

# Academic Performance of Hospitality Management Students in Online Learning Amidst COVID-19 Pandemic

Eliza Mae C. Palalon<sup>1</sup>, Ruby A. Arroyo<sup>2</sup>, Herlyn G. Epanto<sup>3</sup>,  
Cristella A. Salison<sup>4</sup>, Jo Ann Patrecio<sup>5</sup>, Ledelyn O. Delfino<sup>6</sup>,  
Ramil Y. Cabaron<sup>7</sup>, Kyle B. Dafilmoto<sup>8</sup>, Jeany Maica F. Garcia<sup>9</sup>,  
Erica Charm C. Miñoza<sup>10</sup>, Kurt Russel R. Murillo<sup>11</sup>

<sup>1,3,4,5,6,7,8,9,10,11</sup>Department of Hospitality Management, Central Mindanao University, Philippines

<sup>2</sup> Faculty Dean, Department of Hospitality Management, Central Mindanao University, Philippines

## Abstract

This study aims to determine the online education of the hospitality students in Central Mindanao University and their academic performances and level of satisfaction amidst COVID-19 Pandemic. The study used a quantitative– correlational research design that is mainly concerned with the extent of the relationship between two or more variables established in the same population using statistical data. The study found that most of the students were satisfied with the grades received online and the online education offered by the school. There was also no significant relationship between the academic performance of hospitality management students and their level of satisfaction towards the online education offered by the school. This implies that whether the students are satisfied or not with the online education offered, it will not have any effect on their academic performance.

**Keywords:** Academic Performance, Satisfaction, Online Learning, Hospitality Management, COVID-19 Pandemic

## 1. Introduction

The coronavirus, or COVID-19 pandemic, was brought on by a highly contagious virus that altered society. This coronavirus outbreak began at the beginning of December 2019 near Wuhan City, Hubei Province, China (Fong et al., 2020). The pandemic from China has also pervaded the Philippines, not long after, and many cases have been reported. As a result of this pandemic, our lifestyles also began to drastically change, especially at universities around the world, which were required to close their respective campuses and move all of their academic programs online (Bao, 2020). Since there is no face-to-face connection that might threaten professors and students, online education has become the new standard in the educational field.

This online education is not new, because back then, when the COVID-19 pandemic still didn't exist, online education was the way for other students to pursue their education, like some artists with busy schedules but also wanted to attend classes and graduate. They took some private classes and lessons with

their professors or instructors. But then, in midst of a pandemic, the Commission on Higher Education and universities collaborated to develop the Learning Continuity Plan, which serves as the guiding principles of the whole educational system for schools such as the Central Mindanao University. The plan is the primary response and commitment to ensure the health, safety, and well-being of students, instructors, and workers while also figuring out how to keep education going amidst the pandemic (Commission on Higher Education, 2020). As a result, the majority of schools adopted online education as their new method of teaching, and some students benefited from its flexibility and convenience. However, the pandemic exposed many flaws in online education, including the fact that many students lack access to the internet and the computers needed for online learning. Because of this, studying through online education was difficult for those without the required resources. However, despite its flaws, academic institutions have no other option but to adopt online teaching and learning (Dhawan, 2020) for safer education.

With online education as the center of the educational system at Central Mindanao University, the study was conducted to determine the academic performance and level of satisfaction of hospitality management students at Central Mindanao University in online education during COVID-19. Therefore, this study specifically seeks to determine the demographic profile of hospitality management students in terms of gender, year level, and general weighted average and to assess the level of satisfaction of students with the online education offered by the school in terms of synchronous and asynchronous. In addition, the academic performance of students in online education is the mode of teaching, and correlating the academic performance of students with the level of satisfaction in online education is to determine whether it is effective.

