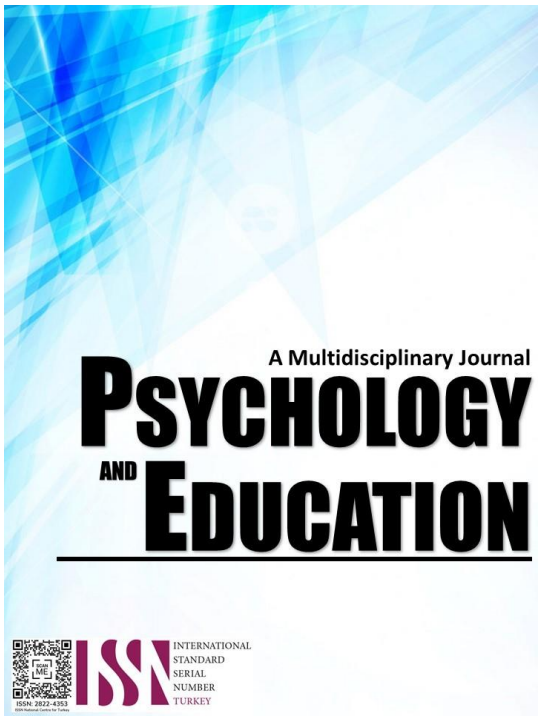
CHALLENGES TO BLENDED MODALITY AND LEARNING EXPERIENCES TOWARDS INSTRUCTIONAL EFFECTIVENESS IN PUBLIC ELEMENTARY SCHOOL



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Research Article

Challenges to Blended Modality and Learning Experiences Towards Instructional Effectiveness in Public Elementary School

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Abstract

This study aimed to determine the teaching-learning challenges and instructional effectiveness encountered in public elementary schools with the use of blended modality. This employed the descriptive survey of quantitative method as participated by 15 public elementary schools with 148 elementary teachers who were selected using purposive sampling procedures. Survey type questionnaires were developed and validated to gather data with properly established communications with DepEd officials and personnel. Weighted Average Mean (WAM) and Pearson R Correlation.Findings showed that teachers encountered difficulty in anchoring on the learner's assistive technology and learning support needs to the lesson (mean=4.18) and conflict in using a particular learning environment, employing interactive activities and monitoring issue on students' progress with respective mean of 4.06 interpreted as agree. Also, creating positive relationship, setting goals for learners' growth, selecting instructional materials, allowing learners' work independently, and promoting transfer of knowledge were the most manifested teaching experiences of the teachers. Moreover, blended modality was found effective in teaching outcomes (mean=4.02), engagement (mean=3.96), and competencies (mean=3.88). Furthermore, null hypothesis was rejected at 0.05 level of significance showing that there is a significant relationship between instructional effectiveness of blended modality and respondents' perception on challenges to blended modality and learning experiences. Likewise, upskilling of teachers in the conduct of blended learning while strengthening its implementation with strong connection and collaboration with the parents are recommended.

Keywords: *quantitative method, learning challenges, blended modality, teaching-learning experiences, learner's assistive technology*

Introduction

Education is very important that without it, individuals are still in the blank sheet. According to Doumbia (2013), education is knowledge gain which develops in a perspective of looking at life. It helps people to build opinions and have points of view on the things in life. Hence, education has to be resilient amidst challenges toward instructional effectiveness in the school. On the other hand, educators are facing the greatest issue on how they can ensure the continuation of education in every learner in this time of pandemic where blended modality is of great help. As stated by Tumapon (2020) in Manila Times, the Department of Education (DepEd) implemented the "New Normal Education Policy" where all school will have blended or purely online courses. Training in teaching and learning platforms will be available for both teachers and students. Because of the Covid-19 movement restrictions, "the DepEd has been encouraging students to continue their learning online or at home". This adjustment was followed by all public and private schools in the Philippines and not only the DepEd (Department of Education) but also the CHED (Commission on Higher Education). And with the implementation of BE-LCP, blended modality of learning arises along with the combination of traditional mode of teaching and learning and online / ICT related instruction.

Moreover, it is taught that when it says teaching, it is all about the teacher and its role, but the fact is the most important aspects of education process are the students and what they learn from the process. That's why when the COVID-19 pandemic strikes, it affected the teachers on how they will impart to the learners the knowledge that is meant to them through alternative learning delivery mode where blended learning modality belongs. Due to the current situation that the country is facing today. There are so many changes happened in the curriculum in DepEd. These changes brought so many challenges for the teachers and learners in terms of their teaching and learning process. According to the featured story in Manila Bulletin by Malipot (2020), teachers are struggling on preparing lesson plans to conduct classes and handing out of assignments, and to make sure that the quality of learning remains even with the absence of face-to-face interactions while the parents and students are struggling on alternative learning delivery modalities such as blended modality. These challenges in the learning process of the learners may bring an effect to the instructional effectiveness of the teacher.Based on the concepts given above, the researcher decided to conduct a study determining the teaching and learning

challenges and instructional effectiveness of blended modality among the public elementary teachers.

