Original article

Introduction of Various Assessment Methods in Undergraduate Anatomy Teaching

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Abstract

Introduction: One of the most significant influences on a student's experience is assessment which can drive a student and motivate towards a directive learning and also it has a huge impact on the quality of learning. Ideally one should enhance student's capacity for learning and engagement with the curriculum. This paper focuses on the challenges associated with the introduction of various assessment methods in medical education and looks at the current trends.

Method: An observational study with cross sectional design was conducted in Coochbehar Govt. Medical College during a period of nine months. The faculty (five in number) and students were sensitized in the beginning of the study & they were shown how to set and face different types of question paper respectively including the use of online assessment. In the next two months the question papers of different format were prepared for a given syllabus and examinations were planned to distribute in two phases where total number of participants (students) were 99 each. Syllabus were different for two phases and examinations patterns were distributed and divided into online and conventional method.

Observation: Regarding the response of structured essay type question by conventional method maximum students agreed and strongly agreed in almost all the given questionnaire. But in the online system of this method the majority of the students did not agree with any of this criteria. Regarding the Short answer type questions and fill in the blank and MCQ almost similar type of feedback were observed. It was also observed that faculty were more towards conventional method of examination than online.

Conclusion: Assessment is truly necessary to put a significant influences on a student's mind to study further and harder and so that it will strike a huge impact on the quality of learning. In this study conventional method is more acceptable than online method among students as well as faculties, though the concept that assessment is the gatekeeper of higher learning is clear and we need to embrace new methods of assessment in order to meet the expectations and challenges associated with recent advances in digitalised platform.

Key words: Assessment, Conventional, On-line

Introduction:

'Examinations drive students learning' describes one of the strongest relationships in education[1]. Within the arena of medical education, it is generally acknowledged that assessment drives learning[2]. Assessment is one of the most significant influences on a student's experience of higher education and improving assessment has a huge impact on the quality of learning[3]. Ideally we want to enhance student's capacity for learning and engagement with the curriculum[4]. This paper focuses on the challenges associated with assessment in medical education and looks at the current trends. All forms of assessment invariably have inherent strengths and flaws but it is important to consider how the process of assessment might foster future learning[5]. After all, we want to reinforce students' intrinsic motivation to learn and to inspire them to set higher standards for themselves[6].The use of a variety of different assessment methods has been

characteristic of medical education, credentialing, and licensure since the 1950s. Prior to that time, the medical knowledge and clinical skills of doctors were often assessed using written and oral examinations. The written examinations were usually composed of open-ended questions mostly descriptive or structured essay type questions whereas the oral examinations (viva voce) typically required the student to go to dissection hall, practical room or a patient's bedside. Since then, there has been rapid and extensive change in the way assessment is conducted in medical education based on a number of developments[9]. it is quite difficult for a medical student to be able to communicate effectively with patients but an assessment of this aspect of competence is not tested well by written examinations or a viva in which the student–patient encounter is unobserved. To correct this problem, several new methods of assessment have been developed and implemented over the past 50 years. These new methods have focused on clinical skills, technical skills, communication skills, procedural skills, and professionalism[13].

Methodology:

An observational study with cross sectional design of data collection was conducted among the phase-1 students of Coochbehar Govt. Medical College & Hospital during a period of nine months. Permission from Institutional Ethics Committee and consent from students and faculty were taken prior to study.

