

# Perception of Culinary Arts Educators' Readiness to Implement Blended Learning in the Teaching and Learning Process

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**Abstract:** Blended learning is a technique that combines in-person instruction with online learning. As a result, the students' futures become a yardstick for the teachers' knowledge during a lesson. Thus, this study aims to investigate the perception of culinary arts educators' readiness to implement blended learning in teaching and learning processes. The research was conducted using a quantitative survey method, and the participants were 63 culinary arts educators from various institutions in Johor, Malaysia. This study's design is a descriptive survey that employs a quantitative strategy via a questionnaire as a research tool. Statistical Packages for Social Science (SPSS) version 25 was used to analyze the data in both a descriptive and inferential manner. The mean, standard deviations, and Paired Sample T-Test coefficient tests were used to report the study's findings. The survey instrument used in this study was adapted from previous research and was focused on four main dimensions of readiness to implement blended learning: technology, classroom, teaching personnel, and student. The findings of this study suggest that culinary arts educators have a positive perception of their readiness to implement blended learning in their teaching and learning processes and to use face-to-face and online blended learning. Additionally, the study found that there is a significant difference between the perception of the readiness of teaching staff in the field of culinary arts when implementing face-to-face and online blended learning. The implications of this study suggest that institutions should focus on providing more support and resources for educators to improve their organizational readiness for blended learning implementation. Moreover, institutions should consider providing professional development opportunities to help educators gain the necessary skills and knowledge to effectively implement blended learning in their teaching and learning processes. Overall, the study's findings can give an overview of how prepared culinary arts educators are to apply blended learning that combines face-to-face with online instruction.

**Keywords:** Culinary Arts Educators'; Face-To-Face Blended Learning; Online Blended Learning

## 1. Introduction

The development of information and communication technology is accelerating and is no longer foreign in this country, particularly in the sphere of education. It is presently believed that the advancement of this technology has more promise, particularly in the sector of education. Following the current technical advancements, a country's technological needs must progress towards those of industrialized nations. So, the education delivery system

must be modified to accommodate technological advancement [1]. This development of information technology is a result of changes in the modernization trend and poses a significant challenge to the teaching profession, as the education system must also be improved to keep up with the technological advancements. For this digital technology to be integrated into the teaching and learning sessions, it is necessary to improve the teaching and learning methodology. Indirectly increasing the flexibility and interactivity of all teaching and learning. To

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strengthen the area of education, the Ministry of Education Malaysia has implemented numerous ways to execution of the learning process in every educational institution, one of which is blended learning [2].

By adopting this strategy, educators must act more proactively to adapt to the severe changes that occur. Hence, educators must expand their knowledge and skills to accommodate these developments. This strategy includes two learning interactions: face-to-face learning in the classroom and online learning using technology. Through Nor, Azid & Othman's [3], application of the blended learning idea, students and teachers have greater flexibility to access knowledge and save time. This blended learning approach can interest students collectively through creative stimulation in the culinary arts provided it is well-planned from a pedagogical and social perspective. Norazah, & Shafinaz [4], identify the learning environment that comes from the combination of these approaches as a teaching strategy known as mixed learning, or blended learning.

Blended learning is a style of education that mixes traditional face-to-face teaching methods in the classroom with the most advanced internet-based learning technology. Using technology, teachers and students can conduct flexible teaching and learning sessions with this blended learning strategy. According to Collins & Halverson [5], the revolution of changing teaching methods began with the use of blackboards in teaching and learning sessions, and now the integration of learning methods based on information technology in the education system, which involves the use of technology and the use of the internet in the education system, is known as e-learning, which has been adopted by the majority of educational institutions in the nation.

