

## **Online Education in the midst of CoViD-19 Pandemic: Evidences from the Lenses of IT Students**

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### **Abstract**

Online education in the midst of the CoViD-19 pandemic is challenged by pivotal issues and concerns especially on the integration of creative innovation and skills for literacy, information, media, and technology across all educational environments and topographies these days. This study explored the students' perceptions on the employment of online learning in the midst of CoViD-19 pandemic in a state university in the countryside of the Philippines. Moreover, this study employed the Qualitative Research Design using Case Study as strategy for inquiry. It found out that the online learning is easy to use, accessible, works online and offline – anywhere and everywhere, and improves performances and ability and interaction relevant to the upskilling of competencies. Likewise, the provision of limited interaction, communication issues, and internet connectivity hold the informants from being effective and efficient online learners. The LMS is not optimized as it mostly functions as a repository of learning materials and the like. It is recommended that the foregoing experiences may be incorporated in retrofitting the online learning facilities in the locale of the study in order to upskill the desired outcomes of this pandemic education.

**Keywords:** Online Education, Learning Management System, QSU e-Aral, Pandemic Education.

### **Introduction**

The dawn of the CoViD-19 pandemic has brought digital revolution along Information Communication Technology (ICT) infrastructures in education to augment the learning climate when the traditional face-to-face instruction was prohibited due to the risks of this pandemic. As such, online learning became an integral part of the expanding curricula of all education

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institutions across all levels around the world – from onsite to online online learning (Aguilar & Torres, 2021). In the case of the current study, going online is coined on the idea of introducing the QSU e-Aral, a customized Learning Management System (LMS) on the academic learning experiences of the students.

The adoption of LMS in the academic learning experiences of students is believed by educationists and researchers to bring constructive support to both teachers and students along content areas for the teachers and learning key skills for the students, e.g., communication, analytical, collaboration, creativity, among others (Capper, 2003; Habib et al., 2021). When designed academically, the employment of such ICT infrastructures like LMS in the realms of online education is paramount to a more effective and efficient access to a greater quantity of information at the tip of the finger nails of every student (Bdair, 2021; Taylor et al., 2020; Khalil et al., 2020; Famularsih, 2020).

Moreover, education in the midst of online education in this pandemic is never daunted as technology is revolutionizing the era of the digital world that transforms the learning and knowledge sharing approaches (Arkorful & Abaidoo, 2015; Soomroo et al, 2018). Inventions in educational technologies are in deep-pace which calls for the skilful ability of teachers and the positive attitude of both teachers-and-student to be in that pace in attaining effective and efficient online learning (Tria, 2020; Mustapha & Devarajoo, 2020).

Learning Management System (LMS) when used as a tool in online learning uses an internet network with accessibility, connectivity, flexibility, and the ability to generate various types of learning interactions (Hastuti et al., 2021; Schneider & Council, 2020). Among the features of online learning to be effective includes convenience and flexibility, teacher-student and student-student interaction, collaboration of various learning tools, customized reporting, online course catalogs, responsive design features, natural user interface at the helm of providing better learning experiences. Likewise, Paulsen (2002) claimed that online education through LMS offers the separation of teachers and learners (which distinguishes it from face-to-face education), the influence of an educational organization (which distinguishes it from self-study and private tutoring), the use of a computer network to present or distribute some educational content, the provision of two-way communication via a computer network so that students may benefit from communication with each other, teachers, and staff. Aptly, teachers must also consider the experiences and feedback of students in evaluating such learning modalities (Farooq et al., 2020; Omar et al, 2012).

The crux is: online education using all forms of ICT infrastructures has shaped the educational landscape including the locale of this study – a state university in the Philippine countryside. Researches in the university center on determining the online readiness of both teachers and students, customization and acceptability of the QSU e-Aral but none yet is conducted along the experiences in using it. It is in this context that this study is conceptualized in order to determine the experiences of the students in using it as possible bases in retrofitting and customizing such online learning facilities.