Research Objectives

This study aimed to determine the teaching-learning challenges and instructional effectiveness encountered in public elementary schools with the use of blended modality. In accordance, it sought to answer the following areas: perception of teaching-learning challenges in terms of issue context and learning design, perception of teaching-learning experiences in terms of learning environment, clear-shared outcomes, varied content, materials and methods of instruction, feedback and practices, complex thinking and transfer, and perception of public elementary teachers in instructional effectiveness in terms of teaching outcomes, engagement, and competencies. Furthermore, the study investigated how do respondents assess if there is a significant relationship between the instructional effectiveness of blended modality and their perception on challenges in blended modality and learning experiences.

Methodology

Research Design

The correlational research was employed as this study's research design. According to Creswell (2014) is a type of research methodology used to examine the relationship between two or more variables. It seeks to determine whether a relationship exists between variables and the strength and direction of that relationship. However, it does not establish causation or determine the cause-and-effect relationship between variables. With the correlational research design, the challenges and experiences of the teachers and learners were gathered and described followed by the analysis of the significant relationship between instructional effectiveness of blended modality and respondents' perception.

Respondents of the Study

The respondents of the study will be the public elementary teachers of General Luna District. The respondents came from the fifteen (15) public elementary schools namely General Luna Central Elementary School, San Ignacio Ibaba Elementary School, San Ignacio Ilaya Elementary School, San Vicente Elementary School, San Nicolas Elementary School, Sumilang Elementary School, San Isidro Elementary School, Nieva Elementary School, Sergio Balane Integrated School, Villarica Elementary School, Lavides Elementary School, Magsaysay Elementary School, Bacong Ibaba Elementary School, Bacong Ilaya Elementary School and Malaya Elementary School with a total of 148 elementary teachers.Likewise, out of the 148 teachers, purposive sampling was employed to select public elementary school teacher respondents because. Purposive sampling was used because it directly reflects the aims of the study on who directly employ and experience the blended modality. Hence, teachers were selected based on the following criteria: teacher of public elementary school, regular or permanent in DepEd, must be assigned in the school within DepEd General Luna, and has the experienced in using blended modality in teaching in the elementary level.

Research Instrument

The researcher utilized survey-type questionnaire to gather information on the challenges and experiences encountered by the teachers in the public elementary schools and the instructional effectiveness of their practices. The questionnaire was used as the main data gathering instrument for this study. Researcher-made questionnaires were used to describe the respondent's profile and to gather relevant information.There was single set of questionnaires for the teacher-respondents. It had three parts: 1.) perception of the public elementary school teachers in the teaching-learning challenges as to issue of context and learning design; 2.) teachers' most manifested teaching-learning experiences as to learning environment, clear-shared outcomes, varied content, materials, and methods of instruction, feedback and practices, and complex thinking and transfer; and 3.) teachers' perception on the instructional effectiveness of the blended modality as to teaching outcomes, engagement, and competencies.The questionnaires were self-made and incorporated 5-point scale. It first underwent validation process as to content and technicalities with the help of five (5) school heads, master teachers, and key teachers. After validation procedures, questionnaires were adjusted and revised. Then, the questionnaires were piloted for reliability checking before its finalization and facilitations.

Research Procedure

Necessary permits to conduct the research were secured. Letters of approval to seek consent from the Office of the District Supervisor to allow the

researcher to conduct the study were sent. The help of the school heads was requested to make sure the success of distributing the research instrument among the respondents.Research respondents are teachers who employed blended modality in the height of pandemic to continue education. They are public school teachers along with the students who experienced challenges and effectiveness of blended modality in rural schools of General Luna in Quezon Province.The researcher personally administered the questionnaires, however, in time of lockdowns and quarantines, google form were used to gather relevant data. Then, the retrieval of the instrument was done after the respondents answered the questionnaires. The data from the google form were harvested separately after the minimum number of respondents is achieved. Afterwards, the data gathered were organized, and treated statistically for analysis and interpretation of each result.

Statistical Treatment of Data

The descriptive statistics such as average mean was used to describe the respondents' perception on the teaching-learning challenges and experiences.The same statistical procedure was utilized in determining the respondents' perception on the instructional effectiveness of the blended modality as perceived by the teachers.To determine the significant relationship between instructional effectiveness and respondents' perception on challenges to blended modality and learning experiences, Pearson r Correlation was used. Significant relationship was tested at 5 % level of significance.

Results and Discussion

Additionally, the relevant data are shown in tabular format following the American Psychological Association (APA) style of documentation of sources as governed by international standard as no longer going back to past antiquity in the presentation of the weighted mean and standard deviation scores to describe the fulcrum and variability of dispersals of data as measures of relative importance for each observation of responses respectively. With this at hand, relevance in the use of weighted average mean, standard deviation, and Pearson R Correlation were used toward objective analysis of data, interpretation, and identifying implications that were all anchored on the cited statements of the problem.

