



The impact of distance learning on tourism and hospitality education during the SARS-CoV-2 pandemic in Region VI, Western Visayas

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ABSTRACT

This study investigates the impact of the shift from face-to-face to distance learning during the SARS-CoV-2 pandemic on tourism and hospitality education in colleges and universities in Region VI, Western Visayas. It compares the effects on academic performance and learning styles of students in different educational modes. The research employs a mixed-method approach, combining qualitative and quantitative descriptive methods, using mobile and electronic online surveys with 292 participants from tourism and hospitality courses in Region VI. The study examines how students coped with the sudden use of technologies, including artificial intelligence (AI), and their readiness for this abrupt shift. The pandemic led to psychological effects on students' academic performance as the educational system transitioned from traditional in-person learning to utilizing hardware, software, and learning resources to maintain effective education. The results indicate that academic motivation was "Average," study skills were "Moderately Low," and academic stress was "Average" across higher education institutions. A hybrid model of education and digital learning emerged, widening educational gaps due to the sudden shift in classroom activities. The pandemic reshaped national education delivery, affecting millions of private and public education students due to institutional closures. Students relied on on-hand modules and online learning through flexible or blended learning approaches, significantly impacting tourism and hospitality education and different educational modalities.

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1. Introduction

The development of a country relies on the abilities of its future students. Advancements in knowledge, skills, and technology in education depend on the quality and preparation of technically skilled professionals, especially those with personal and interpersonal competencies relevant to the tourism and hospitality industry. These are essential components and processes in tourism and hospitality programs at higher education institutions (Johnson et al., 2019). The global pandemic significantly impacted hospitality and tourism education due to widespread school closures. SARS-CoV-2 spreads easily through close contact, making crowded educational spaces conducive to its

transmission (Collins et al., 2024). As a result, 990 million students globally, from primary to tertiary levels in hospitality and tourism courses, were unable to attend school or university (UNESCO, 2020). Education institutions, both public and private, experienced a considerable gap with the tourism industry. The pandemic led to partial or complete closures of hospitality and tourism programs for more than half the world's students in this field, with over a million more students expected to fall below minimum proficiency levels due to the health crisis (Wang et al., 2023). Prioritizing the recovery of hospitality and tourism education is essential to prevent a generational crisis. The COVID-19 pandemic posed a significant challenge to educational systems worldwide. Due to the impacts of SARS-CoV-2, hospitality and tourism programs in both private and public schools shifted away from traditional classroom settings. This shift has transformed how educators teach and engage students in hospitality and tourism, introducing new challenges for both instructors and learners. This situation highlights the need for further research

into the experiences of instructors and students in hospitality and tourism education (Ye and Law, 2021). With the spread of SARS-CoV-2, local government units (LGUs) implemented quarantine protocols, leading to the temporary closure of educational institutions. Consequently, billions of hospitality and tourism students were impacted worldwide. In the Philippines, over 28 million students, including those at the tertiary level, stayed home under government-imposed quarantine measures (UNESCO, 2020). To address the needs of approximately 3.5 million tertiary students across roughly 2,400 higher education institutions (HEIs), proactive policies were introduced to continue education during closures. These policies included flexible and blended learning methods, such as online synchronous learning with real-time lectures and time-based outcomes, as well as asynchronous activities like pre-recorded video lectures and self-paced assessments.

Students face a range of issues and challenges in education, which negatively affect their academic performance. Hospitality and tourism students in the Philippines, in particular, encounter challenges that impact their academic, social, family, emotional, personal, financial, and spiritual well-being, with effects ranging from moderate to very high. These issues point to gaps in classroom management, pedagogy, and a lack of interactive activities that promote holistic development and effective learning habits among hospitality and tourism students (Dagdag et al., 2019). The COVID-19 pandemic caused a significant disruption in traditional education, leading to a rapid transition from face-to-face instruction to blended, flexible methods, including online and flipped classrooms. This shift required institutions to adopt emergency remote teaching methods in response to the crisis. Organizational factors—such as class size, synchronous and asynchronous delivery, and the integration of digital technologies—have been shown to influence student performance positively, supporting the idea that effective organizational practices contribute to the success of emergency teaching models (Iglesias-Pradas et al., 2021).

