



An interesting way to teach medicine

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Education is the name we give to the process of imparting knowledge which includes information and practical skills, to individuals who are yet unlearned and fresh to imbibe the same, so that the same can be used by them to fulfill social roles as well as be rewarded for the same in the form of their livelihoods. If we agree upon this as the aim of education, then we can speculate as to what would be the best way to do it. Coming to the domain of medical education, the process of teaching and learning assumes a greater significance as it is imperative for the learners to understand and remember the information which would be used later to manage patients who come for care with lots of trust.

It is a known fact that the process of learning implies committing already authenticated facts to memory and from there building up further memories by connecting to the facts already ingrained in the memory. The simple phenomenon expressed as “from known to unknown”. Further how strong the memory of a fact is, will be strongly influenced by the number of dimensions of the mind that are stimulated in the process and as a corollary the sensory impact the message is able to make. For example audio visual aids have a possibility of a better impact than just audio aids. Now the question comes about the receptivity of the learner to whatever teaching learning aids he/she is exposed to. If the student is not receptive then definitely the learning process is bound to be inadequate. This receptivity may also be termed as how open the senses and hence the intellect are to the new information that is coming in.

Now how to induce receptivity? Is there a way to do it? Yes. For one, when the sensory inputs from all other avenues except of those related to the content of learning are cut off to the maximum extent possible, then, naturally the senses are receiving only what is planned by the teacher to deliver as his/her teaching. This is what ideally happens in a class, wherein as a matter of discipline the students are required to sit quietly, not communicating with each other, in the

closed environment of a lecture hall or demonstration room and expected to focus on the teacher who is trying to communicate some facts. In this setting though the senses are streamlined and freed to receive the information that is delivered the lacuna in this setting is that though the facts may be entering through the senses, there may not be a process of intellectualization going on. That means the student does not see the significance of the information beyond it being a means to pass exam, in the sense that he is not impelled to put it through his reasoning to know for himself the potential value of the information in life situations. Thus evolves the concept of interactive learning where there is participation from the student in the learning process. The memory consolidation hypothesis was proposed more than 100 years ago [1] and some of its underlying molecular and cellular mechanisms were well characterized over the past decades [2,3,4]. Now an excellent way to get the students participation is by making the whole learning process as a kind of play as we know well, that in a game mode, for majority of people, the mind is most open and interested in participating.

I would like to present my experience when teaching medical undergraduates. As part of the syllabus in community medicine teaching, ‘nutrition’ is an important topic to be taught to the students. The usual way would be a theory class discussing the nutrient content of different food items, the nutritional requirements in different categories of human states and in the practical sessions showing them lab samples of the items with a write up. At most some problems discussed regarding calculation of nutritional requirements in specific groups of people. At the end, I observed that majority of students found it difficult to identify and remember the nutritional contents for the different food varieties.

I planned to do the teaching in a different way. It is understandable that for any activity to elicit interest

and hence enhance the memory of the event particulars, there needs to be some entertainment value to the proceedings.

The students totaling 30 were divided into six teams of five members each. Each team was asked to read up and prepare nutritional cards for one cereal, one pulse, one fruit and one vegetable. A card would contain the name of the item with a picture and the major nutritional contents as a list in the card. For each item, example rice we had three cards of 50g, 100g and 200g and similarly for the other food items based on the daily requirements of that item. The students were given one day's time for this exercise. On the next day the cards from the teams were collected, a total of around 45 cards. The cards were shuffled and distributed as five cards per team. The rest of the 20 cards were placed upside down as a pack like playing in a card game. The question was posed to each team separately to collect cards in such a way as to fulfill the Recommended Daily Allowance (RDA) for a 60 kg male with moderate work (guidelines were displayed on the board). Each team had to assess the cards that they had got in the first hand for the RDA and then if it was not making up to the recommended value, they picked up one card from the stack of upturned cards and dropped one from their set so as to work out the various nutrient cards in their possession, in an attempt to try and match the RDA. In each attempt five minutes were given to each team to work out, at the end of which the members had to convey which nutrient was lacking, what was in excess and what would happen if this diet was given to the reference man in the short term and in the long run. The process ended when any of the teams was able to get to the RDA required.

This game was planned with different questions and each time the pros and cons of each of the combination of cards each team had were discussed. The game was played for two consecutive posting days consuming a maximum of two hours per day.

By the third day, when asked individually the students felt a lot more confident about the different food items and their major nutritional contents. This whole teaching process was done like a game where the students participation was enthusiastic, as well as the learning process was stimulated. The students gave a very positive feedback regarding this mode of imparting information and said that they enjoyed as well as learnt a lot in the bargain. Arousal, motivation and reward can profoundly affect memory formation [5,6]. The same was observed in this case where the motivation and hence arousal brought on by the competition with expectation of, the reward of appreciation among peers, the whole event being conducted in a playful atmosphere promoted the learning process. Irrespective of the topic to be discussed, inducing an element of gaming and a little competitive spirit, and sufficient time given for repeating facts in an interesting way, any subject can be made interesting and of learning value to the students.

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