Original Article

Use of WhatsApp as an Online Assessment Tool During Pandemic: Experiences From a Tertiary Care Hospital

Dipti Geete*, Mariya Jiandani**, Saraswati Iyer***,
*Assistant Professor,**Associate Professor ,***Professor And Head, Physiotherapy School & Centre, Seth G S Medical College & KEMH, Mumbai 400012

Abstract: <u>Background:</u> Higher education institutions and universities use various online learning management systems for the process of teaching and learning. With increased use of mobiles in students, M- Learning is also a widely used approach for online education. WhatsApp messenger is free, easy to use and can be accessed anywhere, hence gaining popularity as one of the platforms of teaching learning tool. <u>Material and Method:</u> This paper focuses on the use of WhatsApp as a tool for online assessments in poor resource settings. In the absence of centre-based face to face exam due to COVID 19 pandemic situation, a sudden transition to an open book online exam was conducted first time for Physiotherapy students. We have used WhatsApp messenger application as a primary communication tool due to non availability of online learning management systems and also considering the internet issues which students might face while appearing for exams from home. <u>Result:</u> WhatsApp was the easiest mode of communication in absence of online training and was used as a medium to conduct theory and practical exams. It was used for posting question papers on students – teachers group and for further exam related fast communication with the students. This paper highlights advantages and challenges of use of WhatsApp as online exam tool. It also narrates student's experiences of open book exam. <u>Conclusion:</u> WhatsApp though easy was time consuming with added responsibilities on teachers. Open book exam at home had a challenge of not being exam friendly environment. [Geete D Natl J Integr Res Med, 2020; 11(5):61-65]
Key Words: WhatsApp, Open Book Online Exam, challenges, Social Media

Author for correspondence: Dr. Mariya P Jiandani, Department of Physiotherapy, Seth G S Medical College, Mumbai – 400012. E-Mail: mpjiandani@gmail.com

Introduction: When the pandemic struck Mumbai, preparations for preliminary examination to be held from 24th March 2020 had already begun. Unaware of the future turn of events, 20% of students had preceded to their home towns when the lockdown was announced by Government[1] ("COVID-19 pandemic lockdown in India", 2020)making it impossible to conduct institutional based examination; which had to be postponed till further notification.

In an otherwise normal scenario, internal assessments are completed around mid-April and marks are uploaded as per declared date of state university following physical verification of marks by students and the respective head of various departments. However as per the lockdown guidelines stated by Indian Ministry (2020) the possibility of holding exams went remote leading to multiple discussions with Board of studies and the Dean of allied health Sciences.

A final notification by state university was published on university website regarding open book online exam to be held in mid of May. A sudden transition wherein it was decided to conduct theory and Practical exams online for the first time, in absence of any formal online program except for case discussion and uploading resources on Google group for students this was new to our faculty and students alike. We share our experiences on how we used WhatsApp for the process of conduction and submission of internal assessment for third-year bachelor of physiotherapy students (n=32) in a tertiary care hospital with faculty who were busy with COVID patient care.

Concerns:
• Computer And Books Availability: Not all students were equipped with laptop or computer for conduct of exams. Out of 32 students, 13 (40.62%) did not have a laptop, 11(34.37%) did not carry books home for study and 4 (12.5%) students were on duty for screening of COVID patients. All had simple android phone except one student.

• Internet Facility: 6 (18.75%) students did not have internet availability at home.
• Lack Of Training: Students and teachers were not formally trained with online platforms for exams.
• Departmental Infrastructure: The department did not have any online learning management system like ATutor, Claroline, Dokeos, Ilias, Moodle, and Sakai (Cavus & Zabadi, 2014)[2] or video cam or audio system for conduct of exams on online formal learning platform like zoom, google meet, WebEx.

- <u>Dedicated Time:</u> As the medical faculty were busy with ongoing covid duties to have dedicated time and availability for faculty contact online for conduct of clinical subject's theory exams was concern.

<u>What Did We Do: Planning:</u> A meeting was held with the Head of department to discuss final conduct of online exams to address the concerns. Mobile learning (M-learning), a subset of e-learning[3] where learning occurs using mobile network and tools; to gain educational information and resources were already in existence. WhatsApp (WA) was used as a medium earlier to post resources for learning like case investigations and videos with ethical consideration and patient consent. It was easy, available, and accessible anytime and anywhere and allowed sharing of material by uploading images and videos[4].

