

Remote Learning Readiness and Challenges: Perceptions and Experiences among Tertiary State University Management Students

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Abstract

COVID-19 has disrupted the education system globally, leading education institutions to migrate into remote learning. This study on online learning readiness and competence was conducted among management students on their perceptions on the importance of, and the confidence level of their online learning competence factors. Using the Student Readiness for Online Learning (SROL) instrument, the results show that the students consider Technical Competence as very important and that they are somewhat confident with their online learning competence. Both perceptions of the importance of the online competence factors and competency levels significantly correlate with the students' self-report of whether or not they have learned in the course. Among the eight online learning challenges, the students find the "lack of technical skills in using online learning" as the least challenging. This study concludes with the recommendations that pedagogical and technological interventions be pursued to address the inadequacies in the online teaching-learning process.

Keywords: remote learning, online learning, Student Readiness for Online Learning (SROL) instrument

1.0 Introduction

The spread of the COVID-19 has upended the day-to-day economic activities, disrupting social interactions and impacting the education system. Universities and colleges heeded the public health advice of social distancing to reduce infection and fatalities from the disease (Murphy, 2020). The traditional face-to-face learning was replaced with online learning to mitigate the spread of the virus (Hodges et al., 2020) and to ensure education continuity and maintain access to learning, where IT infrastructure allowed (Chung et al., 2020; Radu et al., 2020). Hollweck and Doucet (2020) maintain that the COVID-19 pandemic has "challenged and

disrupted the work of educators, the daily learning experiences of students and even the concept of schooling." (p.1).

In the Philippines, the increasing incidents of COVID-19 transmission during the first quarter of 2020 resulted in localized lockdowns in certain areas. Prompted by government directives and observing the safety protocols, the Commission on Higher Education (CHED) has since been active in providing COVID-19 advisories to inform and guide the higher education institutions. Among the CHED recommendations is the utilization of "available distance learning, E-learning, and other alternative learning strategies in exchange

of residential learning depending on available resources" (Cuaton, 2020, p. 68).

The country's premier state university took a stance to transition to "remote learning and/or the blending of remote and face-to-face learning for AY 2020-2021 if the public health situation allows." (Bautista, 2020). The university directive detailed how the faculty members were expected to redesign courses to be delivered through remote teaching and learning modality. In this context, remote learning is a teaching/learning mode with instructors and students located in two different places and the instruction is conducted through real-time virtual interactions (synchronous) or through offline modular-based learning (asynchronous) (Moore et al., 2011).

The implementation of the remote learning modality elicited a variety of transition challenges. To obtain first-hand assessments on the extent of student engagement as well as to examine the students' online readiness and learning adeptness, the researcher rolled out a survey, midway through the semester, intended to evaluate the effectiveness of the implemented remote learning modalities. The courses were electronically delivered mainly through a learning management system, where the course requirements were made accessible and occasional synchronous meetings were also conducted. The researcher's overarching goal was to find out whether the learner-centric course objectives have been achieved in the new learning platform so far, and specifically, to examine the students' online readiness competencies in relation to their learning of the course.

According to Schultz and DeMers (2020), the online environment "leverages on technological tools and that the students must take the responsibility for their learning" (p. 3). To be engaged, to be satisfied with the course and

to perform well, the students must possess the basic competencies of self-directed learning and the technology-mediated learning adeptness. Bouilheres et al. (2020) state that "student engagement through the use of appropriate technology "enhances student performance and course satisfaction" (p. 3052).

Because of the novelty of the remote learning implementation in the Philippines, there is dearth of extant studies on students' remote learning experiences. One of these is the study of Rotas and Cahapay (2020) which identifies the categories of difficulties in remote learning. Another two are the studies of Alvarez (2020) and Toquero (2021) which examine the challenges of and the coping strategies within the emergency remote teaching (ERT). However, there are yet no comparable studies regarding students' learning in relation to their a) perceptions of the degree of importance of the online learning competence factors and b) self-assessment of their online readiness competency levels.