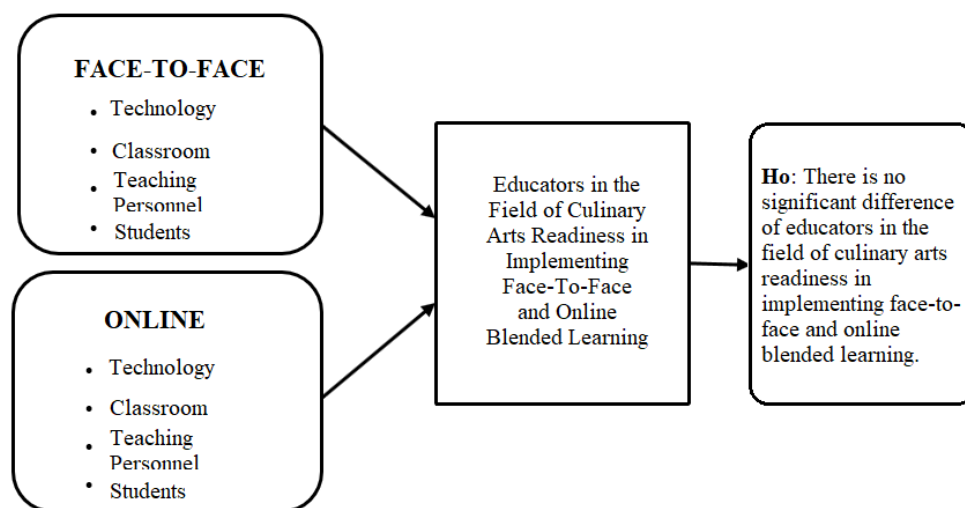
In the context of blended learning, face-to-face learning is the traditional mode of instruction. Through face-to-face learning, communication, and interaction also run smoothly without any obstacles regarding the use of technology and can encourage the direct sharing of knowledge with students through body language style, clear facial expressions, and obtaining information directly through two-way interaction [6]. According to Sambasivan & Khairuddin [7], conversational teaching focuses more on how students directly comprehend what is taught than on how they listen to what the teaching staff says. Using a face-to-face learning strategy, educators will continue to work on delivering their teachings more efficiently and ensuring that they are retained in students' memories through active learning. Indirectly, the application of moral principles can also be applied to students, in addition to the ability to build the courage and confidence of students to express their viewpoints and perspectives in a two-way fashion. According to Brown & Adler [8], classroom management comprises the management of instructor conduct to promote a pleasant environment.

The use of technology in education increases the adaptability of the learning process. This is because educators and students may access learning resources no matter where they are, as a result of advancing technology.

The advancement of this technology has a good impact on both students and teachers in the process of acquiring knowledge. Indirectly, the abilities and knowledge of educators in the use of technology in the field of education can also be enhanced. According to Belawati & Yudhoyono [9], the evolution of information technology has altered the pattern of information search. The development of technology is no longer limited to printed materials but is now broader, and the process of acquiring information is now quicker and more accessible than ever. The adoption of online learning is a significant problem since it requires educators to be well-versed in the current technological advances. Instructors and students must also be well prepared to incorporate new technologies into their teaching and learning sessions. Dabbagh & Kitsantas [10], state that a lack of readiness on the part of educators in terms of skills and knowledge can impede the online blended learning process.

Implementing blended learning through face-to-face and online methods can be a challenging endeavor, particularly in the field of culinary arts. One major issue is the lack of familiarity with technology among some teachers [11]. Culinary arts teachers may not have the same level of comfort with digital tools as teachers in other fields, which can make the implementation of blended learning techniques more difficult. In addition, some teachers may lack the necessary training to effectively integrate technology into their teaching practices, which can lead to frustration and confusion. Another issue is the variability of access to technology and internet connectivity among students. Not all students have access to reliable internet and technology at home, which can create disparities in learning outcomes. Teachers must consider these limitations when designing their blended learning strategies and ensure that all students have access to the necessary resources to participate in online components of the curriculum [12].

Moreover, there may be resistance from some students to online learning. In culinary arts education, students often value hands-on experience and in-person instruction, which may be perceived as more effective than online learning [13]. Teachers must work to address these concerns and demonstrate the benefits of blended learning to win over skeptical students. Lastly, implementing blended learning can also be time-consuming and require additional resources. Teachers may need to spend more time designing lesson plans and creating digital content for their courses. They may also need to invest in technology and training to effectively implement blended learning strategies [14]. These additional demands on teachers' time and resources can be a significant barrier to implementation, particularly in schools with limited budgets and staff.



