

ASSESSMENT OF KNOWLEDGE AND ATTITUDE OF COMPUTER ASSISTED LEARNING AMONG MEDICAL STUDENTS

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ABSTRACT

INTRODUCTION: It is going truth globally that the medical course in medical college students are developed via computer mediated learning.¹ Utilization of both the range upon online messages options must create study exciting, monetization, and likely as hired. We Hypothesized that survey will facilitate to permit us to be able to blueprint some on this necessary condition among my medical students and also to improve our study facilities a lot of automatically. A set of closed ended problems remained displayed on departmental website, to evaluate their computer skills and talents and their own assessment in computer and internet skills helping in learning. In the beginning months of 1st year MBBS college students 2014-15 batch taken up voluntarily to the study through MCQs questions provided to them in the form of departmental website. A batch of 50 college students surveyed on 3 different days. Although 80% students were confident with the operational skills of the computer, the opinion regarding the usage of computers for web based learning activities was not uniform i.e., 55% of the participants felt uncomfortable with web assisted activity in comparison to paper based activity. However, 49% were of the opinion that paper based activity might become redundant and websites will take over books in the future. Expansion on computer-assisted study requires traditional changes as well as thoughtful strategic planning, resource giving, staff benefits, Edutainment promotion by multidisciplinary working, and efficient quality control.

KEYWORDS

Computer Assisted Learning (CAL), Medical Students, Technology and Learning, e-learning, Medical Education.

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INTRODUCTION: NEED FOR THE STUDY: It is a universal truth that the medical education of medical students and Doctors will be improved through Computer Assisted Learning.¹ Use of both the wide range on online information options must make study exciting, valuable, and likely to be retained.

Computer technology can support a lot of learning things, that engage college students in a constant collaborative actual facility and reshaping nurturing. Computer assisted study is now as widely intended. Both the unique presentational advantages computer presentation are usually particularly suitable for questions that are looks extensive, detail friendly, and difficult to be able to conceptualize, such as intricate biochemical process or tiny images.² Furthermore, 'virtual' situations may reduce both the need to handle cat or naked tissue in study. Use of PC and also Internet with regard to medical learning offers made learning one more private study. An student can progress on his or her favored step. They can reproduce, disturb, and pick up at will, that cans have

private value for weaker college students. It's more economical and if may utilized.

Lots of research studies from West by large number of universities and also medical organizations done so as to evaluate both the use of computers among doctors and medical students.^{3,4,5} Our survey can facilitate to allow us to plan some concerning this necessary issue among our medical students and to boost our learning facilities a lot of effectively.

Online formative assessment perpetuates to be important ways of analysis and also supply subsidiary learning.⁶ We need develop and take a look at the psychological science that measures attitudes towards e-learning attitudes among dental students.⁷ Students typically have a positive perspective to e-learning methodologies, and e-learning programs that are straight forward to use are typically highly accepted by learners compared to additional advanced teaching.⁸ Though the primarily computer based module failed to enhance learning, the participants did notice the module a lot of pleasant to use. Developing learning tools like this computer-based module will improve the teaching of surgical procedure skills.⁹ Most of students cited the self-paced instruction, intensive use of interactive graphics, and side-by-side presentation of text and graphics as positive options. Most students reported that it took less time to review the topic matter with this on-line instruction compared with material conferred within the lecture hall.¹⁰

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Within the last decade, e-learning has gained a consistent place in surgical teaching.¹¹ Medical students need to retain vast numbers of medical nurturing along path to be able to becoming physicians. To be able to address present condition, multimedia Internet study resources have to supplement previous text-based materials.¹² Social media is actually increasingly employed with regard to teaching and also decision. We explain the design and also implementation of Facebook© training forum for medical students, and at its effectiveness.¹³ Medical students are required to remember vast amounts of medical knowledge along way to be physicians. To address this condition, virtual Web-based study info have developed to supplement previous text-based materials.¹² Sociable media is actually all too being used with regard to training and decision. Internet survey resources are usually increasingly employed in the assessment steps to deliver the quality knowledge services. What prompts students who give feedback is actually poorly understood.¹⁴ e-Learning has been one popular mode for delivering knowledge in medical course. Presently there were little studies about e-learning stimulation, implementation, and also has assessments accustomed to find the institutional and also learners' needs. The studies described differently study configurations, measurement tools, teaching time, and also resources for e-learning interventions. e-Learning is actually one viable fix for medical teachers faced to lots challenges, which includes (1) promoting self-directed study, (2) providing study opportunities to offer continuous (24h/time/7 days one 7 days) availability with regard to learners, and (3) improve continuous advanced stimulation. Several key recommendations for school instructors interested in feedback and developing e-learning activities with regard to today's learners are studied.¹⁵ The CALM web site was employed by 25% of medical students, notably those with poorer anxiety scores. Self-selection to a web-based resource could give help to those most in would like, however more analysis would be required to assess effectiveness.¹⁶ Web-based formative assessment tools became well known in medical education as valuable resources for self-reliant learning. Health systems worldwide face shortages in professional hands. Many studies having constantly shown the correlational statistics between the supply of medical examiners, coverage of