### **1.1 Objectives of the Study**

This study explored the students' perceptions on the employment of online learning in the midst of CoViD-19 pandemic.

Specifically, it aimed to describe the experiences of the informants in using the QSU e-Aral as a tool of online learning and to identify factors that shaped the experiences of the informants in undergoing online education.

### **Methodology**

This study employed the Qualitative Research Design using Case Study as strategy for inquiry. The informants, where qualitative data were generated, were the IT students who used the QSU e-Aral in their courses during the First Semester, SY 2020-2021. To be qualified as informants of the study, they must have attended all the sessions and active participants as well. Active participants were those who participated in the open forum sharing their insights in the discussion board. Participants explained their experiences including a configural mode of understanding and principles – the meanings of their stories and experiences as part of an identity development (Hoshmand, 2005).

Four of the proponents personally interviewed the informants to gather the needed data in the study. Before the interview was conducted, the interviewers briefed the informants that their participation in the interview is voluntary and they can terminate it anytime. A consent form was signed by the informants. Transcripts of the interview were carefully transcribed and coded which were validated by a researcher whose credibility is beyond compare. Audit trail was employed in routing the transcripts of the interview to the informants in ascertaining the veracity of their claims. Audit trail is an in-depth approach to illustrating that the transcripts are based on the informants' narratives. It also involved a description on how the data were gathered and analyzed (Carcary, 2009; Malterud, 2001). Henceforth, the data are considered verified and valid.

Moreover, the data were analysed using thematic analysis. Themes were formulated according to the recurring claims from the informants which served as bases in an inquiry-based analysis vis-à-vis the research problem. Aptly, the analysis done in the research includes familiarization and organization, coding and recoding, and summarizing and interpreting (Nowell et al., 2017).

### **Findings**

Online learning in relation to the 21<sup>st</sup> century education is geared towards the improvement of the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration (Famularsih, 2020). It further aimed at improving the quality of instruction to ensure that the students meet the requirement of 21<sup>st</sup> century skills. The relevant skill is expected to establish students' ability for competitive career and good life, skills for lifelong learning and creative innovation, and skills for literacy, information, media, and technology (Famularsih, 2020; Suherdi, 2012).

Aptly, online learning tools must stimulate the development of such skills among learners. Likewise, online learning tools and facilities must offer features that can give leverage to the learning experiences of every learner.

#### **3.1 General impressions of the informants on using the QSU e-Aral**

In this study, the online learning is found to be easy to use, accessible, works online and offline – anywhere and everywhere, and improves performances and ability and interaction relevant to the upskilling of competencies among every learner. It is an innovative tool that incorporates technological methods towards an optimized learning process.

**Easy to use.** Online learning tools like the QSU e-Aral need to be easy to use with its navigation and interphase. It was claimed that online learning tools need to be user friendly to serve as an effective tool in knowledge creation and dissemination (Altamony et al, 2012). Moreover, it is said that ICT enabled systems ameliorates the transformation of e-learning facilities in constructing

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academic support; hence, online learning tools must be integrated to the learning environment with ease and comfort (Habib et al., 2021).

In the current study, the informants claimed that the QSU e-Aral is used with ease. Its dashboard is organized with the download and upload tools. One of the respondents claimed that efficient learning tools are easily located. Moreover, lessons are readily accessed.

The following transcripts from the informants qualify the claim of this study that using online learning tools like the QSU e-Aral is easy to use:

S4. It can be used easily.

S5. I can easily locate my modules. The LMS is organized through the dashboard. Modules are arranged weekly.

S6. It can be used easily as I can access my lessons readily.

S7. It is user friendly. You can upload easily.

S9. QSU e-Aral is easy to use.

S13. It is efficient; modules can be located easily.

