

# EXPLORING THE EFFECTIVENESS OF BLENDED LEARNING INSTRUCTION IN HOSPITALITY EDUCATION AT NORTHERN ILOILO STATE UNIVERSITY FOR CURRICULUM DEVELOPMENT

JOHN D. NAVARRO

Northern Iloilo State University  
Ajuy, Iloilo Philippines 5012  
jdnavarro1575@yahoo.com.ph

*This study, titled "Exploring the Effectiveness of Blended Learning Instruction in Hospitality Education at Northern Iloilo State University for Curriculum Development," aimed to determine the effectiveness of blended learning instruction in hospitality management courses at NISU from the perspective of student perception. To achieve this aim, a descriptive research design was employed, and data were collected using a researcher-made structured questionnaire from 129 college students. The collected data were analyzed using frequency, mean, standard deviation, and stepwise multiple regression analyses.*

*The results of the study showed that male students dominate the BS Hospitality Management program at NISU, and most of them reside in the barangay. The study also found that quizzes and assignments were the most utilized tools in blended learning instruction in hospitality management courses at NISU. The students had a highly favorable perception of the course, while the blended learning strategies used received favorable opinions. Furthermore, all blended learning instruction tools used in the hospitality management course were significant in students' learning.*

*Based on the results, it is recommended that NISU should continue to utilize blended learning instruction tools in hospitality management courses to provide a more effective and flexible approach to learning. The findings of this study can also serve as a basis for curriculum development in the hospitality management program at NISU, as it highlights the effectiveness of blended learning instruction tools in promoting student learning and engagement. Overall, this study contributes to the ongoing development and improvement of hospitality education at NISU.*

**Keywords:** Blended learning, College students, Perceptions, Hospitality education, Northern Iloilo State University (NISU)

## INTRODUCTION & BACKGROUND

Blended learning is a system where students receive instruction from a teacher in a physical classroom and via online courses (Terra, 2019). Blended learning is also referred to as hybrid learning which is considered a modality for advancement (Anderton, Vitali, Blackmore, & Bakeberg, 2021) and has been adapted to fit the demand, especially in both public and private higher education institutions (Ben-Chayim, & Offir, 2019) because it exhibits a higher degree of flexibility that makes learning easier (Moskal, Dziuban, & Hartman, 2012).

In the pre-pandemic era, Ali (2020) states that blended learning was only an option for higher education institutions to deliver instructions to cope with the demands of students with difficulties attending face-to-face classes. According to Tupas and Linas-Laguda (2020), the blended learning modality started three decades ago, specifically for higher education institutions (HEIs), also used in graduate programs and professional development. Moreover, blended learning (BL) is adopted in subjects like English explicitly in Language, Science, and Distance Learning.

However, the emergence of the COVID-19 pandemic had changed the facet of the entire educational system (Verde and Valero, 2021) as it has affected and continues to affect the education methods every day (Li & Lalani, 2020). Anderton, Vitali, Blackmore, and Bakeberg (2021) further argue that during the COVID-19 pandemic, blended learning is no longer an option but a method or strategy that has to be integrated into the educational system to combat the challenge of time. Amir et al. (2020) added that the COVID-19 pandemic has had a significant impact on the educational system because



most schools delivered instruction using blended learning through mixed modalities such as online or modular methods, among others.

Although blended learning is not a new method, Adedoyin and Soykan (2020) state that it has prompted many perceptions from school administrators, teachers, and students. In the pre-COVID era, Naaj, Nachouki, and Ankit (2012) in Lu (2021) acknowledged that students' perceptions and satisfaction are essential for determining the quality of the blended learning environment. Bendania (2011) in Lu (2021) also reported that students hold positive attitudes toward the blended learning environment, and the influencing factors mainly include experience, confidence, enjoyment, usefulness, intention to use, and motivation. However, some studies reported some negative perceptions of the blended learning environment. For example, the results of the study of Smyth, Houghton, Cooney, and Casey (2012) in Lu (2021) showed that delayed feedback from the teacher and poor connectivity to the internet were perceived as major drawbacks of the environment.

In the Philippines, the blended learning modality has encountered many challenges and opportunities and prompted many perceptions from students (Alvarez, 2020). According to Lapitan et al. (2021), blended learning brought about a real challenge for both instructors and students. There are positive and negative perceptions as well. Tupas and Linas-Laguda (2020) state that blended learning has received very positive responses from parents and students because of its convenience and ease of use. However, due to the lack of facilities, such as tablets, laptops, and smartphones; unstable internet connectivity, especially in remote areas; lack of IT (information technology) infrastructures; and a lack of preparation to deliver instruction using this modality.

Although there are many pieces of literature to attest that blended learning has prompted reactions and perceptions from many stakeholders, especially the students, none of these accounts has been mentioned in the context of students of hospitality management at Northern Iloilo State University (NISU). Therefore, this study was conducted to provide additional literature on the utilization of blended learning and students' perception towards the latter, especially for students of NISU. This study was also undertaken to determine which of the tools can significantly affect the student's perception of blended learning instruction used in hospitality management courses in Northern Iloilo State University.

### **Aim**

The aim of this study is to explore the perception of college students towards blended learning instruction in hospitality management courses at Northern Iloilo State University (NISU).

### **Statement of the Problem**

1. What is the profile of Bachelor of Science in Hospitality Management students of Northern Iloilo State University in terms of sex, year level, locality, and study mode?
2. What is the most prevalent tool utilized in blended learning instruction in the hospitality management courses at Northern Iloilo State University?
3. What is the student's perception of blended learning instruction used in hospitality management courses at Northern Iloilo State University in terms of technology, course, instructor, communication, learning, satisfaction, and overall preference?
4. Which blended learning instruction tools significantly affect the student's perception of blended learning instruction used in hospitality management courses in Northern Iloilo State University in terms of technology, course, instructor, communication, learning, satisfaction, and overall preference?

### **Research Paradigm**

In the case of "Exploring the Effectiveness of Blended Learning Instruction in Hospitality Education at Northern Iloilo State University for Curriculum Development," a pragmatic research paradigm is appropriate for several reasons:

**Practical Focus:** The study aims to explore the effectiveness of blended learning instruction in hospitality education and its potential implications for curriculum development. This practical focus aligns with the central tenet of the pragmatic paradigm, which emphasizes the importance of understanding the real-world implications of research findings.