Public Elementary School Teachers' Perception on the Teaching – Learning Challenges in Blended Modality

This part presents the gathered from the teachers concerning the challenges in blended modality in terms of issue in context and learning design. Weighted mean, standard deviation, and verbal interpretations were all presented with relative interpretation and analysis of data.

Perception of the Public Elementary School Teachers on the Encountered Teaching – Learning Challenges in Blended Modality in Terms of Issue of Context

Table 1.1. Perception of the Public Elementary School Teachers on the Encountered Teaching – Learning Challenges in Blended Modality in Terms of Issue of Context

Indicators	*Mean*	*Std. Deviation*	*Verbal Interpretation*
1. Difficulty in integration of the learner's skillsand ideas on applying their new learned skills.	4.09	0.56	Often Experienced
2. Issue in interactions that would affect the learning objectoves.	4.14	0.58	Often Experienced
3. Hardship in accessibility on the implications of learning and teaching activity.	4.03	0.63	Often Experienced
4. A challenge in capturing the functional requirements for the particular student.	4.01	0.64	Often Experienced
5. Difficulty in considering the learner's characteristics in the context of the lesson.	4.14	0.74	Often Experienced
6. Conflict in integrating the learner's accessibility needs to transfer their concepts and ideas on the lesson.	4.08	0.68	Often Experienced
7. Difficulty in anchoring on the learner's assistive technology and learning support needs to the lezson	4.18	0.69	Often Experienced
Mean	4.10	0.65	Often Experienced

Depicted in Table 1.1 is the perception of the public elementary school teachers on the encountered teaching – learning challenges in blended modality in terms of issue of context. Data revealed that difficulty

in anchoring on the learner's assistive technology and learning support needs to the lesson obtained the highest mean of 4.18 with the standard deviation of 0.69 interpreted as often experienced. This is followed by the issue in interactions that would affect the learning objectives (m=4.14, sd=0.58) and difficulty in considering the learner's characteristics in the context of the lesson (m=4.14, sd=0.74) and interpreted as often experienced respectively.

On the other hand, a challenge in capturing the functional requirements of the particular students obtained the lowest mean of 4.01 with the standard deviation of 0.64 interpreted also as often experienced. Generally, all the indicators gained the mean of 4.10 with 0.65 standard deviation interpreted as often experienced.

The findings indicate that the teachers of General Luna District considering the context in the locality, found it hard to relate their blended instruction on the available technology of the students such as Tablet, laptop, cellular phone, mobile phone, televisions, radio, and the likes. This was because of the geographical location of the schools that are mostly hilly which results to unreliable signal. Moreover, it was identified that not all learners have their available gadget for learning considering the economic status of the parents and their living. Lastly, having the difficulties in assistive technology were also traced back from seasoned teachers' lack of ICT – related skills which hindered them in maximizing blended learning sessions. This also implies that in the issue of context in using blended modality, it is not only the assistive media that can be the problem but also the availability of the media, and the skills of the teachers who further needs upskilling in technology aided instruction.

Similar with the current findings, Aldosemani et al. (2018) found that the lack of faculty instructors' training and support, language difficulties, and inadequate promotion incentives for blended learning implementation are some of the obstacles teachers face while implementing blended learning in context. These difficulties described by Aldosemani et al. (2018) are equally evident in developing nations such as the Philippines. Dotong, De Castro, Dolot, and Prenda (2016) highlighted certain limits of ICT integration, including a lack of ICT infrastructure, inadequate maintenance of current or existing ICT resources, and a lack of ICT funding (Lorenzo, 2016; Tomaro, 2018; Vergel de Dios, 2016). In actuality, there are still regions in the Philippines, particularly in rural areas, where dependable energy and internet are quite difficult to attain. Thus, it restricts and hinders instructors' capacity to become proficient in the use of ICT for integrating teaching and learning.

Also, the use of technology tools should best meet the needs of the students at their contextual environment while ensuring the blended learning nature of the course is appropriate. However, the lack of technological skills among some faculty members and teachers (Krasnova & Shurygin, 2019) hinders students' ability to discover learning on their own. Consequently, some academics have a negative view of blended-based approaches such as blended modality and its models.

Perception of the Public Elementary School Teachers on the Encountered Teaching – Learning Challenges in Blended Modality in Terms of Learning Design

Table 1.2. Perception of the Public Elementary School Teachers on the Encountered Teaching – Learning Challenges in Blended Modality in Terms of Learning Design

Indicators	*Mean*	*Std. Deviation*	*Verbal Interpretation*
1. Conflict in using a particular learning environment to fulfil the needs of the learning objectives.	4.06	0.59	Challenging
2 Challenge in employing interactive activities based on the objectives.	4.06	0.63	Challenging
3. Difficulty in designing and developing materials that support the students' learning.	4.02	0.65	Challenging
4. Inappropriateness in applying methodology for outcomes the learners.	3.98	0.64	Challenging
5. Monitoring issue on students' progress in intervertion to set learning goals	4.06	0.66	Challenging
6. Difficulty in checking students' progress with self-reflection on the instruction.	4.03	0.76	Challenging
7. Problem in using media effectively that are readily available to student	4.05	0.79	Challenging
8. Difficulty in utilizing learning resources and tools to support learning	4.01	0.67	Challenging
Mean	4.03	0.67	Challenging