The faculty (five in number) were sensitized in the beginning of the study & they were shown how to set different types of question paper including the use of online assessment. The students were also sensitized regarding this method. In the next two months the question papers of different format were prepared for a given syllabus which was furnished by the help of the senior faculty of the department considering the validity, reliability & acceptability the questions. Pre-validated feedback questionnaires were also prepared during the same period of time. Examinations were planned to distribute in two phases. Total 99 students participated for both the phases. The pattern of question papers was same but the syllabuses were different for both the phases. The syllabus of phase-1 offline examination was General Anatomy, General Embryology, Fertilization, Changes in the 1st week of embryo, Histology (Microscope, epithelium, glands, sclerous tissue), Gross Anatomy of Superior extremity and The syllabus of phase-2 online examination was Gross Anatomy (Inferior Extremity, Abdomen, Thorax) entire histology, Embryology (Genito-Urinary System, Gastro-intestinal system). In the first phase, the examination was conducted within the department of Anatomy directly for a period of three months and in the second phase online method was selected for another three months. For the first month of both phases we selected 'Structured Essay Type Question with Brief Answer' of 50 marks, and in the next two months of both phases we introduced 'Short Answer Type Question & Fill in The Blanks' (50 marks) and 'Multiple Choice Question' (50 marks) respectively. The allotted time for 'Structured Essay Type Question with Brief Answer' was 2 hours and for 'Short Answer Type Question & Fill in The Blanks' & 'Multiple Choice Question' the time was 50 min. Different materials were used for the conducting the study i.e. classroom with proper illumination, white board and colour sketch pens for writing of instructions, printer and papers, staplers with pin, blank answer sheets and loose pages, high speed internet connection, tablet or mobile phone having Wi-Fi connection, stop watch & bell etc.

The collected data was tabulated in Microsoft excel spread sheet and analysed by Epi-info 7.0 and SPSS 20. The report was prepared within a period of one-month.

Results:

Table-1A: Students(n) feedback for Structured essay type question with brief answer (conventional) (n=99)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	0 (0.0%)	0 (0.0%)	2 (2.02%)	2 (2.02%)	95 (95.96%)
The examination provides feedback that stimulates learning.	0 (0.0%)	0 (0.0%)	2 (2.02%)	10 (10.1%)	87 (87.88%)
The exam is practical and realistic.	0 (0.0%)	0 (0.0%)	6 (6.06%)	10(10.1%)	83 (83.84%)
Different versions of an exam must be at the same level i.e. the same severity	0 (0.0%)	0 (0.0%)	3 (3.03%)	11 (11.11%)	85 (85.86%)
The examination should motivate the student to learn	0 (0.0%)	0 (0.0%)	2 (2.02%)	6 (6.06%)	91 (91.92%)

Table-1B: Students(n) feedback for Structured essay type question with brief answer (Online) (n=99)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	76 (76.77%)	15 (15.15%)	5 (5.05%)	3 (3.03%)	0 (0.0%)
The examination provides feedback that stimulates learning.	71 (71.72%)	16 (16.16%)	8 (8.08%)	2 (2.02%)	2 (2.02%)
The exam is practical and realistic.	87 (87.88%)	2 (2.02%)	6 (6.06%)	0 (0.0%)	4 (4.04%)
Different versions of an exam must be at the same level i.e. the same severity	7 (72.73%)	18 (18.18%)	7 (7.07%)	2 (2.02%)	0 (0.0%)
The examination should motivate the student to learn	78 (78.79%)	4 (4.04%)	15 (15.15%)	2 (2.02%)	0 (0.0%)

Table-2A: Students(n) feedback for Short answer type questions and FIB (Conventional) (n=99)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	0 (0.0%)	0 (0.0%)	7 (7.07%)	10 (10.01%)	82 (82.83%)
The examination provides feedback that stimulates learning.	0 (0.0%)	0 (0.0%)	1 (1.01%)	11 (11.11%)	87 (87.88%)
The exam is practical and realistic.	0 (0.0%)	0 (0.0%)	6 (6.06%)	15 (15.15%)	78 (78.79%)
Different versions of an exam must be at the same level i.e. the same severity	3 (3.03%)	0 (0.0%)	3 (3.03%)	12 (12.12%)	84 (84.85%)
The examination should motivate the student to learn	0 (0.0%)	0 (0.0%)	1 (1.01%)	9 (9.09%)	89 (89.9%)