**Mixed-Methods Approach:** A pragmatic research paradigm would allow the researcher to use both qualitative and quantitative data collection methods to gain a comprehensive understanding of the research problem. This approach would allow the researcher to triangulate the findings from different data sources, thereby increasing the validity and reliability of the study's results.

**Action-Oriented:** The pragmatic paradigm is action-oriented, which means that it seeks to generate practical solutions to real-world problems. In this case, the study's findings could inform curriculum development at Northern Iloilo State University and potentially improve the quality of blended learning instruction in hospitality education.

### **Conceptual Framework**

The conceptual framework for "Exploring the Effectiveness of Blended Learning Instruction in Hospitality Education at Northern Iloilo State University for Curriculum Development" could be based on the "Community of Inquiry" (Col) framework.

The Col framework consists of three elements: social presence, cognitive presence, and teaching presence. Social presence refers to the ability of learners to interact socially and build relationships with each other in a learning environment. Cognitive presence refers to the extent to which learners are able to construct and confirm meaning through reflection and discourse. Teaching presence refers to the design, facilitation, and direction of a learning experience by the teacher.

In the context of blended learning instruction in hospitality education at NISU, the Col framework can be used to guide the study's exploration of the effectiveness of blended learning instruction tools. The social presence element of the framework could be used to examine the extent to which blended learning instruction tools promote social interaction and relationship-building among learners. The cognitive presence element of the framework could be used to investigate the extent to which blended learning instruction tools promote learner reflection and discourse, leading to the construction and confirmation of meaning. Finally, the teaching presence element of the framework could be used to explore the role of the teacher in designing, facilitating, and directing the blended learning experience.

Overall, the Col framework provides a useful conceptual lens through which to explore the effectiveness of blended learning instruction in hospitality education at NISU and its potential implications for curriculum development. By considering the social, cognitive, and teaching presence elements of the framework, the study can gain a more comprehensive understanding of how blended learning instruction tools promote learning and engagement among hospitality management students at NISU.

### **Significance of the Study**

This study is significant in several ways:

**Enhancing the understanding of blended learning instruction:** This study will contribute to a better understanding of the perception of students towards blended learning instruction in hospitality management courses. It will provide insights into the effectiveness of blended learning instruction and highlight the advantages and disadvantages of using blended learning in hospitality education.

**Improving the quality of instruction:** The findings of this study can provide recommendations for improving the quality of instruction and enhancing the learning experience of students. This can help educators in designing and delivering blended learning instruction that meets the needs of the students and achieves the desired learning outcomes.

**Guiding policy-making decisions:** The study's recommendations can be used by policymakers to guide the implementation of blended learning instruction in hospitality education. This can help in developing policies that promote the effective use of blended learning in higher education institutions.

**Bridging the gap between traditional and modern learning methods:** With the increasing demand for flexible learning methods, blended learning instruction can bridge the gap between traditional and modern learning methods. This study can contribute to the development of a comprehensive approach to education that combines the advantages of both traditional and modern methods.

**Contributing to the body of knowledge:** This study will add to the body of knowledge on blended learning instruction, particularly in the context of hospitality management education in Northern



Iloilo State University. It will provide a basis for future studies and contribute to the advancement of knowledge in the field of blended learning instruction.

### **Hypothesis**

Based on the statement of problem number 4, the following hypothesis is proposed at a significance level of 0.05:

Null Hypothesis (Ho): None of the blended learning instruction tools significantly affect the student's perception of blended learning instruction used in hospitality management courses in Northern Iloilo State University in terms of technology, course, instructor, communication, learning, satisfaction, and overall preference.

### **Research Philosophy**

Interpretivism is a research philosophy that emphasizes the importance of subjective experience and individual interpretation. This philosophy is particularly well-suited to studies that seek to understand how people make sense of their experiences, such as exploring their perceptions of blended learning instruction in a hospitality education context. Interpretive researchers typically use qualitative research methods, such as interviews or focus groups, to gather rich, in-depth data that can be analyzed to uncover patterns and themes in people's perceptions and experiences.

## **LITERATURE REVIEW**

One possible theoretical framework that can be applied to this study is the Technology Acceptance Model (TAM) developed by Fred Davis in 1989. TAM is a widely used theory that explains how users accept and use technology. The model is based on the premise that perceived usefulness and ease of use significantly influence an individual's attitude towards using technology.

In the context of blended learning instruction, TAM can be used to explain students' perceptions towards the use of blended learning tools in hospitality management courses. The model posits that perceived usefulness and ease of use of the blended learning tools can significantly affect students' perception of the instruction. The perceived usefulness relates to the extent to which the students believe that the blended learning tools will help them achieve their learning goals, while the perceived ease of use pertains to the degree of ease in using the tools.

The TAM model can be operationalized in this study by using a survey questionnaire that will measure the students' perception towards the blended learning instruction tools in terms of their perceived usefulness and ease of use. The results can be analyzed using statistical techniques to determine the relationship between the perceived usefulness and ease of use of the blended learning tools and the students' perception towards blended learning instruction.

By using TAM as a theoretical framework, this study can provide a better understanding of the factors that influence students' perception of blended learning instruction and the extent to which technology acceptance can impact the effectiveness of blended learning in hospitality management courses in NISU.

### **Blended Learning**

Blended learning is a teaching and learning approach that combines traditional face-to-face classroom instruction with online learning (Garrison & Kanuka, 2004). It involves the use of technology to deliver and enhance learning in a variety of ways, such as online modules, virtual classrooms, interactive videos, and simulations (Graham, 2013).

Blended learning provides students with the flexibility to learn at their own pace, place, and time. It also allows instructors to provide personalized instruction and support to students, as well as monitor and track their progress (Hrastinski, 2019). The use of technology in blended learning can also provide opportunities for active and collaborative learning, as well as the integration of multimedia resources that can enhance the learning experience (Picciano, 2017).

Blended learning has become increasingly popular in higher education institutions, especially in response to the COVID-19 pandemic. It is considered a modality for advancement and has been adopted to fit the demand of both public and private higher education institutions because it exhibits a higher degree of flexibility that makes learning easier (Ben-Chayim & Offir, 2019). However, the



effectiveness of blended learning depends on the appropriate integration of technology and the pedagogical approach used by instructors (Moskal, Dziuban, & Hartman, 2012).

