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Assessing the Effectiveness of the Fully Online Mode of Teaching and Learning in the Attainment of Course Outcomes: Implementing Outcome-Based Education Framework in Readings in Philippine History Classes

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ABSTRACT

The delivery of quality education in the Philippines has been tested in the last decade as educational programs and curriculums were revised in response to the implementation of the K-12 educational framework. Moreover, the Covid-19 pandemic made adjustments even more challenging as it forced the immediate shift to online mode learning beginning March 2020. Mapúa University responded to the challenge by switching immediately to the fully online mode of learning, characterized by the combination of synchronous and asynchronous sessions, and adopting the principles of an outcome-based education framework to ensure the continuous delivery of quality education. As such, this study assesses the effectiveness of a fully online mode of learning by assessing the feedback of students by answering the central question, "Can the online mode of learning effectively achieve the identified course outcomes in Readings in Philippine History (GED103), a general education course?". Using a quantitative analysis of data obtained through the use of Google Forms for Survey, the findings of the study showed that pedagogy is the one constant factor between traditional face-to-face and online modes of learning. The study likewise suggests that the principles of the outcome-based education framework if adopted appropriately can contribute to the effectiveness of the online mode of learning in achieving desired course learning outcomes.

KEYWORDS

Outcome-Based Education, Online Pedagogy, Online Class, Readings in Philippine History

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RESEARCH PROBLEM

As outright implications of the pandemic gradually fade out in 2022, the efficiency of a fully online mode of learning vis-à-vis face-to-face mode of learning is still yet to be scientifically studied, especially in the context of OBE. This dearth of studies has contributed anew to the long-standing debate on the effectiveness of online distance learning. Previous studies on the effectiveness of online distance learning were based on qualitative rather than quantitative measures, with some relying merely on variables that cannot be controlled (Schutte, 1996; Phipps & Merisotis, 1999; Hanson et al., 1997; Russell, 1999).

To address the aforementioned gap, this paper would like to assess the effectiveness of a fully online mode of learning by assessing student feedback on the delivery of a fully online general education course titled Readings in Philippine History being offered in University M. The central question therefore is, "Can the online mode of learning effectively achieve the identified course outcomes in Readings in Philippine History, a general education course, at University M?". In particular, this paper will specifically address the following research questions:

1. What are the identified course outcomes (COs) in the Readings in Philippine History course?
2. How effective do students find the delivery of the teaching-learning activities (TLAs) relative to the achievement of the identified student outcomes?
3. Which mode of learning do students prefer for Readings in Philippine History?

METHODS

The study used a quantitative survey design by analyzing data obtained through the use of Google Forms. Before the end of every term, students enrolled in the course, Readings in Philippine History, at University M, accomplish a survey titled "Closing the Loop Survey"

through a Google Form link disseminated to the classes. The students answered the survey items using a four-point Likert Scale from 1 (strongly agree) to 4 (strongly disagree).

The Google Form Survey is composed of two parts. The first part assesses the students' evaluation of their performance and achievement of the course outcomes, while the second assesses the various tools relevant to the conduct of a fully online mode of learning.

It should also be noted that there were no significant changes to the teaching methodology applied by the faculty-volunteer over the survey period which could alter the perception of the students toward the course. Moreover, student consent was obtained before the start of the survey, and their participation was kept confidential and voluntary, but was highly encouraged by the teacher-in-charge.

RESULTS

Readings in Philippine History (GED103) is one of the components of the revamped General Education curriculum for tertiary education brought by the implementation of the K-12 education framework. In the delivery of the lessons, the course adopted a courseware-ready workbook under the same title that comes in print and e-book copies. Furthermore, the course description as stated in the course syllabus utilized by University M provides that:

The course analyzes Philippine history from multiple perspectives through the lens of selected primary sources coming from various disciplines and different genres. Students are given opportunities to analyze the author's background and main arguments, compare different points of view, identify biases and examine the evidence presented in the document. The discussions will tackle traditional topics in history and other interdisciplinary themes that will deepen and broaden their understanding of Philippine politics, economics, cultural, social, scientific and religious history. Priority is given to primary materials that could help students develop their analytical and communications skills. The end goal is to develop the historical and critical consciousness of the students so that they will become versatile, articulate, broad-minded, morally upright, and responsible citizens. The course also includes mandatory topics on agrarian reform, the Philippine constitution and taxation.