Permission was obtained from the respective concerned clinical subject department heads and university. A separate email id containing subject name was created as per university instructions. Password was provided to the faculty in charge for correction of theory papers. The subject exams for theory included orthopaedic, neuro medicine, community health and sociology. Both theory and practical exams was conducted for the core subject of Functional Diagnosis and Physiotherapeutic skills.

<u>Execution:</u> A timetable with details of date, email id's for uploading of written answer sheets, time to upload written answer sheets and general instructions to write the answers was put on WA. It was confirmed that all had read and understood. A reminder was given 10 minutes earlier on the day of exam with time to upload answer sheets and uploading email id. Question papers were uploaded as per university pattern. The students wrote on the answer sheets, numbering with name on each page. They scanned the answer sheets immediately at the end of exam. A provision of extra 10 minutes for technical conversion into PDF documents and to upload on the given subject email id was given to the students. It was a non-proctored exam[5] with no flexi time.

The supervisor maintained a continuous check on email to ensure that all students had uploaded the answer sheets in the given time frame. If any

students failed to upload, they were immediately communicated on WA.

To conduct online practical exam, students were divided into four WA groups (8 students in each group). After selection of 4 patient related videos(2 musculoskeletal and 2 neurological) showing movement dysfunction these videos were uploaded with problem based questions to test analytical and decision-making skills. The students were asked to watch the video and answer the questions and upload similar to theory exams.

The marks received following complete correction of PDF document were scrutinized for any errors to be rectified. Subsequent mark sheets were prepared in excel and uploaded for student verification.

<u>Feedback:</u> As a routine after every exam a discussion is held to resolve the queries related practical and theory exam and collect feedback. Such a meeting was held on zoom with entire class where the core paper and practical videos of exams were discussed. Students were also asked for their experience and feedback for the way exams were conducted. Consent to document the feedback was taken.

<u>Advantages Of WA In Assessment:</u> WA was a simple, easy and fast communicating tool and familiar with all students. It has more than 15 million users are in India[6].

Teachers and students both were users of WA and were familiar to use of it, which eliminated need of training on online mode. Smart Phone was the only requirement for use of WA.

Different learning management apps required at least 2 hour of connectivity which was not feasible as students were in their native places where internet facilities was very poor. Use of WA for uploading and downloading the question paper and sending of answer sheets did not need continuous stable internet connection.

WA allowed to send real-time messages to an individual or groups simultaneously at low-cost anytime and anywhere, and encouraged collaborative learning[7].

As WA allows the facility of creating groups with up to 256 contacts to whom messages could be

sent at the same time in the form of texts, videos or audios[8], practical videos could be uploaded and sent at the same time. Its ability to create new learning opportunities, when geographical or time constraints meant that "meeting face-to-face is not possible"[9,10] could be used for assessment too.

Problems Faced: Though it made conduct of exam easier, roles and responsibility as a teacher in charge of conduct of exams increased. The major task was scrolling and checking the roll numbers which failed to upload in the given time. The genuinity of internet issue was confirmed by asking for a screenshot(Fig 1).

Some students in fear uploaded same PDF repeatedly increasing tally of answer sheets and a major task was of removal of duplicate answer sheets.

Some files were corrupted and a request to resend them had to be done. Some PDFs were unclear as they lacked good camera pixel quality. Some of the students had failed to number the pages or sequenced them incorrectly.

Fig 1. Problems Of Internet

Considerable investment of time was needed even outside the official duty hours and from home and on holidays to meet the needs of responding to examining the answer sheets. Table 1 summarizes the advantages and problems of use of WhatsApp.

Table 1: Advantages and problems Of WhatsApp

Advantages	Problems
Simple	Extra time and effort
Familiar	Increased anxiety for Scanning and uploading
Easy To Use	Strenuous as repeated zooming needed
Low Cost	Internet interruptions leading to queueing of answer sheets
User Friendly	Panic associated multiple uploadings
Stable Connectivity Not Needed Continuously	

Student's Feedback: Though it was an open book exam within the comforts of home, feedback from students revealed conducting exams at home was not a very pleasant experience. WA as a medium was comfortable but giving exams from home lost the learnings through the process of exams and post exam discussions.