## 2. Literature Review

The Online Distance Learning Challenges is despite the potential benefits of online distance learning, students and teachers face challenges as well. Due to lack of interaction in the online classes, students are most likely to be distracted by smartphones, pets, deliveries, and other things other than the ongoing online class, according to Amadora (2020). Because there is no face-to-face interaction, it is assumed that students will be disinterested in the online class. Due to the COVID-19 pandemic, teachers, and students all over the world were forced to adapt to online teaching and learning (Crawford et al., 2020). Online Education as emphasized by Kauffman (2015), online courses are perceived differently by students than traditional courses. Kauffman pointed out that negative views can contribute to poor learning outcomes, such as a loss of desire and perseverance. Some of the students of their younger years is referred to as digital natives." Since they became aware of their surroundings, the Internet has become a part of their lives. Many studies compared face-to-face and online distance courses in terms of university student performance, as well as a variety of other academic and demographic variables. Even both learners and educators indicate the lack of the experience with online learning, and the study found that both of them adopted so quickly and having a favorable attitude regarding in the transition. Asynchronous and synchronous classes settings are frequently compared in online learning. According to Clark and Mayer (2016), asynchronous settings are defined as more individually based and self-paced as well as less instructor- dependent. Both differ in terms of the timing and location of teaching and learning activities, with asynchronous settings being more individually based and self-paced, as well as less instructor dependent. Northey et al. (2015) pointed out that while asynchronous teaching allows students to work at their own pace and in their own time, not all students are equipped with the necessary strategies to take

advantage of the benefits of asynchronous classes which can become a disadvantage such as procrastinating. However, in the synchronous class setting, the disadvantage of asynchronous can be avoided as Blau et al. (2017) stated that the synchronous class happens real-time which means students will attend the class real-time and avoid the procrastination of streaming video recorded lecture. Furthermore, the main advantages of synchronous online learning include the use of natural language, real-time interpersonal communication, and immediate feedback. In addition, synchronous learning improves the learners' commitment and task motivation as Kim et al. (2019) conducted an interview study with experts on online teaching and found that videoconferencing reduces interaction fluency, slows interactions, and reduces attention when compared to traditional teaching. Ogbonna et al. (2019) claimed that students learn practical skills better in a synchronous online setting whereas cognitive achievement, such as producing meaningful and thoughtful contributions is better in asynchronous settings. According to Daniel (2020) added that asynchronous working allows teachers to prepare learning materials more quickly and allows students to balance the responsibilities of home and school. However, they had difficulties in receiving immediate feedback. In addition, teachers can monitor student participation on a regular basis and schedule online sessions with students who have specific needs or questions. Furthermore, teachers and students have more breathing room in an asynchronous digital classroom.

### **3. Methodology**

#### **Research Design**

The study used quantitative – correlational research design to determine and examine the relationship between academic performance and satisfaction levels of hospitality management students in Central Mindanao University amidst COVID-19 pandemic.

#### **Respondents**

The respondents of the research study are hospitality management students at Central Mindanao University located in University Town, Musuan, Bukidnon. Surveyed with the total of 456 hospitality management students excluding 140 first-year. The target population consisted of 177. Wherein, 47 fourth-year students, 57 third-year students, and 73 second-year students. The criteria for selecting the target population are Central Mindanao University students enrolled in the College of Hospitality Management for the S.Y 2020-2021 second semester.

#### **Instrument**

The questionnaire consists of two sections designed with a 5-point Likert scale ranging from 1 which indicates strongly disagree to 5 which means strongly agree. It is adapted from the study of Hashemi (2021). The first section of the questionnaire will be focusing on the demographic profile of the students containing three items (gender, year level, and general weighted average) and the academic performance was based on the general weighted average obtained which was measured using the grading system of Central Mindanao University. The second section of the questionnaire will contain 20 items which focus on the students' level of satisfaction in online education offered during the COVID-19 outbreak. In addition, three questions from the questionnaire focus on the students' level of satisfaction in online education in terms of synchronous and asynchronous.

**Data Analysis**

The data collected was analyzed through descriptive statistical analysis and Pearson product moment correlation. To elaborate, the level of satisfaction of students in online education and demographic profile such as the gender, year level and academic performance was analyzed through descriptive statistical analysis wherein the mean, standard deviation, percentage, and frequency were computed to get the results. In addition, the Pearson product moment correlation was used to determine the relationship between the academic performance and level of satisfaction of students. Then, the results were organized to show the online education of hospitality management students in Central Mindanao University and their academic performance and level of satisfaction amidst COVID-19.