Moreover, the three-unit course aims for the following outcomes as shown in Table 1:

Table 1
GED103 Course Outcomes

After completing the course, the student must be able to:
CO1. Determine the contribution of different kinds of primary sources in understanding Philippine history by analyzing and evaluating its context, content, perspective, credibility, authenticity, and provenance;
CO2. Develop critical and analytical skills by effectively communicating the historical analysis of a particular event or issue and demonstrating the ability to use primary sources to argue in favor or against a particular issue. Promote local history, national patrimony, and cultural heritage for its preservation; and
CO3. Display the ability to work in a team and contribute to a group project through proposed recommendations/solutions to present-day problems based on their understanding of root causes and their anticipation of future scenarios.

The study was able to compile students' responses from four terms (out of seven terms) during the two-school year cycle of the fully online mode of learning from August 2020 to May 2022. Data were taken from the following school quarters as presented in Table 2:

Table 2
Summary of Surveyed School Quarters

School Quarter/School Year	Inclusive Months
Q1 SY 2020-2021	(August 2020 – October 2020)
Q1 SY 2021-2022	(August 2021 – October 2021)
Q2 SY 2021-2022	(November 2021 – February 2022)
Q3 SY 2021-2022	(February 2022 – May 2022)

Table 3 presents the breakdown of students' responses. For Q1 SY 2020-2021 (August 2020 – October 2020), a total of 409 students' response was collected, while only 219 students' response was collected for Q1 SY 2021-2022 (August 2021 – October 2021). For Q2 SY 2021-2022 (November 2021 – February 2022), 218 responses were recorded, while only 205 responses were collected for Q3 SY 2021-2022 (February 2022 – May 2022).

The high number of recorded responses for Q1 SY 2020-2021 (August 2020 – October 2020) is primarily due to the high number of student enrollees. It has always been the trend for the Q1 of every school year to have a high number of student enrollees in addition to the possible excitement of students to try out the relatively new platform of fully online learning which explains the remarkable decrease that was observed for the following school year for Q1 SY 2021-2022 (August 2021 – October 2021). Nevertheless, it is also noticeable that for the three school quarters for SY 2021-2022, students' responses were relatively at the same frequency.

Table 3
Breakdown of Students' Response

School Quarter/ School Year	Number of Students' Response
Q1 SY 2020-2021 (August 2020 – October 2020)	409 (38.91 %)
Q1 SY 2021-2022 (August 2021 – October 2021)	219 (20.84%)
Q2 SY 2021-2022 (November 2021 – February 2022)	218 (20.74%)
Q3 SY 2021-2022 (February 2022 – May 2022)	205 (19.51%)
Total	1051

The first four questions in the survey evaluate the effectiveness of the online mode of learning in achieving the identified course outcomes of the Readings in Philippine History course. The first survey question asks the student to measure if at the end of the course the student was able to determine the contribution of different kinds of primary sources in understanding Philippine history by analyzing and evaluating its context, content, perspective, credibility, authenticity, and provenance (CO1).

Table 4
Achievement of CO1

	Q1 SY 2020-2021	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Strongly Agree	273 (66.67%)	100 (45.7%)	146 (67%)	161 (78.5%)
Agree	114 (27.9%)	88 (40.2%)	43 (19.7%)	28 (13.7%)
Disagree	11 (2.7%)	16 (7.3%)	13 (6%)	3 (1.5%)
Strongly Disagree	11 (2.7%)	15 (6.8%)	16 (7.3%)	13 (6.3%)
Total Responses	409	219	218	205

The second survey question checks whether, the at the end of the term, the student was able to develop critical and analytical skills by effectively communicating the historical analysis of a particular event or issue and demonstrating the ability to use primary sources to argue in favor or against a particular issue (CO2).