Table-2B: Students(n) feedback for Short answer type questions and FIB(Online) (n=99)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	76 (76.77%)	21 (21.21%)	0 (0.0%)	2 (2.02%)	0 (0.0%)
The examination provides feedback that stimulates learning.	75 (75.76%)	16 (16.16%)	6 (6.06%)	2 (2.02%)	0 (0.0%)
The exam is practical and realistic.	67 (67.68%)	25 (25.25%)	5 (5.05%)	2 (2.02%)	0 (0.0%)
Different versions of an exam must be at the same level i.e. the same severity	68 (68.69%)	21 (21.21%)	8 (8.08%)	2 (2.02%)	0 (0.0%)
The examination should motivate the student to learn	75 (75.76%)	19 (19.19%)	3 (3.03%)	2 (2.02%)	0 (0.0%)

Table-3A: Students(n) feedback for MCQ (conventional) (n=99)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	1 (1.01%)	4 (4.04%)	8 (8.08%)	25 (25.25%)	61 (61.62%)
The examination provides feedback that stimulates learning.	4 (4.04%)	5 (5.05%)	9 (9.09%)	21 (21.21%)	60 (60.61%)
The exam is practical and realistic.	2 (2.02%)	5 (5.05%)	16 (16.16%)	16 (16.16%)	60 (60.61%)
Different versions of an exam must be at the same level i.e. the same severity	3 (3.03%)	5 (5.05%)	10 (10.1%)	20 (20.2%)	61 (61.62%)
The examination should motivate the student to learn	3 (3.03%)	8 (8.08%)	12 (12.12%)	18 (18.18%)	58 (58.59%)

Table-3B: Students(n) feedback for MCQ (Online) (n=99)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	47 (47.47%)	25 (25.25%)	0 (0.0%)	6 (6.06%)	21 (21.21%)
The examination provides feedback that stimulates learning.	54 (54.55%)	23 (23.23%)	0 (0.0%)	5 (5.05%)	17 (17.17%)
The exam is practical and realistic.	61 (61.62%)	21 (21.21%)	0 (0.0%)	5 (5.05%)	12 (12.12%)
Different versions of an exam must be at the same level i.e. the same severity	61 (61.62%)	20 (20.2%)	0 (0.0%)	3 (3.03%)	15 (15.15%)
The examination should motivate the student to learn	59 (59.6%)	24 (24.24%)	1 (1.01%)	2 (2.02%)	13 (13.13%)

Table-4: Students(n) feedback for "structured easy type question with brief answer" (n=99)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Assessment method is interesting	5 (5.05%)	9(9.09%)	28(28.3%)	42(42.42%)	15(15.15%)
2. Motivate to read more	0 (0.0%)	10(10.1%)	21(21.21%)	58(58.58%)	10(10.1%)
3. Examination provides feedback that stimulates learning	0 (0.0%)	8(8.08%)	24(24.24%)	59(59.59%)	8(8.08%)
4. Motivate clinical thinking	6 (6.06%)	11(11.11%)	25(25.25%)	50(50.50%)	7(7.07%)
5. Cover the entire syllabus	2 (2.02%)	11(11.11%)	27(27.27%)	48(48.48%)	11(11.11%)
6. Address all the domains of learning	1 (1.01%)	10(10.1%)	34(34.34%)	4848.48%)	6(6.06%)
7. Give confidence in subject learning	5 (5.05%)	5(5.05%)	25(25.25%)	52(52.52%)	12(12.12%)
8. Depth of knowledge is required for answering	1 (1.01%)	5(5.05%)	21(21.21%)	54(54.54%)	18(18.18%)
9. Easy to score high marks	5 (5.05%)	25(25.25%)	47(47.47%)	21(21.21%)	1(1.01%)
10. Total time given is appropriate	4 (4.04%)	21(21.21%)	31(31.31%)	38(38.38%)	5(5.05%)