health services, and population health outcomes. To handle this shortage, on-line eLearning is more and more being adopted in health professionals' education. To tell policy-making, in on-line eLearning, would like to see its effectiveness. The present proof suggests that on-line eLearning is equivalent, probably superior to ancient learning. These findings gift a possible incentive for policy manufacturers to cautiously encourage its adoption among the student studies.¹⁷ Analysis and comparison for various net examination system within the current individual field, projected a group of style mode concerning general examination platform that apply in faculties and universities, analysis and analysis the key technology, and projected improved theme, created system being perfect.¹⁸ Web-based technologies area turning into integral a part of the business material, interlinking into most departments and purposeful areas. More studies stretch the exploration into the impact of Web-based collaboration.¹⁹

MATERIALS AND METHODS: A set of closed ended questions was displayed in departmental website, to assess their computer skills and their involvement in computer and internet assisted learning activities. First year MBBS students of 2014-15 batch participated by voluntarily in the study by responding to the questions provided to them by means of departmental website. A batch of 50 students participated on 3 different days and responded to the questions.

ASSESSMENT PLAN: (STATISTICAL ANALYSIS): Data will be entered in Microsoft excel and analysed using SPSS software version 18. The demographic data will be analyzed as frequencies, measures of central tendency and dispersion. Chi- square test and Fishers' exact test will be used to compare the data in proportions. Non-parameter tests like Mann-Whitney U test will be used. Response to questions was assessed by item analysis.

Selection Criteria:

- **Inclusion Criteria:** Medical students. (I, II and III phase students)
- **Exclusion Criteria:** Non-medical students, Interns, PG medical students.

RESULTS:

Sl. No.	Question	Options & Response (n =300)			
1	Do you have access to computer?	Yes	No	Not Sure	
2	Do you have access to internet at home and college	Yes	No	Certain times/ Not always	
3	How often do you use the Internet for college work?	Always Priority	Certain times/ Not always	Never Priority	Often Whenever free
4	I learn to use new Web Sites by trial and error	Yes very often	Yes at sometime	Not interested	Slightly can manage
5	When I have a problem with a Web Site, I usually solve it on my own	Yes very often	Yes at sometime	No	Slightly can manage

6	The Web Assisted activity terrified me to use	Yes very often	Yes at sometime	No	Slightly can manage
7	I felt more uncomfortable using the Web Assisted activity than the Paper Assisted activity	Yes very often	Yes at sometime	No	Slightly can manage
8	If given a choice I would get most of my diagrams for College projects from a text book than a Web Si	Yes very often	Yes at sometime	No	Slightly can manage
9	I download objects (such as pictures and sound) from a Web Site for college use	Yes very often	Yes at sometime	No	Slightly can manage
10	College work that uses Web Sites for learning makes me feel happy	Yes very often	Yes at sometime	No	Slightly can manage
11	I feel confident with using Web Sites	Yes very often	Yes at sometime	No	Slightly can manage
12	The Web Assisted activity was easier to use than the Paper Assisted activity	Yes very often	Yes at sometime	No	Slightly can manage
13	Web Sites will take over Books in the future	Yes very often	Yes at sometime	No	Slightly can manage
14	There should be more college work that uses Web Sites	Yes very often	Yes at sometime	No	Slightly can manage
15	To use Web Sites you have to be highly qualified	Yes very often	Yes at sometime	No	Slightly can manage
Sl. No.	Question	Options & Response (n = 134)			
1	Do you have access to computer?	Yes	No	Not Sure	
		60%	28%	10%	
2	Do you have access to internet at home and college	Yes	No	Certain times/ Not always	
		66%	5%	27%	
3	How often do you use the Internet for college work?	Always Priority	Certain times/ Not always	Never Priority	Often Whenever free
		25%	57%	8%	7%
4	I learn to use new Web Sites by trial and error	Yes very often	Yes at sometime	Not interested	Slightly can manage
		13%	53%	15%	17%
5	When I have a problem with a Web Site, I usually solve it on my own	Yes very often	Yes at sometime	No	Slightly can manage
		29%	48%	22%	7%
6	The Web Assisted activity terrified me to use	Yes very often	Yes at sometime	No	Slightly can manage
		10%	22%	58%	8%
7	I felt more uncomfortable using the Web Assisted activity than the Paper Assisted activity	Yes very often	Yes at sometime	No	Slightly can manage
		24%	31%	36%	7%
8	If given a choice I would get most of my diagrams for College projects from a text book than a Web Si	Yes very often	Yes at sometime	No	Slightly can manage
		41%	33%	8%	16%
9	I download objects (such as pictures and sound) from a Web Site for college use	Yes very often	Yes at sometime	No	Slightly can manage
		33%	54%	8%	3%
10	College work that uses Web Sites for learning makes me feel happy	Yes very often	Yes at sometime	No	Slightly can manage
		31%	33%	19%	15%
11	I feel confident with using Web Sites	Yes very often	Yes at sometime	No	Slightly can manage
		46%	34%	12%	6%
12	The Web Assisted activity was easier to use than the Paper Assisted activity	Yes very often	Yes at sometime	No	Slightly can manage
		22%	51%	13%	11%
13	Web Sites will take over Books in the future	Yes very often	Yes at sometime	No	Slightly can manage
		23%	26%	31%	17%

