

# Senior High School Students' Engagement And Readiness In Elearning Environment: Basis For A Proposed Online Learning Environment Model

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**Abstract:** Students are the clients of institutions and educators. In order for them to be equipped with the best knowledge, understanding the new trends in technology is needed. Since the generation of computers arises, student learning not just at the tertiary level but also in the high school level should elevate into the technology-oriented classroom. This study aimed to answer the engagement and readiness of the Senior High School Students by determining the profile of the SHS students, the level of readiness SHS Students for Open and Distance Education, and the linear correlation of variables. A Proposed Online Learning Environment Model was also discussed. The SHS Students of the current SY 2018-2019 were the sources of data for this study. Frequency, Percentage, Average weighted mean and linear correlation was used as a statistical treatment. The result of the study shows that the majority of students were engaged and ready for Open and Distance Education. The proposed Online Learning Environment Model enables students in the Senior High School level to fully utilize distance education.

**Index Terms:** online learning, senior high school, open and distance education

## 1. INTRODUCTION

The Open and Distance Education pertains to facilitating an education outside the classroom. However, there are terms that were often used interchangeably; there are significant bearing differences. Open education is one of the other terms of any system education or training that methodically remove obstacles in learning no matter what they concern with age, time, place or space. With open and distance education, students who participate in it, shall be responsible for what they can learn, how they can learn, where they can learn, how they can easily learn, who helps them and when they have their learning assessed [1]. Moreover, Distance learning is one of the components of Open Education in which the educator and learners were separated by location.

Student's assignments are being submitted online, online quizzes, theme writing, essays are done using technology [2]. In today's generation, students should be able to have writing skills to cope up with the changing environment. Other researchers refer home study as a term used in online education, but there are many modes of communication being used in distance learning, not just regional factors [3], Home support program are even practiced in other developing countries and has been seen as effective [4]. Even before, most of the individual used the different learning technique in some forms of their daily lives such as reading books, newspapers, watching video blogs and request information via phone and emails. These are all learning experiences that educate in a broad sense. Open school is a system that is you are free of regular school attendance and time-bound programs. This Open School is designed for those people who are not able to attend onsite schooling or attend the regular class because of reasons, and now this is their chance to complete their education in the 10<sup>th</sup> or 12<sup>th</sup> regardless of age and some other reason they cannot go to regular school programs. Open, and Distance Education is now being practiced worldwide. There are overseas workers who are currently undergoing Open and Distance Education. Enrollees for higher education keep on increasing. One of the

data gathered by researchers [5], there are over 23 million higher education students taking a distance education course from institutions in the twelve countries. There is no precise number as the enrollment keep on increasing because the different countries have different counting procedure. In the Philippines, there is a lot of school offering Open and Distance Education. Those students who are unable to go to college due to lack of money, time, and another constraint may know to complete their education through Distance Education. This will allow them to finish their college degrees in any part of the world.

### 1.2 The objective of the Study

This study aimed to answer the following questions: What is the profile of SHS students; What is the level of readiness SHS Students for Open and Distance Education; What is the linear correlation of variables; and lastly the proposed Online Learning Environment Model?

### 1.3 Significance of the Study

This study may benefit not only the Pangasinan State University, which once offered an SHS but also other universities in determining if Senior High School students are ready to adapt ODeL and schools in the Department of Education.

## 2. RESEARCH METHODOLOGY

In this research study, the researcher adopted the quantitative method of research. It used the survey as a method of data collection in the form of questionnaires because it yielded information that was more systematic for all participants. Questionnaire was adopted from Penn State University [6].

### 2.1 Sources of Data and Processing

The SHS Students of the PSU of the current SY 2018-2019 were the sources of data for this study. The PSU had a total of more than 667 SHS students for the SY 2018-2019. PSU-SHS was one component of PSU that currently had a tradition educational room setup. 110 of SHS Students of PSU participated in the survey which is a 90 percent confidence level and 7.2 percent margin of error. Participants were requested to complete the survey within one term from the

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date of the issuance. The researcher shortened the link using bit.ly and provided it to the selected SHS students. The survey questionnaire was floated using Google Forms, and extracted in CSV for analysis. The gathered data was analyzed using a spreadsheet and statistical software to easily analyzed.