**Figure 1.** Blended Learning concept adapted from Yao's study [15]

Figure 1 illustrates the idea of mixed learning, which was used in Yao's 2017 study for this one. The idea of blended learning is not only concerned with the kind of platform used, but also with how a teacher implements a lesson or class depending on the teaching model employed following the student's learning preferences. This strategy gives teachers and students the freedom and chance to utilize the most recent digital technologies from any location. Students can also be given the chance to confer with the teaching staff face-to-face in the classroom setting if they are having trouble understanding the material they are learning. Therefore, the purpose of this study is to:

1. Identifying educators in the field of culinary arts readiness in implementing face-to-face blended learning.
2. Identifying educators in the field of culinary arts readiness in implementing online blended learning.
3. Identifying differences of educators in the field of culinary arts readiness in implementing face-to-face and online blended learning.

This survey was also conducted to find out how educators felt about whether they were prepared to use this method effectively in person or online. The research was also able to pinpoint in great depth how different culinary arts instructors' levels of preparation for face-to-face and online blended learning. During the investigation, elements including technology, learners, teachers, and lecture halls will be taken into account. By addressing the

following hypotheses, the results of this study can further improve instructors' readiness to use blended learning:

Ho: There is no significant difference of educators in the field of culinary arts readiness in implementing face-to-face and online blended learning.

Ha: There is a significant difference of educators in the field of culinary arts readiness in implementing face-to-face and online blended learning.

## 2. Methodology

This study employs quantitative research, where the quantitative approach is a research method that facilitates the analysis of data. Quantitative data gathering survey utilizing a Google Form questionnaire to collect data and information for the sample collected. In this study, the researcher created a series of three-part questionnaires, designated A, B, and C. For Parts B and C, a Likert scale was employed to determine the extent of variations in respondents' attitudes and emotions. To meet the first, second, and third objectives of this study, quantitative approaches were used to collect the necessary data. The population of this study consists of 71 individuals who teach culinary arts at various TVET colleges in the Malaysian state of Johor. Hence, the sample size for this study was determined using the table of Krejcie and Morgan [16], which included a total of 63 individuals. Table 1 shows the distribution of the research instrument.

Table 1. Research Instrument

Section	Construct	No. of Questions	Item
Section A	Demographics	3	A1 – A4
Section B	Face-to-Face Learning		B1 – B16
	• Technology	4	
	• Classroom	4	
	• Teaching Personnel	4	
	• Student	4	
Section C	Online Learning		C1 – C16
	• Technology	4	
	• Classroom	4	
	• Teaching Personnel	4	
	• Student	4	

To validate the research instrument, a total of two experts will be selected: a language expert who is a language teacher with experience in the language field and a blended field expert who is an experienced lecturer in the field of information technology. Consequently, the results of this validity assist the researcher to enhance the questionnaire items to ensure the accuracy of the study. This pilot study's sample selection is determined by the criteria of culinary arts professors. For this pilot project, ten instructors from a TVET institution in Negeri Sembilan, Malaysia were chosen. The Cronbach's Alpha value for the pilot study conducted for this study is 0.936, which is within the range of 0.9 to 1.0 for all the questionnaire questions that have been produced. Thus, Cronbach's Alpha value acquired for this pilot study is of very high quality and dependability. The questionnaire data were analyzed using version 25 of the Statistical Package for the Social Sciences (SPSS) and inferential analysis through the T-test.

The pair sample t-test can be used to determine the differences in the perception of teachers' readiness in the field of culinary arts when implementing blended learning through face-to-face and online modalities [17]. This statistical test compares the mean scores of two related groups to determine if there is a significant difference between them. In this case, the two related

groups would be teachers who have implemented blended learning through face-to-face instruction and teachers who have implemented blended learning through online instruction. The test would be conducted by collecting data from both groups using a survey or questionnaire that measures their perception of readiness. The scores would then be compared using a pair sample t-test to determine if there is a significant difference in perception between the two groups. This information can be useful for identifying areas where teachers may need additional support or training to improve their readiness for blended learning in the culinary arts field.