Table-5: Students feedback for "short answer type question and fill in the blanks" (n=99)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Assessment method is interesting	5 (5.05%)	5(5.05%)	15(15.15%)	59(59.59%)	15(15.15%)
2. Motivate to read more	0 (0.0%)	8(8.08%)	21(21.21%)	62(62.62%)	8(8.08%)
3. Examination provides feedback that stimulates learning	0 (0.0%)	2(2.02%)	22(22.22%)	53(53.53%)	22(22.22%)
4. Motivate clinical thinking	2(2.02%)	15(15.15%)	38(38.38%)	40(40.4%)	4(4.04%)
5. Cover the entire syllabus	4(4.04%)	25(25.25%)	28(28.28%)	36(36.36%)	6(6.06%)
6. Address all the domains of learning	1 (1.01%)	20(20.2%)	43(43.43%)	30(30.3%)	5(5.05%)

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7. Give confidence in subject learning	1 (1.01%)	3(3.03%)	30(30.3%)	60(60.6%)	5(5.05%)
8. Depth of knowledge is required for answering	1 (1.01%)	4(4.04%)	9(9.09%)	50(50.5%)	35(35.35%)
9. Easy to score high marks	6 (6.06%)	12(12.12%)	39(39.39%)	31(31.31%)	11(11.11%)
10. Total time given is appropriate	7(7.07%)	20(20.2%)	21(21.21%)	45(45.45%)	6(6.06%)

Table-6: Students feedback for "multiple choice question" (n=99)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Assessment method is interesting	1(1.01%)	1(1.01%)	12(12.12%)	43(43.43%)	42(42.42%)
2. Motivate to read more	1(1.01%)	6(6.06%)	17(17.17%)	46(46.46%)	29(29.29%)
3. Examination provides feedback that stimulates learning	0(0.0%)	2(2.02%)	18(18.18%)	55(55.55%)	24(24.24%)
4. Motivate clinical thinking	3(3.03%)	5(5.05%)	35(35.35%)	38(38.38%)	18(18`18%)
5. Cover the entire syllabus	3(3.03%)	20(20.20%)	25(25.25%)	37(37.37%)	14(14.14%)
6. Address all the domains of learning	2(2.02%)	8(8.08%)	30(30.30%)	47(47.47%)	12(12.12%)
7. Give confidence in subject learning	1(1.01%)	2(2.02%)	23(23.23%)	47(47.47%)	26(26.26%)
8. Depth of knowledge is required for answering	1(1.01%)	1(1.01%)	8(8.08%)	42(42.42%)	47(47.47%)
9. Easy to score high marks	2(2.02%)	10(10.10%)	29(29.29%)	37(37.37%)	21(21.21%)
10. Total time given is appropriate	2(2.02%)	7(7.07%)	20(20.20%)	44(44.44%)	26(26.26%)

Table-7A: Faculty (n) feedback for Structured essay type question with brief answer (conventional) (n=05)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20%)	4 (80%)
The examination provides feedback that stimulates learning.	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20%)	4 (80%)
The exam is practical and realistic.	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (40%)	3 (60%)
Different versions of an exam must be at the same level i.e. the same severity	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (100%)
The examination should motivate the student to learn	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (100%)

Table-7B: Faculty (n) feedback for Structured essay type question with brief answer (Online) (n=05)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60%)	2 (40%)
The examination provides feedback that stimulates learning.	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (40%)	3 (60%)
The exam is practical and realistic.	0 (0.0%)	0 (0.0%)	2 (40%)	2 (40%)	1 (20%)
Different versions of an exam must be at the same level i.e. the same severity	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (40%)	3 (60%)
The examination should motivate the student to learn	0 (0.0%)	0 (0.0%)	1 (20%)	2 (40%)	2 (40%)