**Accessible.** In the light of synergizing efforts, resources, and skills to ensure sustainability of effective online learning, ICT in education needs to be accessible to students. Accessibility in this sense is the feature of a tool that can be utilized all the time offered at the fingertips of the students. Customization is necessary especially in the case of the current study where internet connectivity, including the readiness of the students are areas of concern (Yra et al., 2020).

In the case of the current study, the informants claimed that the QSU e-Aral is accessible with its ready offline modes. Informant 10 zeroed-in that they can use it even if it is on offline mode. This configuration necessitates the idea of bringing online access to learning materials among students.

The following transcripts from the informants qualify the claim of this study that using online learning tools like the QSU e-Aral needs to be accessible:

S8. It is accessible.

S10. It is accessible, you can use it even when you are offline

S11. It is accessible, I can open the files immediately and I can do the tasks.

S12. It is accessible.

**Working online and offline – anywhere and everywhere.** Anshari et al. (2016) claimed that the online availability of learning activities is providing extended learning opportunities to students offered in a seamless opportunities, anywhere and everywhere. Learning is reinforced by ICT infrastructure like LMS: in the current study, it is the QSU e-Aral.

In the current study, the informants claimed that the QSU e-Aral is offered in online and offline modalities. The customized online learning tool functions in both modalities, thereby making its functions borderless unlike other LMS (Yra et al., 2020).

The following transcripts from the informants qualify the claim of this study that using online learning tools like the QSU e-Aral needs to work in online and offline modes, working anywhere and everywhere:

S1. My experience is good. I can easily use this application even I got offline. This is the good thing about this, I can download, view, and send materials whether I am online or offline.

S2. This app seems to serve me at an instant. I can download materials in my phone. It is convenient as I can study anywhere and everywhere I go.

S3. I can use it anywhere and everywhere I go. I do my tasks and send it later.

S10. It is accessible, you can use it even when you are offline

**Improves Performances and Ability.** Online learning increases the effectiveness of learning situation (Matsunaga, 2016; Haron et al., 2015). Moreover, online learning empowers learners to constructively control their educational needs and provides avenues that cultivate self-directed learning (Diab & Elgahsh, 2020). When realized, this precedes an improved ability to process learning tasks and their performances specific to competencies; hence, learning is optimized. The attainment of these performances and abilities is paramount to a developed motivation to do better in the next independent study (Victoria et al., 2018).

In the current study, informants claimed that their experiences in using the QSU e-Aral improved their performances including their ideation ability and task processing. Corollary to this perceived improvement is the admission of *informant 11* that online learning needs focus, an innate drive which will propel students' motivation to better their studies and learning condition. Students can control their pacing with enjoyment. This became a concomitant factor in sustaining their interest as they develop better attitudes towards learning (Bautista, 2012).

The following transcripts from the informants qualify the claim of this study that using online learning tools like the QSU e-Aral calls for the independent study skills of students:

*S4. It improves my ideation ability as this is independent study.*

*S3. It improves my ability to process tasks; yet, I am alone.*

*S11. It improves my performances. All I needed is to focus on my tasks.*

**Interaction.** Interaction, when properly employed and participated by all in online sessions, optimizes the academic pollination in a given class (Croft et al., 2010). In so far as online learning is concerned, interaction is pivotal, yet relevant idea in assuring effectiveness of incorporating technological means in all academic encounters. Corollary to the Social Learning Theory, interaction forms an integral part in teaching and learning; thus, it helps students to manage their thoughts, reflect on their learnings, and fills the gap in their reasoning ability.

Active participation to online discussion provides synergy towards collegial learning. These create a wagon of positive motivation and highly related to positive learning in a virtual learning environment towards classroom efficacy (Apostol et al., 2016; Bautista, 2012).

In the current study, constant interaction is assured and done in the chat room of the QSU e-Aral. The sharings of the students in the synchronous and asynchronous modalities paved ways on establishing rapport among them. Interaction is imperative to an interactive learning experience in optimizing competencies in education.

