



Reflective Writing: A Reliable and Versatile Tool in Medical Teaching

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Abstract

Introduction: Throughout India competency based medical education is implemented by NMC (National Medical Council) of India. This implies that student should be trained with all the three domains that are cognitive (Knowledge), Psychomotor (Skills) and Attitude (Behaviour, Emotions). Modules of Humanities are being offered as a part of undergraduate course which have been started since 2019 batch. It is interesting to introduce Reflective Writing as a method of teaching as it can help students to learn all the three domains. Besides it will help students to improve their textual communication skill and technical writing.

Methodology: Reflection was introduced in structured format. Firstly, students were sensitised by lecture on Reflection and described Rolfee model of reflective writing (Indian model). After these students were asked to reflect on videos, case and lecture delivered on Biochemistry topics and Communication Skills (AETCOM module).

Result: There was very good results with Reflective Writing. On repeating after feedback on Reflective Writing student responded very well. Faculty from biochemistry department assessed their Reflective Writing. The perception and results obtained indicated effectiveness of Reflective Writing as hybrid tool (teaching learning and Assessment) especially for AETCOM.

Conclusion: Reflective writing in medical education can be used as multidimensional development tool for analysing all the three domains of knowledge, skills and attitude. in medical practice. It had proved to be a very good method of teaching and with feedback it can transform practice by improving the knowledge skills and attitude of empathy, ethics and create a healthy relation with patients thus fostering medical practices

Keywords: Reflection, Reflective Writing, Medical Education, Innovative Methods, Assessment Tools

Introduction

Despite a radical reform in teaching learning and assessment methodologies over last decade, the majority of medical colleges still use traditional methods. It is observed that medical students do not possess sufficient skills of good communication, ethics and professionalism. The Medical council of India has introduced a module to facilitate AETCOM (Attitude, Ethics and Communication) in medical education. Undergraduates are expected to introduce self-directed learning skills and write reports from

reflection on case scenarios, clinical experiences described in AETCOM module booklets. Traditional methods of teaching raises concern about teacher and examiner variability, standardisation and uniformity of different methods as these Skills are difficult to teach and assess by traditional methods. To address this issue and to line up the student's assessment and teaching learning, Reflection was introduced as a useful method in teaching, learning and assessment tool. To develop the habit to continuously reflect on every experience can be significantly promote

learning. Reflection writing provides ability to an individual to reflection an action to engage in the process of continuous learning ^[1].

Reflection is considered as a critical characteristic in professional competence. It is an active process of analysing, questioning and reframing an experience, to make assessment for the purposes of learning and or improving practice. It is metacognitive process (thinking about thinking) that creates greater understanding of self and situations to inform future action ^[2]. Studies have shown that physicians with self-awareness are more efficient and satisfied. Studies have revealed that students with higher reflection in learning scores had higher GPA's. In medical profession we are privileged to interact with people in the most private, intimate and often stressful situations. The past curriculum provides little opportunities to the students to get feedback and internally examine how learning is going on ^[3]. Reflection increases knowledge and skills and promotes development of necessary attitude and professional growth as a self-directed learning, self-evaluation and benefits individual and community. The undergraduate students should develop competency of learning effective reflective writing. So, to assess the practice of reflective writing for experiential learning by training of undergraduate medical students this project was undertaken.

Material And Methods

A total number of 150 students participated in the study. The present study is an exploratory

observational work and was conducted after Institutional Ethic committee approval. Informed consent was taken from the volunteer students. Students were sensitised through the 2 hrs reflection class. Faculty of the department were also sensitised. Five topics from each category (1- molecular biology topic, 2-Early clinical exposure topic, 3- Case based topic, 4-Self-directed learning, topic 5-AETCOM module) were selected for the study. Two tests were held and evaluated with and without giving feedback. Firstly, the students were taught by interactive lecture with videos then students were asked to make reflective writing on each topic and then were given feedback to each one and again to make reflective writing on the topic. The reflection was assessed and evaluated by different faculties by giving marks out of 10 on the writing. The mean and standard deviation and coefficient of variation of marks were calculated. The comparison of marks obtained in first reflection with second reflection was done. The difference in mean score at two evaluation was tested using paired 't' test.