Schultz and DeMers (2020) differentiate online learning from hybrid learning, blended learning and emergency remote learning. The authors define online learning as the "well- designed, planned approach to storyboard and create deep virtual learning experiences with no physical interaction in a physical classroom environment," while hybrid learning as the "combination in various percentages of on-ground versus online instruction, which offers flexibility to students between the two types of learning interaction." (p.3). Blended learning, on the other hand is "a combination of synchronous and asynchronous learning in a virtual environment, blending interactions such as live synchronous sessions with posted asynchronous discussions, assignments, and videos." (p. 3).

Other authors define blended learning as a “prevalent component of traditional face-to-face and online education environments (Picciano, 2017). Moore et al. (2011) define remote learning as a learning pedagogy involving a medium of instruction in a geographically distant set-up. Learning occurs at different times and with the use of various instructional materials. Hodges et al. (2020) suggest that when evaluating the success of online learning experiences, student learning outcomes may be measured to examine whether the learners have achieved the intended knowledge, skills, and/or attitudes that were the focus of the course content.

Rotas and Cahapay (2020) identify the following difficulties in remote learning as experienced by university students in the Philippines, to wit, unstable internet connectivity; inadequate learning resources; electric power interruptions; vague learning contents; overloaded lesson activities; limited teachers scaffolds; poor peer communication; conflict with home responsibilities; poor learning environment; financial related problems; physical health compromises; and mental health struggles (p. 147). Alvarez (2020), using a qualitative phenomenological investigation among Filipino students’ lived experiences on the abrupt shift to emergency remote learning, reports four themes which include poor to no internet access, financial constraints, lack of technological devices, and affective or emotional support (p. 144).

In a study on the online learning readiness among university students in Malaysia, Chung et al. (2020) had the students rank the following eight challenges faced by students in an online learning environment, namely, internet connectivity; too many different online learning methods used by different lecturers; limited broadband data; slow personal laptop, devices; difficult to focus due to

distractions from surroundings; lack of motivation due to absence of face to face contact with friends and lecturers; difficult to understand the content of the subjects; and, lack of technical skills in using online learning (p. 55).

Transitioning to online learning has burdened students who are required to possess a variety of skills competencies and resources (Radu et al., 2020). Technology-mediated online learning requires students to be self-directed and independent, as they “consider new ways to prepare, organize, engage, and complete requirements” (Martin et al., 2020, p. 39). Radu et al. (2020) further contend that the negative attitude of students towards educational technology negatively impacts their academic performance and that students with limited digital skills were likely to be disadvantaged because of the online instruction.

This study investigated the students’: a) report on their having learned hitherto in the remote learning mode, b) their perceptions of the importance of, and their self-assessment of their competence on the factors of online learning readiness, and c) their evaluation of the critical factors associated with remote learning.

The findings of this study are envisioned to contribute to the state university’s knowledge-base on its first-ever system-wide remote learning initiatives. For the researcher, the results shall serve as the bases for informed decisions on actionable reforms to fine-tune and improve the delivery of the course content and enhance the achievement of the course outcomes. For the research community, the results of this study, on the bases of the variables investigated, may provide initial insights on factors affecting the students’ learning in a remote learning set-up and may serve as springboard for future related studies.

2.0 Methods

A descriptive research design was used to evaluate the extent of student learning in the remote learning modalities and to assess the students' online readiness competencies. The cross-sectional study was conducted midway through the first semester, academic year 2020 – 2021 after the implementation of the remote teaching / learning set-up. Fifty-three (53) junior management students who belonged to two sections of the same course handled by the researcher voluntarily participated. The survey was carried out through Google Forms, with the students' informed consent obtained, indicating that participation was voluntary. The objectives of the survey were explained, assuring the students that their participation or non-participation in the survey would have no bearing on their course grades. The students were also guaranteed that their responses were to be held confidential and cannot be traced to them, and that the summary reports shall anonymize the sources of responses.