Presented in Table 1.2. is the perception of the public elementary school teachers on the encountered teaching – learning challenges in blended modality in terms of learning design. The gathered data revealed that the respondents primarily encountered conflict in using a particular learning environment to fulfil the needs of the learning objectives (m=4.06, sd=0.59); challenge in employing interactive activities based on the objectives (m=4.06, sd=0.63); and monitoring issue on students' progress in intervention to set learning goals (m=4.06, sd=0.66) obtained the highest mean score and interpreted as challenging.

However, inappropriateness in applying methodology for the learners gained the lowest mean of 3.98 and standard deviation of 0.64 interpreted also as challenging. In general, all the indicators garnered the mean of 4.03 with the standard deviation of 0.67 interpreted also as challenging.

The findings imply that concerning the learning design in blended modality, the teachers found difficulties in adapting the learning process to students varying environment which is too varied in scope that the school manpower and resources cannot fully address within a short period of time. Also, interactive activities were difficult because of the remote and separate places that widens the gap between the teacher and the students. Interactive activities were difficult because of logs ang tech glitches that hampered the learning session. Lastly, the teachers cannot fully and objectively monitor students real-time progress in the interventions according to the learning objectives that were set because students may come and go without further notice due to different factors such as signal and technical problems. Likewise, the findings also imply that in developing the learning design, the teachers must first consider the appropriateness of the activities and the assessments if majority or all of the students can relate and be able to actively participate in the proposed blended modality of learning sessions.

Conforming with the current findings, literature emphasized that learning designs are a number of approaches to designing student learning experiences, i.e., a series of activities and interactions (Oliver, 2019). Related studies also showed that not all faculty members are receptive to blended-based education, according to research (Albiladi & Alshareef, 2019; Bataineh & Mayyas, 2017; Crawford & Jenkins, 2017; Shand & Farrelly, 2018) examining the issues associated with the use of mixed modality in learning design. Some still saw the utilization of ICT as "time-consuming" (Benson et al., 2011, p.148). For instance, it was discovered that designing and developing instructional materials on a web-based platform requires more time than face-to-face engagement. Some argue that preparations for teaching and learning are more rigorous when using a hybrid method. This explains the concept offered by Ma'arop and Embi (2016), who classified integrated learning as a cognitive and physical load. In other words, instructors must devote more time to building the course platform, uploading instructional materials, responding to questions, and grading students' online work (Alebaikan & Troudi, 2015).

Manifested Teaching – Learning Experiences of Teachers in Blended Modality in terms of Learning Environment

Table 2.1. Teachers' Most Manifested Teaching – Learning Experience in Blended Modality in terms of Learning Environment

Indicators	*Mean*	*Std. Deviation*	*Verbal Interpretation*
1. Configures varying ways to best fit the task on the learner at hand.	4.11	0.68	Often Manifested
2 Uses only the learning tools and materials that are readily available in the students' surrounding	4.16	0.74	Often Manifested
3. Engages learner's families in a variety of ways to promote student learning	4.26	0.67	Often Manifested
4. Accepts the mistakes of the learners for correction.	4.29	0.68	Often Manifested
5. Gives the learners a chance to express themselves for further learning.	4.30	0.68	Often Manifested
6. Inspires everyone for full participation.	4.35	0.76	Often Manifested
7. Creates positive relationship to the learners and their families.	4.41	0.72	Often Manifested
8. Makes meaningful lesson based on the students'	4.30	0.70	Often Manifested
Mean	4.27	0.70	Often Manifested

Table 2.1. teachers' most manifested teaching – learning experience in blended modality in terms of learning environment. Based on the data, the indicator that creates positive relationship to the learners and their families obtained the highest mean of 4.41 with the standard deviation of 0.72 and interpreted as often

manifested. This is followed by the indicator that inspires everyone for full participation having the mean of 4.35 and standard deviation of 0.76 and interpreted also as often manifested. On the contrary, configure varying ways to best fit the task on the learner at hand earned the lowest mean of 4.11 with the standard deviation of 0.68 interpreted as often manifested. Generally, all the indicators were given the general weighted average mean of 4.27 with the standard deviation of 0.70 and interpreted as often manifested.

The results indicate that all the indicators often manifested. However, among all indicators in learning environment, the conduct of blended modality develops positive and welcoming relationship with the learners together with their families. Some of the teachers also observed that compared to full modular distance learning modality, the conduct of blended learning helps them reach the students with at least minimal social interactions for them to know the students better as well as the parents. This establishes proper communication not only in academics but also in other related school matters. Hence, the involvement of the learners and parents are much more manifested and observed by the teachers that resulted to getting much acquainted and creating ties and bonds with them.

