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A POTENTIAL PROTOCOL: BRIDGING COMMUNITY EDUCATION AND DIGITAL PLATFORMS FOR EVALUATION DURING ONLINE SEASON

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ABSTRACT

Introduction: Occupational Therapy program learning outcomes achieved by learning in campus and in clinical setting. Both teach and assess students' cognitive, psychomotor and affective domains. Measuring students' ability on cognitive domain level four, analytical in the campus is difficult without access to a real patient. To reduce students' transition time into clinical setting, and to increase student ability to transfer knowledge and skills from campus into clinical setting are reasons for this project. The objective is to create a standard learning and evaluation protocol assessing students via community education and digital platform. The digital platform used are YouTube channel and Facebook. Communication between lecturer, and students via WhatsApp and google drive. Content for community education is a pre-recorded video. This is a report of experience using community education and digital platform to evaluate students' cognitive domain level four.
Methods: The project began by developing ideas and identify communities in need. Students were given a consent form to share their videos in the YouTube channel and Facebook. Instruments were created, a rubric to assess students, a feedback form for viewer response and questions for students' reflection. Therapy skills for the video are part of the lesson. Students created their storyboard, content and community association verified by the lecturer.
Results: Responses received from 343 viewer, 97.7 to 99.7 % of the respondents answer it is beneficial for them. The rest is opposite. Students reflect positively the experience into teamwork, self-efficacy and identify need for skills in video editing. Learning time takes 12-16 hours.
Conclusion: The result suggested a flow of the process is a success and can be adapted as a protocol for community education and digital platform. However, further research is needed for psychometric properties on rubrics, and identify long-term community needs. Commercialization potential may be possible for the protocol and skills video made.

Keywords: community education, digital platforms, online assessment.

1. INTRODUCTION

Measuring students' ability to determine skills needed with cases within medical and neurological conditions is always a challenge and a debate between adequacy or overdo. Prior to the Covid19 pandemic, students in occupational therapy, as thousands of students around the world had face-to-face lectures, tutorials, or laboratory practice. In recent years, the merging between face-to-face delivery and online guided concept are introduce to educators in tertiary education. Lectures and tutorials are often a preferred teaching method for online learning. Subjects with psychomotor and affective outcomes often choose the common face-to-face learning. The Occupational Therapy curriculum benefits from the balance of three common teaching lectures, tutorials and practice to train cognitive, affective, and psychomotor domains in future occupational therapists. The course for the project is a pre-requisite clinical practice. Clinical practice is final teaching and assessment in the real-world, clinical setting.

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Supervision is given but students are expected to deliver the basic skills learned in campus to real patients.

One of the course outcomes stated students to be able to determine occupational therapy skills within the medical and neurological conditions. Presentation is an assessment task specified to measure the achievement of the learning outcome. Normally, by presenting in front of the class on a topic given based on a simulated case scenario. The presenter will receive a question from fellow students and lecturers. basic skills for occupational therapy students are learn via practical sessions in laboratory in the campus. Students will repeat the practice with other students. This is to ensure comprehension of the skill set needed using a role-play with classmate. Such learning will increase memorization of procedures, but it did not guarantee application and analysis as needed in cognitive domain level three and four. Bloom's taxanomy cognitive level is the main reference used in this course figure 1 shows cognitive level from the lowest level that is knowledge to the highest level that is evaluation. Teaching and learning in campus will achieve level one until two easily. The challenges arise for an educator for levels three and four onwards.

Figure 1: Bloom's Taxonomy Cognitive Level (Bloom's taxanomy, 2021)

The ability to transfer the skills learned in real situations will be learning during clinical practice or industrial attachment in the final year. Students are required to complete minimum 1000 hours of supervise clinical. The supervision will be reduced at the end of the experience. Problem often raised by the therapist in a clinical setting is about some students taking too long to adapt and seems unable to transfer the skill learned in the lab with patients, a real person with physical and cognitive impairment. Some students are taking too long to oriented to the clinical setting. This is understandable due to nature of learning in campus is only by role-play, and students has zero exposure to real patient. Clinical setting is tiring and daunting to even fresh graduate therapist or any healthcare worker. Students being young, and inexperience can slower the orientation process undoubtedly. This is a known problem.