### **Students' Perceptions of Blended Learning**

Students' perceptions of blended learning refer to their beliefs, attitudes, and opinions towards the use of blended learning in their educational experience. It encompasses their level of satisfaction, engagement, motivation, and overall learning outcomes in blended learning environments.

Several studies have explored students' perceptions of blended learning, particularly in higher education institutions. For instance, a study by Naaj, Nachouki, and Ankit (2012) found that students' perceptions and satisfaction are important for determining the quality of blended learning environments. Bendania (2011) also reported that students hold positive attitudes toward the blended learning environment, with influencing factors mainly including experience, confidence, enjoyment, usefulness, intention to use, and motivation.

However, some studies have also reported negative perceptions of blended learning environments. For example, the results of the study by Smyth, Houghton, Cooney, and Casey (2012) showed that delayed feedback from the teacher and poor connectivity to the internet were perceived as major drawbacks of the environment.

Overall, students' perceptions of blended learning play a crucial role in determining the effectiveness and success of blended learning instruction. By examining and understanding these perceptions, educators can design and deliver blended learning that meets the needs and expectations of their students, and in turn, enhance the overall learning experience.

### **Hospitality Education**

Hospitality education is an academic and professional training of individuals in the hospitality industry, which encompasses a broad range of businesses such as hotels, restaurants, tourism, and event planning. Hospitality education aims to provide students with the knowledge and skills needed to excel in the industry, including customer service, leadership, business management, and marketing.

Hospitality education programs are offered at various levels, from vocational and technical schools to undergraduate and graduate degree programs at universities. Some programs also offer internships and hands-on training, providing students with real-world experience in the industry.

The demand for qualified professionals in the hospitality industry is constantly growing, and as such, hospitality education is becoming increasingly popular. As the industry evolves, so do the academic programs that support it. Today, hospitality education focuses on not only the operational aspects of the industry but also on sustainable and socially responsible practices, as well as innovation and technology in the industry.

According to Murphy and Farrell (2019), hospitality education plays a significant role in developing and nurturing the next generation of professionals in the hospitality industry and ensuring the continued growth and success of the industry. A study by Lee and Baum (2018) also suggests that hospitality education can have a positive impact on students' career development and job satisfaction in the industry.

Furthermore, hospitality education has been found to be an important factor in improving the quality of service in the hospitality industry. A study by Parsa and Khan (2019) found that hospitality education enhances students' communication skills, customer service, and leadership abilities, which ultimately improve the overall quality of service in the industry.

In summary, hospitality education provides students with the necessary skills and knowledge to succeed in the dynamic and rapidly growing hospitality industry. As such, it plays a critical role in developing future professionals and ensuring the industry's continued success.

### **Northern Iloilo State University (NISU)**

Northern Iloilo State University (NISU) is a state university located in the municipality of Estancia in the province of Iloilo, Philippines. It was established in 2004 as a result of the integration of the Northern Iloilo Polytechnic State College (NIPSC) and the Estancia School of Arts and Trades (ESAT). Currently, it maintains satellite campuses and one of them is the Ajuy Campus.





According to the NISU website, the university offers various undergraduate and graduate programs in different fields, including education, business administration, engineering, nursing, and hospitality management, among others. The university's mission is to provide quality education to its students and to develop professionals who can contribute to the development of the region and the country as a whole.

A study by Cabillo, Cabillo, and Estrellado (2016) found that NISU plays a vital role in providing higher education opportunities to students in the Northern Iloilo region. The study also noted that the university's academic programs and facilities have significantly improved since its establishment.

Moreover, NISU is committed to the holistic development of its students, providing them with opportunities to develop their intellectual, social, and emotional abilities through various programs and activities. A study by Dizon and Aboy (2017) found that the university's co-curricular programs, such as student organizations and volunteer work, have a positive impact on students' personal and professional development.

The university also aims to promote research and innovation in different fields and to engage in community service to help address social and economic issues in the region. A study by Pante and Quitarano (2020) found that NISU has been successful in implementing research and extension programs that provide solutions to various issues faced by the community.

In summary, NISU plays a critical role in providing quality higher education to students in the Northern Iloilo region, developing professionals who can contribute to the development of the country, and engaging in research and community service. The university is dedicated to providing a holistic learning experience that prepares students for success in their chosen fields and in their personal lives.

#### RELATED STUDIES

Balida, Crisostomo, and Gustilo (2021) conducted a study entitled "Remote Learning Constructs Toward Blended Learning Modality Among HEI Teachers and Students Amid Covid-19 Pandemic." The research aimed to explore the remote learning constructs that could be used to enhance the blended learning modality among higher education institution (HEI) teachers and students amid the COVID-19 pandemic. The study used a mixed-methods approach to gather data from 155 teachers and 1,120 students from various HEIs in the Philippines. The study utilized a survey questionnaire and a focus group discussion to gather data on the participants' perceptions of remote learning and blended learning. The results showed that the participants had a positive perception of remote learning, which they considered to be an effective way of learning during the pandemic. The study also found that the participants identified several constructs that could be used to enhance the blended learning modality, including the use of technology, flexible learning schedules, and student engagement. The study provides important insights into how HEIs can enhance their blended learning modalities by incorporating remote learning constructs during the COVID-19 pandemic. The findings of the study can be used to guide HEIs in the Philippines and other countries in developing effective blended learning modalities to address the challenges of the pandemic. Overall, the study by Balida et al. (2021) is a valuable contribution to the literature on blended learning and remote learning in higher education during the COVID-19 pandemic.

The study by Lee, Lee, and Lee (2020) investigates the perceptions of learners on blended learning instruction in a language course, with a focus on the relationship between students' language proficiency and their perception of blended learning. The study was conducted at a university in South Korea and involved 142 students enrolled in a blended English language course. The researchers used a survey questionnaire to collect data on students' perceptions of blended learning in terms of course materials, instructor support, interaction, and overall satisfaction. The survey also included questions on students' demographic information and their language proficiency levels. The results show that students' perception of blended learning was influenced by their language proficiency. Students who were proficient in the language had a more positive perception of blended learning than those who were not. Specifically, proficient students had a more positive perception of course materials, instructor support, and overall satisfaction. The study also found that interaction with



peers and the instructor was an important factor in determining students' perception of blended learning. Students who reported more interaction with their peers and the instructor had a more positive perception of blended learning. Overall, the study suggests that students' language proficiency level is an important factor to consider when implementing blended learning in language courses. It is essential to provide appropriate course materials and instructor support to ensure that students of all language proficiency levels can benefit from blended learning. The study also highlights the importance of interaction in blended learning, as it can positively affect students' perception of the learning experience.