A descriptive correlational design was used to investigate the relationship between the students' self-report on their having learned in the course so far, and their a) perceptions of the degree of importance of the online learning competence factors and b) self-assessment of their online readiness competency levels. The Pearson correlation coefficient (Pearson r) was used to measure the strength of the relationship between the variables measured. This study adopted the Student Readiness for Online Learning (SROL) instrument of Martin et al. (2020) with slight modifications on the technological application references (Google Classroom, and the university's learning management system) which were used in the current remote learning set-up.

Martin et al. (2020) examined the student

readiness for online learning based on students' perception of the importance of and their confidence in several competencies. The authors developed an instrument that measures student readiness for online learning (SROL). The instrument is organized along four subscales of competencies namely, online student attributes, time management, communication, and technical. Every subscale in turn has five items. Their survey investigated the student readiness for online learning where students evaluated not only the competencies they consider as important for their readiness for online learning but also their perceptions of their confidence in their readiness for online learning.

In a similar study, Hung et al. (2010) developed and validated an instrument to evaluate college students' readiness for online learning. Their study generated five dimensions of the Online Readiness Scale (OLRS): self-directed learning, motivation for learning, computer / Internet self-efficacy, learner control, and online communication self-efficacy. Chung et al. (2020) adopted the OLRS to evaluate the online learning readiness among university students in Malaysia using online learning that replaced the tradition face-to-face learning amidst COVID-19 pandemic.

This study's instrument was organized in four subscales of competencies with five items each, including *online student attributes, time management, communication, and technical competence*. The method of obtaining the students' responses also adopted the methodology of Martin et al. (2020) where the participants had to rate the scale items twice. The first instance measured the importance of the online readiness competencies. The students were asked to rate on a four-point Likert scale (4 - *unimportant*, 3 - *neither important nor unimportant*, 2 - *somewhat important*, 1 - *very*

important). The second instance measured the students' confidence in their readiness for online learning. The students were asked to rate on a five-point Likert scale (5 - *very unconfident*, 4 - *somewhat unconfident*, 3 - *neither confident not unconfident*, 2 - *somewhat confident*, 1 - *very confident*). In addition, the students were asked on whether they have been learning so far. The responses were on a four-point Likert scale (4 - *strongly disagree*, 3 - *disagree*, 2 - *agree*, 1 - *strongly agree*). A descriptive design was also used to summarize the students' ranking of the importance of the challenges related to online learning. The eight challenges faced by students in an online learning environment were adopted from Chung et al. (2020) where the students were asked to rank the factors they perceived as most challenging, ranking from one (1), the factor

deemed most challenging, to eight (8) as the least challenging.

3.0 Results and Discussion

A total of 53 BS Management students voluntarily participated in the survey, and 43 were female. The age range is from 20 to 22, and 66% were 21 years old. These participants belong to the first cohort of the reformed basic education system which implemented the additional two years of Senior High School.

Table 1 summarizes the results of the first research objective which is to investigate the participants' a) perceptions of the degree of importance of the online readiness competence factors and b) self-assessment of their online readiness competency levels.

Table 1. Student Readiness Online Learning Descriptive Statistics

Student Readiness Online Learning Competencies	Importance M(SD)	Confidence M(SD)
Online Student Attributes		
1. Set goals with deadlines	1.62 (0.96)	2.00 (0.88)
2. Be self-disciplined with studies	1.34 (0.76)	2.40 (1.03)
3. Learn from a variety of formats (lectures, videos, podcasts, online discussion/conferencing)	1.91 (1.11)	2.15 (0.74)
4. Be capable of following instructions in various formats (written, video, audio, etc.)	1.64 (1.06)	1.91 (0.69)
5. Utilize additional resources to answer course-related questions (course content, assignments, etc.)	2.04 (1.19)	2.28 (1.10)
Mean	1.71 (0.74)	2.15 (0.45)
Reliability	0.77	0.25
Time Management		
1. Devote hours per week regularly for the online class	1.72 (0.93)	2.17 (1.05)
2. Stay on task and avoid distractions while studying	1.51 (0.91)	3.15 (1.10)
3. Utilize course schedule for due dates	1.55 (0.95)	2.00 (0.92)
4. Complete course activities/assignments on time	1.21 (0.53)	1.68 (0.89)
5. Meeting multiple deadlines for course activities	1.53 (0.95)	2.396 (1.21)
Mean	1.51 (0.66)	2.28 (0.70)
Reliability	0.82	0.70

Table 1. Student Readiness Online Learning Descriptive Statistics (cont'd.)

