Review Article

Tutorial Review : Evolution to Modifications

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ABSTRACT :

Background : Teaching-learning methods are varied, tutorials being one of them. Tutorials are considered as a small group teaching-learning method and they complement the lectures. **Objective:** To review tutorials from its inception to the modifications incorporated in the present scenario. **Methods:** Literature search was performed by searching databases like Google, PubMed. Search was completed using terms like tutorials, evolution AND tutorials, modifications AND tutorials. **Results:** Tutorials started with definite goals, had different perspectives and inspite of the difficulties faced, was an effective teaching-learning method. Modifications introduced in tutorials proved to be effective and were appreciated by the students. **Conclusions:** Tutorial since its inception served a central role being important and complementing the curriculum with definite goals and need based student-centered modifications.

INTRODUCTION :

Renovation of medical curricule and education in recent decades have often been accompanied by small group teaching-learning[1,2]. 'Tutorial' is one such a class conducted for one student or a small number of students by a tutor[3]. The research in the domain of tutorials have evolved over the years making it more interesting and achieving better academic performance through tutorials. The review takes into account the various researchers with the central theme in the order as literature has unfolded over the years. The central theme has been dealt under the categories as:

- Evolution of tutorials
- Tutorials: a small group teaching-learning method
- Modifications/ innovations incorporated in tutorials.

Evolution of tutorials:

"If you want to understand today, you have to search yesterday" – Pearl Buck

Literature on tutorials documented that teaching has existed since the 11th century and the role of tutors was documented in the 15th century, when Oxford tutors were described as 'having responsibility for the conduct and instruction of their young colleagues'[4].

One of the foundation of Oxford's academic excellence is the dialectic of the individual discussion-based tutorial which is reputed to have reached its unique status in the middle of the 19th century. Professor Benjamin Jowett, classicist and Master of Balliol college, Oxford, is traditionally credited with having been the guiding influence behind the establishment of the tutorial system.[5]

However, less than a century later, the tutorial method was considered by many to be outmoded. In 1960's, rapid growth of new universities throughout Britain resulted in accusations that tutorial method was both unsuitable and inefficient, with large lectures being deemed to be the more appropriate method of teaching in the modern university. But a defence of the tutorial method followed in the wave of these changes. In 1968, Professor Will. G. Moore of St John's college, Oxford penned "The tutorial system and it's future" in which he argued that the tutorial system outweighed any criticism against it because of it's individual focus and unique ability to foster dialogue; argumentation and independent thought.[4]

In 1967, Goldbloom RB et al came to a consensus that, in the Faculty of medicine at McGill University, the tutorial system serves an important role in complementing the normal curriculum. In September 1964, faculty of medicine at McGill university introduced a tutorial system for first year students which was then carried to third year of operation and was designed to meet the specific needs of McGill students. A large number of students and tutors favoured the program. It had provided faculty members with insight into some of the problems of present day medical education.[6]

TUTORIALS :
A SMALL GROUP TEACHING-LEARNING METHOD :

Tutorials in its true sense is a small group teaching-learning method with the central concept of discussion. This sub- heading titled 'Tutorials: A small group teaching-learning method' has been sub divided into goals,

perspectives, effectivity and difficulties faced.

GOALS :

Steinert, 2004 conducted a focus group study and one of the key questions she gave to students was: what are the goals of small group teaching? The major goals mentioned by students were: to be able to ask questions and think things through, to check out understanding of the material , to learn from each other, to apply content to clinical or real life situations and to learn to solve problems.[7]

PERSPECTIVES :

Small group learning can be studied from different theoretical perspectives. Slavin 1996, identified four different approaches to the study of collaborative learning. The first approach is motivational in which a group motivates its group members to exert maximum effort because if the group succeeds, each member can attain its personal goals. The second approach is cohesiveness which implies that a group develops team spirit; students help their group mates since they want the group to succeed. The third is a developmental perspective that implies the opportunity to interact, discuss, argue and hear one another's viewpoints which contributes to intellectual growth of the students. The fourth perspective is cognitive elaboration where student learning is supposed to be enhanced by having them explaining material to each other, by providing feedback and by linking prior knowledge to new information. A questionnaire was developed measuring motivation (eg. The group positively influences individual student learning),cohesion (eg. Feeling responsible for the group to succeed), sponging (eg. Some students let others do the work), withdrawing (eg. Students contributing less), interaction and elaboration. The major finding in this study was that the interaction dimension, one of the cognitive dimensions, had the highest weight in predicting a tutorial group's productivity. In addition, it was found that motivation played a central role, not only in relation to the other motivational dimensions measured, but because it also directly influenced group productivity, elaboration and interaction.[8]