### 3. Results and Discussions

This study's data analysis revealed that there are substantial differences in the readiness of teaching staff to execute blended learning that is conducted face-to-face and online in terms of technology, classrooms, teachers, and students. According to the conclusions of the study, the researcher gathered data from 63 respondents representing numerous TVET institutions in Johor, Malaysia. The selection of these responders is based on the experiences of individuals who have attended in-person and online culinary arts instruction courses. Several of the study's findings provide answers to the research questions posed by this study.

Table 2. Information on the Respondent's Demographics

Details	Dimension	Total	Percent (%)
Gender	Male	21	33.3
	Female	42	66.7
Institution	MARA College	7	11.1
	Vocational College	25	39.7
	Community College	20	31.7
	University	11	17.5
Teaching Experience	Less than 5 years	7	11.1
	Less than 10 years	20	31.7
	More than 10 years	30	47.6
	More than 20 years	6	9.5

Table 3. Frequency Level, Mean Value, and Explanation of Each Item for Teachers' Readiness to Use Face-to-Face Blended Learning

No	Factor	Mean	Standard Deviation	Dimension
1	I am aware that a slow internet connection disrupts the face-to-face teaching and learning process significantly.	3.38	1.63	Technology
2	I recognize the ability of each face-to-face learning platform (PowerPoint, etc.) to present students with a unique approach.	4.40	0.61	
3	I will guarantee that the capacity of the classroom used for face-to-face learning sessions is sufficient for the number of students.	4.49	0.69	
4	I found face-to-face teaching and learning sessions enhanced by the usage of various multimedia software to be more enjoyable.	4.35	0.76	
5	I can entice students to attend face-to-face teaching and learning sessions.	4.56	0.64	Classroom
6	I am aware that presentations done during face-to-face teaching and learning sessions are more participatory.	4.05	0.97	
7	I am convinced that students can meet the deadline for submitting face-to-face homework.	4.05	0.79	
8	I found the face-to-face evaluation of student engagement scores in the classroom to be simpler.	4.60	0.55	
9	I feel that face-to-face comments and evaluations can have a positive impact on students.	4.11	0.80	Teaching Personnel
10	I am certain that face-to-face instruction can foster more creative thought in kids.	4.13	0.72	
11	I am convinced that students are pleased with the grading of each practice and live examination.	3.98	0.72	
12	I discovered that the question-and-answer portion of the teaching and learning session boosted the confidence of the students.	4.59	0.71	
13	I believe that mixed face-to-face instruction is more engaging for kids.	4.11	0.93	Student
14	I discovered that students were more inventive when doing face-to-face homework.	4.08	0.76	
15	With a face-to-face blended learning strategy, I discovered that students connect in a meaningful way.	4.68	0.71	
16	I believe that students self-evaluate their strengths and deficiencies based on face-to-face achievement results.	4.14	0.82	

The study as a whole reveal that the perception of the readiness of educators in the field of culinary arts to adopt face-to-face blended learning is strong (m = 4.68, sd = 0.71) and can be seen through the item. The second-highest item is the statement that I found it simpler to evaluate student involvement scores in the classroom face-to-face (m = 4.60, sd = 0.55). In addition, the item I can entice students to attend face-to-face teaching and learning sessions (m = 4.56, sd = 0.64) is at the greatest level. This

component of technology had a mean score of 4.15 (sd=0.61), indicating a high level. In the meantime, the mean overall score for the classroom aspect is strong (m = 4.31, sd = 0.52). Next, the mean score at the high level for the educator's aspect is (m = 4.20 sd = 0.51) and the mean score at the high level for the student's aspect is (m = 4.25 sd = 0.54). This indicates that face-to-face blended learning has a good influence.