Frequency and Percentage were used in the first and second problems, which were about the profile of the respondents and the readiness of the students. Average weighted mean was also used in determining the interpretation based on the Likert rating scale used. For the last problem, a correlation matrix was used.

## 2.2 Statistical Treatment Used

**TABLE 1** INTERPRETATION FOR STRENGTH OF THE LINEAR RELATIONSHIP

Correlation	Strength of the linear relationship
1	Perfect
0.8 to 1.0	Very strong
0.60 – 0.80	Strong
0.40 – 0.60	Moderate
0.20 – 0.40	Weak
0.00 – 0.20	None to extremely weak

## 3. RESULTS AND DISCUSSION

This part of the study shows the results and discussion regarding the profile of the students, the level of readiness of

SHS Students for Open and Distance Education, the linear correlations of variables, and the developed ODEL Framework.

**TABLE 2** SHOWS THE PROFILE OF THE RESPONDENTS

Variables	Categories	Frequency	Percentage
Grade	Grade 11	47	43%
	Grade 12	63	57%
Age	15 years old	2	2%
	16 years old	25	23%
	17 years old	72	65%
	18 years old	10	9%
	19 years old	1	1%
Sex	Male	36	33%
	Female	74	67%
Track	TVL	51	46%
	Acad	59	54%

As shown in the table, more than half of 110 SHS respondents, which is 63 or 57%, were Grade 12. The majority of the respondents were female, who is 74 or 67%. The

respondent was Senior High Student of Pangasinan State University has a positive response to Open and Distance Education.

**TABLE 3** SELF-DIRECTION

Indicator	Students	
	WM	VD
Self-Direction		
1. I am good at setting goals and deadlines for myself.	3.85	A
2. I have a really good reason for taking an online course.	3.78	A
3. I finish the projects I start.	4.05	A
4. I do not quit just because things get difficult.	4.12	A
5. I can keep myself on track and on time.	3.82	A
Overall	3.92	A

Under the Self-Direction, the overall Weighted Mean is 3.92, which has a Verbal Description of Agree. Respondents believe that they set their own goals and can manage their deadlines by their selves. And on top of that, by having this program, they can maximize their time in taking an online course and

they believe that they can finish the project and any task that will be assigned with them. And they do believe as well that they cannot easily quit the program because of a lot of consideration they have to take. But they are very certain that they keep tier selves on track and on time.

**TABLE 4 LEARNING PREFERENCES**

Indicator	Students	
	WM	VD
Learning Preferences		
6. I learn fairly easily.	3.74	A
7. I can learn from things I hear, like lectures, audio recordings, or podcasts.	3.90	A
8. I have to read something to learn it best.	4.00	A
9. I have developed good ways to solve problems I run into.	3.86	A
10. I learn best when I figure things out for myself.	3.88	A
11. I like to learn in a group, but I can learn on my own as well.	3.85	A
12. I am willing to send e-mail to or have discussions with people I might never see.	3.64	A
Overall	3.84	A

In Learning Preferences, the overall Weighted Mean is 3.84 with Verbal Description of Agree. Students believe that they can learn much easier in an online course. They can easily pick up things that they hear like lecture through audio recordings and podcasts. And it will be easier for them to find what they read something they can learn best. They also believe that they can develop good ways to solve problems

that they can run into. And it is also the best outlet that they can figure out how they can solve things for their selves. They still wanted to be in a group, but they also want to learn on their own as well. They are willing to venture in technology in sending an email or have discussions with people that they never see or meet.