Student Readiness Online Learning Competencies	Importance M(SD)	Confidence M(SD)
Communication		
1. Use asynchronous technologies (discussion boards, email, etc.)	1.19 (0.62)	1.72 (0.95)
2. Use synchronous technologies (Google Meet, Zoom, etc.) to communicate	1.91 (0.99)	2.66 (1.24)
3. Ask the instructor for help via email, discussion board, or chat	1.47 (0.80)	2.25 (0.92)
4. Ask classmates for support (accessing the course, clarification on a topic)	1.60 (0.97)	1.72 (0.66)
5. Discuss feedback received (assignments, quizzes, discussion, etc.) with the instructor	1.49 (0.85)	2.36 (1.00)
Mean	1.53 (0.62)	2.14 (0.59)
Reliability	0.82	0.59
Technical Competence		
1. Complete basic computer operations (e.g., creating and editing documents, managing files, and folders)	1.38 (0.88)	1.53 (0.93)
2. Navigate through the course in the Learning Management System (e.g., UPC VLE, Google Classroom)	1.25 (0.59)	1.91 (0.97)
3. Participate in course activities (discussions, quizzes, assignments, synchronous sessions)	1.21 (0.50)	2.06 (1.06)
4. Access the online grade book for feedback on performance	1.47 (0.93)	1.87 (.98)
5. Access online help desk/tech support for assistance	1.89 (1.07)	2.23 (1.12)
Mean	1.44 (0.63)	1.92 (0.69)
Reliability	0.83	0.71

In terms of the reliability of the subscales, with the exception of the competence *confidence* subscales on *Online Student Attribute and Communication*, the Cronbach alphas of the rest of the subscales (importance and confidence) range from 0.71 to 0.83, suggesting an acceptable internal consistency.

On the *importance* of the online competence factors, the subscales' average scores on *Online Student Attribute, Time Management and Communication* are rated as somewhat important, while the subscale *Technical* is rated *very important*. Specifically, the top five SROL item scores rated as *very important*. The *importance* assessment

demonstrates the students desire to be able to actively participate in the learning activities through technology-mediated synchronous and asynchronous modes.

Only the high importance on *Technical* finds consistency with the results of the findings of Martin et al. (2020) which show that the US students rated high importance on *Technical, Online Student Attributes, Time management*. In the same study by Martin et al. (2020), Communication competencies were reported to be not as high in importance. This finds similarities with this study's results where *Communication* is rated as *somewhat important*.

On the students' **confidence** assessment of their competencies, the average scores of all four subscales are rated as *somewhat confident*. The top five SROL item scores rated as somewhat confident which also span the *Technical Competence, Time Management and Communication subscales*. In terms of confidence on the SROL scales, the results of Martin et al. (2020) show that, as compared to *Time Management and Communication*, the US students were confident on their *Online Student Attributes and Technical* competencies.

The **confidence** assessment complements the students' **importance** assessment on their online learning readiness. Albeit the rating is "somewhat confident," the results indicate the students' priority and confidence on being able to participate and learn both synchronously and asynchronously. It is worthwhile to note that the item "*complete basic computer operations (e.g., creating and editing documents, managing files, and folders)*" has a rating close to very confident.