**4. Results and Discussion**

Over the course of three weeks, data was gathered. The questionnaires in google form that serve as a data to the study was collected and one hundred seventy-seven (177) valid questionnaires were returned out of one hundred seventy-seven (177) questionnaires distributed. The questionnaires were used to investigate the academic performance and level of satisfaction of students in the online education offered by the school. The analysis of the collected data reflecting the variables in the research model were carried out by means of descriptive analysis and Pearson product correlation.

**Table 1. Demographic Profile of students**

Demographic Profile	Frequency	Percentage
<b>Gender</b>		
Male	60	66.1
Female	117	33.9
Total	177	100.0
<b>Year Level</b>		
2 <sup>nd</sup> year	73	41.2
3 <sup>rd</sup> year	57	32.2
4 <sup>th</sup> year	47	26.6
Total	177	100.0
<b>General Weighted Average</b>		
1 – 1.24	12	6.8
1.25 – 1.49	70	39.5
1.50 – 1.74	64	36.2
1.75 – 1.99	23	13.0
2.00 – 2.24	6	3.4
2.25 – 2.49	1	0.6
2.50 – 2.74	1	0.6
2.75 – 2.99	0	0
3	0	0

4	0	0
5	0	0
Total	177	100.0

In table 1, it shows the demographic profile of the respondents. To elaborate, the number of respondents in terms of gender is presented. Based on the table shown, the total respondents of the study were one hundred seventy-seven (177) wherein sixty (60) respondents were males, and one hundred seventeen (117) respondents were females. There were more female respondents than male respondents as the female population enrolled is higher than males in the course program. Furthermore, the students were randomly selected regardless of gender as simple random sampling was used in selecting respondents. According to Hdi and Fagroud (2018), the female students get better results in every subject compared to males whereas Faisal et al. (2017) claimed that males performed better than females academically. However, Nistor (2013) disagreed with these ideas and stated that there is no significant difference in the academic performance of both males and females.

In addition, Table 1 revealed the number of respondents per year level wherein the second-year students have the highest frequency of seventy-three (73), followed by the third year students with fifty-seven (57) respondents, and fourth year with forty-seven (47) students having the lowest frequency of respondents. The number of respondents per year level was distributed proportionally using the stratified proportionate sampling. In the study of Momanyi (2015), he claimed that the age greatly affects the academic performance of students. He further explained that the younger students tend to perform academically well compared to the older students. However, Imlach et al. (2017) disagreed with the idea as he believed that the age of a student does not matter in the academic performance and achievements.

The table above also shows that the highest frequency with seventy (70) out of one hundred seventy-seven (177) got a general weighted average of 1.25-1.49. Followed by sixty-four (64) students wherein they got 1.50-1.74. Twenty-three (23) students got 1.75-1.99, twelve (12) students got 1-1.24, and six (6) students got 2.00-2.24. Finally, the remaining two (2) students got a general weighted average of 2.25-2.49 and 2.50-2.74 respectively. These grades are used to determine the academic performance of the students as El Said (2021) stated that grades are the evaluation of a student’s work and effort.

**Table 2. Student Satisfaction in Online Education**

Items	Mean	Interpretation
I am satisfied with the online webinars, seminars, and classes offered by the school.	3.8305	Agree
I am satisfied with the learnings I gained in various online classes.	3.5141	Agree
I am pleased with the teaching quality of the instructors in online classes.	3.5819	Agree
I am satisfied with the way our teachers motivate us to do better in online class.	3.7458	Agree
I am satisfied with the convenience of the online education environment.	3.4915	Neither Agree nor Disagree