Table 4. Item Summary for Teachers' Readiness to Use Face-to-Face Blended Learning

Dimension	N	Mean	Std. Deviation
Technology	63	4.15	0.61
Classroom	63	4.31	0.51
Teaching Personnel	63	4.20	0.51
Students	63	4.25	0.54

The purpose of the first study commissioned by the researcher is to determine the perception of the culinary arts teaching staff's preparation for face-to-face blended learning. Fundamental to the process of transferring knowledge to students is the availability of the teaching staff. According to Agyeman & Donkor [18], the preparation of teaching staff involves the amount to which they are prepared to implement a blended learning strategy. This incorporates the element of the students. The readiness of the teaching staff to apply face-to-face blended learning demonstrates that students participate more actively in face-to-face classes. Each student's disposition and character are unique. Skilled instructors can manage the emotions and actions of each student during the learning session [19].

Since each student has a unique learning style, they must be inventive when transferring knowledge. To create a more harmonious learning environment, it is necessary to recognize the diversity of students accepting patterns by employing a variety of instructional strategies. Through this strategy, class participation becomes more active, and students' confidence in expressing their opinions and perspectives can grow. According to a study conducted by Montrieux et al, [20], teachers must celebrate the diversity of students' learning styles because the diversity of students will lead to the active participation of students during learning and teaching, in addition to achieving the main learning objectives. The preparation of the teaching staff must be comprehensive in terms of a variety of characteristics, including the ability to attract students' attention creatively and to offer diverse tasks. The presence of a pleasant environment in the classroom

encourages students to interact and express their views and opinions.

Also, students can strengthen their motivation to study and continue to improve their academic performance. According to Leal Filho, Brandli & Becker-Ritterspach [21], when teaching and learning sessions are done without force, students voluntarily incorporate the information into their daily lives. If there is disclosure and exchange of information or knowledge, it will always grow. According to a study conducted by Abdullah [22], instructors who are confident in teaching make it simpler for students to grasp a concept or skill, but instructors who lack confidence in teaching make it more difficult for students to grasp a concept. Hence, teachers must take responsibility to convey knowledge more seriously to enhance students' understanding following their inventiveness. This strategy indirectly improves the teaching staff's ability and creativity to pique students' interest in learning sessions.

Teachers' readiness in the field of culinary arts when implementing face-to-face blended learning is influenced by several factors. They need to be technically proficient with the tools and technology used in blended learning, have a strong understanding of the curriculum and instructional design, be comfortable with new pedagogical strategies, effectively manage both online and in-person learning environments, and communicate and collaborate with stakeholders [23]. With the right training and support, teachers can successfully implement face-to-face blended learning and provide engaging, effective learning experiences for their students.

Table 5. Frequency Level, Mean Value, and Explanation of Each Item for Teachers' Readiness to Use Online Blended Learning

No	Factor	Mean	Standard Deviation	Dimension
1	I am aware that a slow internet connection disrupts the face-to-face teaching and learning process significantly.	4.60	0.79	Technology
2	I recognize the ability of each face-to-face learning platform (PowerPoint, etc.) to present students with a unique approach.	4.49	0.53	
3	I will guarantee that the capacity of the classroom used for face-to-face learning sessions is sufficient for the number of students.	4.56	0.53	
4	I found face-to-face teaching and learning sessions enhanced by the usage of various multimedia software to be more enjoyable.	4.40	0.81	