Results And Discussion

The mean score obtained by students in two evaluations of all the five topics were calculated. The result revealed that mean score of tests 2 was higher as compared to test 1. This showed improvement in marks which may be due to feedback in Reflective 1.241 Writing given after test 1.

Figure 1: Comparison of results of test 1 (without feedback) and test 2 (with feedback)

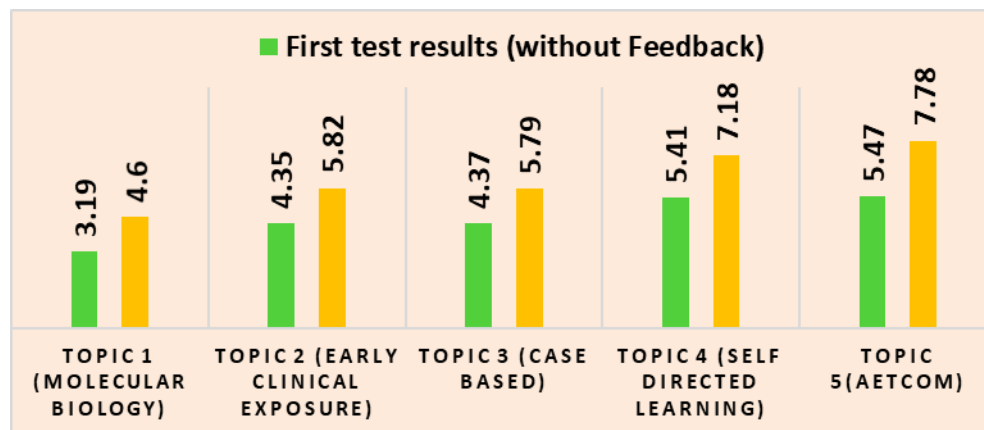


Table 1: Mean, SD and CV values of marks obtained by students (n= 150) in all the five topics.

Topic No.	First test results (Each topic 10 marks)			Second Test results (Each topic 10 marks)			% increase in mean value (%)	P value
	Mean	SD	CV	Mean	SD	CV		
Topic 1 (Molecular biology)	3.19	1.24	39.11	4.60	1.23	26.82	44.20	0.0001*
Topic 2 (Early Clinical Exposure)	4.35	1.14	26.32	5.82	1.02	17.63	33.79	0.0001*
Topic 3 (Case Based)	4.37	1.14	26.14	5.79	0.97	16.88	32.49	0.0001*
Topic 4 (Self Directed Learning)	5.41	1.01	18.80	7.18	0.93	12.95	32.72	0.0001*
Topic 5 (AETCOM)	5.47	0.94	17.19	7.78	0.77	9.97	42.23	0.0001*

*p<0.0001, SD= Standard deviation, CV= coefficient of variation

The table 1 showed that mean score of tests 2 was consistently higher than test 1 in all the five topics. The results showed 32 to 44 percent rise in mean score in different topics. It indicated that students learning was improved after test1, which can be due to feedback of Reflective Writing given to students. The student 't' test was used to compare the statistical significance in increased mean score after feedback given to students on the first Reflective writing as evidenced by p value of <0.05. The mean score has increased significantly for all the five topics. Besides the reduced CV values for the second test revealed that the feedback mechanism has resulted in reducing the variation in scores obtained by the students. The results of some authors also agree with the results as they also revealed that Reflective Writing is very effective for teaching learning and as assessment tool. ^[4,5,6,7] The results also revealed that marks were more consistent after feedback on first reflective writing. The regular increase in mean score before and after feedback from topic 1 to topic 5 confirms that the students

themselves learnt the art of Reflective Writing. If the reflective writing is practiced with feedback it showed a drastic improvement in the scores which was from 3.19 (Topic 1 first test) to 7.78 (Topic 5 second test), the same was also showed by Hedy S wild 2009 ^[6].

Conclusion

Reflection in medical education can be used as multidimensional development by analysing all the three domains in medical practice. It is a very good method of teaching and with feedback it can transform practice by improving the knowledge skills and attitude of empathy, ethics and create a healthy relation with patients thus fostering medical practices.

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