The coronavirus pandemic had a significant impact on both private and public education, especially in colleges and universities where students live and study in close proximity, increasing the risk of virus spread. This led to uncertainty and challenges for educational institutions. Online courses became an effective tool for retaining students and ensuring access to learning during this time. Many colleges and universities globally adapted their programs to respond to the pandemic, with larger institutions generally able to integrate strong online systems, while smaller institutions faced challenges meeting the demand for online learning. Higher education institutions, having withstood past economic hardships, are expected to remain resilient.

In the digital era, universities and colleges are better positioned to offer hospitality and tourism

students online learning options. For first-year university students, self-efficacy and academic performance are closely linked, with learning contexts influencing their beliefs and academic outcomes (Talsma et al., 2021). However, during the SARS-CoV-2 outbreak, students faced risks to their academic self-efficacy and ability to manage course loads. Many students believed that pandemic-related changes in the learning environment negatively impacted their performance, highlighting the importance of supporting self-efficacy and mobilizing effective learning in flexible or blended setups.

The objectives of this research can be summarized as follows:

1. Assess the academic performance of hospitality and tourism students in higher education institutions (colleges and universities) in Region VI, Western Visayas.
2. Examine the profiles of hospitality and tourism students in terms of gender, age, program of study, institution, and learning mode, focusing on access to a) hardware resources, b) software resources, c) learning resources, and d) traditional resources, in colleges and universities in Region VI, Western Visayas.
3. Determine the academic performance status of selected hospitality and tourism students in colleges and universities during the local SARS-CoV-2 outbreak.
4. Analyze the impact of the SARS-CoV-2 pandemic on hospitality and tourism students' academic performance in higher education, specifically in terms of academic motivation, study skills, and academic stress.
5. Evaluate the effects of the SARS-CoV-2 pandemic on the academic performance of hospitality and tourism students, focusing on academic motivation, study skills, and overall academic performance in higher education institutions.

2. Materials and methods

This descriptive study aims to assess the study motivation, study skills, and academic stress of tourism and hospitality students in HEIs in Region VI, Western Visayas. A self-designed questionnaire with a five-point Likert scale was used to investigate academic performance, incorporating both qualitative and quantitative methods. A total of 292 tourism and hospitality management students, enrolled in state universities and colleges during the SARS-CoV-2 outbreak, participated in the study. Table 1 shows the distribution of participants in the study.

Table 1: Distribution of participants

Participants	Number of participants
Tourism management	68
Hospitality management	224
Total	292

2.1. Tools and techniques

This investigation used a descriptive research method, which observes and describes current conditions without controlling variables. Descriptive studies aim to determine, describe, or identify what exists, unlike analytical research, which seeks to explain why or how something occurs. Although often based on observation, descriptive studies are not restricted to observational data collection alone.

A mixed-methods approach was used, combining both quantitative and qualitative data. Quantitative methods generally involve universal formulas to calculate metrics such as mean, median, and mode. In contrast, qualitative methods focus on individual data analysis, interpreting primary data with consideration for unique characteristics.

3. Result and discussion

The researcher examined the academic performance of tourism and hospitality students in HEIs in Region VI, Western Visayas, focusing on a) study motivation, b) study skills, and c) academic stress. Table 2 provides the profile of tourism and hospitality students from both private and public institutions.

According to Table 2, there were 158 participants (95.2%) from private institutions and 134 participants (95.7%) from public institutions in Iloilo and nearby provinces. In terms of gender, 141 participants (93.0%) were male, and 151 (97.9%) were female. Age distribution showed: 161 students (105.0%) aged 19-21, 93 students (60.6%) aged 20-23, nine students (6.2%) aged 24-26, 24 students (15.4%) aged 27-29, and five students (4.0%) aged 30-32.