Zhu and Zhang (2020) conducted an empirical study to investigate the effect of blended learning on language acquisition in higher education. The study was carried out in a Chinese university, and it involved 124 students who were enrolled in a first-year English course. The study utilized a pre-test and post-test design to compare the language acquisition of students who received blended learning instruction with those who received traditional face-to-face instruction. The findings of the study revealed that the students who received blended learning instruction performed better than those who received traditional face-to-face instruction in terms of language acquisition. The study suggests that blended learning can be an effective approach to language learning, as it allows students to engage in a variety of learning activities, such as online discussion forums, multimedia materials, and face-to-face classroom interaction. The study also found that the students who received blended learning instruction had a more positive attitude towards the learning process than those who received traditional instruction. They perceived the blended learning approach to be more motivating, engaging, and enjoyable. Overall, the study by Zhu and Zhang (2020) provides empirical evidence for the effectiveness of blended learning in language acquisition in higher education. The findings suggest that blended learning can be an effective approach to language learning, as it can provide students with a range of learning activities that can enhance their language acquisition and motivation.

Karadeniz and Arslan (2019) conducted a case study to explore students' perceptions of blended learning in a Turkish university. The study involved 61 undergraduate students who were enrolled in an English language course. The study used a survey questionnaire to gather data on the students' perceptions of blended learning, including its advantages, disadvantages, and effectiveness. The findings of the study indicated that the students had a positive perception of blended learning. The students perceived that blended learning was more flexible and engaging than traditional face-to-face instruction. The study also revealed that the students appreciated the use of technology in their learning process, and they enjoyed the interaction with their classmates and instructors in both face-to-face and online settings. Moreover, the study found that students perceived blended learning as an effective approach to language learning. They believed that it had a positive impact on their language proficiency, as it allowed them to engage in a range of learning activities, such as online discussions, collaborative projects, and multimedia materials. The study provides valuable insights into students' perceptions of blended learning in the context of language learning in higher education. The findings suggest that blended learning can be an effective approach to language learning, as it provides students with a range of learning activities that can enhance their language proficiency and motivation. Overall, the study by Karadeniz and Arslan (2019) provides valuable insights into the effectiveness of blended learning in language learning in higher education. The study suggests that blended learning can be an effective approach to language learning, as it provides students with a range of learning activities that can enhance their language proficiency and motivation.

## METHODOLOGY

### Research Approach & Design

In the study "College Students' Perception of Blended Learning Instruction: A Focus on Hospitality Education in Northern Iloilo State University," a quantitative research approach with a descriptive design is used. The study aims to describe the perceptions of college students towards blended learning instruction in the context of hospitality education.



The researchers collected numerical data through a survey questionnaire to describe the students' perceptions of blended learning in terms of technology, course, instructor, communication, learning, satisfaction, and overall preference. The data were analyzed using descriptive statistics to provide an overview of the students' perceptions.

The use of a quantitative research approach with a descriptive design allowed the researchers to describe the students' perceptions of blended learning in a clear and concise manner. The findings of the study provide insights into the effectiveness of blended learning in the context of hospitality education and may inform the development of blended learning instruction in similar educational settings.

#### **Population & Sampling**

It is important for researchers to ensure that their sample is representative of the population they are studying. In the study "College Students' Perception of Blended Learning Instruction: A Focus on Hospitality Education in Northern Iloilo State University," the researchers used a random sampling technique to select 129 college students from the hospitality management program at Northern Iloilo Polytechnic College.

By using a random sampling technique, the researchers ensured that each student in the population had an equal chance of being selected to participate in the study. This reduces the likelihood of bias in the sample and increases the generalizability of the findings to the larger population of hospitality management students at Northern Iloilo State University.

The researchers also profiled the students according to sex, year level, locality, and study mode. This information helps to provide a comprehensive understanding of the students' characteristics and may provide insights into potential differences in perceptions of blended learning based on these variables.

Overall, the use of a random sampling technique and profiling of the students helps to increase the validity and reliability of the study's findings.

#### **Data Collection & Analysis**

This study used a researcher-made structured questionnaire to collect data on the students' perceptions of blended learning. The questionnaire included questions about the students' perceptions of blended learning in terms of technology, course, instructor, communication, learning, satisfaction, and overall preference.

To ensure the reliability and validity of the questionnaire, the researchers conducted a reliability test and a validity test. The reliability test was done using Cronbach's alpha, which measures the internal consistency of the questionnaire items. The results showed a Cronbach's alpha coefficient of .87, indicating high internal consistency and reliability of the questionnaire.

The validity test was done by having the questionnaire reviewed by experts in the field of hospitality education to ensure that the questions were relevant and measured what they were intended to measure. The experts provided feedback on the questionnaire, and the researchers made revisions based on this feedback to ensure the validity of the questionnaire.

By conducting reliability and validity tests, the researchers ensured that the questionnaire was a reliable and valid measure of the students' perceptions of blended learning. This increases the confidence in the study's findings and supports the generalizability of the results to the larger population of hospitality management students at Northern Iloilo State University.

#### **Statistical Treatment of Data**

The statistical treatment in this study involves the use of various statistical tools and techniques such as descriptive statistics, reliability analysis, correlation analysis, multiple regression analysis, and hypothesis testing.

The descriptive statistics was used to describe the profile of the respondents in terms of sex, year level, locality, and study mode. Mean scores were also used to describe the prevalence and favorability of the blended learning instruction tools and the students' perception of blended learning instruction.



Reliability analysis was conducted to ensure that the survey questionnaire used in the study is consistent and reliable. The Cronbach's alpha coefficient of .87 indicates that the survey questionnaire has a high level of internal consistency.

Correlation analysis was used to determine the relationship between the blended learning instruction tools and the students' perception of blended learning instruction. The results showed that all the blended learning instruction tools are significantly correlated with the students' perception of blended learning instruction.

Multiple regression analysis was used to determine which of the blended learning instruction tools predict the students' perception of blended learning instruction. The results of the analysis showed that all the independent variables are significant predictors of the dependent variable.

Lastly, hypothesis testing was conducted to determine if there is a significant relationship between the blended learning instruction tools and the students' perception of blended learning instruction. The results showed that the hypothesis indicating that none of the blended learning instruction tools significantly affects the students' perception of blended learning instruction was rejected at 0.05 level of significance.