Online education allowed students to access a wide range of resources. (Resources such as information, etc.)	3.9322	Agree
I have adequate technical support from my university. (The university offered free loads for internet, laptops or any gadgets, etc.)	2.4520	Disagree
I am satisfied with my grades during online classes.	3.8418	Agree
I am satisfied with the online class policies that have been implemented by my teachers or the university.	3.7458	Agree
I work well together with our teachers and classmates in online classes.	3.6554	Agree
I am satisfied with the content quality of the online classes offered by the school.	3.7119	Agree
I am satisfied with the Wi-Fi or any internet connection used for online education.	2.4119	Disagree
I am satisfied with the application (Google Meet and Google Classroom) used by the university for online education.	4.0282	Agree
Online education helps me train and develop to become a professional for my dream job (Receptionist, Cook, etc.)	2.3932	Disagree
Synchronous:		
I am satisfied with the instructors' discussions in each session of the online classes.	3.6158	Agree
I am satisfied having online classes real-time using Google Meet. (Meeting virtually in every class schedule)	3.5537	Agree
My interactions with the teachers such as concern and questions are met or answered during online classes.	3.6045	Agree
I am satisfied with meeting virtually during class schedule than video recorded classes.	3.7966	Agree
Asynchronous:		
I am satisfied with the instructors' various online teaching approaches. (PPT, Videos, etc.)	3.6158	Agree
I am satisfied with having video recorded classes and modules.	3.4520	Neither Agree nor Disagree
<b>TOTAL MEAN</b>	3.4987	Neither Agree nor Disagree

**Legend:**

Scale	Descriptive Rating
4.51-5.00	Strongly Agree
3.51-4.50	Agree
2.51-3.50	Neither Agree nor Disagree
1.51-2.50	Disagree
1.00-1.50	Strongly Disagree

Table 2 shows that most of the students were satisfied with the online webinars, seminars, and classes offered by the school. Furthermore, students gave positive feedback on the teaching quality and learnings gained from the classes online. Ludenberg et al. (2008) pointed out that students may prefer online classes as it offers more flexible study time which means the students can study at their own pace while doing their hobbies in between. This can be one of the reasons why students are satisfied with online classes. In addition, most of the students agreed that the teachers motivate them to do better in class despite the challenges faced due to the pandemic. This can be the cause on why most of the hospitality management students performed academically well as Hulleman (2018) stated that motivation is an important predictor of the student's achievements and learning. Though the students were mostly satisfied, they were unsure whether the online education's environment is convenient. It may be due to the challenges faced during the online setting such as slow internet connectivity as Paul and Jefferson (2019) emphasized that the slow internet connection is a hindrance to learning.

Additionally, majority of the students agreed that online education allowed the access to a wide range of resources such as information and guides for academic purposes which contributed positively to their satisfaction as Paul and Jefferson (2019) stated that one of the benefits of online learning is the accessibility to other information which is helpful for the students. Furthermore, most of the students were satisfied with their grades during online education and have agreed that they work well with their classmates and teacher despite being in the online setting. In addition, the students were satisfied with the online class policies implemented by the teacher and the university. However, the hospitality management students were dissatisfied with the technical support provided by the school. Most of the students agreed that the content quality and teaching approaches made by the teachers in online classes are satisfactory. However, the students believed that online education does not help in training and developing them to become a professional for the job preferred in the future as it requires skills that needs to be improved through hands on experience which is quite difficult in the online setting as Kemp and Grieve (2014) stated that online education does not provide dynamics which is important in a skill based on the course.

In terms of synchronous classes, it revealed that majority of the students are satisfied with the synchronous approach as the mode of teaching and learning. To elaborate, the questions and concerns of most students were met during the online classes despite the challenges and difficulties faced in an online setting such as bad internet connectivity. Furthermore, students are coping with the online education quite well as majority of the students are satisfied with having online classes real time. In addition, the instructors' discussion every meeting in online classes were met with positive responses as majority of the students were satisfied. It also revealed that most of the hospitality management students prefer to meet real-time than streaming video recorded classes. This can be further explained by the idea of Blau et al. (2017) which stated that synchronous classes offer students real-time interpersonal communication and

immediate feedback which enhances the learning experience of students. In connection with the study, students prefer the synchronous as they make learning easier. The students can ask teachers questions regarding the lessons and get an immediate answer.

In terms of asynchronous classes, the table revealed that the online teaching approaches of instructors such as power points, modules, videos, and more are effective as most of the students are satisfied with it. However, students are still reluctant in having only video recorded classes and modules as the mode of teaching and learning. Northey et al. (2015) emphasized that some students procrastinate due to having the flexibility study time which hinders their learning experience. This can be one of the reasons on why students are reluctant in having videos and modules as the only teaching approach.

