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## Distance Education in the Philippines: A Review on Online Instruction and Evaluation

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### Abstract

The educative process has evolved with the emergence and advancements of various teaching and learning technologies. The evolution is evident in tracing the history of distance education and its transformation through these years. This paper presents a number of evaluation techniques from various academic papers, which are essential for distance and online teaching and learning. At present, the crucial job of a teacher in online learning does not lie in creating instructional and assessment software and electronic application for these are already available and accessible. Pivotal role of teachers as facilitators of learning is on selecting which of these educational technologies and assessment approaches best align with the learning goals and instructional technique, to ultimately produce authentic results of the students' overall learning experience.

**Keywords:** Distance Education, Online Instruction, Online Evaluation Techniques

### 1. Introduction

Distance Learning in the Philippines

Modified types of online learning are included in education institution policies, with the goal of facilitating student learning activities. In order to respond to developments brought by industrialization and globalization, education institutions have become more adaptable in their instructional delivery systems. In a number of education institutions in the Philippines, distance education with its varying formats among others, have arisen as legitimate alternative learning process to the traditional educational system (Sabio & Sabio\*, 2013).

The evolution of distance education (DE) in the Philippines is generally divided into 5 major generations. As reviewed by dela Pena-Bandalaria in 2007, the earliest distance education documented in the Philippines was in 1952 (Flor, 1995). The first-generation DE started as School-on-the-Air (SOA) sustained by a radio station of the University of the Philippines Los Baños. The second generation was done via print-based instructional materials supplemented by occasional face to face tutorials. The third was characterized by flexible learning anytime anywhere with the emergence of information and communication technology (ICT) accessibility. This generation of distance learning was mainly driven by print-based materials, and convenient audio and video lesson formats. The fourth has rapidly advanced in the mid-1990s (Arinto, 2016) with DE formats in electronic, mobile and ubiquitous learning. An empowered phase enabled by the advancement of ICTs which has made the process more dynamic resulting to a far richer and more conducive educational experience for fostering critical and higher order thinking. Today, DE has even further evolved to better transfigured forms with the emergence and influence of various modern ICT and web-based technologies and learning management software which have been proven effective in providing a virtual venue of instructional delivery and successful learning (Roa *et al.*, 2022).

When an education system embarks on a new method of education, several aspects must be highly considered. This encompasses instructor capacity, the learner's circumstance and context, and the learning environment's efficiency. These are, of course, in addition to the more obvious concerns about internet speed, material costs, and delivery methods. Taking a

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step back and designing a strategy that involves teachers, students, parents, school officials, and technology-based corporations is the best approach to move forward (Joaquin *et al.*, 2020).

**Table 1:** Synchronous and Asynchronous Classes (Scheiderer, 2021).

Asynchronous Online Classes	Asynchronous And Synchronous Online Classes	Synchronous Online Classes
1. Complete work each week on your schedule 2. Receive immediate feedback on quizzes 3. When it's most convenient for everyone, schedule group work.	1. Attend class from anywhere 2. Communicate regularly with instructors 3. Network and make connections with classmates	1. Participate in classes with teachers and classmates virtually every week 2. Participate in real-time discussions during class 3. Improve presentation skills

All learning methods in which the learner and teacher are in the same place at the same time are called synchronous learning. In-person classes, as well as live online meetings where the entire class or smaller groups gather, are all examples of this. Students frequently walk through the learning route together in synchronous learning, with their instructor assisting them while they do tasks and activities. The majority of online learning is asynchronous, with synchronous learning occurring only when there is a specific requirement for live discussion to promote community among students (Yamagata-Lynch, 2014; Finol, 2020). In a synchronous class, concerns are handled real-time as well as addressed questions as they arose. This help enhance student participation and provide them the opportunity to submit different solutions to a problem. The teachers can also make necessary revisions to the students' solutions or answers, as well as answering any additional questions about the difficulties. These types of activities allow more time at higher levels of Bloom's taxonomy.