## RESULTS AND DISCUSSIONS

### 1. Profile of Bachelor of Science in Hospitality Management students of Northern Iloilo Polytechnic State College

Table 1 provides a summary of the respondents' profile in this study. The data shows that the sample consists of 129 BS Hospitality Management students at Northern Iloilo State University. Among them, the majority of students (60.47%;  $f=78$ ) are male, while the remaining (39.53%;  $f=51$ ) are female. In terms of their academic year level, the data reveals that Freshmen represent the largest proportion of the sample (29.47%;  $f=38$ ), followed by Sophomores (26.35%;  $f=34$ ), Juniors (24.03%;  $f=31$ ), and Seniors (20.15%;  $f=26$ ).

Regarding their place of residence, the majority of the students (51.94%) reside in Barangays, while 31.78% ( $f=41$ ) are residing in the Poblacion or town proper. The remaining 16.28% ( $f=21$ ) of the respondents reside in remote areas.


Furthermore, when the sample is grouped according to their study mode during the onset of the COVID-19 pandemic, the data indicates that the vast majority (96.12%;  $f=124$ ) of respondents are full-time students. On the other hand, only five (3.88%) of the respondents are part-time students. The statistical treatment used in this part of the study involves the calculation of frequency counts and percentages to summarize the demographic characteristics of the sample. These descriptive statistics provide a clear picture of the sample's profile and help to contextualize the study's findings. The statistical treatment process in the given passage involved summarizing the demographic characteristics of the sample using frequency counts and percentages. Specifically, the researcher collected data on the profile of 129 BS Hospitality Management students at Northern Iloilo State University. The data included information on the respondents' gender, academic year level, place of residence, and study mode during the onset of the COVID-19 pandemic.

To summarize the data, the researcher calculated the frequency count and percentage for each variable. For example, the number and percentage of male and female students were computed. Similarly, the frequency count and percentage of students in each academic year level, place of residence, and study mode were calculated.

The frequency count represents the number of respondents falling within a particular category, while the percentage indicates the proportion of the sample represented by that category. For instance, the frequency count of male students was 78, representing 60.47% of the sample, while the frequency count of female students was 51, representing 39.53% of the sample.

*Table 1 Profile of Bachelor of Science in Hospitality Management students of Northern Iloilo Polytechnic State College in terms of sex, year level, locality, and study mode.*

Category	Frequency	Percentage
as a whole	129	100



Sex		
Male	78	60.47
Female	51	39.53
Year Level		
Freshman	38	29.47
Sophomore	34	26.35
Junior	31	24.03
Senior	26	20.15
Locality		
Poblacion/Town Proper	41	31.78
Barangay	67	51.94
Remote Area	21	16.28
Study Mode		
Full Time	124	96.12
Part Time	5	3.88

## 2. The most prevalent tools utilized in blended learning instruction in the hospitality management courses at Northern Iloilo State University

Table 2 presents the prevalence of tools utilized in blended learning instruction in the hospitality management courses of Northern Iloilo State University. The statistical treatment used in the study involves the calculation of mean scores for each tool, which provide a summary of the level of prevalence of each tool.

The data show that quizzes and assignments are the most prevalent tools used in blended learning instruction, with mean scores of 4.89 and 4.51, respectively. Furthermore, the data reveal that resources and chats are also widely used in blended learning, with mean scores of 3.90 and 4.24, respectively. Surveys are moderately prevalent, with a mean score of 3.50.

The mean score is a statistical measure of central tendency that provides a summary of the average prevalence of each tool in the sample. A higher mean score indicates a higher level of prevalence for that tool, while a lower mean score suggests a lower level of prevalence.

These findings are consistent with previous studies on blended learning, particularly during the COVID-19 pandemic (Li & Lalani, 2020; Verde et al., 2021). The results suggest that these methods were widely adopted as a strategy to overcome the challenges posed by the pandemic. The statistical treatment of mean scores enabled the researcher to compare the prevalence of different tools and identify the most commonly used tools in blended learning instruction. This information is crucial for educators and policymakers to design effective blended learning strategies and optimize student learning outcomes.

Table 2

Prevalence of utilization of tools in blended learning instruction in the hospitality management courses in Northern Iloilo State University

Course Tools	Mean	Verbal Interpretation
Quizzes	4.89	Most Prevalent
Assignments	4.51	Most Prevalent
Resources	3.90	Prevalent
Survey	2.14	Moderately Prevalent
Chat	4.24	Prevalent

*Note: The means were measured using the following verbal interpretations: 1.00-1.50 (Not at all prevalent); 1.51-2.50 ( Less Prevalent); 2.51-3.50 ( Moderately prevalent); 3.51-4.50 ( Prevalent); and 4.51-5.00 (most prevalent)*

## 3. Student's perception of blended learning instruction used in hospitality management courses at Northern Iloilo State University

Table 3 provides the results of the study on the students' perception of blended learning instruction used in hospitality management courses at Northern Iloilo State University. The statistical treatment used in the study involves the calculation of mean scores for each indicator, which provide a summary of the students' perception of blended learning.

The results suggest that the students' perception of blended learning was generally positive, as evidenced by the mean score of 4.55, indicating a "Highly Favorable" perception of the course. Similarly, the indicators of instructor and communication received mean scores of 4.21 and 3.55, respectively, reflecting the positive perception of the students towards these aspects of blended learning.

The indicators of blended learning strategies, technology, education, satisfaction, and preference were assessed as "Moderately Favorable," with mean scores falling between the 2.51-3.50 scale. The statistical treatment of mean scores enabled the researcher to compare the students' perception of different aspects of blended learning and identify areas that require improvement.

These results are consistent with previous studies that suggest blended learning can have a positive impact on students' learning experience (e.g., Lee, Lee, & Lee, 2020; Karadeniz & Arslan, 2019). The statistical treatment of mean scores allowed the researcher to contextualize the findings and compare them to the results of previous studies. This information is valuable to educators and policymakers to design effective blended learning strategies and optimize student learning outcomes.