In March 2020, the Covid-19 outbreak followed by a movement control order (MCO) impose another challenge. Open Distance Learning (ODL) become inevitable during the Covid-19 pandemic. Another struggle with lecturer's competency in digital knowledge, attempt to achieve learning outcome, and poor internet connection experience by students and lecturer. This is among common challenges identified by Coman.C, Gabriel Tiru.L., Mesesan-Schmitz, L., Stanciu.C, and Bularca. M.C. (2020). Kawasaki, H., Yamasaki, S., Masuoka, Y., Iwasa, M., Fukita, S., and Matsuyama, R. (2021) reported 69.4% encountered technical problem using platform by university and 14.8% poor internet connection. ODL is defined by Malaysia Quality Agency (MQA) as a provision of flexible educational opportunities in terms of access and multiple modes of knowledge acquisition. (Malaysia Quality Agency, 2019)

The main reason is to overcome the slow transition of students into clinical setting, by conducting skills and practices in a community centre with residents in need for therapy. However, time, and logistic issues are always a problem in addition to Covid-19, immediately abrupt this plan. The silver lining of the Covid-19 is a motivation toward a digital platform for teaching skills-based program. Bridging community education and digital platform in the evaluation was never done. Therefore, lecturers decided to create and learn from opportunity of this alternative teaching and assessing during online season. This is in line with the professional association for occupational therapy at local and international, encourages academics and practitioner to welcome online strategy to ease burden and continue serving students, patients, and community during the pandemic.

In this project, lecturer takes the opportunity to develop a protocol for assessing cognitive domain level four analytical with community education and online platform. At the end of the day, the

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education program needs to proof the teaching and learning of occupational therapy students are applicable and relevant to "local health and societal needs" (WFOT, 2020). This innovation is about developing protocol to merge two concepts of community education, and digital platforms in teaching skills-based occupational therapy courses. This is a report based on experience for possible development of a protocol to deliver an assessment for the course in the future.

2. MATERIALS AND METHODS

The project began with the lecturer's developed idea, presentation guideline, time frame, group division and rubric. The document was shared with the student on the third academic week. Due to the decrease Covid-19 case at the time, students are allowed to return to campus for 5 weeks to practice skill-based course. All skills-based needed for the video is practice and discussed. Students were asked to fill in consent form as a permission to share their videos in the YouTube channel. Students search for appropriate community/associations with lecturer guidance on how to approach and introduction statement. All potential community and association social media were reviewed to ensure they has members to benefits the videos content and suitability for the association Letters were given to the community centre, and associations.

Few instruments were created, first a rubric to assess student skills, second a feedback form for the community and a set of reflection questions for students. The rubric for assessing students' ability to apply cognitive level four contains six criteria. First is the audio-visual, second is the correct techniques. Both criteria have a maximum of 30 marks. The third criterion is the ability to search for community/associations with maximum mark is 5. The fifth and sixth are peer evaluation and reflection on learning experience, both carry maximum of 15 mark each.

The second instrument is feedback form from the community and viewer. The question is direct whether each video has given benefits or not to the viewer. The third instrument is reflection question. In the end lecturer to understand the usability of this way of evaluation, students' opinion is important. The reflection question asked about student perception in community education project whether it is beneficial to the community, students' teamwork skills, self-efficacy, and area need for self-improvement.

3. RESULTS AND DISCUSSION

3.1: Community and viewer responses.

Five groups of students with 5 topics are created. But only four videos were included in the YouTube because one student from a group only give consent for Facebook. Therefore, a Facebook account is created to suit student preferences.