The results of the table also show that the overall mean which is the general perception or satisfaction is 3.4987 which indicates that the students are undecided on whether they are satisfied or not with the online education offered by the school. Gopal et al. (2021) pointed out that students who are satisfied with the online education offered tend to perform better academically whereas, Kauffman (2015) claimed that students who have negative perception or satisfaction regarding the online education offered can contribute to the poor learning outcomes.

**Table 3. Academic performance of students in terms of general weighted average (GWA)**

General Weighted Average	Percentage Equivalent	Frequency	Percentage	Interpretation
1 – 1.24	94-100	12	6.8	Excellent
1.25 – 1.49	88-93	70	39.5	Very Good
1.50 – 1.74	82-87	64	36.2	Very Good
1.75 – 1.99	76-81	23	13.0	Good
2.00 – 2.24	70-75	6	3.4	Good
2.25 – 2.49	64-69	1	0.6	Satisfactory
2.50 – 2.74	58-63	1	0.6	Satisfactory
2.75 – 2.99	52-57	0	0	Pass
3	50-51	0	0	Pass
4	30-49	0	0	Conditional
5	29-below	0	0	Fail
Total		177	100.0	



Table 3 shows that the highest frequency of hospitality management students’ population with a percentage of 39.5 received a general weighted average grade around 1.25 to 1.49 which is equivalent to 88-93 percent with the online education as the mode of teaching and learning. This is a very good performance. Following that is the general weighted average of around 1.50 to 1.74 which is relatively close to the highest frequency having 36.2 of the population. It is also considered a very good performance which means 75.7 percent of the hospitality management students perform academically well despite the challenges faced in online education. Lundberg et al. (2008) pointed out that students may prefer online education as it provides more flexibility study hours wherein video lectures and modules can be streamed and read at the convenience of the student. In connection with the results of the study, Lundberg’s idea may be a possible reason on the positive academic performance of hospitality management students online.

Additionally, the students are doing very well academically as 75.7 percent of the students got a general weighted average of 1.25-1.75. However, in connection with the results in the level of satisfaction of students in online education wherein the total mean is 3.4987, it indicated that students were undecided on their satisfaction towards the online education which is odd considering their good grades during online classes. The possible reason for this oddness according to Fleming (2020) is that students study at their own free time after online classes which enhances learning experience. This means that students study on their own after class hours which can explain why they can perform academically well despite being satisfied or not in the online education offered by the school. In addition, self-studying can also be a possible reason as it helps students learn information beyond what the online classes offered (Grade Power Learning, 2018). These two may be the possible reasons on the oddness of having good academic performance despite the students being indecisive with their level of satisfaction in online education.

**Table 4. Pearson product moment correlation of the relationship between the academic performance and level of satisfaction**

		GWA	Level of Satisfaction
GWA	Pearson Correlation	1	.039
	Sig. (2-tailed)		.611
	N	175	175
Level of Satisfaction	Pearson Correlation	.039	1
	Sig. (2-tailed)	.611	
	N	175	176

The table above revealed that since the Pearson correlation value is 0.039, showing weak correlation with a p-value of 0.611(>0.05) indicating that there is no significant relationship between the general weighted average (GWA) and level of satisfaction of students in online education. This shows that the level of satisfaction of students towards the online education offered by the school does not have any impact or relationship with the academic performance of the students which means even if the satisfaction is high or low, it will not have any effect on the students’ academic performance. Contrary to the findings in the research of Hashemi (2021) wherein he concluded that there is a relationship between the academic performance and level of satisfaction of students in online education. He pointed out that when the satisfaction is low, it will affect the academic performance.