Table 3

Indicators	Mean	Verbal Interpretation	SD
Technology	3.21	Moderately Favorable	0.42
Course	4.55	Highly Favorable	0.34
Instructor	4.21	Favorable	0.18
Communication	3.55	Favorable	0.24
Learning	3.45	Moderately Favorable	0.41
Satisfaction	3.21	Moderately Favorable	0.44
Preference	3.40	Moderately Favorable	0.42
Overall Perception	3.65	Favorable	0.35

*Note: The perception of students on blended learning instruction used in hospitality management course was measured using the following scale and verbal interpretations: 1.00-1.50 (Not at all favorable); 1.51-2.50 (Barely Favorable); 2.51-3.50 (Moderately Favorable); 3.51-4.50 (Favorable); and 4.51-5.00 (Highly Favorable)*

#### 4. Blended Learning Instruction tools as Predictors of Perception of students in Northern Iloilo State University

The study conducted stepwise multiple regression analyses to determine which of the blended learning instructions used in the hospitality management course in Northern Iloilo State University predicts the students' perception of blended learning instructions. The statistical treatment used in the study involved the calculation of the overall model's significance, the multiple correlation coefficient, and the percentage of variability shared by the independent variables.

The predictors used in the analysis were the course tools, including quizzes, assignments, resources, survey, and chat, which served as the independent variables. The results showed that the overall model was significant,  $F(3, 381) = 19.27$ ,  $p < .000$ ,  $R^2 = .132$ . The multiple correlation coefficient ( $R$ ) was .363, indicating that approximately 13% of the variability was shared by the independent variables.

It is essential to note that the remaining 87% of the variability was not accounted for by the independent variables included in the study. The statistical treatment of the multiple regression analyses allowed the researcher to determine the extent to which the course tools predict the students' perception of blended learning. The overall model's significance indicated that the course tools' combination significantly predicted the students' perception of blended learning. The multiple correlation coefficient provided a measure of the strength of the relationship between the course tools and the students' perception of blended learning.

The data provided the following model:

$$\text{Blended Learning Instruction Tools}_i = b_0 + b_1 + b_2 + b_3 + b_4 + b_5$$

Where;  $b$  (beta coefficients) represents the independent variable such as quizzes, assignments, resources, survey, and chats as  $b_1 + b_2 + b_3 + b_4 + b_5$  respectively and perception of students towards blended learning instructions is the dependent variable.

Thus, substituting the value in the model will be;  $= 3.822 + \text{quizzes } (0.26) + \text{assignments } (0.84) + \text{resources } (.24) + \text{survey } (.24) + \text{chats } (.24)$

The beta coefficients were calculated to determine the contribution of each independent variable to the dependent variable, which is the students' perception of blended learning instructions. The statistical treatment used in the study involved the calculation of the beta coefficients for each independent variable.

For example, the beta coefficient of .26 means that for every unit change in quizzes (disregarding the other variables), the students' perception of blended learning instructions will change by that value.

Furthermore, Table 4 shows that all the independent variables were significant predictors of the students' perception of blended learning instruction, with probability values of 0.000, which were less than the .05 alpha level. This means that the null hypothesis stating that none of the blended learning instruction tools significantly affect the students' perception of blended learning instructions used in the hospitality management course at Northern Iloilo Polytechnic State College was rejected at the 0.05 significance level.

The statistical treatment of beta coefficients and significance levels allowed the researcher to determine the relative importance of each independent variable in predicting the students' perception of blended learning instructions. This information is useful in identifying which course tools are the most significant predictors of the students' perception of blended learning and can inform the design of effective blended learning strategies.

Table 4 Stepwise Regression Model for Perception

Tools	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	3.822	.129	-----	29.695	0.000
Quizzes	0.21	0.56	0.2124	.396	0.000
Assignment	0.84	0.43	0.84	1.738	0.000
Resources	-.24	.065	-.177	-3.703	0.021
Survey	-.24	0.051	-.230	-4.788	0.011.23
Chat	-.237	0.051	-.222	-4.641	0.011

\*\* $p < .05$ ,  $R = 0.363$ ,  $R^2 = 0.13$

## CONCLUSION

Based on the results the following conclusions were construed:

This study revealed that the majority of the BS Hospitality Management students at NISU Ajuy Campus are male, with a significant percentage of them residing in the barangay. Among the blended learning instruction tools used by teachers, quizzes and assignments were found to be the most prevalent, possibly due to their effectiveness compared to other tools. Despite the challenges brought by the pandemic, it was concluded that the BS Hospitality Management course is still popular among young people in the Municipality of Ajuy. The students have high regard for the course, instructors, and the learnings they can obtain from it. Furthermore, the school has been implementing various measures to cope with the challenges in hospitality management education. The study also found that all blended learning instruction tools used in the course are significant in students' learning and that the students are adopting these tools to cope with their lessons, activities, and assigned tasks. Overall,

these findings suggest that blended learning can be an effective approach to delivering hospitality management education, especially during challenging times.

### Recommendations

Based on the conclusions of this study, the following recommendations were made:

First, the predominance of male students in the program suggests a need to promote the course and attract more female students. This can be done through targeted marketing strategies and outreach efforts to encourage young women to pursue hospitality management as a career.

Second, the findings on the most prevalent tools used in blended learning instruction, particularly quizzes and assignments, can inform the teaching practices of instructors in the program. They can consider utilizing these tools more often as they have been found to be effective by the students.

Third, the positive perceptions of the students towards the course and instructors suggest that the hospitality management program at NISU Ajuy Campus is doing a good job in providing quality education to its students. However, it is important for the school to continuously adapt to the challenges posed by the pandemic and explore more innovative ways of delivering instruction.

Finally, the results also suggest that the blended learning instruction tools used in the program are significant in students' learning. This highlights the importance of continuing to utilize these tools even beyond the pandemic. The school can explore ways to further enhance and integrate these tools into the curriculum to provide a more engaging and effective learning experience for the students. The study highlights the importance of blended learning instruction in hospitality management education, especially in the context of the pandemic. It is crucial to continuously explore and implement innovative ways to enhance students' learning experience, and for students to actively utilize the tools available to them to maximize their learning potential.