**TABLE 5 STUDY HABITS**

Indicator	Students	
	WM	VD
Study Habits		
13. I usually study in a place where I can read and work on assignments without distractions.	4.09	A
14. I can ignore distractions around me when I study.	3.32	A
15. I am willing to spend 10-20 hours each week on an online course.	3.07	A
16. I keep a record of what my assignments are and when they are due.	3.85	A
17. I plan my work in advance so that I can turn in my assignments on time.	4.47	SA
18. When I study, people around me will help me work and not try to distract me.	3.71	A
19. I am willing to use e-mail and other online tools to ask my classmates and instructors questions.	3.85	A
Overall	3.77	A

In Study Habits Indicator, the overall Weighted Mean is 3.77 with Verbal Description of Agree. For them, this Open and Distance Education would help to study in a place where they can read and work assignments without distractions because they do believe that they can ignore distractions around them when they are studying. Respondents also said that they are willing to spend ten to twenty hours each week on an online course. Students are also agreed that they could record their assignment and when they are due and the submission date.

This setup also helps to plan their work in advance so that they can submit their assignments on time. It also shows that when studying people around them will help them working and not to try to cause a distraction to them. Overall, respondents are very much willing to use e-mail and other online tools to ask their classmates and instructors for any inquiries or questions.

**TABLE 6 TECHNOLOGY SKILLS**

Indicator	Students	
	WM	VD
Technology Skills		
20. I am fairly good at using the computer.	3.73	A
21. I am comfortable surfing the Internet.	3.97	A
22. I am comfortable conducting searches, setting bookmarks, and downloading files.	3.94	A
23. I am comfortable installing software and changing configuration settings on my computer.	3.62	A
24. I know someone who can help me if I have computer problems.	3.87	A
Overall	3.83	A

Based on the table above, it shows in Overall Weighted Mean in Technology Skills Indicator is 3.82 with Verbal Description of Agree. It shows on the table that everyone is fairly good at using a computer. Everyone is computer savvy. Everyone is comfortable surfing the internet. It also shows that everyone is comfortable and knowledgeable in conducting searches,

knowledgeable in setting and bookmarks, and downloading files. Respondents are also comfortable installing software and changing configuration settings on their computers if it is needed, and they are confident that they ask someone to help them if they have any computer problems.

**TABLE 7 COMPUTER EQUIPMENT CAPABILITIES**

Indicator	Students	
	WM	VD
Computer Equipment Capabilities		
25. My computer and Mobile devices run reliably on Updated Operating Systems.	3.72	A
26. I have a printer.	3.05	A
27. I am connected to the Internet with a fairly fast, reliable connection.	3.42	A
28. I have virus protection software running on my computer.	3.61	A
29. I have headphones or speakers and a microphone to use if a class has a videoconference.	3.53	A
30. My browser will play several common multimedia (video and audio) formats.	3.11	A
Overall	3.40	A

For the Computer Equipment Capabilities Indicator, the overall weighted mean is 3.40 with the Verbal Description of Agree. It shows that most of the SHS respondent has a Computer and Mobile phones that they can rely on Updated Operating System. The majority also of the respondents own a printer at home, and they have a fairly fast, reliable internet connection. They also have a positive response to virus protection software that they can use on their computers. Also, everyone owns headphones and speakers and a microphone at home to use if the class is on a videoconference, and lastly, the data shows that their browser can play several common multimedia both for video and audio formats.

### Linear Correlations

The result of the correlation matrix shows that Self-Direction has a strong correlation with Learning Preferences, Study Habits and Technology Skills and has a moderate positive correlation with Computer Equipment Capabilities. Learning Preferences has a very strong positive correlation with study habits, has a strong correlation with Self-Direction and Technology Skills, and has a moderate correlation with Computer Equipment Capabilities.