In terms of courses, 68 students (44.7%) were enrolled in tourism management and 224 (146.2%) in hospitality management. During the SARS-CoV-2 pandemic, the primary mode of learning included:

- Hardware resources: 103 students (63.3%) used laptops and home internet access.
- Software resources: 43 students (26.5%) utilized web-based tools, including real-time chat, video lectures, presentations, and social networking.
- Learning resources: 45 students (30.1%) accessed resources such as modules, library content, and Massive Open Online Courses (MOOCs).
- Traditional resources: 101 students (71.0%) used hard-copy module distributions.

Table 2: Profile of private and public tourism and hospitality students

Variables	Category	Frequency (N)			Percentage (%)		
		Private	Public	Total	Private	Public	Total
Gender	Male	69	72	141	41.6%	51.4%	93.0%
	Female	89	62	151	53.6%	44.3%	97.9%
Age	19-21 old	89	72	161	53.6%	51.4%	105.0%
	20-23 old	52	41	93	31.3%	29.3%	60.6%
	24-26 old	2	7	9	1.2%	5.0%	6.2%
	27-29 old	15	9	24	9.0%	6.4%	15.4%
	30-32 old	0	5	5	0%	3.6%	4%
Course	Tourism management	35	33	68	21.1%	23.6%	44.7%
	Hospitality management	123	101	224	74.1%	72.1%	146.2%
Higher education institutions enrolled	Private school	158	0	158	95.2%	0	95.2%
	Public school	0	134	134	0	95.7%	95.7%
Mode of learning	Hardware resources	92	11	103	55.4%	7.9%	63.3%
	Software resources	38	5	43	22.9%	3.6%	26.5%
	Learning resources	18	27	45	10.8%	19.3%	30.1%
	Traditional resources	10	91	101	6.0%	65.0%	71.0%

Table 3 presents the academic performance in terms of study motivation among tourism and hospitality students from private and public institutions. Results show that, for private institutions with 158 participants, the mean score was 2.91 (SD=1.18), described as "Average." In contrast, for public institutions with 134 participants, the mean score was 2.90 (SD=1.17), described as "Low." Overall, with 292 tourism and hospitality students from selected institutions in Region VI, Western Visayas, the study motivation level was found to be "Average" (M=2.90, SD=1.17). Table 4 shows the results of academic performance in terms of study skills among tourism and hospitality students in private and public institutions. For private institutions with 158 participants, the mean score was 2.49 (SD=0.71), described as "Moderately Low." Similarly, for public institutions with 134 participants, the mean score

was 2.50 (SD=0.17), also described as "Moderately Low." Overall, with 292 participants from selected institutions in Region VI, Western Visayas, the study skills level was "Moderately Low" (M=2.50, SD=0.71).

Table 3: Academic performance on academic motivation of private and public tourism and hospitality students

Institution type	N	Mean score	Standard deviation
Private higher institutions	158	2.91	1.18
State universities and colleges	134	2.9	1.17
Combined	292	2.9	1.17

The sudden shift from face-to-face learning to online and module-based learning due to the SARS-CoV-2 pandemic impacted learning satisfaction and academic performance in tourism and hospitality programs, which adopted a dual-mode system

without adequate training and support for technology. Educators taught both in-person and online courses, including laboratory and lecture-based subjects, assessing student performance through this dual-mode design. Regression analysis suggests that students with higher GPAs generally performed worse in online courses, while those with lower GPAs also struggled compared to in-person learning (El Said, 2021). This study on the impact of the SARS-CoV-2 pandemic on academic performance in a developing country's university showed that with the global shift to virtual learning, universities rapidly implemented digital and virtual strategies. Tourism and hospitality students adapted to new blended or flexible learning methods, combining online and distance learning approaches implemented by private and public schools. The ongoing pandemic has transformed educational technology use and may continue to shape pedagogical strategies in the future.