On top of synchronous instruction, asynchronous activities with computer-mediated communication systems, particularly the integrated tools of content management systems, are the most widely used in the online educational environment (Comeaux & McKenna-Byngton, 2003). In online learning, asynchronous learning is a prominent method of student-centered education. Instead of synchronous learning, which occurs at the same time and place with one or groups of learners and their instructor/s, learning can take place at numerous times and places for each learner. Instructors frequently create an asynchronous learning path for students to follow at their own leisure in asynchronous learning (Finol, 2020). It gained its prominence with its applicability to academic flexibility, practicality and affordability (View Sonic Library, 2020). This is an advantage to both the teachers and learners where students are allowed to learn at their own pace in a given amount of time. During this period, learners can access and complete lectures, readings, homework, and other learning resources at any time (Scheiderer, 2021).

The teaching and learning process is fundamentally expressed as an educational ternion which translate, cascade and generate from learning objectives, teaching procedure and assessment (Sewell *et al.*, 2010). The cycle repeats when the desired learning outcomes are not achieved.

The essential goal of the evaluation methods is to see if the students are on the right track in terms of achieving their

academic objectives. In addition, educators are able to raise awareness about how to effectively use teaching-learning strategies in the classroom. Hence, evaluation methods are used to determine learning capacity and academic achievement that when the students do well, the instructors will realize that they are doing a good job of instructing the learners (Kapur, 2020). As defined by Briggs & Keyek-Franssen in 2010, assessment is the systematic collection, examination, and interpretation of qualitative and quantitative data about student learning and the use of that information to document and improve student learning. Assessment which is vital to the education process could be used to establish frequent interactive assessment of students' progress, identification and understanding of their learning needs and adjust teaching appropriately. Hence, online assessments can be any means of evaluating student achievements, giving feedback or channelizing students forward in their learning process in a fully online mode. These assessments can be either formative or summative. Formative assessments are designed to monitor students' progress in a low or no stakes environment, while summative assessments are designed to evaluate students against criteria (Bardhan *et al.*, 2020).

As educators and administrators look to countless mobile apps, software programs, and web-based learning tools to meet the demands of students in remote, virtual, and hybrid settings, risks and assumptions of online platforms and assessments must be considered (Schmidt & DeSchryver, 2021), because with the advent of online learning, education that was originally carried out offline is now being implemented online including the assessment of learning. This has an influence on the achievement of educational goals with the aid of information and communications technology such as WhatsApp, Google Drive, or Telegram and many more (Ulil Ilmi *et al.*, 2021).

**2. Objectives**

This paper aimed to evaluate distance and online evaluation in the Philippines and the continuity of education with virtual and flexible online mode of learning - a type of distance learning for transitional or health emergency purposes. This review also discusses instructional approaches for online learning, evaluation techniques and the authenticity of assessments conducted using virtual platforms both synchronously and asynchronously.

**3. Methods**

This study has employed a systematic research review design (Rahi, 2017; Pollock and Berge, 2018) in finding

relevant research data including analysis, synthesis and interpretation of the various findings in the context of online distance education. 56 research documents which include studies, journals, articles, academic blogs and papers were reviewed to produce an analysis and concept which presents an evaluation of instructional procedures and evaluation techniques and their effectiveness in online learning.

**4. Results and Discussion**

The teaching and learning process has greatly and widely evolved throughout the years since its system conception. The transformation of educational automation has even hastened with the recent effects of the 2019 global pandemic (Matutes *et al.*, 2021). Several reports claim that online education is frequently regarded as a less effective alternative to in-person face-to-face education (Hodges *et al.*, 2020). In fact, even after class resumed in the recent distance education format of education brought by the global health emergency, student dissatisfaction and teacher anger were heard, highlighting the limits of many learning skills (McKibin and Fernando, 2020).