The same with the findings of the current study, according to Tucker, et al (2017), blended modality fosters an atmosphere where the most recent educational research and technology-based culture, mentality, and real preparation of teachers are exhibited through meaningful and hands-on trainings that produce school leaders. Similarly, at a blended learning school, campus leaders train students to become their own learning advocates. Technology enables students to assume responsibility for their own education, therefore fostering the development of the skills essential to become lifelong learners (Incantalupo, Treagust, & Koul, 2014). When students have access to technology-based learning, their academic outcomes and study habits improve, resulting in positive learning impacts (Incantalupo et al., 2014). Moreover, according to Petty (2018), pupils who talked during instructional time may have been reprimanded. The 21st century learning environment is the current trend in the world of education (Abdalhadi, 2016). Technology is integrated into the 4Cs of 21st century learning: critical thinking, communication, collaboration, and creativity (BattelleforKids, 2019).

Manifested Teaching – Learning Experiences of Teachers in Blended Modality in terms of Clear Shared Outcomes

Shown in Table 2.2. are the teachers' most manifested teaching – learning experience in blended modality in terms of clear shared outcomes. The findings revealed that setting a goal for the learner's growth earned the highest mean of 4.39 with the standard deviation of 0.74 interpreted as often manifested. This was followed by indicators such as using standards that leads to learners' progress (m=4.38, sd=0.73) and also interpreted as often manifested. However, least scored indicator was establishing clear descriptions of what success looks like with the mean of 4.31 and standard deviation of 0.72 interpreted also as often manifested. Generally, all indicators earned the general mean of 4.35 interpreted as often manifested.

Table 2.2. Teachers' Most Manifested Teaching – Learning Experience in Blended Modality in terms of Clear Shared Outcomes

Indicators	*Mean*	*Std. Deviation*	*Verbal Interpretation*
1. . Selects materials & activities aligned to the learning outcomes.	4.33	0.60	Often Manifested
2 Chooses clear assessment tasks.	4.36	0.69	Often Manifested
3. Uses standards that leads to learners' progress.	4.38	0.73	Often Manifested
4. Sets a goal for the learner's growth.	4.39	0.74	Often Manifested
5. Explains how the manner of doing the tasks to the learners.	4.33	0.68	Often Manifested
6. Allows the learners to share experiences aligned to their learning outcomes.	4.36	0.71	Often Manifested
7. . Establishes clear descriptions of what success looks like.	4.31	0.72	Often Manifested
Mean	4.35	0.70	Often Manifested

The findings of the study indicates that as to clear shared outcomes, goal setting for the learner's growth was the most often manifested indicator. This implies that majority of the teachers using blended modality primarily establishes the learning goals to be attained by the students. This can be verified by the fact that the learning designs and creation of learning plans are all anchored on the learning goals as represented by the objectives of the lesson which are likely anchored on the most essential learning competencies indicated

in DepEd Budget of Work (BOW). Moreover, trainings and classroom observations on the modality being used firstly identifies the goals of the lesson for the students to be mastered from the activity, practices activities, applications activities, and assessments. However, establishing success was least scored with the teachers doubt and risk factors of the blended modality concerning signals and technology-related issues.

In conformity with the current findings, Great Schools Partnership (2019) shown that both long-term and short-term learning outcomes are crystal clear; it provides explicit explanations of what success looks like. Danielson (2017) noted that while selecting instructional objectives, instructors should assess the significance of the outcomes for students both now and in terms of the future learning that is made possible by the outcomes. Instructional results should demonstrate significant learning, high student expectations, and intellectual rigor. Researchers Joseph Krajcik, Katherine McNeill, and Brian Rieser (2017 quoted in Marzano, 2019) emphasize that excellent teaching begins with clearly articulated learning objectives, from which teachers pick suitable activities and assessments to measure students' progress on the learning goals.

Manifested Teaching – Learning Experiences of Teachers in Blended Modality in terms of Varied Contents, Materials, and Method

Depicted in Table 2.3. teachers' most manifested teaching – learning experience in blended modality in terms of varied content, materials, and method. Data reveals that selecting instructional materials to meet the needs of a variety of learners earned the highest mean of 4.43 with the standard deviation of 0.62 interpreted as often manifested. This indicator was followed by encouraging the learners to select the materials to meet the learning outcome (mean=4.38, sd=0.62) and delivering assessments that are relevant, authentic and purposeful for the learners (mean=4.33, sd=0.62) which are both interpreted as often manifested respectively.