Table 5
Achievement of CO2 (1)

	Q1 SY 2020-2021	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Strongly Agree	255 (55%)	85 (35.8%)	127 (58.3%)	141 (68.8%)
Agree	155 (37.9%)	92 (42%)	65 (29.8%)	48 (23.4%)
Disagree	23 (5.6%)	28 (12.8%)	11 (5%)	6 (2.9%)
Strongly Disagree	6 (1.5%)	14 (6.4%)	5 (6.9%)	10 (4.9%)
Total Responses	409	219	218	205

The third survey question assesses whether, the at end of the term, the student was able to promote local history, national patrimony, and cultural heritage for its preservation (CO2).

Table 6
Achievement of CO2 (2)

	Q1 SY 2020-2021	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Strongly Agree	217 (53.1%)	96 (43.8%)	125 (57.3%)	135 (65.9%)
Agree	152 (37.2%)	82 (37.4%)	62 (28.4%)	50 (24.4%)
Disagree	34 (8.3%)	28 (12.8%)	18 (8.3%)	7 (3.4%)
Strongly Disagree	6 (1.5%)	13 (5.9%)	13 (6%)	13 (6.3%)
Total Responses	409	219	218	205

The fourth survey question evaluates if at the end of the term the student was able to display the ability to work in a team and contribute to a group project through proposed recommendations/solutions to present-day problems based on their understanding of root causes and their anticipation of future scenarios (CO3).

Table 7
Achievement of CO3

	Q1 SY 2020-2021	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Strongly Agree	267 (65.3%)	115 (52.5%)	150 (68.8%)	152 (74.1%)
Agree	114 (27.9%)	69 (31.5%)	40 (18.3%)	36 (17.6%)
Disagree	19 (4.6%)	21 (9.6%)	12 (5.5%)	6 (2.9%)
Strongly Disagree	9 (2.2%)	14 (6.4%)	16 (7.3%)	11 (5.4%)
Total Responses	409	219	218	205

The first four survey questions assess the effectiveness of the fully online mode of learning in achieving the desired course outcomes based on the self-assessment done by the students. The overwhelming response of "strongly agree" and "agree" on all four survey questions as shown in Table 1 to Table 4 confirms that all the three identified course outcomes of the Readings in Philippine History course were successfully achieved during the period covered by survey cycle. In addition, on all four survey questions, the disapproval rate as represented by the responses of "disagree" and "strongly disagree" were tallied to just less than 20 percent.

The second part of the survey weighs on the effectiveness and ease of use of relevant learning tools in the conduct of a fully online mode of learning. The first question assesses the ease of access to the Cardinal Edge powered by Blackboard, the online platform utilized by Mapua for its online mode of learning, as well as to the learning materials uploaded to it.

As presented in Table 8, the majority of the students were able to navigate easily through the online learning platform used by the university. The students' familiarity with the learning platform contributed significantly to this since before the switch to the full online mode of learning, Mapúa already implemented the use of a learning management system (LMS).

Table 8
Ease of Access

	Q1 SY 2020-2021	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Strongly Agree	274 (67%)	113 (51.6%)	164 (75.2%)	161 (78.5%)
Agree	114 (27.9%)	66 (30.1%)	24 (11%)	26 (12.7%)
Disagree	11 (2.7%)	24 (11%)	10 (4.6%)	6 (2.9%)
Strongly Disagree	11 (2.7%)	16 (7.3%)	20 (9.2%)	12 (5.9%)
Total Responses	409	219	218	205

The second question evaluates the communication features of the university's online learning platform. The survey asks if the student was able to effectively communicate with their teacher using Blackboard's course messaging feature.