5	I can entice students to attend face-to-face teaching and learning sessions.	3.81	0.84	Classroom
6	I am aware that presentations done during face-to-face teaching and learning sessions are more participatory.	4.24	0.91	
7	I am convinced that students can meet the deadline for submitting face-to-face homework.	3.37	1.19	
8	I found the face-to-face evaluation of student engagement scores in the classroom to be simpler.	2.78	1.52	
9	I feel that face-to-face comments and evaluations can have a positive impact on students.	3.51	1.04	Teaching Personnel
10	I am certain that face-to-face instruction can foster more creative thought in kids.	4.35	0.91	
11	I am convinced that students are pleased with the grading of each practice and live examination.	3.52	0.87	
12	I discovered that the question-and-answer portion of the teaching and learning session boosted the confidence of the students.	3.94	0.89	
13	I believe that mixed face-to-face instruction is more engaging for kids.	3.95	0.94	Student
14	I discovered that students were more inventive when doing face-to-face homework.	4.40	0.83	
15	With a face-to-face blended learning strategy, I discovered that students connect in a meaningful way.	3.27	1.19	
16	I believe that students self-evaluate their strengths and deficiencies based on face-to-face achievement results.	3.86	1.09	

I am aware that a slow internet connection can be quite disruptive to the online teaching and learning process (m = 4.60, sd = 0.60) is the item with the highest mean score regarding the perception of the readiness of educators in the subject of culinary arts to adopt online blended learning. While the second-highest item is an item I, the capacity of the platform used for the online learning session must be sufficient to support the number of students (m = 4.56, sd = 0.53). Following, the item with the third highest overall mean score is "I comprehend the capabilities of each online learning platform (PowerPoint,

etc.) to present students with a different approach" (m = 4.49, sd = 0.53). The average score for the technological aspect as a whole is high (m = 4.51, sd = 0.44) The total mean score for the classroom aspect is (m = 3.54, sd = 0.86), which is moderate. While the highest mean score for this part of the teaching force is at a high level (m = 3.82, sd = 0.64) and the total mean score for this aspect, which is the student aspect, is also at a high level (m = 3.86, sd = 0.76) This demonstrates that online blended learning also has a favorable effect.

Table 6. Item Summary for Teachers' Readiness to Use Online Blended Learning

Dimension	N	Mean	Std. Deviation
Technology	63	4.51	0.44
Classroom	63	3.54	0.86
Teaching Personnel	63	3.82	0.84
Students	63	3.86	0.76

To determine how teaching professionals in the field of culinary arts perceive their readiness for online blended learning, with an emphasis on the technological side. Technology plays a significant role in the online implementation of blended learning. The usage of technology in the field of education is on the rise, and it is now a requirement for all educators to adopt it. Instructors must be adept in using this technology, regardless of their age or level of expertise. According to Perera & Yaseen

[24], the evolution of information technology has altered the pattern of information search. This demonstrates that not only the teaching staff acquires technological skills, but also the students are receptive to technological advancement.

Furthermore, the browsing data connection or internet connection is the most important factor in guaranteeing the seamless operation of blended online learning, as practically all technologies, i.e., devices,

require an internet connection when searching for information online [25]. In the event of an internet connection outage, all connected activities will be disrupted, which will have a detrimental impact on the teaching staff and students. This is corroborated by a study, which indicates that internet access disturbances throughout the online learning process are highly disruptive to both teachers and students.

Hadi & Isnani [26], who did a study at Pamane Talino College of Education, Indonesia, concluded that the majority of students who have difficulty participating in online classes do so owing to a lack of data plans and internet connection interruptions. According to Qiu & Guo [27], the teaching and learning process that utilizes technology is in more demand since the distribution material is interactive, reality-based, inventive, and exploratory, and can be accessed from anywhere. As a result of the presence of technology in education, students can be influenced to think outside the box. Thus, the use of technology is strongly promoted throughout teaching and learning sessions. According to Irawan, Hidayat & Fadhilah [28], the use of technology in the classroom can also attract culinary students' attention to their learning through the usage of video, graphics, and animation aspects.

In summary, the readiness of teaching staff in the field of culinary arts when implementing online blended learning depends on various factors. They must possess technical skills and be familiar with the tools and platforms used for online teaching, as well as have pedagogical skills to design and deliver engaging online learning experiences. Effective time management, communication skills, and adaptability are also crucial for successful implementation. To ensure their readiness, training, and support may be required, including workshops, online modules, and coaching [29]. It's essential to create a supportive culture that encourages innovation and experimentation in online teaching practices.