Table 2.3. *Teachers' Most Manifested Teaching – Learning Experience in Blended Modality in terms of Varied Content, Materials, and Method*

Indicators	*Mean*	*Std. Deviation*	*Verbal Interpretation*
1. Selects instructional materials to meet the needs of a variety of learners.	4.43	0.62	Often Manifested
2. Encourages the learners to select the materials to meet the learning outcome.	4.38	0.62	Often Manifested
3. Allows the learners to propose topics relevant to the learning outcome	4.28	0.61	Often Manifested
4. Provides time to reteach the lessons.	4.18	0.68	Often Manifested
5. Extends the learning needed by the learners	4.31	0.70	Often Manifested
6. Uses a range of methods such as differentiated homework, reading activities using technologies	4.26	0.63	Often Manifested
7. Supports students to advance their learning in authentic and purposeful for the learners	4.26	0.69	Often Manifested
8. Delivers assessments that are relevant.	4.33	0.62	Often Manifested
Mean	4.30	0.65	Often Manifested

On the other hand, providing time to reteach the lessons got the lowest mean of 4.18 with the standard deviation of 0.68 and interpreted as often manifested as well. Generally, all the indicators were rated 4.30 with the standard deviation of 0.65 and interpreted as often manifested.

The findings indicate that concerning variations of contents, materials, and the methods to be used in blended modality, the teachers considered the learning needs of the learners. This is where appropriateness and meaningfulness of the contents, methods, and materials are taken into account to provide learner-centered blended modality of teaching and learning process. Moreover, this can be observed based on the conduct of the diagnostics or pretest where the teachers are allowed to reprogram the instruction different from the indicated contents and strategies in the modules and textbooks that are too general in scope. The teachers are encouraged to hold differentiation of methods, contextualization and localization of learning materials and contents for the students to be able to relate with the topic and find

practical ideas to link their lesson to actual scenarios.

Similar with the current study, the Great Schools Partnership (2019) emphasized that students have choice in how they demonstrate their learning; that they use multiple and varied pathways to reach common ends; that they use a variety of tools and supports (including technology) to demonstrate their learning; and that assessments are authentic and relevant. However, the instruments utilized by instructors should suit instructional goals with a focus on student learning (Tucker et al., 2017). Microsoft enables students to organize, schedule, and manage a simulated project; the projects are exercises for use as in-class, instructor-directed learning activities or self-directed activities in conjunction with an online video learning platform (Valle & Lanier, 2016).

In the paper by Aldosemani et al. (2018), it is said that ICT is not limited to supplying high-quality data, but also provides a platform for applying a range of instructional tools that are crucial for remote learning, such as blended-based approaches (Rivera, 2017; Smith & Hill, 2018; Vaughan, Reali, Stenbom, Van Vuuren, & MacDonald, 2017). This also explains how the capacity of blended-based education to access a broad variety of course resources contributes to an improvement in learners' rates of information retention outside the classroom (Wang, Shen, Novak, & Pan, 2019). Also, as to differentiation of varied learning, studies have shown that 'contracts' can have positive effects on students' ability to set objectives for their learning (Dean, et. al., 2012).

Manifested Teaching – Learning Experiences of Teachers in Blended Modality in terms of Practice and Feedback

Presented in Table 2.4. teachers' most manifested teaching – learning experience in blended modality in terms of practice and feedback. With the gathered data, findings revealed that allows the learners to work independently, cooperatively with guidance earned the highest mean of 4.36 with the standard deviation of 0.63 interpreted as often manifested followed by guiding the learners in their activities thoroughly (mean=4.34, sd=0.66) and offering opportunities to practice what the students learn in class (mean=4.31, sd=0.66) both interpreted as often manifested. However, least scored indicator is specifying an actionable suggestion or recommendation with the mean of 4.26 with the standard deviation of 0.58 and interpreted as often manifested. In general, all the indicators garnered the weighted average mean of 4.30 with the standard deviation of 0.65 and interpreted as often manifested.

Table 2.4. *Teachers' Most Manifested Teaching – Learning Experience in Blended Modality in terms of Practice and Feedback*

Indicators	*Mean*	*Std. Deviation*	*Verbal Interpretation*
1. Allows the learners to work independently cooperatively with guidelines	4.36	0.63	Often Manifested
2 Let the learners work cooperatively with peers.	4.28	0.68	Often Manifested
3. Guides the learners in their activities thoroughly.	4.34	0.66	Often Manifested
4. Provides practices to supports the student's learning of essential skills and knowledge.	4.28	0.67	Often Manifested
5. Gives learners timely feedback.	4.28	0.66	Often Manifested
6. Specifies an actionable suggestion or resommendation.	4.26	0.58	Often Manifested
7. Uses feedback to revise essential work of the learners.	4.29	0.63	Often Manifested
8. Offers opportunities to practice what the student learn in class	4.33	0.66	Often Manifested
Mean	4.30	0.65	Often Manifested

The results indicate that as to practice and feedback in the conduct of blended modality, the teacher most allow collaborative activities where the students can also freely work according to their pace. According to the teachers, the blend of modular and online learning sessions both allow independent and cooperative learning with their instructions and guidance. It was also observed that the use of module as based for blended modality maximized independent learning while the conduct of online served as the cooperative platforms that learners can use free and open platforms which are carefully selected by the teachers for practice of the MELCs to be mastered and to provide feedback on students' responses and outputs. However, they sometimes failed to specify actionable suggestions or recommendations among the students because of the risk factors by the pandemic as well as the unavailability of the materials to be used in the lesson or project.