The following transcripts from the informants qualify the claim of this study that using online learning tools like the QSU e-Aral calls for an excellent interaction between and among teachers and students:

*S1. It calls for an interaction with my teachers and classmates to clarify things in our tasks*

*S6. Constant interaction with my teachers through the chat room*

*S7. We share ideas in the chat room. Interaction is good.*

*S3. You can interact with your classmates virtually to things that seem to be unclear.*

### **3.2 Problems encountered by the informants in going online.**

Online learning holds drawback when compared to the traditional face-to-face instruction. In this study, the informants identified three problems that hold them from being effective and efficient members of an online class: limited interaction, communication issues, and internet connectivity.

**Limited interaction.** Online learning to be effective should provide a holistic discussion on the topics presented through profound interaction between teacher and students and among students. It was claimed that the limited to lack of interaction in online classes limits the academic pollination and threatening the employment of constructivist approach that optimizes learning (Adarkwah, 2021; Croft et al., 2010). In view of the Social Learning Theory, interaction forms an integral part in teaching and learning; thus, it helps students to manage their thoughts, reflect on their learnings, and fills the gap in their reasoning ability.

In the study of Anderson and Elloumi (2004), online threads or discussion threads of interactions are necessary in online learning as students can view and review previous topics which seem to be vague to students. These threads are often viewed by students who find difficulty in digesting the topics presented. Aptly, the availability of this online threads is claimed to reinforce learning under the online learning scheme as it offers an array of scholarly tendencies, e.g. immediate search of concepts for clarification and substantiation (Bautista, 2017; 2013).

In the current study, online instruction is threatened with the limited to non-interaction between and among teachers and students. If not mitigated, students may soon underdeveloped the required competencies as they will just be dependent to their own understanding on the concept presented. This is also an academic risk as it threatens the development of a profound knowledge, as well as professional and technical know-how relative to a course of study.

The following transcripts from the informants qualify the claim of this study that using online learning tools like the QSU e-Aral is threatened with limited interaction between and among teachers and students:

*S12. Limited interaction with the instructors and students.*

*S13. We do not interact as we just used the LMS as a repository of materials (modules, activity sheets, etc.)*

**Unclear Communication.** Communication in an online class is paramount to an assured success and efficiency. The employment of online learning is mullied over abruptly with unready teachers and students in embracing technological inclusions in the learning environment. It is claimed that online communication by teachers and students threatens the efficacy of online instruction (Alkinani, 2021).

In the light of the current study, two informants claimed that miscommunication along explanations and instructions led to misunderstanding. This hampers the individual efficiency of students in complying with the requirements of the course.

The following transcripts from the informants qualify the claim of this study that using online learning tools like the QSU e-Aral is hampered with vague and unclear communication:

*S1. Misunderstanding and miscommunication. Sometimes, the explanation is not clear so I misinterpreted instructions.*

*S5. Communication issues. Some instructions are not clear.*

**Poor Internet Connectivity.** Poor internet connectivity remained to be the most encountered problem among developing countries when online learning is implemented (Almanthari et al., 2020). This limits students from participating in online sessions and advancing learning through independent research.

In the current study, three informants claimed that they are burdened with internet connectivity. This holds drawback to the efficacy of online learning as some learners lost the chance to receive the knowledge given by teachers during theory sessions as most LMS including this study do not record virtual sessions.

The following transcript from the informants qualify the claim of this study that using online learning tools like the QSU e-Aral is threatened with poor internet connectivity:

*S1. Poor internet connectivity*

*S2. Poor internet connectivity*

*S11. Internet connectivity*

### **Conclusion**

In light of the experiences of students in undergoing online education and on the parameters of this study, the following are concluded:

1. Online learning is found to be easy to use, accessible, works online and offline – anywhere and everywhere, and improves performances and ability and interaction relevant to the upskilling of competencies;
2. The provision of limited interaction, communication issues, and internet connectivity hold the informants from being effective and efficient online learners;
3. The LMS (used in this study) is not optimized as it mostly functions as a repository of learning materials and the like.

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