The difference in the perception of the readiness of teaching staff in the field of culinary arts while implementing blended learning face-to-face and online can be demonstrated via numerous differences in aspects through the results of the study. The researcher has studied the differences between each variable based on the predetermined criteria. The researcher utilized the "Paired Sample T-Test" in this study to examine the difference between the two variables. This study indicated that there is a substantial difference between the perception of the readiness of culinary arts teaching staff for face-to-face and online blended learning implementation as in Tables 7, 8, 9, 10, and 11.

Table 7. The Paired Sample T-Test evaluates outcomes based on Technology considerations

Dimension	Variables	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Technology	Face-to-face	63	4.15	0.61	-4.121	0.000
	Online	63	4.51	0.44		

Table 8. The Paired Sample T-Test evaluates outcomes based on Classroom considerations

Dimension	Variables	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Classroom	Face-to-face	63	4.31	0.51	6.252	0.000
	Online	63	4.54	0.86		

Table 9. The Paired Sample T-Test evaluates outcomes based on Teaching Personnel considerations

Dimension	Variables	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Teaching Personnel	Face-to-face	63	4.20	0.51	3.716	0.000
	Online	63	3.82	0.64		

Table 10. The Paired Sample T-Test evaluates outcomes based on Student considerations

Dimension	Variables	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Students	Face-to-face	63	4.25	0.54	3.274	0.002
	Online	63	3.86	0.76		

Table 11. Variables-specific Paired Sample T Test analysis outcomes

Variables	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Face-to-face	63	4.25	0.54	3.274	0.002
Online	63	3.86	0.76		



The overall results of the research findings based on this "Paired Sample T-Test" test show that the difference between the readiness of culinary arts teaching staff when implementing face-to-face blended learning and the readiness of culinary arts teaching staff when implementing blended learning online has  $p$ -value = 0.001 and sig value = 0.05. Because the sig value exceeds the  $p$ -value ( $p < 0.05$ ), there is a substantial difference between the two variables. Based on the findings of the study, the researcher discovered that the perception of the teaching staff's readiness to use face-to-face blended learning differs from that of the students. From this student perspective, there is a considerable difference between students who prefer face-to-face learning in the classroom and those who prefer online learning. This is because there is a two-way contact between students and teaching professionals in effective face-to-face learning sessions.

Teachers are more self-assured and inventive when imparting knowledge face-to-face if this may be observed from the perspective of the teaching staff. Zhang, Chen & Xie [30], concluded in a study that systematic planning is necessary to ensure that learning objectives are met. According to Ma'alip et al. [31], conversational teaching focuses more on how students directly comprehend what is taught than on how they listen to what the teaching staff says. Through a face-to-face learning approach, the teaching staff will continue to strive to deliver their lessons more smoothly and remain in the students' memories through active learning such as question and answer, discussion with students, clear two-way explanations, making summaries, and reflection sessions between students and staff instructor on the topic of study.

Meanwhile, if we look at the students' viewpoint of the readiness of the teaching staff in adopting blended learning online, it is observed that students engage less with other students during the teaching and learning sessions carried out online. In addition to that, the preparation of the teaching staff when implementing online learning needs to be described in terms of skills to draw students' interest in attending classes, communication skills, and skills in imparting knowledge that only connects with students virtually [32]. In addition, the technological preparedness of the teaching staff must be considered, as not all instructors can utilize technology to conduct online learning sessions. This is evidenced by a study conducted by Liu & Zhang [33], which found that as many as 29% of teaching staff are still incompetent at conducting online teaching sessions due to their lack of technology application expertise. To ensure that online teaching and learning sessions are smooth, engaging, and beneficial for students, a great deal of emphasis is placed on the level of technological knowledge and proficiency of the teaching team.

