Re-thinking cheat-proof and supervision-free exams: A perspective in view of Covid-19 situation in developing economies

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Abstract

The emergence of the global pandemic, SARS-CoV-2 has posed several challenges to education across the globe and led to the emergence and progression of newer methods of teaching and assessment. While online teaching has been quickly adopted and implemented across the globe, exams and assessment remain poorly managed both at an elementary and higher level. The practice of promoting students without an equivalent assessment or poor methods of online examinations systems poses a future difficulty in employability assessment and academic equivalence. Here we propose some suggestive measures especially for developing economies with a lack of adequate technology and insufficiently sensitized trainers for online assessment to avert the difficulties due to faulty examination schemes in pandemic situations with prolonged lockdowns.

KEYWORDS

academic equivalence, coronavirus disease, Covid-19, online exams, SARS-CoV-2

Since the early emergence of Covid-19 or SARS-CoV-2 infection globally, education has been greatly hampered, especially in the developing economies where a larger clad of students and teachers remain unaware of remote teaching methods and technological advances. In 2020, when the nationwide lockdown was imposed in several countries, most academic organizations had no idea about online teaching. If at all, the online teaching was conducted, it was a part of a non-standard learning process. However, the emergence and free availability of tools such as Google Meet, Zoom, Webex and so forth, lead to the possibility of teacher–student interactions and gradually both students and teachers got sensitized with emerging methods. Several academic researchers highlighted that online teaching is not merely an alternate but a necessity in these times.1–3 Moreover, the online mode of teaching has also become an emerging entrepreneurial opportunity with the involvement of educators, IT experts, and investors.4 Efforts are constantly being made in the direction of improving the quality and effectiveness of online education, yet, the delivery model and pedagogy need to be greatly improved before it could become comparable to classroom teaching. We have previously discussed the role of the hybrid-flipped classroom strategy for improving the impact of online education5 which was implemented by several academic institutions. Perhaps the thrust on online teaching was thought to be short-lived and Covid-directed but the continuation of the second wave of Covid in developing nations especially in India shattered this belief. Furthermore, the possibilities of continuation of the Covid-19 situation have frightened the academic fraternity largely. The dangers of lockdown and closure of academic institutions are overshadowed at present due to the thrust on health services, but soon the effects would be rippled up especially in the recruitment drives and analysis of employability.
An annual or semester examination system, rather than continuous assessment remains the sole criterion for the evaluation of academic capabilities of students in most of the developing economies. The exams are mostly conducted in a supervised manner with a strong focus on testing the classroom learning of students using a defined pattern regulated by educational boards for school and university education. Recent lockdowns and inability to conduct exams have led to poor decision making towards academic activities and hence, most exams have been canceled considering the health and safety of students and teachers. In most cases, students have been promoted to the next class without any exam or internal assessment of the teacher. In some cases, the exams have been conducted over various online platforms such as Google forms, and have proven successful. At university level, some exams have been suggested with specific provision and guidelines have been issued. A challenge that would soon appear in front of recruiters and employers is the equivalence of academic understanding in pre-Covid and Covid sessions, which can lead to unfair judgement of past academic performance. We, therefore, suggest a paradigm shift in the exam pattern and system of evaluation which should not be affected by the mode in which the exam is conducted. In the context of developing economies, the questions asked in exams, both at the university and school level are factual, conceptual, or numerical which are based on classroom teaching, but less often rely on the overall understanding, thought process development, or innovations. Such questions pose a challenge of copying and use of unfair means as the answers of solutions can be easily gathered. Furthermore, the need for supervision in most of the aforementioned exams, that is, session end or semester-end exams, is the possible use of unfair means by the students. These factors further limit the transformation of conventional exams into an online mode which is prone to the easy availability of answers and onerous supervision. If these two barriers are dislodged, the exam will be equally effective in offline as well as online mode and no supervision would be needed. Inclusion of questions and activities which could not be easily copied or gathered from online resources and offloading the information in tests can help reformulate the exams for emerging situations. Some of the leading academic institutions and developed economies less often experience such challenges, possibly due to lower socio-economic burden and better access to resources. Some of the noteworthy online programs run at MIT and Harvard, that is, MITx, HarvardX, and so forth conduct exams that are cheat-proof and supervision-free. Such portals and strategies can be a model for developing economies and should be tested on a pilot scale at a community level. Based on the above discussion, we suggest a possible exam pattern that could be beneficial, in making the exams cheat proof and supervision free.

Part A: Possible set of understanding and numerical ability based questions such as drag-and-drop, match the columns, and fill in the gaps type with least relevance of access to calculator or internet. Scoring could be carefully performed based on the degree of completeness and accuracy of numerical answers to specific places of decimal.

Part B: Video game or computer animation simulated questions that test the overall understanding of the subject and scoring based on timing and approach of the question.

Part C: Interactive chat-based discussions on thought-provoking questions and scoring should be done based on the degree of interaction or involvement in the discussion, which can be monitored autonomously.

Part D: Innovative component—this part may include comprehension and collaborative cloud-based projects on data collection, data comprehension and interpretation using available information on the internet.

The aforementioned strategy was recently tested by one of our author-connect programs with over a 100 students and had an excellent turnout. We did not require any supervision and there was no possible means of cheating or use of unfair means. Cloud-based data collection activity (part D) also led to the generation of information which was later used in other courses. We, therefore, propose this scheme for a larger part of the academic umbrella to be adopted and tested. We however suggest that a massive faculty development program and sensitization for teachers and availability of enough resources for the development of such exams should be provided by academic regulatory authorities. In addition, a technical team should back up and coordinate with teachers and educators for the propagation of such examination schemes.

CONFLICT OF INTEREST
Authors declare no conflict of interest. Views of authors do not represent the views of affiliated organizations.

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