Conforming with the current findings, related studies

showed that feedback gives specific direction that enables students to change their learning, there is a higher influence on accomplishment, students are more inclined to take chances with their learning, and they are more likely to persist until they succeed (Dean, Hubbell, Pitler, & Stone, 2012). Hattie and Timperley (2017) added that learning can be enhanced through practice to the extent that students share challenging learning goals, adopt self- assessment and evaluation strategies, and develop error detection procedures and increased self-efficacy to tackle more difficult tasks leading to lesson mastery and comprehension. Kang and Han (2015) and Brown (2016) concurred that the efficiency of corrective feedback is impacted by moderating variables such as learners' skill, the context, and the task genre (Kang and Han, 2015). These factors were not included during our meta-analysis. High-information feedback includes task, process, and (sometimes) self-regulation information.

Manifested Teaching – Learning Experiences of Teachers in Blended Modality in terms of Complex Thinking and Transfer

Shown in Table 2.5. teachers' most manifested teaching – learning experience in blended modality in terms of complex thinking and transfer. The data shows that the teachers primarily provide activities that promote transfer of knowledge and skills with the highest obtained mean of 4.32 with standard deviation of 0.57 and interpreted as often manifested followed by guides the learner in applying what they have learned (mean=4.31, sd=0.58) and asks learners some questions that help them access and integrate knowledge (mean=4.28, sd=0.62) and both interpreted as often manifested. On the contrary, indicator showing demonstrate to the students how to integrate ICT in their daily activities got the lowest mean of 4.03 with the standard deviation of 0.64 interpreted as often manifested.

Generally, all the indicators gained the general weighted average mean of 4.20 with standard deviation of 0.61 interpreted as often manifested.

Table 2.5. *Teachers' Most Manifested Teaching – Learning Experience in Blended Modality in terms of Complex Thinking and Transfer*

Indicators	*Mean*	*Std. Deviation*	*Verbal Interpretation*
1. Engages the learners in complex thinking for transfer of learning.	4.15	0.62	Often Manifested
2 Allows the learner wrestle with complex and ICT in their daily activities	4.11	0.65	Often Manifested
3. Demonstrates to the students how to integrate learned.	4.03	0.64	Often Manifested
4. Guides the learner in applying what they have access and integrate knowledge	4.31	0.58	Often Manifested
5. Asks learners some questions that help them knowledge and skills	4.28	0.62	Often Manifested
6. Provides activities that promote transfer of autentic problems	4.32	0.57	Often Manifested
Mean	4.20	0.61	Often Manifested

The findings imply that concerning complex thinking and transfer, the most often manifested teaching and learning experience of the teachers is the integration of activities that encourage students to transfer knowledge and skills in into practical situations. This implies that the teachers employ "What I can do?" related activities with contextualized situations for students to perceive meaningful situations where they can apply the concepts and knowledge they learned while employing the skills they acquired. This is also verified from the fact that they usually include performance-based assessments for the students to demonstrate transfer of knowledge through collaborative activities with authentic assessment strategies. However, they find it hard to always use ICT in the blended modality because of technical issues and unreliable internet that only adds to the challenges in blended modality.

In conformity with the present study, Petty (2018) said that in blended pedagogy, students are encouraged to employ their critical thinking abilities to identify collaborative answers to complex global challenges. In certain instances, blended learning settings enable cross-cultural collaboration among international students (Petty, 2018). When educators think about blended learning, the station rotation model and the flipped classroom model are the two most prevalent classroom models that come to mind (Ghoul, 2013; Horn & Staker, 2014). Also, Brookhart in Susan (2014) emphasized the need of assessing higher-order

thinking throughout all phases of instruction and assessment, including formative and summative evaluations. On the other hand, transfer is not necessarily the product of a standard teaching and testing routine, regardless of how rigorous the course of study. Only when teachers educate and assess for understandings that are applied to circumstances can transfer occur (Wiggins, 2013).

Teachers' Perception on the Instructional Effectiveness of Blended Modality in terms of Teaching Outcomes

Presented in Table 3.1. teachers' perception on the instructional effectiveness of blended modality in terms of teaching outcomes. The results showed that the students' outputs are objectively and effectively monitored earned the highest mean of 4.11 with the standard deviation of 0.72 interpreted as effective followed by indicators such as the learning objectives are successfully achieved (mean=4.04, sd=0.73) and the written assessments are conducted meaningfully (mean=4.01, sd=0.75) and both interpreted as effective. Generally, all the indicators earned the general weighted average mean of 4.02 with the standard deviation of 0.73 and interpreted as effective.