In relation to the results from table 2 and 3, this Pearson – R result validates the initial findings that

despite the promising GWAs (collectively and generally), the respondents still could not decide as to their satisfaction in online education. However, this result still does not substantiate the oddness between the GWA and collective indecisiveness of online education satisfaction. Fleming (2020) stated that students learn better online due to students being able to study at their own pace which is revealed to positively affect the performance of the student. This can be the possible reason on the positive academic grades despite the indecisiveness of students in their satisfaction in the online education offered by the school. Furthermore, the results can also imply that the hospitality management students of Central Mindanao University are relying not only at the classes offered by the school but also by their own efforts to get good grades. This idea is further elaborated by Grade Power Learning (2018) which stated that self-studying enhances the learning experience of students on the said topics. Additionally, self-studying allows students to go beyond what they have learned in class which can further enhance the learning experience of the students who self-studies. In relation to the academic performance and level of satisfaction of students, self-studying may also be one of the reasons on the oddness of having good academic performance despite the undecided satisfaction of students towards the online education offered by the school.

## 5. Discussion

Most of the hospitality management students' academic performance during online classes is very good based on the school's grading system with the majority receiving a grade of 1.25-1.49 general weighted average. In addition, the general satisfaction of students towards the online education offered by the school is undecided with an overall mean of 3.4987 which interprets as neither agree nor disagree. To elaborate, most of the students were satisfied with the grades received online and the online education offered by the school. Furthermore, students perceived the quality and content of the classes held online as satisfactory. It was also revealed that despite the online setting, it did not hinder the communication between the teachers and students. However, the majority of the students agreed that the school lacks technical support towards their students and most of them suffered from internet connectivity problems which affected their satisfaction.

Additionally, the hospitality management students were satisfied with the synchronous and asynchronous classes, but most of them prefer to have synchronous or real-time classes online. The results also revealed that there is no significant relationship between the academic performance of hospitality management students and their level of satisfaction towards the online education offered by the school. This implies that whether the students are satisfied or not with the online education offered, it will not have any effect on their academic performance. This explains and validates why the students perform academically well despite the indecisiveness of students towards their satisfaction with the online education offered by the school.

## 6. Conclusion

The online education provided by a school is vital towards the learning of students. Thus, assessing the level of satisfaction and online education is relevant to the improvement of the educational system offered by the schools during the pandemic.

As of now, the hospitality management students are achieving outstanding results despite the difficulties and challenges faced online. This shows that students can adapt to changes and achieve better learning results. However, the general and level satisfaction of students is undecided, yet their learning outcomes remain exceptionally good. The research results also show that there is no significant

relationship between the learning outcomes of hospitality management students and their level of satisfaction with the online education provided by the school, this shows that the students can achieve good academic results regardless of whether they study hospitality management or not satisfied with online education offered which supports initial findings. Therefore, it is important to determine students and their level of satisfaction with online education to collect necessary results for improving the educational system of the school.

## 7. References

1. An Important Piece of the Student Motivation Puzzle. (2018, January 10). FutureEd. <https://www.future-ed.org/reversing-the-decline-in-student-motivation>
2. Amadora, M., 2020. Common Problems that Occur During Online Classes. (2020, September 18). *Manila Bulletin*. <https://mb.com.ph/2020/09/18/common-problems-that-occur-during-online-classes/>
3. Blau, I., Weiser, O., & Eshet-Alkalai, Y. (2017). How does medium naturalness and personality traits shape academic achievement and perceived learning? An experimental study of face-to-face and synchronous e-learning. *Research in Learning Technology*, 25. <https://doi.org/10.25304/rlt.v25.1974>
4. Clark, R. C., & Mayer, R. E. (2011). *E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning*. San Francisco, CA: Pfeiffer. <http://dx.doi.org/10.1002/9781118255971>
5. Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., Magni, P., & Lam, S. (2020). Covid-19: 20 countries' higher education intra-period digital pedagogy responses. 1, 3(1). <https://doi.org/10.37074/jalt.2020.3.1.7>
6. Daniel, S. J. (2020). Education and the COVID-19 pandemic. *PROSPECTS*, 49(1-2), 91–96. <https://doi.org/10.1007/s11125-020-09464-3>
7. Faisal, R., Shinwari, L., & Hussain, S. S. (2017). Academic performance of male in comparison with female undergraduate medical students in Pharmacology examinations. *JPMA. The Journal of the Pakistan Medical Association*, 67(2), 204–208. <https://pubmed.ncbi.nlm.nih.gov/28138172/>
8. Fleming, N. (2020, April 24). Why Are Some Kids Thriving During Remote Learning? Edutopia; George Lucas Educational Foundation. <https://www.edutopia.org/article/why-are-some-kids-thriving-during-remote-learning>
9. Gopal, R., Singh, V., & Aggarwal, A. (2021). Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19. *Education and Information Technologies*, 26(6), 6923–6947. <https://doi.org/10.1007/s10639-021-10523-1>
10. Hashemi, A. (2021). Effects of COVID-19 on the academic performance of Afghan students' and their level of satisfaction with online teaching. *Cogent Arts & Humanities*, 8(1). <https://doi.org/10.1080/23311983.2021.1933684>
11. Hdi, S., & Fagroud, M. (2018). The effect of gender on University Students' School Performance: The case of the National School of Agriculture in Meknes, Morocco. *Culture & Society*, 9(1), 67–78. <https://doi.org/10.7220/2335-8777.9.1.4>
12. Hulleman, C., Hulleman, T. (2018). An Important Piece of the Student Motivation Puzzle. (2018, January 10). FutureEd. <https://www.future-ed.org/reversing-the-decline-in-student-motivation>
13. Imlach, A.-R., Ward, D. D., Stuart, K. E., Summers, M. J., Valenzuela, M. J., King, A. E., Saunders, N. L., Summers, J., Srikanth, V. K., Robinson, A.,