Table-8A: Faculty (n) feedback for Short answer type questions and FIB (Conventional) (n=05)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (100%)
The examination provides feedback that stimulates learning.	0 (0.0%)	0 (0.0%)	0 (0.0%))	0 (0.0%)	5 (100%)
The exam is practical and realistic.	0 (0.0%)	0 (0.0%)	0 (0.0%))	0 (0.0%)	5 (100%)
Different versions of an exam must be at the same level i.e. the same severity	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (40%)	3 (60%)
The examination should motivate the student to learn	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20%)	4 (80%)

Table-8B: Faculty (n) feedback for Short answer type questions and FIB (Online) (n=05)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20%)	4 (80%)
The examination provides feedback that stimulates learning.	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (100%)
The exam is practical and realistic.	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60%)	2 (40%)
Different versions of an exam must be at the same level i.e. the same severity	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60%)	2 (40%)
The examination should motivate the student to learn	0 (0.0%)	0 (0.0%)	0 (0.0%))	2 (40%)	3 (60%)

Table-9A: Faculty (n) feedback for MCQ (conventional) (n=05)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	0 (0.0%)	0 (0.0%)	0 (0.0%))	0 (0.0%))	5 (100%)
The examination provides feedback that stimulates learning.	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%))	5 (100%)
The exam is practical and realistic.	0 (0.0%)	0 (0.0%)	0 (0.0%))	0 (0.0%)	5 (100%)
Different versions of an exam must be at the same level i.e. the same severity	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (40%)	3 (60%)
The examination should motivate the student to learn	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (40%)	3 (60%)

Table-9B: Faculty (n) feedback for MCQ (Online) (n=05)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The examination measures / assesses what is stated in the learning objectives	0 (0.0%)	0 (0.0%)	0 (0.0%))	1 (20%))	4 (80%)
The examination provides feedback that stimulates learning.	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20%))	4 (80%)
The exam is practical and realistic.	0 (0.0%)	0 (0.0%)	0 (0.0%))	0 (0.0%)	5 (100%)
Different versions of an exam must be at the same level i.e. the same severity	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60%)	2 (40%)
The examination should motivate the student to learn	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (40%)	3 (60%)

Table-10: Faculty (n) feedback for "structured easy type question with brief answer" (n=05)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Assessment method is interesting	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60%)	2 (40%)
2. Motivate to read more	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60%)	2 (40%)
3. Examination provides feedback that stimulates learning	0 (0.0%)	2 (40%)	0 (0.0%)	2 (40%)	1 (20%)
4. Motivate clinical thinking	0 (0.0%)	0 (0.0%)	0 (0.0%)	3	2 (40%)
5. Cover the entire syllabus	0 (0.0%)	0 (0.0%)	1 (20%)	2 (40%)	2 (40%)
6. Address all the domains of learning	0 (0.0%)	1 (20%)	2 (40%)	1 (20%)	1 (20%)
7. Give confidence in subject learning	0 (0.0%)	0 (0.0%)	1 (20%)	2 (40%)	2 (40%)
8. Depth of knowledge is required for answering	0 (0.0%)	0 (0.0%)	1 (20%)	2 (40%)	2 (40%)
9. Easy to score high marks	0 (0.0%)	0 (0.0%)	1 (20%)	1 (20%)	3 (60%)
10. Total time given is appropriate	0 (0.0%)	0 (0.0%)	2 (40%)	2 (40%)	1 (20%)

Table-11: Faculty feedback for "short answer type question and fill in the blanks" (n=05)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Assessment method is interesting	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60%)	2 (40%)
2. Motivate to read more	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60%)	2 (40%)
3. Examination provides feedback that stimulates learning	0 (0.0%)	2 (40%)	0 (0.0%)	2 (40%)	1 (20%)
4. Motivate clinical thinking	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60%)	2 (40%)
5. Cover the entire syllabus	0 (0.0%)	1 (20%)	1 (20%)	2	1 (20%)