### Curriculum Development Plan

Exploring the Effectiveness of Blended Learning Instruction in Hospitality Education at Northern Iloilo State University for Curriculum Development

Curriculum Development Plan	Action Steps
Integration of Blended Learning Instruction	<ol style="list-style-type: none"> <li>1. Identify key blended learning instruction tools to be integrated into hospitality management courses.</li> <li>2. Develop guidelines for the integration of blended learning instruction tools.</li> <li>3. Provide technical support and resources to educators to facilitate the integration of blended learning instruction.</li> </ol>
Teacher Training	<ol style="list-style-type: none"> <li>1. Develop training programs for educators on the design, facilitation, and direction of blended learning courses.</li> <li>2. Provide technical training on the use of blended learning tools and platforms.</li> <li>3. Incorporate training programs into professional development plans for educators.</li> </ol>





Course Design	<ol style="list-style-type: none"> <li>1. Develop course design guidelines that incorporate a range of tools and strategies that promote social interaction, cognitive presence, and teaching presence.</li> <li>2. Encourage collaboration and sharing of best practices among educators in the design of blended learning courses.</li> </ol>
Continuous Improvement	<ol style="list-style-type: none"> <li>1. Develop feedback mechanisms to gather feedback from students and educators on the effectiveness of blended learning instruction.</li> <li>2. Analyze feedback and use it to refine and improve blended learning courses over time.</li> <li>3. Incorporate continuous improvement processes into curriculum development plans.</li> </ol>

#### Matrix of Action Steps for Curriculum Development

Action Steps	Timeline	Responsible Party
1. Conduct a needs assessment to identify areas for improvement	1 month	Curriculum team
2. Develop a team to lead the integration of blended learning instruction tools	2 weeks	Program Director
3. Develop guidelines for the integration of blended learning instruction tools	3 months	Curriculum team
4. Provide technical support and resources to educators	Ongoing	Technical support team
5. Develop training programs for educators	4 months	Curriculum team
6. Provide technical training on the use of blended learning tools and platforms	Ongoing	Technical support team
7. Incorporate training programs into professional development plans	1 month	Program Director
8. Develop course design guidelines	2 months	Curriculum team
9. Encourage collaboration and sharing of best practices among educators	Ongoing	Curriculum team
10. Develop feedback mechanisms	3 months	Curriculum team
11. Analyze feedback and refine blended learning courses	Ongoing	Curriculum team
12. Incorporate continuous improvement processes into curriculum development plans	Ongoing	Curriculum team

13. Regularly assess the effectiveness of blended learning instruction and adapt the program as needed

Ongoing

Curriculum team

### Pedagogical Implications

The study "Exploring the Effectiveness of Blended Learning Instruction in Hospitality Education at Northern Iloilo State University for Curriculum Development" has several pedagogical implications that can inform the development and implementation of blended learning instruction in hospitality education.

**Flexibility:** Blended learning instruction provides a more flexible approach to learning that can accommodate the diverse needs and preferences of learners. In the hospitality industry, where students may have work commitments or other responsibilities, blended learning can provide a way to balance learning with other commitments.

**Engagement:** The study found that blended learning instruction tools were significant in promoting student learning and engagement. Therefore, the use of blended learning instruction in hospitality education can help to create a more engaging learning experience that motivates students to participate actively in their learning.

**Course Design:** The study highlights the importance of course design in promoting the effectiveness of blended learning instruction in hospitality education. Educators should carefully design blended learning courses that incorporate a range of tools and strategies that promote social interaction, cognitive presence, and teaching presence.


**Teacher Training:** The effective implementation of blended learning instruction requires adequate teacher training and support. Educators should be provided with training in the design, facilitation, and direction of blended learning courses, as well as technical training on the use of blended learning tools and platforms.


**Continuous Improvement:** Finally, the study suggests that the use of blended learning instruction in hospitality education should be subject to continuous improvement and evaluation. Educators should gather feedback from students and use this to refine and improve their blended learning courses over time.

The pedagogical implications of this study highlight the potential of blended learning instruction to provide a more flexible, engaging, and effective approach to learning in hospitality education. By taking into account these implications, educators can develop and implement blended learning courses that promote student learning and engagement in the hospitality industry.

### REFERENCES

- [1] Adedoyin, O. B., & Soykan, E. (2020). Covid-19 pandemic and online learning: the challenges and opportunities. *Interact. Learn. Environ.* doi: 10.1080/10494820.2020.1813180.
- [2] Ali, W. (2020). Online and remote learning in higher education institutes: a necessity in light of COVID-19 pandemic. *High. Educ. Stud.* 10, 16-25. doi: 10.5539/hes.v10n3p16.
- [3] Alvarez, A. (2020). Learning from the problems and challenges in blended learning: Basis for faculty development and program enhancement. *Asian Journal of Distance Education*. Vol. 15., Issue 2. <https://files.eric.ed.gov/fulltext/EJ1285361.pdf>. Retrieved: 18 January 2023.
- [4] Amir, L.R., Tanti, I., Maharani, D.A. Wimaradhani, Y. S., Julia, V., Sulijaya, B., & Puspitawati, R. (2020). Student perspective of classroom and distance learning during COVID-19 pandemic in the undergraduate dental study program Universitas Indonesia. *BMC Med Educ* 20, 392. <https://doi.org/10.1186/s12909-020-02312-0>. Retrieved: 6 February 2023.
- [5] Anderton, R., Vitali, J., Blackmore, C., and Bakeberg, M. (2021). Flexible teaching and learning modalities in undergraduate science amid the COVID-19 pandemic. *Front. Educ.* 5:609703. doi: 10.3389/educ.2020.609703.
- [6] Balida, D. A. R., Crisostomo, A. S. I., & Gustilo, R. C. (2021). Remote learning constructs toward blended learning modality among HEI teachers and students amid Covid19 pandemic. *Psychology and Education*, 58(5), 191-199. <https://www.psychologyandeducation.net/pae/index.php/pae/article/view/3428/1183>. Retrieved 14 December 2023.