These results evaluated by subscale show the students' online learning readiness in terms of their *Technical* competence, with their acknowledgement of the importance of being able to "participate in course activities (discussions, quizzes, assignments, synchronous sessions" and "navigate through the course in the learning management system (e.g., UPC VLE, Google Classroom)." The students likewise are cognizant of their confidence on "being self-disciplined with studies" which fall short of their assessment of the importance of this competence factor. This level of confidence (*somewhat confident*) is related to the *Time Management* item "Stay on task and avoid distractions while studying," which yielded the

lowest score among all the items in the scale.

Overall, the study's findings show that the students are knowledgeable of the importance of the online readiness for learning, but that they seem to undervalue themselves in terms of their confidence on the online learning competencies. This suggests that infrastructural interventions and pedagogical strategies are needed in order to enhance the students' confidence in their online readiness for learning competencies.

The second objective of the study is to examine whether the students have been learning in the course so far. The participants were asked to base their assessments on their modules' course learning outcomes. The participants' average score is 1.40 (standard deviation, 0.49) with the transmutation equivalence of *strongly agree*. This indicates that the students consider themselves as having achieved the learning objectives of the first five modules hitherto.

The third objective is to explore the possible relationship between the students' self-report on their having learned so far and their perceptions of the degree of *importance* of, and their level of *confidence* on their online readiness for learning competence factors. The correlations of the variables were investigated. Table 2a shows the *Pearson r* correlations between the students' self-report on their having been learning so far, and their perceptions of the degree of *importance* of the online competence factors, while Table 2b shows the *Pearson r* correlations between the students' self-report on their having been learning so far, and their *confidence* on their online readiness competency levels.

Table 2a. Correlations between “Been Learning in the Course, So Far” and Students’ Perceptions on the Degree of Importance of the Online Readiness for Learning Factors

	Been Learning in the Course, So Far	
	Pearson r	Interpretation
Online Student Attribute Importance Average	0.17	Weak correlation
Time Management Importance Average	0.32*	Moderate correlation
Communication Importance Average	0.38**	Moderate correlation
Technological Competence Importance Average	0.33*	Moderate correlation

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 2b. Correlations between “Been Learning in the Course, So Far” and Students’ Perceptions on their Confidence on Competence on the Online Readiness for Learning Factors

	Been Learning in the Course, So Far	
	Pearson r	Interpretation
Online Student Attribute Confidence Average	0.32*	Moderate correlation
Time Management Confidence Average	0.28*	Weak correlation
Communication Confidence Average	0.343*	Moderate correlation
Technological Competence Confidence Average	0.402**	Moderate correlation

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 2a shows that albeit *moderate*, the correlations of the subscales are significant except for the *Online Student Attribute* importance. The *Communication* scale items positively and

significantly vary with the students’ self-report on their learning on the course. Similarly, Table 2b shows that that albeit *moderate*, the correlations of the SROL subscales with students’ self-report on their learning on the course are significant, except for the *Time Management* confidence, being weak. This suggests that the students’ confidence on the scale items on the *Online Student Attribute*, *Communication*, *Technical Competence* subscales vary with their self-report on their learning in the course.

The differences of the results in the correlations between Table 2a (degree of *importance*) and Table 2b (degree of confidence on *competence*) are derivatives of the SROL subscale scores for both the measures of *importance* and *confidence*. For instance, in the measure of *importance*, the weak correlation of *Online Student Attribute* can be ascribed to the lowest subscale average score of 1.71. Similarly, in the measure of *confidence*, the weak correlation of *Time Management* can be attributed to the lowest subscale average score of 2.28. These findings suggest the presence of correlations between the SROL scores and the students’ self-report on “been learning in the course so far.”

The last objective of the study is to find out, based on the students’ remote learning experience, their ranking of the challenges related to online learning. Table 3 shows that the “*lack of technical skills in using online (remote) learning*” was the least challenging to the participants. This implies that the participants believe that they sufficiently possess the basic technical skills for online learning, and this finding is consistent with the results on the SROL subscale *Technical Competence* which posted the highest scores in terms of both *importance* and *confidence*. One possibility for

this adeptness in online learning technical skills is that these participants had two more Senior High School years, being the first among the cohorts of the implementation of the K to 12 program. Similarly, this finding is parallel to that of Chung et al. (2020) where Malaysian university students also ranked “*lack of technical skills in using online learning*” as the least challenging.