- &Vickers,J.C.(2017).Ageisnobarrier:Predictorsofacademicssuccess in older learners. *Npj Science of Learning*, 2(1). <https://doi.org/10.1038/s41539-017-0014-5>
14. Jones, S. H. (2014). Benefits and Challenges of Online Education for Clinical Social Work: Three Examples. *Clinical Social Work Journal*, 43(2), 225–235. <https://doi.org/10.1007/s10615-014-0508-z>
15. Kauffman, H. (2015). A review of predictive factors of student success in and satisfaction with online learning. *Research in Learning Technology*, 23. <https://doi.org/10.3402/rlt.v23.26507>
16. Kim, H. J., Hong, A. J., & Song, H.-D. (2019). The roles of academic engagement and Digital Readiness in students' achievements in university e-learning environments. *International Journal of Educational 35 Technology in Higher Education*, 16(1). <https://doi.org/10.1186/s41239-019-0152-3>
17. Lundberg, J., Castillo Merino, D., & Dahmani, M. (2008). Do Online Students Perform Better than Face-to-face Students? Reflections and a Short Review of some Empirical Findings. *RUSC. Universities and Knowledge Society Journal*, 5(1). <https://doi.org/10.7238/rusc.v5i1.326>
18. Nistor, N. (2013). Stability of attitudes and participation in online university courses: Gender and location effects. *Computers & Education*, 68, 284-292. <https://doi.org/10.1016/j.compedu.2013.05.016>
19. Northey, G., Bucic, T., Chylinski, M., & Govind, R. (2015). Increasing student engagement using asynchronous learning. *Journal of Marketing Education*, 37(3), 171–180. <https://doi.org/10.1177/0273475315589814>
20. Momanyi, J., Too, J., & Simiyu, C. (2015). Effect of students' age on academic motivation and academic performance ... (n.d.). <https://www.semanticscholar.org/paper/Effect-of-Students'-Age-on-Academic-Motivation-and-Momanyi-Too/af57089b7b1cbca58326eaacd4dbb80cf647cd08>
21. Ogbonna, C. G., Ibezim, N. E., & Obi, C. A. (2019). Synchronous versus asynchronous e-learning in teaching word processing: An experimental approach. *South African Journal of Education*, 39(2), 1–15. <https://doi.org/10.15700/saje.v39n2a1383>
22. Paul, J., & Jefferson, F. (2019). A comparative analysis of student performance in an online vs. face-to-face environmental science course from 2009 to 2016. *Frontiers in Computer Science*, 1. <https://doi.org/10.3389/fcomp.2019.00007>
23. What Is Self Study? The Benefits For Students | GradePower Learning. (2018, September 13). GradePower Learning. <https://gradepowerlearning.com/what-is-self-study/>