**TABLE 8** CORRELATION MATRIX

Attributes	Respon...	Age	Sex	Track/Fi...	Self Dir...	Learnin...	Study H...	Technol...	Comput...
Respondents Classific...	1	0.455	-0.015	0.045	0.366	0.421	0.351	0.521	0.430
Age	0.455	1	-0.017	0.061	0.097	0.063	0.144	0.117	0.171
Sex	-0.015	-0.017	1	-0.105	0.077	0.071	0.056	0.037	0.133
Track/Field	0.045	0.061	-0.105	1	-0.029	-0.078	-0.044	-0.150	-0.076
Self Direction	0.366	0.097	0.077	-0.029	1	0.790	0.754	0.616	0.561
Learning Preferences	0.421	0.063	0.071	-0.078	0.790	1	0.813	0.744	0.500
Study Habits	0.351	0.144	0.056	-0.044	0.754	0.813	1	0.724	0.523
Technology Skills	0.521	0.117	0.037	-0.150	0.616	0.744	0.724	1	0.661
Computer Equipment ...	0.430	0.171	0.133	-0.076	0.561	0.500	0.523	0.661	1

Study Habits has a very strong positive correlation with learning preferences, has a strong correlation with Self-Direction and Technology Skills, and has a moderate correlation with Computer Equipment Capabilities Technology Skills has a strong positive correlation with self-direction, learning preferences, study habits, and computer equipment capabilities. Lastly, computer equipment capabilities have a strong positive correlation with technology skills; and have a moderate correlation with self-direction, learning preferences, and study habits.

#### PROPOSED ONLINE LEARNING ENVIRONMENT MODEL

Technology is the primary requirement for an online learning environment. As shown in the Model, hardware, software, and the internet are much needed as technological equipment

should be present. Some online schools provide specific hardware and software requirements and recommendations for online students' devices. Also, it is important for students to have a good speed of internet connection that is needed for connectivity. This is particularly important for synchronous classes. Mobile devices are also useful for learning on the go. Before the start of the school year, student's toolkit with the recommended technology and resources for online education should be ready. Technological readiness is useless without the skills and attitude of the student. The student should have equipped with technological competencies [7] in order to learn through distance education. The attitude of the student should also be available such as self-discipline. Lastly, the support of the institution, parents and teachers should be visible for a successful learning environment.