The results presented in Table 9 confirm that students were able to communicate with their teacher through the use of the LMS's course messaging feature. However, it should be noted that other communication channels were made available to the students including the use of email and SMS. The use of MS Teams messenger and the Facebook messenger was not part of the official communication channels used in the course.

Table 9
Communication Effectiveness

	Q1 SY 2020-2021	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Strongly Agree	152 (37.2%)	58 (26.5%)	86 (39.4%)	98 (47.8%)
Agree	150 (36.7%)	79 (36.1%)	76 (34.9%)	69 (33.7%)
Disagree	84 (20.5%)	62 (28.3%)	35 (16.1%)	20 (9.8%)
Strongly Disagree	23 (5.6%)	20 (9.1%)	21 (9.6%)	18 (8.8%)
Total Responses	409	219	218	205

The third question gauges the overall comfort of the students in the conduct of synchronous classes. The survey confirms that students did not have difficulties in the conduct of synchronous online classes. All online synchronous classes were delivered through the use of Zoom Meetings. Most students found little difficulty in accessing the synchronous classes as shown in Table 10. Moreover, it can be observed that for the first quarter that the full online mode of learning was utilized, 20.5 percent of the students encountered difficulty in accessing the synchronous classes. Such can be attributed to the unfamiliarity of the students with the use of online meeting/conference tools since it was the first time that such tool was significantly used in the delivery of lessons. This can be corroborated by the decrease in the number of students who had issues accessing the synchronous classes during the subsequent school terms.

Table 10
Accessibility of Synchronous Classes

	Q1 SY 2020-2021	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Strongly Agree	207 (50.6%)	104 (47.5%)	149 (68.3%)	154 (75.1%)
Agree	118 (28.9%)	76 (34.7%)	35 (16.1%)	35 (17.1%)
Disagree	75 (18.3%)	22 (10%)	19 (8.7%)	6 (2.9%)
Strongly Disagree	9 (2.2%)	17 (7.8%)	15 (6.9%)	10 (4.9%)
Total Responses	409	219	218	205

Relatively, the next question checks if the student learned a lot through their synchronous classes. The findings presented in Table 11 affirms that students learned to a great extent while taking the online mode of learning posing an approval rate of 85 percent.

Table 11
Learning Effectiveness

	Q1 SY 2020-2021	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Strongly Agree	221 (54%)	84 (38.4%)	154 (70.6%)	166 (81%)
Agree	144 (35.2%)	83 (37.9%)	38 (17.4%)	23 (11.2%)
Disagree	30 (7.3%)	33 (15.1%)	8 (3.7%)	5 (2.4%)
Strongly Disagree	14 (3.4)	19 (8.7%)	18 (8.3%)	11 (5.4%)
Total Responses	409	219	218	205

The fifth question considers if the student finds asynchronous recordings useful in case they missed some synchronous classes. Table 12 shows that most students prefer that the teacher post asynchronous recordings of lessons (pre-recorded video lectures, recorded live synchronous sessions, etc.) as a learning supplementary.

Table 12
Usefulness of Asynchronous Recordings

	Q1 SY 2020-2021	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Strongly Agree	281 (68.7%)	84 (38.4%)	151 (69.3%)	136 (66.3%)
Agree	95 (23.2%)	84 (38.4%)	36 (16.5%)	41 (20%)
Disagree	24 (5.9%)	27 (12.3%)	12 (5.5%)	18 (8.8%)
Strongly Disagree	9 (2.2%)	24 (11%)	19 (8.7%)	10 (4.9%)
Total Responses	409	219	218	205

The sixth question measures the usefulness of the Readings in Philippine History Courseware (online component, e-book copy, etc.) in achieving the course outcomes. Data presented in Table 13 shows a gradual improvement in the usefulness and effectiveness of the courseware as a learning tool. The dismal performance manifested during the initial run of the full online mode of learning implies that the courseware was not able to meet the learning expectation of the students as evidenced by the 55 percent approval rate. However, the succeeding school terms present gradual improvement as the approval rate dramatically increased to 80 percent, 85 percent, and 90 percent respectively. Such only proves that there was a significant quality improvement in the delivery and utilization of the courseware after a year of its implementation.