Examining the difference in the technological element of the teaching staff's readiness to adopt face-to-face learning reveals that the internet connection speed does not interfere with the face-to-face teaching and learning session. This is because, typically, the use of

technology during face-to-face class sessions does not require an internet connection, as teaching aids are typically prepared in advance and displayed on the LCD screen in the classroom during teaching and learning sessions, without requiring an internet connection. Unless the teaching staff is imaginative in implementing the learning sessions, the use of technology in the classroom should not interfere with teaching and learning [34]. In the subject of culinary arts, however, the application of technology focuses on food development technology [35]. Students will gain from this experience as a result of its technological application.

Notwithstanding the disparity between the teaching staff's technological competence and their preparedness to deploy online learning, the internet connection speed is extremely disruptive during teaching and learning sessions. But, technology in education is no longer singularly focused; it is now diversified. According to Peng, Wu & Zhao [36], the preparedness of the hospitality and tourism instructors to adapt technology during the learning session is crucial to the effectiveness of integrating digital technology into the curriculum. The use of technology in education can enhance the blended learning application abilities of teaching professionals. With technology in education, it is also easier for teachers to engage pupils in learning sessions. According to a study conducted in Ghana, which states that the use of technology during the session is more effective than online learning, and students demonstrate better performance in classroom learning than online learning, there is a clear distinction between online and face-to-face learning [37].

Differences in the perception of teachers' readiness in the field of culinary arts when implementing blended learning face-to-face and online is an interesting topic to explore. Blended learning can provide numerous benefits to students, such as increased flexibility and personalized learning experiences. However, it also requires teachers to be adequately prepared and equipped to implement it effectively. The differences in teachers' readiness to implement blended learning through face-to-face and online modes can be influenced by various factors, such as their level of technological proficiency and teaching experience. Further research in this area can help identify effective strategies to support teachers in implementing blended learning in the culinary arts field. Ultimately, an instructor must be skilled in terms of instruction, as face-to-face and online learning have varying effects on pupils. Consequently, if the teaching staff has a solid grasp of pedagogical knowledge, it will be easier for them to approach and comprehend the proper learning approaches to adjust to different online or face-to-face learning sessions. Hence, based on the research that has been conducted, it is evident that there is a difference in the perception of the readiness of teaching staff when integrating face-to-face and online blended learning.

#### 4. Conclusion

Shows from the research that teachers' perceptions of their preparation in the field of culinary arts may differ when adopting blended learning through face-to-face and online approaches. The average score for the technological aspect as a whole is high ( $m = 4.51$ ,  $sd = 0.44$ ) The total mean score for the classroom aspect is ( $m = 3.54$ ,  $sd = 0.86$ ), which is moderate. While the highest mean score for this part of the teaching force is at a high level ( $m = 3.82$ ,  $sd = 0.64$ ) and the total mean score for this aspect, which is the student aspect, is also at a high level ( $m = 3.86$ ,  $sd = 0.76$ ). This demonstrates that online blended learning also has a favorable effect.

Some instructors may feel more at ease with face-to-face education, whilst others may feel more at ease with online instruction. Yet, it is crucial to recognize that all styles of instruction have advantages and disadvantages, and teachers should be prepared to adapt to the needs of their pupils and the curriculum requirements. In addition, teachers can be prepared and confident in using blended learning strategies regardless of the mode of instruction if they have the right training and support. The ultimate effectiveness of blended learning in culinary arts education will depend on several elements, including the availability of technology and resources, the preparedness of teachers and students, and the curriculum's unique aims and objectives.

As a consequence of the data analysis and discussion of the presented findings, it can be stated that educators have a high degree of preparedness for face-to-face and online blended learning implementation. In addition to playing a significant part in the realization of an effective strategy during the knowledge delivery process, the usage of technology and the classroom environment is also crucial. Educators and students are also crucial to ensuring that the implementation of blended learning has a good effect on the field of education. For educational institutions and educators to satisfy the criteria of the Ministry of Education in their attempts to adopt 21st-century learning, they must use the findings of this study as a guide for their blended learning initiatives. There is also a distinction between educators' perceptions of their readiness to adopt blended learning online versus face-to-face. To attain and execute progress for the advancement of national education, it is necessary to give serious consideration to each of the aforementioned facets.

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