EFFECTIVITY:

Walton H, in 1997 emphasized that group sessions are a profoundly effective basis for learning and decision-making. Group methods have the particular merit that – when properly used- all participants have the opportunity to take part and each can see for themselves the impact of their views on other members of the group. Through the facilitatory style of group leader, the members of the group contribute facts, concepts, personal experiences but then progress to achieve novel insights and arrive at a new synthesis of the topic under consideration. A group session elicits observation, opinions, pre-conceptions but is partial and defective without reflection , review, fresh thought and delibration. Unless such reflection actually takes place, group methods are improperly utilized and transduced in the process. An understanding about the group process and its sequential development is essential for managing group unproductivity and dysfunction and for accomplishing the specified task set before a group.[9]

In 2006, Visschers-Pleijers et al investigated how much time was spent on the different types of learning oriented interactions in the group and how these types of interactions are distributed over the tutorial group meeting. Four sessions were videotaped and coded. It was found that 80% of the interactions in the group were learning oriented, which demonstrates a high task involvement in the tutorial groups. The results further demonstrated that 63% of the interactions consisted of cumulative reasoning, 10% of exploratory questioning and 7% of handling conflicts about the subject matter. Exploratory questioning often preceded cumulative reasoning and handling conflicts mainly occurred after the first 20 minutes.[10]

In 2012, Pal R summarized that small group teachings helped self- identification of lacunae by student and promotion of self-directed learning by instant resolution of confusions and helps them learn the art of holistic problem solving approach. Small group teaching had a positive impact on learning experience of the students and is a comprehensive tool for in-depth teacher-student interaction.[11]

DIFFICULTIES FACED:

A study was conducted by Virtanen et al (1999) in which students were asked to describe experiences of a successful tutorial session: what they did themselves?, what the other students did and how the group did its work? A study form including structured and open-ended questions was presented to students twice and students' written accounts were analyzed. The same questions were formulated for an unsuccessful group. The tutors who were involved in tutorial groups analyzed the data (the citations and categories). Successful tutorials relied most crucially on balanced discussion between the students and careful preparation for the session. Unsuccessful groups were characterized by a non – balanced discussion because of disintegrated, dominant, passive, poor prepared or ignorant students.[12]

De Grave et al (2002) made a distinction between

unequal participation (eg. quiet students) and difficult personalities (dominant students) and found that dominance of one or more students is not perceived as occurring very often and is also not perceived as strongly inhibiting the learning process. Unequal participation through the presence of quiet students occurs frequently, but again, this does not strongly restrain the learning process. A plausible explanation is that students in tutorial groups probably ignore quiet students. Lack of motivation (of students who are not very motivated from the start) turned out to inhibit the learning process most strongly; whereas its occurrence was not rated highly. He not only focussed upon motivational issues, but also on cognitive ones, such as lack of elaboration (skipping issues) and lack of interaction (reading notes instead of reporting in own words). Both processes occurred relatively infrequently, and lack of elaboration particularly, scored high on hindering the learning process.[13]

Similar findings were reported by Hendry et al (2003) in which they investigated which group problems were most commonly experienced by students and tutors and which problems hinder student learning. The top three frequent problems were: quiet students, lateness or absenteeism and dominant students. In the students' perception, the following problems were assumed to hinder student learning most : dominant student, a disorganized or haphazard tutorial process and superficial study of the problem. This, in turn, would hinder student learning and would lead to decreased motivation and absenteeism. The strength of the study was that the authors develop a model in which they linked motivational and cognitive aspects of group learning to better understand dysfunctional groups. But the central issue within this model was whether the tension conflict between the dominant and the very quiet student really leads to ineffective groups, because students within the study reported that, in fact, a very quiet student hinders student learning the least.[14]

MODIFICATIONS/ INNOVATIONS INCORPORATED IN TUTORIALS:

"Necessity is the mother of taking chances " – Mark Twain

Tutorials being a mainstay of teaching – learning process is considered as teacher-centered activity by academicians. SPICES model stresses on student-centered approaches[15]. Modifications in traditional tutorials is the need of the hour. Some of the modifications incorporated are in the form of SLOT, SGC's and debate style of tutorials.