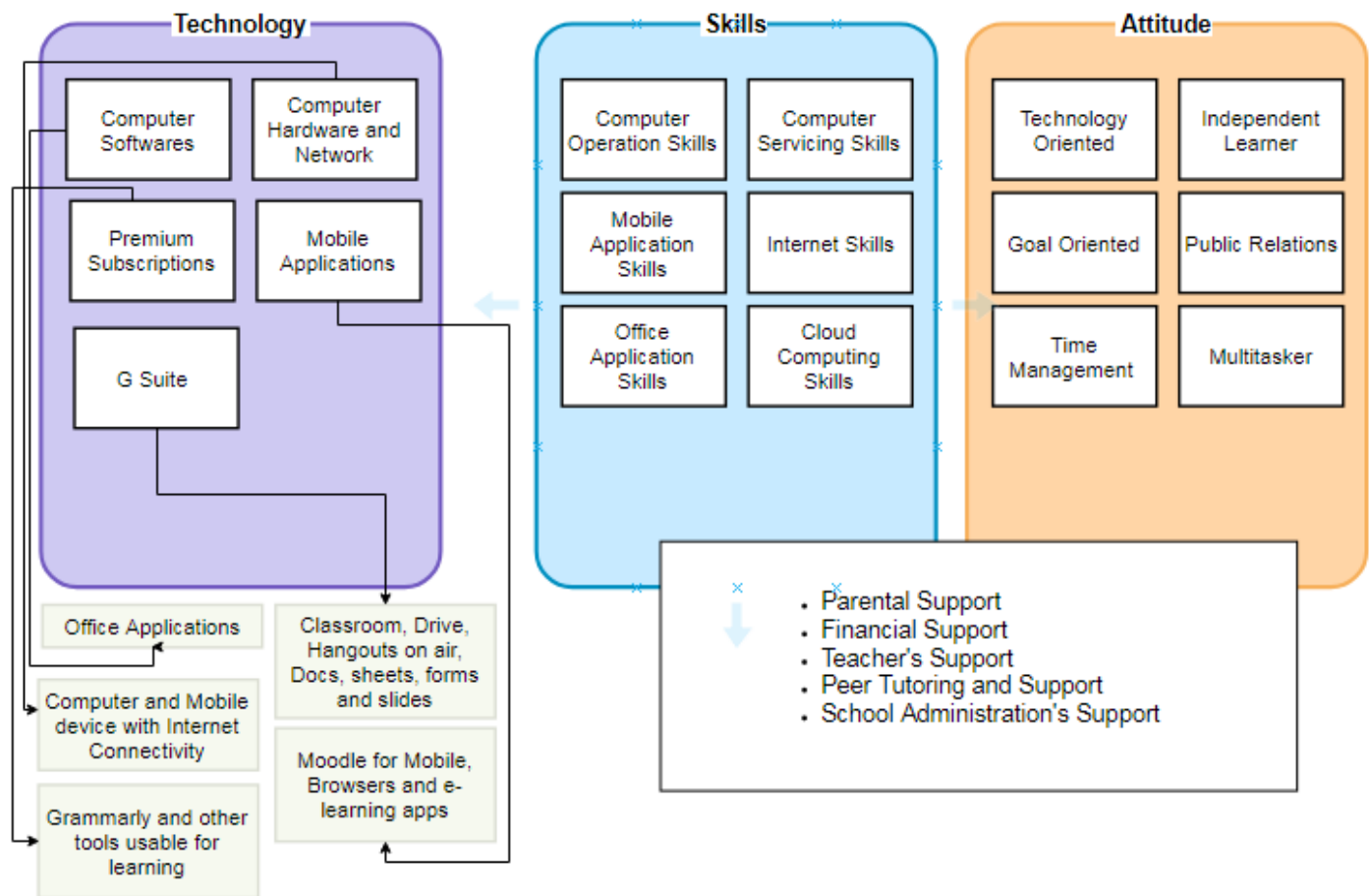


FIGURE 1 PROPOSED ONLINE LEARNING ENVIRONMENT MODEL

## CONCLUSIONS AND RECOMMENDATIONS

The study concluded that the majority of respondents were ready for Open and Distance Education. Students believe that this will also help them to be more advantageous and focus on their studies. It is recommended that Open and Distance Education must be offered as well for Senior High School to give them an opportunity for those students who have struggles and challenges going to school. The institution must adopt a singular vision, policies, and procedures for Open and Distance Education for Senior High School implementation. The institution must establish clear guidelines to follow when planning Open and Distance Education for Senior High School. It is most important for Open and Distance Education for Senior High School implementation that the systems for the ODE delivery be in place and working and training must be implemented as well for the faculty so that they can execute the program well. Lastly based on the proposed online learning environment model, technological readiness is useless without the skills and attitude of the student and the support of the institution, parents and teachers should be visible for a successful learning environment.

## REFERENCES

- [1] Melinda dela Pena-Bandalaria, "Ensuring Quality Education in Open and Distance eLearning ( ODeL )," AAOU, 2011, doi: 10.1108/AAOUJ-06-01-2011-B002.
- [2] P. G. Queroda, "Theme writing skills of Pangasinan State University (PSU) education students," TESOL Int. J., 2018.
- [3] L. Plowman, O. Stevenson, C. Stephen, and J. McPake, "Preschool children's learning with technology at home," in *Computers and Education*, 2012, doi: 10.1016/j.compedu.2011.11.014.
- [4] S. R. Suiza, R. J. M. Ventayen, and N. E. Arquillano, "Effect of home support program in English proficiency for preschool learners in Thailand," *Asian EFL J.*, 2019.
- [5] A. Qayyum and O. Zawacki-Richter, "Distance Education in Australia, Europe and the Americas," 2018.
- [6] Penn State University, "Online Learning Readiness Student Self-Assessment." [Online]. Available: <http://tutorials.istudy.psu.edu/learningonline/ORQ/ORQ.htm>. [Accessed: 15-Dec-2019].
- [7] R. J. M. Ventayen, "Educators competencies on the application of technological tools in teaching," *Int. J. Sci. Technol. Res.*, 2019.