**Online Learning in the Philippines**

The digital gap - a term coined to describe a lack of proper technology, internet inaccessibility, instructors' "learning by doing set-up," and other hybrid online chances - has drastically altered the educational landscape, showing both old and new issues. According to early data in the Philippines, about 6.9 million poor Filipino students have unreliable mobile phones and internet connections, while 6.8 million have no internet access (Mateo, 2020). Furthermore, among 87 countries, it scored eleventh slowest in upload speed and sixteenth slowest in download speed (Ragandang, 2020); but placed 21st in terms of 4G availability, with 72.4 percent, which is comparable to those of Albania, Brazil, and Tunisia, among others (Mercurio, 2020, as cited in Abude, 2021). On the bright side, the country's communications technology and education departments have been bridging these gaps with various implementation programs. With the joint efforts of the government and educational institutions and their earnest goal to deliver quality and inclusive education, the system is now revitalizing along with its new normal transformation.

The type of learning at all levels of education in the Philippines today exists four: full online, partial online, offline or print and limited face to face as stipulated in DepEd DO 17 s. 2022 and CMO 1 s. 2022. These orders are persistent to the pronouncement of the chairman of the commission on higher education in 2021 that flexible learning will be the norm, and that there will be no going back to the traditional full-packed face-to-face classrooms. The commission has also adopted the policies that flexible learning will continue in school year 2021 and thereafter.

**Instruction and Online Learning**

With the availability of teaching and learning equipment needed, users will share with objects through computers and experience in a digital environment. It represents a significant development direction for virtual reality technology, a simulation of the real world (Cheng, 2021). Along with synchronous classes, asynchronous activities are given highlight and advantage in online learning for both the teachers and the learners. It gives teachers more time to review concepts, kickstarts conversation, makes content more digestible, expands network of participants and grants access to instructors and experts (MIT Open Learning, 2021). The educational usage and benefits of asynchronous applications have been well documented even from the early years of the 20<sup>th</sup> century (Comeaux & McKenna-Byngton, 2003; Chen, 2005). Asynchronous online conversation has been proven to be as good as, if not better than, face-to-face communication due to the presence of the teacher and classmates, and synchronous sessions might result in high levels of desire to stay engaged in e-activities (Yamagata-Lynch, 2014).

A specific form of media literacy, where importance of skills instruction and practice of digital application literacy has been presented by Schmidt and DeSchryver in 2021 which introduced the four-step process. First is setting learning goals, second is guiding learners through the application with explicit instructions before use, third is providing low-stakes explorations, and the last step is debriefing to address any issues which could represent a failing of application literacy and not content knowledge in an assessment. The digitization of the teaching and learning process along with its facets are equated with the emergence of numerous learning management systems and ICT based teaching and learning software and applications (Roa *et al.*, 2022).

**Evaluation techniques for Online Learning**

Even though traditional face-to-face lectures had to be moved online with no purposeful planning, the biggest challenge has been the online assessment of the learning process (Garcia-Peñalvo *et al.*, 2021). Even in online teaching and learning, formative and summative assessments are still considered the basic types of assessments. Formative assessments are best when done concurrently and consistently within an online course to identify how well students are learning the material and eventually provide critical observations to learners (Colman, 2021). Full implementation of formative assessments necessitates careful planning, monitoring, and communication of feedback to newcomers in a timely and meaningful manner (Rovai *et al.*, 2006; Glassmeyer *et al.*, 2011). Table 2 present techniques which can be used for e-learning formative assessments.

**Table 2:** Online Techniques for Formative Assessments.

Evaluation Technique	Description
1. Tests and Quizzes	Although quizzes are traditional assessment tool, these are ideal for measuring learning results across wide audience (Colman, 2021). This type of assessment can be done with various online quiz makers or applications such as Socrative, Google form, EdPuzzle, iSpring Suite, ThatQuiz, ExamTime Quizzes, , Mentimeter, Edmodo, Quizinator, Twtpoll and many others.
2. Open Ended Essay Questions	Encourages critical thinking and are best suited for evaluating higher order learning (Colman, 2021).
3. Drag and Drop	Learners can be able to apply knowledge to real life situations (Colman, 2021).