14	There should be more college work that uses Web Sites	Yes very often	Yes at sometime	No	Slightly can manage
		19%	40%	31%	8%
15	To use Web Sites you have to be highly qualified	Yes very often	Yes at sometime	No	Slightly can manage
		7%	34%	47%	9%
Table 1: "Computer Assisted Learning KAP Study Responses"					

DISCUSSION: Computers have penetrated into every nook and corner of medicine. Internet is explosively developing as information superhighway that has provided huge amount of information on fingertips. It is now becoming a well-known thing that the medical education of medical students and doctors will be enhanced through the use of computer-assisted learning. With the help of it we can achieve the ultimate goal of higher education and effective learning. Computer applications, especially the Internet and World Wide Web, are an extremely efficient way of rapid and effective learning.⁴ A large number of such surveys have been conducted among medical learners and practitioners. For example, a huge survey conducted by American College of Internal Medicine showed that the majority of physician respondents (82%) use computers.⁵ Knowing what is available on the Internet is also important to members. Physicians younger than 50 years reported greater use of computers, especially if they had academic affiliations.⁵ The American College of Physician survey revealed that physicians used computers in professional settings, especially in the office, for administrative functions of billing, accounting, and scheduling appointments.⁵

Responses for Top 15 questions out of total questions are shown in Table no. 1, Among 150 students 134 students participated in the study and submitted their responses, out of which male participants were 43% & female participants were 55%. Out of the 134 students, 66% of them had access to the internet at home and were aware of the availability of the same in the college digital library. Although 80% students were confident with the operational skills of the computer, the opinion regarding the usage of computers for web based learning activities was not uniform i.e., 55% of the participants felt

uncomfortable with web assisted activity in comparison to paper based activity. However, 49% were of the opinion that paper based activity might become redundant and websites will take over books in the future. 47% supported the above opinion by agreeing that high qualification was not pre requisite for using internet and anybody could avail the access to vast knowledge on the various websites. Such access to such enormous information could bring about changes in the attitude of the medical student towards the goal of academic excellence and incorporating computer assisted learning which is monitored by teaching faculty could be novel step in achieving this goal.

CONCLUSION: The wider use of modern computer and internet technology will result in reduced funding, rising student numbers, geographical dispersal, and the current increased competition in a complex global market have put medical colleges under pressure to embrace computer assisted learning.^{1,2} New technologies may have important educational advantages, but without support and training for staff and students they could prove an expensive disaster.¹ Expansion of computer-assisted learning requires cultural change as well as careful strategic planning, resource sharing, staff incentives, active promotion of multidisciplinary working, and effective quality control. Physicians reported a desire to learn about current general computer applications, new uses of telemedicine, including e-mail with colleagues, staff, and patients, and general Internet issues. Physicians also need to increase their knowledge of computer-based information sources of patient care through use of EMR systems, electronic medical books and journals, electronic clinical guidelines, and electronic sources of CME.⁵

CONSENT FORM

I understand that I will be a volunteer for the study titled ""Assessment of Knowledge and Attitude of Computer Assisted Learning among Medical Students". I have been informed in detail regarding the purpose of the study & its procedure. This study may benefit me & may not cause any harm – so, I hereby give my consent to be the volunteer for this study in view of scientific advancement. I have been explained regarding the study in my own language.

I can raise further question at any time & I am assured that these will be answered. I can withdraw from the study at any time without prejudice to my rights to further treatment. I have not been given any inducement & agree to participate to participate in the study voluntarily. While I am participating in the study, I agree to abide by the protocol requirement & assure free co-operation.

Signature of the investigator
Date:

Name & Signature of the volunteer
Date:

Name & Signature of the witness*
Date:

*In case the volunteer is not in a position to give the consent.

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