Table 4: Academic performance on study skills of private and public schools of tourism and hospitality students

Institution type	N	Mean score	Standard deviation
Private higher institutions	158	2.49	0.71
State universities and colleges	134	2.5	0.72
Combined	292	2.5	0.71

Table 5 presents the academic performance related to academic stress among tourism and hospitality students in private and public institutions. For private institutions with 158 participants, the mean stress level was 2.70 (SD=1.14), described as "Average." Similarly, for public institutions with 134 participants, the mean was 2.71 (SD=1.15), also described as "Average." Overall, the academic stress level for 292 tourism and hospitality students in selected institutions in Region VI, Western Visayas, was found to be "Average" (M=2.57, SD=1.14).

The continuous spread of the SARS-CoV-2 pandemic, strict isolation measures, and school delays have impacted college students in private and public institutions. The stress and anxiety linked to the pandemic are crucial for society and university departments to understand, as academic workloads, separation from school, and fear of contagion have significantly affected the physical and mental health of college students. The perceived stress from these factors has mediated the relationship between academic stress and student well-being. During the pandemic, over 30 million college students globally were home-schooled, with a limited understanding of how academic demands, isolation, and fear of infection affected their health. Three primary stressors and two types of health impacts during SARS-CoV-2 were evaluated through self-reported surveys (Yang et al., 2021).

The SARS-CoV-2 pandemic disrupted college life worldwide, leading to sudden and significant changes. Campuses closed, unemployment rose, and

social distancing became standard practice within weeks. According to Best Colleges, 78% of households with college students reported disruptions related to the pandemic, with a notable impact on mental health. Among affected students, 81% agreed they experienced increased stress due to the SARS-CoV-2 outbreak (Johnson et al., 2020). This study contributes to the literature on academic stress and health, offering insights into societal and institutional measures to support student health during and beyond the pandemic.

Table 5: Academic performance related to academic stress among tourism and hospitality students in private and public schools

Institution type	N	Mean score	Standard deviation
Private higher institutions	158	2.7	1.14
State universities and colleges	134	2.71	1.15
Combined	292	2.7	1.14

Tables 3-5 indicate that support is needed for private and public academic institutions to help students manage the stress associated with the SARS-CoV-2 pandemic, which was anticipated to continue through 2020 and 2021. Limited research exists on how schools globally have responded to the pandemic and prepared for upcoming semesters. The pandemic has drastically reshaped education, affecting students through institutional closures and the shift to online learning. The impact of SARS-CoV-2 has negatively affected students' academic performance. A survey by an educational technology company found that more than 14,000 freshmen, sophomores, and juniors across 232 public and private colleges experienced challenges with virtual access to study materials in fall 2020.

4. Conceptual model to higher education tourism and hospitality management

The conceptual framework of this research is based on Social-Cognitive Theory (SCT). This theory emphasizes social and cognitive interactions through digital devices and applications, which support independent digital learning in a COVID-19 blended learning environment. The study assumes that students' use of hardware, software, learning, and traditional resources in hospitality and tourism education is influenced by individual characteristics, such as digital literacy and stress-related factors, as well as personal motivation. Region VI in Western Visayas has limited digitalization in classrooms, impacting the integration of blended learning technologies and the sudden use of artificial intelligence in education.

According to Limniou et al. (2021), the study focuses on student digital capabilities and academic performance during the COVID-19 pandemic, when universities shifted from on-campus blended learning to a fully online emergency approach. Fig. 1 illustrates SCT's application, highlighting social and

cognitive interactions through digital tools in COVID-19 blended learning, enabling students globally to engage in independent digital learning. Studies on the SARS-CoV-2 pandemic explore various perspectives, including the impact of COVID-19 on hospitality and tourism education and the shift to

online education delivery. This shift has implications for curriculum design, workforce structure, and essential actions required of educators. Hospitality and tourism education have received significant attention during this crisis (Ye and Law, 2021).