Though they were comfortable as they had to download only one question paper it did appear strenuous as mentioned by a student "It was bit strenuous as I again & again had to open my phone, had to zoom it the question paper. As my data was on, I was getting distracted by the notifications and the incoming calls".

Online exams were held within the so-called comfort zone of home but students narrated experiences of various problems faced at home while appearing for exams like "Initially, I thought I will be comfortable giving exam at home but then I realize it wasn't. The examination hall atmosphere was not present. This made difficult to concentrate while writing exams as there were too many things for distraction". Few also mentioned that… "we are staying in small houses. We don't have separate room for study. So, while giving exams there were lots of distraction because all family members were present at home due to lockdown. Either parents or older siblings were attending online meetings which
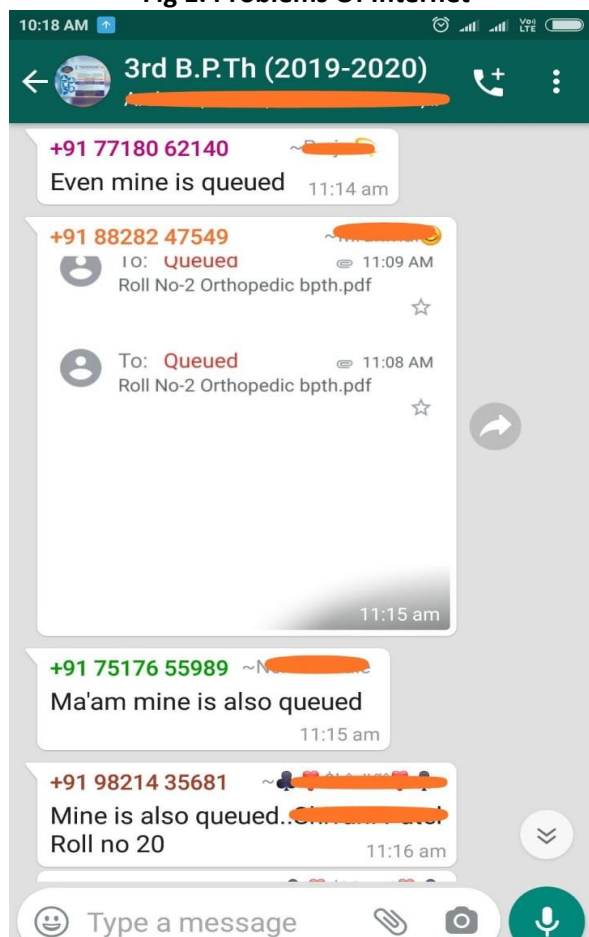
was disturbing, timing of which they couldn't adjust though they wished to…..”

One student mentioned an added responsibility as caretaker at home for younger sibling. “I have a younger brother and since my parents weren't at home due to their duties in hospital, he was my responsibility. So in spite of him understanding that my exams were going on the responsibility of every small thing at home was a big distraction for me.”

Load shedding where electricity was not available at least for few hours was also a problem observed. Unlike classroom seating arrangement, students had to manage at home without proper table and chairs for writing 3 hour paper. It was uncomfortable for many of them to remain in cross legged sitting position with pillow on the lap to complete the paper.

All stationary shops being closed, unavailability of any sheet, borrowed from siblings or few from colony friends increased the anxiety regarding reputation in front of teachers due to non-uniformity in use of papers and projection as cheating in view of open book exam.

Open book exam was also referred to as an opportunity to cheat. “As it was open book online exam, we got chance to cheat. It took more time to write as we have to search answers in the books or on net….”.

“As we were at home not in the examination hall so no one was there to remind us about the time left or to take away papers after time got over. And as it is, we were aware of that we got extra time for making PDF and uploading so we used that time for completing the papers…”

While some felt they could utilize open book others thought they were at a loss as they did not have books at home “we didn't get good opportunity to cheat as our books were at hostel and we came home …”.