Activities	
4. Online Interviews	Students demonstrate their proficiency and competencies in various areas (Colman, 2021).
5. Dialogue Simulations	This technique helps learners to train for real life conversations with costumers, coworkers, bosses and others (Colman, 2021). The technique takes advantage of most learners' familiarity with video conferencing software and add reality-based mock scenarios, dialogues, and interviews (Lambda Solutions, 2021).
6. Online Polls	Allows capture of feedback directly from the students on their learning experience (Colman, 2021).
7. Game-based Activities	Considered the most entertaining approach which can exhibit good general indicator of skills and knowledge (Colman, 2021).
8. Peer Evaluation or Assessment Activities	Learners are given the chance to reflect on their own learning experience and communicate their feedback in a consistent and structured way (Colman, 2021). This technique challenge learners to think critically or solve a problem with a provocative idea by having them post an introspective response to a question or statement on a discussion or message board (Lambda Solutions, 2021). This can be done using discussion boards.
9. Forum Posts	Encourage learners' interaction as a part of the learning process while checking their comprehension in the topic (Colman, 2021).
10. Online Forums and Discussions	With a "fly on the wall" effect, online discussions can be held for the purpose of gathering feedback while monitoring student discussions (Pappas, 2017).
11. Online Focus Groups	Holding focus groups with a list of questions prepared in advance, is effective in getting feedback and recommendation (Pappas, 2017).
12. One-on-one Conferences	An online conference is essentially prescribed conversation with one or more students with a particular topic which the teacher wants to assess. This provides venue for immediate correction of misconceptions, or reviewing the lesson material as the need arises. (Gray, 2020).
13. Higher Order Thinking Assignments	Increased student engagement is allowed when learners apply higher order thinking such as analyzing evaluating and creating (Gray, 2020).
14. Digital Writing Discussions	Using comment or editing tools of a shared document such as Google docs, progress can be observed and inputs are responded real time or asynchronously. This technique allows giving of feedback whenever deemed necessary (Gray, 2020).
15. Virtual Debates	Students can practice generating ideas under pressure while learning key ideas in a given time. The teacher observes the extent of learning and misconceptions and can give appropriate feedback at the end of the discussion (Ahmad Zawawi <i>et al.</i> , 2021).
16. Reflective Journal	Students express knowledge gained from reading, collaboration discussion, and personal experiences (Naughton <i>et al.</i> , 2011). Learner's voice and experiences are given priority in the evaluation and analysis process (Russell <i>et al.</i> , 2006).
17. Netfolio and E-portfolio	E-portfolio assists in managing students work in various performance and allow students to facilitate, observe and take action regarding their learning by engaging the integration of electronic technology (Barett, 2007; Wigle, 2007; Muin <i>et al.</i> , 2021). Netfolio is a collection of e-portfolios developed by completely diverse students allowing them to better grasp learning objectives and improve self-portfolios by participating in portfolio assessment give give others feedback (Barbera, 2009).
18. Wikis	Wikis are user-friendly web spaces that support easy web authoring for individuals or for collaborative groups, provide a platform for both student learning and authentic assessment (Eddy and Lawrence, 2013).

The assessment techniques must be ensured to align with the teaching methods and learning objectives when administering evaluation (Sewell *et al.*, 2010). Summative evaluation seeks to comprehensively report and richly depict the emergent method of gaining knowledge of that took place over a given time-bounded

gaining knowledge of experience (Naughton *et al.*, 2011) and summative assessments validates the achievement of the overall learning objectives which are generally referred to as final examinations (Colman, 2021). Table 3 present techniques which can be used for e-learning summative assessments.