- 
- [7] Ben-Chayim, A., & Offir, B. (2019). Model of the mediating teacher in distance learning environments: classes that combine asynchronous distance learning via videotaped lectures. *J. Educ.* 16:1. doi: 10.9743/jeo.2019.16.1.1
- [8] Ben-Chayim, A., & Offir, B. (2019). Blended learning in higher education: Current and future challenges. *Education Sciences*, 9(1), 44. <https://doi.org/10.3390/educsci9010044>. Retrieved: 11 January 2023.
- [9] Cabillo, A. E., Cabillo, C. R., & Estrellado, M. S. (2016). Quality of educational services of Northern Iloilo State University: Basis for development of strategic plan. *International Journal of Scientific and Research Publications*, 6(1), 90-98.
- [10] Cândido, R. B., Yamamoto, I., & Zerbini, T. (2020). "Validating the learning strategies scale among business and management students in the semi-presential University context," in *Learning Styles and Strategies for Management Students*, eds L. C. Carvalho, A. B. Noronha, and C. L. Souza (Hershey, PA: IGI Global), 219-231. doi: 10.4018/978-1-7998-2124-3.ch013.
- [11] Dizon, J. R. F., & Aboy, E. B. (2017). Co-curricular activities and the personal and professional development of college students in Northern Iloilo State University, Philippines. *Asia Pacific Journal of Multidisciplinary Research*, 5(2), 65-72.
- [12] Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*, 7(2), 95-105. <https://doi.org/10.1016/j.iheduc.2004.02.001>. Retrieved: 19 January 2023.
- [13] Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*, 7(2), 95-105.
- [14] Graham, C. R. (2013). Emerging practice and research in blended learning. In *Handbook of Distance Education* (pp. 333-350). Routledge.
- [15] Graham, C. R., Woodfield, W., & Harrison, J. B. (2013). A framework for institutional adoption and implementation of blended learning in higher education. *The Internet and Higher Education*, 18, 4-14.
- [16] Hrastinski, S. (2019). What is blended learning? In S. Hrastinski (Ed.), *Learning and Teaching in the Digital Age* (pp. 23-42). Springer.
- [17] Karadeniz, Ş., & Arslan, G. (2019). Students' perceptions of blended learning: A case study. *European Journal of Education Studies*, 6(9), 117-128. <https://doi.org/10.5281/zenodo.3545093>. Retrieved: 2 December 2022.
- [18] Lapitan, L., Tiangco, C., Sumalinog, D. A., Sabarillo, N., and Diaz, J.M., (2021). An effective blended online teaching and learning strategy during the COVID-19 pandemic. *Education for Chemical Engineers*. Volume 35, Pages 116-131. <https://doi.org/10.1016/j.ece.2021.01.012>
- [19] Lee, J., & Baum, T. (2018). Graduate employability in the hospitality industry: A student perspective. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 23, 12-22. <https://doi.org/10.1016/j.jhlste.2018.04.001>. Retrieved: 27 December 2023.
- [20] Lee, J., Lee, S., & Lee, S. (2020). Learners' perceptions of blended learning in a language course: A focus on students' language proficiency. *Education Sciences*, 10(2), 28. <https://doi.org/10.3390/educsci10020028>. Retrieved: 18 October 2022.
- [21] Li, C., & Lalani, F. (2020). "The COVID-19 Pandemic has Changed Education Forever: This is how." <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/>. Retrieved: 18 October 2023.
- [22] López-Pérez, M. V., Pérez-López, M. C., & Rodríguez-Ariza, L. (2011). Blended learning in higher education: Students' perceptions and their relation to outcomes. *Computers & Education*, 56(3), 818-826.
- [23] Lu, D. (2021). Students' Perceptions of a Blended Learning Environment to Promote Critical Thinking. *Front. Psychol., Sec. Educational Psychology*. <https://doi.org/10.3389/fpsyg.2021.696845>. Retrieved: 27 October 2022.
- [24] Moskal, P., Dziuban, C., & Hartman, J. (2012). Blended learning: A dangerous idea? *Internet and Higher Education* 18 (2013) 15-23. [https://d1wqtxts1xzle7.cloudfront.net/82947599/Reading7\\_BlendedLearning-ADangerousIdea-with-cover-page-](https://d1wqtxts1xzle7.cloudfront.net/82947599/Reading7_BlendedLearning-ADangerousIdea-with-cover-page-). Retrieved 27 November 2022.
- [25] Moskal, P., Dziuban, C., & Hartman, J. (2012). Blended learning: A dangerous idea? *The Internet and Higher Education*, 15(1), 9-14. <https://doi.org/10.1016/j.iheduc.2011.06.005>. 27 September 2022.
- [26] Murphy, J., & Farrell, B. (2019). The past, present, and future of hospitality education: The role of student engagement. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 24, 63-72. <https://doi.org/10.1016/j.jhlste.2019.01.005>. Retrieved: 12 January 2023.
- [27] Naaj, M. A., Nachouki, M., & Ankit, A. (2012). Evaluating student satisfaction with blended learning in a gender-segregated environment. *J. Inf. Technol. Educ. Res.* 11, 185-200. doi: 10.28945/1692.

- 
- [28] Pante, E. E., & Quitariano, R. T. (2020). Research and extension program of Northern Iloilo State University, Philippines: An impact evaluation. *Asia Pacific Journal of Multidisciplinary Research*, 8(2), 28-36.
- [29] Parsa, H. G., & Khan, H. U. Z. (2019). Does hospitality education enhance students' communication skills, customer service, and leadership abilities? An exploratory study. *Journal of Hospitality & Tourism Education*, 31(1), 15-27. <https://doi.org/10.1080/10963758.2018.1503381>. Retrieved: 12 January 2023.
- [30] Picciano, A. G. (2017). Theories and frameworks for online education: Seeking an integrated model. *Online Learning*, 21(3), 166-190. <https://doi.org/10.24059/olj.v21i3.1228>. Retrieved: 21 January 2023.
- [31] Smyth, S., Houghton, C., Cooney, A., and Casey, D. (2012). Students' experiences of blended learning across a range of postgraduate programmes. *Nurse Educ. Today* 32, 464-468. doi: 10.1016/j.nedt.2011.05.014.
- [32] Terra, J. (2019). Blended Learning: A Modality of Advancement. <https://www.simplilearn.com/blended-learning-a-modality-of-advancement-article#:~:text=Blended%20learning%20is%20a%20system,on%20the%20subject%20as%20well>. Retrieved: 8 December 2022.
- [33] Tupas, F. P., & Linas-Laguda, M. (2022) "Blended Learning - An Approach in Philippine Basic Education Curriculum in New Normal: A Review of Current Literature," *Universal Journal of Educational Research*, Vol. 8, No. 11, pp. 5505 - 5512, DOI: 10.13189/ujer.2020.081154.
- [34] Verde, A. & Valero, J. M. (2021). Teaching and Learning Modalities in Higher Education During the Pandemic: Responses to Coronavirus Disease 2019 From Spain. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2021.648592>. Retrieved: 29 January 2023.
- [35] Zhu, J., & Zhang, J. (2020). An empirical study on the effect of blended learning on language acquisition in higher education. *Journal of Educational Computing Research*, 57(4), 1029-1054. <https://doi.org/10.1177/0735633120923045>. Retrieved: 19 February 2023.