Table 3. Challenges in Online Learning (Ranked from most to least challenging)

Challenges in Online Learning	Importance M(SD)
1. Unreliable internet connectivity	3.08 (1.93)
2. Difficult to understand the content of the subject matters	3.70 (1.97)
3. Too many different online learning methods used by different teachers	4.32 (2.46)
4. Lack of motivation due to absence of face-to-face (in person) contact with teachers and classmates	4.42 (2.14)
5. Difficult to focus due to distractions from my surroundings	4.45 (2.13)
6. Slow performing personal devices	4.58 (1.95)
7. Limited broadband data	4.66 (2.19)
8. Lack of technical skills in using online (remote) learning	6.77 (1.85)

Moreover, the findings are congruent with Rotas and Cahapay (2020) and Chung et al. (2020) where “*unstable/unreliable internet connectivity*” is ranked first, considered as the most challenging concern in remote learning. The results likewise exhibit similarities with first among the four challenges, “*poor to no internet access*,” as evaluated by Filipino students on the shift to emergency remote learning (Alvarez, 2020).

4.0 Conclusion and Recommendations

This study intended to investigate the online learning readiness competence perceptions

among students of a state university which transitioned into remote learning. The participants in this study expressed the *importance* of the online learning readiness competencies to be able to actively participate in the learning activities and likewise recognize their inadequacy in terms of *confidence* in most of the online learning readiness competencies measures. Schultz and DeMers (2020) advance the idea that the online environment “leverages on technological tools” where “students must take the responsibility for their learning” (p. 3).

The study also examined the extent of learning among the students tested the relationship between the students’ online readiness competencies and the extent of their learning. The findings yield a positive, albeit moderate correlations between the participants’ self-report on their learning on the course and the *importance* of online readiness competencies and *confidence* on the subscale items. These findings find support in Bouilheres et al. (2020) assertion that “student engagement through the use of appropriate technology “enhances student performance and course satisfaction” (p. 3052). This implies that online learning competencies potentiate remote learning effectiveness.

These results suggest that educators and learning administrators take into account the crucial function of online learning readiness competencies, particularly in terms of the achievement of the learning objectives. Radu et al. (2020) aptly describe the disadvantage of students with limited digital skills in the online environment. To be successful in the remote learning modality, students should possess adequate technology-mediated learning adeptness and should be self-directed towards learning. Hence, it is recommended that educators and administrators

ensure that students are online-learning-ready, and that they review their pedagogical and technological intervention schemes which facilitate student learning.

Finally, this study evaluated the students' experiences on the challenges they faced in relation to online learning. The "unstable/unreliable internet connectivity" truly is the bane of all the online learning stakeholders in the Philippines. Considering the gravity and urgency of this concern, government intervention is imperative. Otherwise, this unsuitable state of data access infrastructure may spawn learning achievement asymmetries, marginalizing those who have unreliable internet connectivity access. The findings also call for the appropriate up skilling among faculty members in remote pedagogical strategies and learning technologies as well as a greater expectation among educators to be more considerate in terms of students' learning and performance in the novel learning set-up.

As an exploratory study, these nascent findings suggest an association between the students' learning in the course and their online learning readiness competencies. Knowing that the country's educational system is in the process of creating innovative solutions, migrating to the novel remote learning environment, this study's motivation lends support from the recommendation of Toquero (2021) on the "need to examine the effectiveness along with the challenges of transitioning from classroom-based education to remote learning environments" (p. 162). Future related studies may investigate the causal relationships of the variables covered in this study, focusing on the contribution of these online readiness subscales to the motivation, engagement and performance of students in an online learning environment. Upcoming studies may also look into

how pedagogical and technological interventions moderate learning in terms of students' online learning readiness.

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