**Table 3:** Online Techniques for Summative Assessments.

Evaluation Technique	Description
Online multiple-choice exams	Like a typical paper and pen examination, students choose from a specific set of answers. No written responses are required, and the answers are typically presented in random (Pappas, 2015).
Online Presentations	Learners create online presentation that delve into a particular topic, which they must then share with their peers or in a public forum. The online presentation shows their mastery of the subject, and determines whether they have learned the key concepts and ideas (Pappas, 2015).
Creating a website or blog	A modern twist of online presentation assessments, wherein learners create site or blog that covers all aspects of the topic in question. Learners must put the information they find using their own words and create a design for the site, which also tests their communication and technology skills (Pappas, 2015).
Learners' online portfolios	Throughout the eLearning course, learners are asked to place important online assignments and eLearning activities into an online portfolio, which is then assessed at the end of the term by the facilitator of the eLearning course (Pappas, 2015).
Online group projects	Learner's work with their peers to complete an online group project that showcases their comprehension and skill mastery. For example, they might create a slideshow that highlights the key takeaways from the eLearning course (Pappas, 2015).
Performance Items and Tasks	Students perform by applying their thinking with a standard or skill. Tasks demand students to apply their knowledge to novel situations (Miller, 2020).
Research Output	Summative assessment may take form as a research paper output. As the highest form of intellectual activity, research can promote holistic measurement of an individuals knowledge, disposition and skills (Frey, 2018).
Conversation and	Conversation is one of the best ways to check for understanding, and it holds true with summative assessments.

Pappas (2021) emphasized major key areas for successful summative assessment for e-learning: 1) preparation of grading rubric beforehand; 2) identification of points for improvement by analyzing evaluation results; 3) discerning of appropriate assessment type; and 4) Utilization of comprehensive and inclusive assessment approaches to cater diverse. Methods of evaluation have evolved alongside the advancement of transitional and online education in the mainstream learning development. On this note, the use of wide range assessment tools accompanied by third party educational technology integration will definitely result to a positive impact on a more authentic result and learner engagement.

#### Authenticity of Assessment

Like all other factors of the educative process, assessments should be a critical part of e-learning and should also be taken with the same level of consequential rigor with learning content creation (Colman, 2021). Teachers mostly take the classic pen and paper tests, surprise tests or performance type evaluations for offline learning. Although with certain limitations, this can be considered an advantage for face-to-face learning because misconducts can be monitored, time can be managed, technical glitches are omitted, interaction is fostered and the acquaintance to the teaching and learning community is heightened (Bardhan *et al.*, 2020).

Although conducive, test security is the primary issue of assessments conducted online, for it is prone to academic dishonesty (Williams and Wong, 2009; Yilmaz and Bayadas, 2017). In fact, many lecturers do not believe that online examination results are reliable and are insufficient for determining success of performance (Mardanian and Mozelius, 2011). However, the likelihood of genuine assessment result discrepancy of online evaluations can be reduced with strategies such as timed examinations, synchronization, shuffling, one-time submission and many more (Levia and Qiring, 2008; Eyal, 2012). Moreover, Peat and Franklin in 2003 found out that the use of online and offline resources appeared to have no differential effect on learner's performance and final grades. This is consistent with the equivalency of academic performance of learners with online and paper-based examination (Hewson, 2012).

With the growing diversity of distance learners and evolution of the educative online process, variety of well-articulated models, flexible and hybrid approaches that balances teaching, learning and assessment, takes consideration of accessibility, instructional quality, efficiency and economical (Kanuka and Brooks, 2010; Power and Gould-Morven, 2011). With the correct materials needed, teachers and learners may be able to effectively share experiences in the learning environment. This represents a big step forward in virtual reality technology, which simulates the real environment (Cheng 2021). Hence, a need for varied and inclusive instructional procedures and assessment techniques are emphasized to holistically and clearly achieve teaching and learning goals.

#### Conclusion

The normalization of online education raises new instructional and assessment considerations. Teachers must consider their assessment strategies as they consider

instructional methodologies and include online learning as an instructional delivery technology. Whichever format of flexible or hybrid learning employed with varying extent of limitations, synchronous and asynchronous activities are proven effective, and auspicious qualities online teaching and learning most especially desired learning outcomes are increased with varied and inclusive assessment techniques. Also, drawbacks in test security and academic dishonesty are reduced when engaging and varied assessment techniques are utilized with higher order thinking to enrich the overall quality of the learning experience. Findings also explain the equivalence of offline and online learning in a number of facets, therefore whatever form of process the educational system may assume, quality learning must not be compromised and learning continuity must be taken priority.

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