				(40%)	
6. Address all the domains of learning	0 (0.0%)	1 (20%)	2 (40%)	1 (20%)	1 (20%)
7. Give confidence in subject learning	0 (0.0%)	0 (0.0%)	1 (20%)	2 (40%)	2 (40%)
8. Depth of knowledge is required for answering	0 (0.0%)	0 (0.0%)	1 (20%)	2 (40%)	2 (40%)
9. Easy to score high marks	0 (0.0%)	1 (20%)	2 (40%)	1 (20%)	1 (20%)
10. Total time given is appropriate	0 (0.0%)	0 (0.0%)	2 (40%)	2 (40%)	1 (20%)

Table-12: Faculty feedback for "multiple choice question" (n=05)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Assessment method is interesting	0 (0.0%)	0 (0.0%)	2 (40%)	2 (40%)	1 (20%)
2. Motivate to read more	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (60%)	2 (40%)
3. Examination provides feedback that stimulates learning	0 (0.0%)	2 (40%)	1 (20%)	2 (40%)	0 (0.0%)
4. Motivate clinical thinking	0 (0.0%)	1 (20%)	2 (40%)	2 (40%)	0 (0.0%)
5. Cover the entire syllabus	0 (0.0%)	1 (20%)	1 (20%)	3 (60%)	0 (0.0%)
6. Address all the domains of learning	0 (0.0%)	1 (20%)	0 (0.0%)	3 (60%)	1 (20%)
7. Give confidence in subject learning	0 (0.0%)	2 (40%)	0 (0.0%)	2 (40%)	1 (20%)
8. Depth of knowledge is required for answering	0 (0.0%)	1 (20%)	0 (0.0%)	2 (40%)	2 (40%)
9. Easy to score high marks	0 (0.0%)	0 (0.0%)	1 (20%)	2 (40%)	2 (40%)
10. Total time given is appropriate	0 (0.0%)	0 (0.0%)	2 (40%)	2 (40%)	1 (20%)

Results:

Regarding the response of structured essay type question by conventional method 95.96% students strongly agreed that it could assesses what was stated in the learning objectives; 87.88% strongly agreed that the examination provides feedback that stimulated learning. 83.84% strongly agree that the exam is practical and realistic. 85.86% strongly agreed that different versions of an examination might be at the same level i.e. the same severity. 91.92% strongly agreed that the examination should motivate the student to learn. 80%, 80%, 60%, 100%, 100% faculty strongly agreed for the above mentioned statements respectively. In case of online system 40%, 60%, 20%, 60%, 40% faculty strongly agreed with above mentioned statements respectively.

But in the online system of this method the majority of the students did not agree with any of this criteria. Only 2.02% & 4.04% students strongly agreed that the examination provided feedback that stimulated learning & examination was practical and realistic respectively. No other students strongly agreed with any other criteria. **(Table 1A, 1B, 7A, 7B)**

Regarding the Short answer type questions and fill in the blank by conventional method 82.83%% students strongly agreed that it could assesses what was stated in the learning objectives; 87.88% strongly agreed that the examination provided feedback that stimulated learning. 78.79%% strongly agreed that the exam was practical and realistic. 84.85%% strongly agreed that different versions of an examination might be at the same level i.e. the same severity. 89.9% strongly agreed that the examination should motivate the student to learn. 100%, 100%, 100%, 60%, 80% faculty strongly agree with above mentioned statements respectively. In case of online system 80%, 100%, 40%, 40%, 60% faculty strongly agree with above mentioned statements respectively.

But in the online system of this method all the students did not strongly agree with any of this criteria. **(Table 2A, 2B, 8A, 8B)** Regarding the multiple choice questions by conventional method 61.62% students strongly agreed that it could assesses what was stated in the learning objectives; 60.61% strongly agreed that the examination provides feedback that stimulated learning. 60.61% strongly agreed that the exam was practical and realistic. 61.62% strongly agreed that different versions of an examination might be at the same level i.e. the same severity. 58.59% strongly agreed that the examination should motivate the student to learn.100%, 100%. 100%. 60%, 60% faculty strongly agreed with above mentioned statements respectively. In case of online system 80%, 80%, 100%, 40%, 60% faculty strongly agreed with above mentioned statements respectively.

