travel goal, the guide uses different methods to guide passengers (for example in pleasure trips, the guide tries to spend more time on showing natural sites and entertainment and in travel to a historic country spends more time visiting museums, historical sites and talking about historical and cultural issues), similar to a teacher who uses different teaching methods depending on the teaching purpose.

The important point is that passengers' experiences about the travel are totally different from each other, and at the end of the journey (end of the educational period) construct their own experience. So student assessment does not only take place in quantitative reviews and usual statistical

forms, but in addition to that methods like interviewing, observing and analyzing are used (7).

Conclusion

Considering the impact of metaphors on our conceptual system, it is necessary that each person, who has a role in this education system, thinks about metaphors related to education, learners, teachers, etc. For example, a person who thinks about educational environment as a factory, naturally tries to behave completely in accordance with the curriculum, his or her direction is the terminal goal, does not pay much attention to personal differences and always considers three main parts of input, process and output in the process of curriculum planning. Or if a person looks at education as gardening, he/she would consider the learners' characters and probably (even unconscious) feels responsible for the other learners when planning and choosing training method. Therefore, people with respect to their mental metaphor can analyze and amend their opinion and behavior.

In this way, recognizing a main metaphor in teachers, and learners' minds has a great role in education and should be considered in curriculum planning and choosing teaching method, evaluation and feedback. For example, in understanding that one's concept of learning is only to reach a predetermined goal (and in this goal the learning itself is not considered) the possibility of innovation and creation and conducting a research is low. In the contrary, students that look at learning like travel, engage in learning and study other references as well. Therefore, knowing the learner, teacher, educational planners and principals considered metaphor, and discussing about it can prevent future misunderstanding and facilitate development. Medical training is a long period and encompasses different and varying goals in different years. For example, in basic science period, teaching takes place mostly in classrooms and laboratories, while in the

clerkship and internship periods, teaching is totally different. It seems that none of these metaphors alone can be sufficient for developing a comprehensive teaching curriculum and a proper combination of these metaphors should be used for preparing a proper curriculum in different levels. Thus a more comprehensive metaphor maybe needed to encompass all these metaphors and benefit from their advantages to create a new insight in teaching and curriculum development.

Conflict of Interest

The author declares no conflict of interest.

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