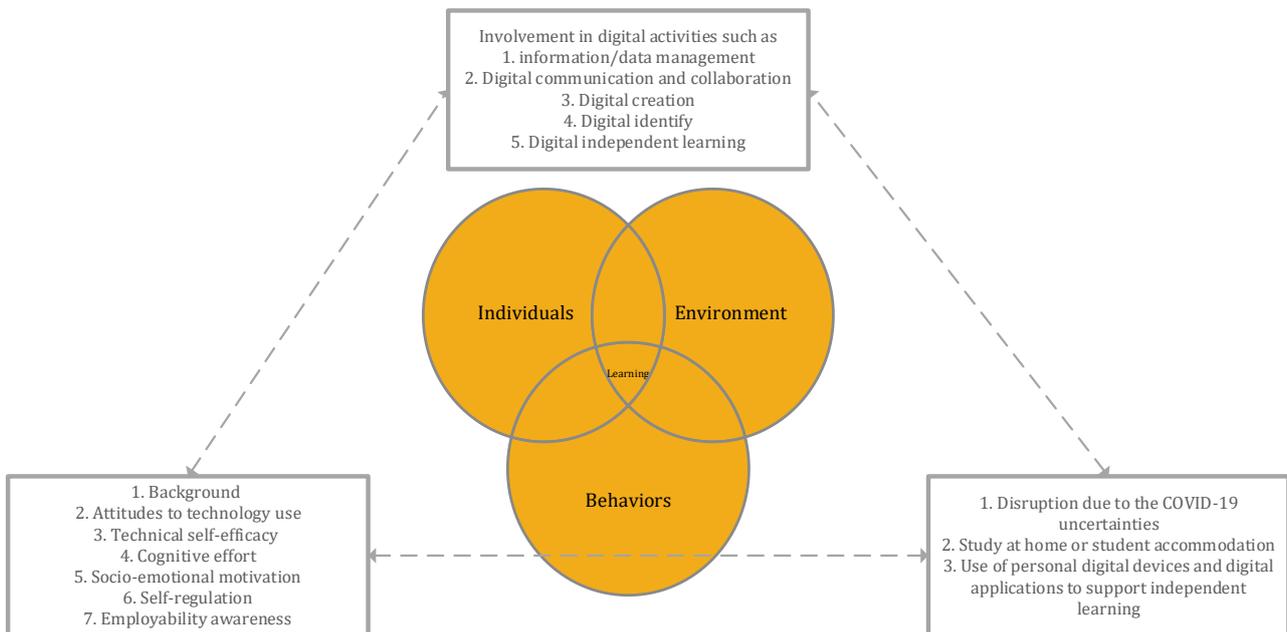


Fig. 1: SCT learning disrupted by the COVID-19 pandemic (Limniou et al., 2021)

5. Conclusion and recommendation

This study used a mixed-methods approach, including focus group discussions (FGDs), interviews, and a self-designed questionnaire to measure key variables. The SARS-CoV-2 measures implemented by governments, educational authorities, and health departments have disrupted education worldwide, leading to school closures in 188 countries, affecting over 90% of enrolled students globally (UNESCO, 2020). The study results indicate that during the SARS-CoV-2 pandemic, students' academic performance was at an average level, study skills were moderately low, and academic stress was at an average level. To adapt, private and public schools adopted mixed learning modalities, allowing students in hospitality and tourism programs to experience flexible, blended, mobile, and social media-based learning. This adaptation required students to adjust to new methods, including lecture and laboratory subjects, with different modalities based on instructor requirements. School routines serve as crucial coping mechanisms for students with mental health issues, and the loss of these routines due to school closures can exacerbate their symptoms. Pre-existing inequalities in access to quality education may continue to widen, as hospitality and tourism students increasingly depend on higher education institutions to provide flexible, blended, and other class formats during the pandemic.

The study suggests that schools should consider implementing a single, consistent learning system

rather than a mixed-method approach to ensure clear instructions and efficient support for distance learning. The variety of flexible and blended learning methods may create additional challenges beyond educational interruptions. This study also addresses the impact of pandemic-related loneliness on academic stress, highlighting its negative effects on students.

Compliance with ethical standards

Ethical considerations

Informed consent was obtained from all participants, who were assured of the confidentiality and anonymity of their responses. This study followed ethical guidelines to protect participants' rights and privacy.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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