Table 13
Courseware Usefulness

	Q1 SY 2020-2021	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Strongly Agree	89 (21.8%)	94 (42.9%)	131 (60.1%)	128 (62.4%)
Agree	138 (33.7%)	81 (37%)	56 (25.7%)	55 (26.8%)
Disagree	130 (31.8%)	25 (11.4%)	15 (6.9%)	13 (6.3%)
Strongly Disagree	52 (12.7%)	19 (8.7%)	16 (7.3%)	9 (4.4%)
Total Responses	409	219	218	205

Furthermore, an additional question was added to the survey beginning Q1 SY 2021-2022, a year after the initial run of the full online mode of learning, which pertains to the mode of learning preference of the students considering that they have experienced the diversity of the traditional face-to-face learning set up vis-à-vis the full online mode of learning.

Table 14 shows that given the liberty to choose the modality of the learning environment, blended learning is still the highly preferred learning modality of the students over the traditional face-to-face learning setup and a full online mode of learning, with the latter receiving the least preference. Blended online learning is characterized by a mix-mode of face-to-face and online learning.

Such indicates that despite of the advancement offered by technology, students still prefer to have physical interaction with their teachers which connotes social communication. Though a full online mode of learning implies a combination of synchronous and asynchronous learning sessions, students find the physical presence of a learning partner or instructor more effective and appealing. Some of the explanation behind such students' preference includes difficulty in under-

standing the instructions given by the instructor for asynchronous outputs, difficulty in making a follow-up question in clarifying topic discussions, non-cooperation of groupmates in group outputs, difficulty in communicating effectively with group members, and limitations of online classes in terms of the learning experience. Students still prefer the dynamism of having their classes on a face-to-face setup while having the flexibility of accomplishing some of the activities and lessons online.

Table 14
Students' Mode of Learning Preference

	Q1 SY 2021-2022	Q2 SY 2021-2022	Q3 SY 2021-2022
Face-to-Face	36.1%	33.9%	24.4%
Blended Learning	46%	47.2%	49.3%
Full Online	17.4%	18.8%	26.3%

Moreover, in the same survey, one student responded when asked if he/she prefers to have a fully online class (all asynchronous, self-paced class) for Readings in Philippine History, *"I think to be able to understand history, there should be someone teaching us live for our questions to be answered."* Another student commented that *"It would have been more fun if it was face-to-face but seeing and hearing our professor teach this subject made me more interested in the subject. If I were given a chance to take the course [again], I would still prefer having a professor that we would be able to hear live"*. Similarly, *"Face-to-face learning forces me to listen and be prepared in any discussion and possible recitations, enabling me to learn more."*, another student remarked.

Such reactions support the proposition that students still prefer to maintain a teacher-student learning interaction over a less-interactive fully-online class.

CONCLUSION

Readings in Philippine History is one of the components of the revamped General Education curriculum. Usually, history is one of the least attractive subjects among students primarily due to the connotation that it cannot directly contribute to the achievement and advancement of a student's professional career. Additionally, many consider history as a thing of the past with not much contribution to shaping the personal character of a student.

Beforehand, its teaching and learning activities were focused closely on relieving the events of the past by revisiting them through the use of historical narratives found in textbooks and supplemented by experiential learning of museum visits and historical field trips. Nevertheless, the revised curriculum added another layer of repulse on the part of the students since the new curriculum focuses on selected readings in Philippine history away from the traditional chronological discussion of historical events. This time, the focus was on reading instead of listening. Students were encouraged, if not coerced, to read the selected readings and analyze their significance to the grand narrative of Philippine history. More than that, students had to contend with primary and secondary sources to better grasp what transpired in the past. Such made the subject less appealing to students for it combined two things that students disliked today, that is history and reading. Thus, teaching the course poses a great challenge on the part of the instructors.