Six community associations/centre were verbally agreed to share and let the members watched the video and return feedback. Unfortunately, only one centre participated upon received a letter of invitation. Due to this, student uses Facebook account to share with public. Feedback from public was collected via google form. The google form ask if each video link is beneficial to them. Each video received positive response from 97.7 to 99.7 % of 343 respondents answer it is beneficial for them.

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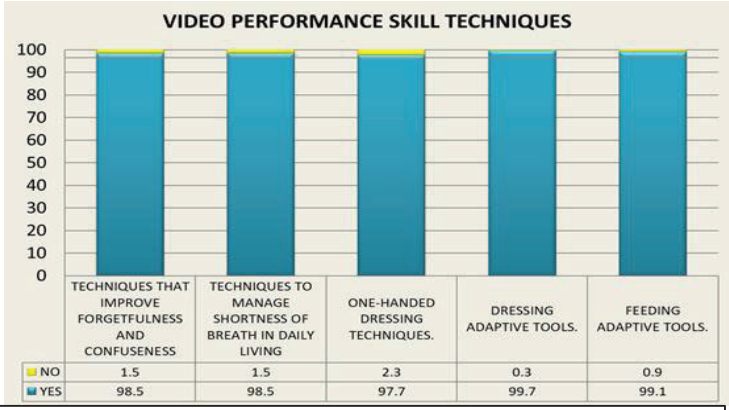

Figure 2: Responses on video performance skills techniques.

3.2: Teaching and Learning Time.

Lecturers started the planning and search for the local community a few weeks before the semester begin to ensure the potential for the project. It takes telephone calls and visits to two centres. Upon visit and telephone, the administrator of the centres replied positively.

Post project briefing, the student spends around 12-16 hours from developing storyboard, creating the video, shooting, editing and submit to lecturers. Skills learn and practice takes about 6 hours with lecturers. two video drafts were submitted to the lecturer to comment on. The final videos were uploaded on the YouTube by the lecturer. The total time spent is between 18-22 hours.

3.3: Students reflections

Students mostly consider this exercise as beneficial, and yet challenges on technical skills. Few students noted very challenging due to need of acting and wondering who else will see the video. The majority of students stated video editing skills is important to complete the project.

3.4: Course learning outcome

Bloom's cognitive taxanomy domain divided into six levels, level four is analysis. The presentation of learned skills as a community education using digital platforms able to measure analysis level. The project allowed students to break down therapy techniques within the topic into component parts by designing a storyboard for the video. At the end, students need to show an overall technique for a specific problem to benefits the specific group within the community or association. To achieve the result, students need to identify and comprehend the therapy technique, to identify relation of technique and problem of the case, and analyze the relationships between techniques, and recognition of the therapy principles involved. Therefore, course learning outcome is achieved through this project with the advantage of video editing skills.

4. CONTRIBUTION AND USEFULNESS

The advantages of combination digital platform and community education will benefit students, and people in need. Digital platforms allow information to reach people in need especially in this project are people with injuries, and disabilities to benefit the skill-based videos. Digital platforms allow students to continue their learning without deferment. The community education gives students opportunity to relate the skill leaned with real problem in community.

The disadvantage is, it is a recorded video, and student did not interact live with viewer, limited practice times and the viewer too varies. Next project, it will be useful to conduct community education live session with focus on one community centre rather that many. Skills needed for basic video making, editing, online platform and community education need to be introduced to the student in before the semester. The protocol and rubrics can be use with further adaptation.

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5. CONCLUSION

The result suggested a flow of process is a success and can be adapted as a protocol for community education and digital platform to measure cognitive level four analytical. Nowadays, skills in manoeuvring within digital world is inevitable, skills-based program must approach online learning concept with a constructive mindset. Commercialization potential may be possible for the protocol and skills video made. However, further research is needed for psychometric properties on rubrics, and identify long-term community needs. Nevertheless, education via digital platform makes inclusivity of people across location, association, and community possible.

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