But in the online system of this method 47.47%, 54.55%, 61.62%. 61.62%, 59.6% students strongly disagreed with the criteria mentioned above. **(Table 3A, 3B, 9A, 9B)**

Regarding the structured essay type question 42.42% students agreed & 15.15% students strongly agreed that the method was interesting. 58.58% students agree & 10.1% students strongly agreed that the method motivated to read more. 59.59% students agreed & 8.08% students strongly agreed that it provides feedback that stimulates learning. 50.50% students agreed & 7.07% students strongly agreed that it motivated clinical thinking.48.48% students agreed & 11.11% students strongly agreed that it could cover the entire syllabus. 48.48% students agreed & 6.06% strongly agreed that it addressed all the domains of learning. 52.52% students agreed & 12.12% strongly agreed that it gave confidence in subject learning. 54.54% students agreed & 18.18% strongly agreed that depth of knowledge was required for answering. 47.47% students were neutral regarding the response "easy to score high marks". 38.38% students agreed & 5.05% strongly agreed that the total time given was appropriate. **(Table-4)** The above mentioned statements strongly agreed by 40%, 40%, 20%, 40%, 40%, 20%, 40%, 40%, 60%, 20% faculty respectively. **(Table-10)**

Regarding the short answer type question and fill in the blanks 59.59% students agreed & 15.15% students strongly agreed that the method was interesting. 62.62% students agreed & 8.08% students strongly agreed that the method motivated to read more. 53.53% students agreed & 22.22% students strongly agreed that it provided feedback that stimulated learning. 40.4% students agreed & 4.04% students strongly agreed that it motivated clinical thinking. 36.36% students agreed & 6.06% students strongly agreed that it could

cover the entire syllabus. 30.3% students agreed & 5.05% strongly agreed that it addressed all the domains of learning. 60.6% students agreed & 5.05% strongly agreed that it gave confidence in subject learning. 50.5% students agreed & 35.35% strongly agreed that depth of knowledge was required for answering. 31.31% students agreed & 11.11students strongly agreed that it was easy to score high marks. 45.45% students agreed & 6.0% strongly agreed that the total time given was appropriate. **(Table-5)** The above mentioned statements were agreed by 60%, 60%, 40%, 60%, 40%, 20%, 40%, 40%, 20%, 40% faculty respectively. Among these 40% faculty strongly agreed that this method was interesting and motivated to read more. **(Table-11)**

Regarding the multiple choice questions 43.43% students agreed & 42.42% students strongly agreed that the method was interesting. 46.46% students agreed & 29.29% students strongly agreed that the method motivated to read more. 55.55% students agreed & 24.24% students strongly agreed that it provided feedback that stimulates learning. 38.38% students agreed & 18.18% students strongly agreed that it motivated clinical thinking. 37.37% students agreed & 14.14% students strongly agreed that it could cover the entire syllabus. 47.47% students agreed & 12.12% strongly agreed that it addressed all the domains of learning. 47.47% students agreed & 26.26% strongly agreed that it gave confidence in subject learning. 42.42% students agreed & 47.47% strongly agreed that depth of knowledge was required for answering. 37.37% students agreed & 21.21% students strongly agreed that it was easy to score high marks. 44.44%% students agreed & 26.26% strongly agreed that the total time given was appropriate. **(Table-6)** The above mentioned statements were agreed by 40%, 60%, 40%, 40%, 60%, 60%, 40%, 40%, 40%, 40% faculty respectively. Among these 40% faculty strongly agreed that this motivated to read more, depth of knowledge was required for answering & it is easy to score high marks. **(Table-12)**

Discussion:

Among all the different components of a medical education programme, the assessment strategies direct and influence the way students learn. A well- designed assessment sets clear expectations, establishes a reasonable workload and provides opportunities for students to self-monitor, rehearse, practise and receive feedback[7]. Conversely, poorly designed assessments can mar the quality of learning.[8] For academic staff, assessment is often the final consideration in their planning of the curriculum.[8] After this thorough study it is clearly noticed that students are more towards the conventional method of examination than online assessment. They did not agree or strongly agree any of the criteria for online assessment of structured essay type, short answer type or even for MCQs instead of quite familiar to convensional method of examination. For most students, however, the curriculum is literally defined by the requirements of assessment. Students often work 'backwards' through the curriculum, focusing first and foremost on how they will be assessed and what they will be required to demonstrate.[8] Therefore the potent effects of assessment were recognised. It is also clear from our study that requirements on the study habits of students and capitalizing on the capacity of assessment for creating preferred patterns of study is nothing but a powerful means of re-conceptualizing and repositioning the use of assessment. This paper evaluates current trends in assessment and explores the benefits and limitations associated with the various forms of assessment (online and conventional) which are already being discussed in result part. Liu, N. & Carless, D. et al stated that a well-designed formative assessment can focus students on effective learning and divert them away from summative assessment, which focuses attention on grades and reproductive thinking.[3] In this paper, we will provide a similar type of framework for selecting

methods of assessment and an overview of the assessment methods used in medical education, with a focus on recent advanced of online platform in simulation and work-based strategies. Detailed examples of simulation and work-based assessment methods and the benefits and challenges related to their use will be provided in various tables in this study. After conducting this study it is clear that sometimes, it is incorrectly assumed that multiple choice questions (MCQ) are unsuitable for testing problem solving ability because they require students to merely recognise the correct answer, while in open ended questions they have to generate the answer spontaneously. Multiple choice questions can test problem solving ability if constructed properly[10,11,12].This paper will not be an exhaustive review of all assessment methods reported in the literature, but only those with clear conclusions about their validity and reliability in the context of undergraduate medical education (Anatomy) in Coochbehar Government Medical College and Hospital, although many of them can also used in postgraduate medical education also. In our study it is in quite a clear note that the most acceptable method for the assessment of knowledge is the written method (which can also be delivered online) but when an explanation is required, an essay question will, obviously, be more suitable than an MCQ. Every question format has its own advantages and disadvantages which must be carefully weighed when a particular question type is chosen. It is not possible that one type of question will serve the purpose of testing all the aspects of a topic. Therefore, a variety of formats are needed to counter the possible bias associated with individual formats ans so are done in this study and they were consistent with the stated objectives of the course or programme. According to maximum number of students MCQs are often misconstrued as tests of simple facts, but, if constructed well, they can test the application of knowledge and problem solving skills. Contextualising the questions by including clinical or laboratory scenarios not only conveys authenticity and validity, but, also, is more likely to focus on important information rather than trivia. Short answer type questions (SAQ) are open-ended questions that require students to generate an answer of no more than one or two words, rather than to select from a fixed number of options. Since they require some time to answer, not many SAQs were asked in an hour of testing time. It is important that the questions are phrased unambiguously and a well defined answer key was written before marking the question.[14] It was helpful for faculties also. They required much more time to answer than short answer or multiple choice questions and, therefore, not quite as many questions were used per hour of testing; hence, their lower reliability. A well-written fill in the blanks assesses the approach of students to solving a problem, their reasoning skills, and their understanding of concepts, rather than recall of factual knowledge.[15]

Conclusions:

Various assessment methods that assess a range of competencies are available for examiners. The choice should be dictated by fitness for purpose and a number of utility criteria. Assessment is a central feature of teaching and the curriculum, without it the whole assessment method (summative or formative) will be useless. It one of the most significant influences on a student's mind to study further and harder and improving assessment has a huge impact on the quality of learning[3]. Though most of the students favour the conventional page and paper over online assessment. It is apparent that assessment is the gatekeeper of higher learning and we need to embrace new methods of assessment in order to meet the expectations and challenges associated with recent advances in digitalised platform.

Acknowledgements:

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