Moreover, the learning environment got more challenging when the earning modality switched to online learning brought by the unprecedented development of a global pandemic, thus integrating online learning into the two parameters mentioned earlier. Taking into consideration as well the training preparedness of faculty members to handle online distance learning, with most faculty members are compelled to switch to online distancing learning even if they are ill-prepared than to suffer technical unemployment; hence the quality of education takes a setback in the end of the day.

The findings of the study show that pedagogy is the one constant factor between traditional face-to-face and online modes of learning. Historically, the best teachers are those who can best entertain the students in a face-to-face classroom setup, but under the online

mode of learning, popularity can be measured differently. In 1987, the American Association of Higher Education published the Principles of Good Practice in Undergraduate Education which highlights seven components namely (1) encourage contact between students and faculty; (2) develop reciprocity and cooperation among students; (3) use active learning techniques; (4) give prompt feedback; (5) emphasize time-on-task; (6) communicate high expectations, and (7) respect diverse talents and way of learning (in Palloff & Pratt, 2001).

The same framework can be applied as well to the online mode of learning. One common issue against the online mode of learning is that it develops a sense of isolation on the part of the learner leading to frustration and loss of confidence in the overall system of the online mode of learning. Unlike before, the social interaction between the learner and instructor is inevitable but can become very problematic under the online distance learning setup. The first principle of good practice mentions contact between students and faculty such that it is always important for the latter to appear visible to the former. The students need to feel that there is somebody on the other side who is ready to answer the points of clarification for them. This is what Garrison and Anderson (2003) call "teaching presence" (in Bach, Haynes, & Smith, 2007). Students' needed to feel that they are interacting with somebody and be assured that they are not dealing with artificial intelligence such that the use of an introduction module containing biographical details of the instructor is suggested.

Nevertheless, it is also important to note that teachers cannot dedicate their entire day just to wait for students' clarification such that the use of FAQs and discussion boards for points of clarification is suggested. More than that, a sense of "office hours" can be observed to properly manage students' expectations vis-à-vis the time allotted by the teacher for working.

Moreover, giving timely feedback to students' submitted outputs can also spell a big difference making the students feel that their work is being valued. The absence of immediate feedback can be frustrating at times on the part of the students. Teachers often set due dates for student's submissions, thus teachers are also expected to have a due date when can the students expect feedback on their work which can serve as points for improvement in their upcoming submissions.

Additionally, traditional teachers are used to being micromanagers of the learning environment. They always make sure that they are always on top of the situation no matter what which is not always necessary in online distance learning, such that the switch to an online mode of learning becomes very taxing on the part of the teacher at times. There should be a willingness to give up some control in the learning process to empower the students and establish a better learning environment. Palloff and Pratt (2001) mentioned that a good online teacher is *"open to giving up control of the learning process, using collaborative learning techniques and ideas, allowing for personal interaction and bringing in real-life experiences and examples, and who builds reflective practice into teaching"*.

In some cases, "gamifying" the learning environment is another way of making learning interactive. Most learning management systems such as Moodle, Canvas, and Blackboard have incorporated "awards" or "achievements" features based on badges or points which are commonly game design features. Such motivates the learners to unlock and achieve as many goals as possible, thus developing a friendly competition among the learners where the top achievers can be rewarded with grade incentives.

However, there is no single acceptable formula when it comes to championing online distance learning. It should be considered that not all learners are the same and that "all students can learn and succeed, not on the same day, in the same way" or expanded opportunity, which serve as among the operating principles of the outcome-based education framework together with the clarity of focus, high expectations, and designing down (Spady, 1994 in Macayan, 2017).

The principles of the outcome-based education framework manifest the Principles of Good Practice in Undergraduate Education of the American Association of Higher Education, hence, if adopted appropriately can contribute to the effectiveness of the online mode of learning in achieving desired course learning outcomes. To make this happen, constant retooling and retraining of faculty are necessary.

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