“On Searching on the net, we get lots of information. So, it takes time to filter it out that information. Other than that, some time there were lot of internet issues that couldn't allow to go through all the site to search for the answers….’’.

Presence of parents was looked as interference in conduct of exams. “My parents are very strict. Though I showed them the circular mentioning about open book exam still they didn't allow me to avail those facilities. As they were at home, they kept closed watch on me. So, I don't think so everyone got equal opportunity to cheat and that will affect our grades.”

Students also missed the face to face interaction with the patient and teacher in online practical exam. “If student is unable to answer a particular question, then teacher shift to the other questions to evaluate the student's knowledge on that particular topic. This opportunity we miss during online exam’’.

Online practical assessment by uploading the video though tested analytical skills was considered as a loss of ability to express by the students. “A student may be good with the hands-on assessment but may not be good in explaining or in writing in his/her words effectively, so this may lead to ineffective evaluation of a student's practical sills”

They missed the learning through the assessment ’’When the exam take place one to one basis in a traditional method, the teacher is able to help the student to understand the questions properly and this may help the student to reach the answer. This guidance was missing…”.

Conclusion: Internet technology has shaped the way people communicate and learn. WhatsApp provided a tool for support, feedback, sharing of information and student- teacher interaction at minimal cost and proved to be beneficial in conduct of exams in absence of any online learning software and training in poor resource setting.
The open book exam conducted at home via WhatsApp did not evaluate the component of learning, and was with many challenges. They preferred the traditional method of examination. The situation of panic and increasing anxiety amongst the student prevailed throughout. Parental pressure, distractions, uncomfortable sitting arrangement and lack of privacy were amongst the few problems faced by the students in giving an online exam from home.

There is a need to train students and faculty alike for various online platforms as a part of inbuilt educational program. A sudden transition during

pandemic called for the easiest available method of WhatsApp in absence of any infrastructure and resource.

References:

1. COVID-19 pandemic lockdown in India. En.wikipedia.org. (2020). Retrieved 4 August 2020, from https://en.wikipedia.org/wiki/2020_coronavirus_lockdown_in_India

2. Cavus, N., & Zabadi, T. (2014). A Comparison of Open Source Learning Management Systems. Procedia - Social And Behavioral Sciences, 143, 521-526. https://doi.org/10.1016/j.sbspro.2014.07.430

3. Kumar Basak, S., Wotto, M., & Bélanger, P. (2018). E-learning, M-learning and D-learning: Conceptual definition and comparative analysis. E-Learning and Digital Media, 15(4), 191-216. https://doi.org/10.1177/2042753018785180

4. Sarrab, M., Elgamel, L., & Aldabbas, H. (2012). Mobile Learning (M-Learning) and Educational Environments. International Journal Of Distributed And Parallel Systems, 3(4), 31-38. https://doi.org/10.5121/ijdps.2012.3404

5. Hollister, K., & Berenson, M. (2009). Proctored Versus Unproctored Online Exams: Studying the Impact of Exam Environment on Student Performance. Decision Sciences Journal Of Innovative Education, 7(1), 271-294. https://doi.org/10.1111/j.1540-4609.2008.00220.x

6. One third of global users of WhatsApp Business are from India. TechRadar. (2020). Retrieved 4 August 2020, from https://www.techradar.com/news/one-third-of-global-users-of-whatsapp-business-are-from-india.

7. Cetinkaya, L. (2017). The Impact of Whatsapp Use on Success in Education Process. The International Review Of Research In Open And Distributed Learning, 18(7). https://doi.org/10.19173/irrodl.v18i7.3279

8. Kushwaha, P., & Jhawar, N. (2018). Role of Whatsapp as a Teaching Aid to Enhance Learning Capabilities of Management Students. Ushus - Journal Of Business Management, 17(1), 43-52. https://doi.org/10.12725 /ujbm.42.4

9. Coleman, E., & O'Connor, E. (2019). The role of WhatsApp® in medical education; a scoping review and instructional design model. BMC Medical Education, 19(1). https://doi.org/10.1186/s12909-019-1706-8

10. Hayward, E., & Ward, A. (2018). Virtual learning communities for faculty members: does WhatsApp work?. Medical Education, 52(5), 569-569. https://doi.org/10.1111/medu.13559