STUDENT-LED OBJECTIVE TUTORIAL (SLOT):

Sivagnanam G et al (2006) assessed an innovative tutoring program named SLOT among undergraduate medical students. In SLOT , each batch was divided into small groups and was given a reading assignment on four previously delivered lecture topics. Each group was asked to prepare 3-5 MCQ's of their own in PowerPoint format to be presented, in turns, to the whole class on the day of SLOT. The proceedings were facilitated by two lecturers. Student feedback on the efficacy and benefits were assessed through an anonymous self administered questionnaire. They came to a conclusion that SLOT is a novel tutorial method which can manage faculty shortage with advantages like enhanced interest among teachers and learners, uniform reach of content, opportunities for group learning and involvement of visual aids as teaching-learning (T-L) method.[16]

Similar study was executed by Waghmare LS et al (2012) in which the study compared the educational effectiveness of (SLOT) with traditional tutorials and student's preferences and satisfaction with these formats. Results showed no significant differences between the two educational formats in students' test grades. Retention of knowledge through active participation was cited reason for preferring SLOT. Better satisfaction was attributed to SLOT, but not better learning results.[17]

STUDENT LED GROUP CLASSES (SGC'S):

Kommalage M et al (2010) designed a study to compare student perceptions on student –led group classes with traditional tutorials (TT's). SGC was conducted in the first term and traditional tutorial was conducted in the second term. A case was given at the beginning of the tutorial class in SGC. Formal lectures were conducted parallel to SGC to help students learn the subject material discussed in the SGC. The cases used were broader and more of a problem solving type. The structure of SGC consisted of several segments: clarifying concepts and explaining difficult words, defining the problem or deciding the boundaries, brainstorming and systematic classification and identifying further studying areas or learning issues with staff acting as a facilitator. During brainstorming, student generate different ideas/ opinions and classified them systematically. Important information discussed was recorded on the whiteboard by students. Students sat in a circle and the duration of SGC was 2 hours. The chairperson/leader who conducted the SGC was appointed from among the students at beginning of each class. Student's perceptions were assessed using a mixed qualitative and quantitative method. Students

recognized and appreciated some favourable features of the SGC, such as the opportunity for discussion, quality of knowledge, active participation, improvement in presentation ability and increased breadth of knowledge. However, the majority of students preferred the TT over the SGC despite the highlighted benefits of SGC. Students appreciated the focussed learning for examination, written preparation and more tutor involvement in TT.[18]

DEBATE STYLE TUTORIAL:

In 2006, Shingaki et al introduced a debate-style tutorial exercise into the 3rd year tutorial classes with the purpose of developing the students' logic, broadening their vision and encouraging them to express their opinions in public, before an audience. The issues for debate included medical (dental) and non- medical topics. Two separate debate exercises were performed and each session concluded with an open debate. Fifty 3rd year students and six bachelor graduate entrants were divided into eleven groups. Each group comprised four to six students and was divided into half for the purpose of debating. In the first session, the debate was conducted within the group. The second session was conducted between groups that took the affirmative stand and groups that took the negative stand on a certain issue. Each week, 180 min were allocated to the core tutorial classes; the 1st and 2nd sessions were allocated six and three weeks respectively. The study of the second session concluded with an open, formal debate. Each group and tutor then evaluated the other groups' performance. The groups received high scores, their understanding of the subjects was superior and they provided logical arguments using good presentation skills. Thus it was suggested that the introduction of debates into the curriculum of lower classes would be effective in teaching students new ways of thinking about problems.[19]

CONCLUSION:

Tutorials: a small group teaching-learning method has evolved a long way from its inception to incorporation of modifications. Need based modifications are the call of the hour since different students have different learning styles and tutorials should be moulded and modified without hampering the essence of tutorials.

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