Table 3.1. *Teachers' Perception on the Instructional Effectiveness of Blended Modality in terms of Teaching Outcomes*

Indicators	*Mean*	*Std. Deviation*	*Verbal Interpretation*
1. The learning objectives are successfully achieved.	4.04	0.73	Effective
2. The discussion can be facilitated with ease.	3.95	0.71	Effective
3. The written assessments are conducted meaningfully.	4.01	0.75	Effective
4. The students' performances are assessed effectively monitored	3.97	0.74	Effective
5. The students' outputs are objectively and effectively.	4.11	0.72	Effective
Mean	4.02	0.73	Effective

The findings imply that all the indicators are effective in attaining the teaching outcomes with the use of blended modality. However, the teacher mostly believed that blended modality adds to the objectivity of assessing students' performance both in written and performance-based outputs as well as properly monitoring students' progress. With blended modality, the teachers can observe how students work and determine the right pace, instruction, language, and interventions if needed according to the set goals and learning expectations. Also, with the blended learning, outputs are demonstrated properly unlike in pure modular learning with interactions were limited and observance of students' personal accomplishment of outputs are puzzled by parent interventions and subjective involvement of other factors.

Similar to the current study, Educator performance standards often outline the knowledge, abilities, behaviors, and attitudes of highly effective educators in relation to the results of education (Learning Forward Organization, 2022). Teaching results are also products of instructors' attitudes, beliefs, and perspectives that change in the classroom when they play a vital role in fostering the academic growth of their pupils, particularly when offering means to make information more relevant (Dursun, 2019). When teachers are not provided with the appropriate coaching strategies for new development and high-quality knowledge, they tend to have little or no professional pride. Individuals' teaching confidence would be affected by their self-efficacy and attitudes surrounding technology utilization (Abdalhadi, 2016; Dursun, 2019). Also, Hui et al. (2018) observed that students' learning attitudes and academic performance increased when instructors used purposeful design of learning. Similarly, Arifin and Herman (2017) found that fifth graders' conceptual comprehension and self-regulated learning skills improved when using a web-enhanced mathematics course.

Teachers' Perception on the Instructional Effectiveness of Blended Modality in terms of Engagement

Shown in Table 3.2. teachers' perception on the instructional effectiveness of blended modality in terms of engagement. Data revealed that with the highest mean of 3.99 with the standard deviation of 0.75, the learners actively participate with the ease of checking which is interpreted as effective. This is followed by the learners follow the directions with clarity (mean=3.98, sd=0.80) and the students talk and respond to questions freely (mean=3.97, sd=0.75) and were both interpreted as effective. Generally, all indicators obtained the general weighted average mean of 3.96 with the standard deviation of 0.75 and interpreted as effective.

Table 3.2. *Teachers' Perception on the Instructional Effectiveness of Blended*

Indicators	*Mean*	*Std. Deviation*	*Verbal Interpretation*
1. The learners actively participate with ease of modality in terms of engagement.	3.99	0.75	Effective
2. The students talk and respond to questions.	3.97	0.75	Effective
3. The learners follow the directions with clarity.	3.98	0.80	Effective
4 The students minimize noise or distractions.	3.95	0.71	Effective
5. The modular and online activities are completed.	3.93	0.77	Effective
Mean	3.96	0.75	Effective

The findings indicate that in blended modality, all the presented indicators were effective such as students can participate, talk and respond, follow directions, minimize noise and distractions, and complete modular and online activities. However, among all indicators, students' participation is mostly noticeable. With the blended modality, the teachers encourage and tap the best out of the students to engage in different activities with total participation. Moreover, because all instructions and discussions are clearer in the blended modality with the guidance of the teacher, the students can easily respond with limited difficulties in personal comprehension of the topics. However, since not all students have the same level of cognitive intelligence and skills, not all learners were able to fully accomplish the modules or activities within the indicated time. This further implies the need for reprogramming of the lesson where everyone in the class can relate and be in the same pace of learning engagement toward total attainment of the set learning objectives.

Similar with the current results, related studies showed that blended learning enables instructors to engage and assess their students from the beginning of the school year and to establish student-centered stations to promote accountability and growth via the use of technology-based education (Duncan-Hudspeth, 2018). Blended learning helps teachers to feel less pressure and have tools readily available to help students, particularly English Language Learners, master any curriculum area with assistance (Buwono & Ciptaningrum, 2019). The utilization of blended-based training provides for increased student involvement and participation (Baragash & Al-Samarraie, 2018; Bowyer & Chambers, 2017). In a case study provided by Benson, Anderson, and Ooms (2011), the majority of participants expressed enthusiasm for the use of ICT-based education using a blended learning strategy. Gedik, Kiraz, and Ozden (2013) conclude that the adoption of blended-based education encourages more student involvement and participation.

Teachers' Perception on the Instructional Effectiveness of Blended Modality in terms of Competencies

Shown in Table 3.3. teachers' perception on the instructional effectiveness of blended modality in terms of engagement. Data revealed that with the highest mean of 3.99 with the standard deviation of 0.75, the learners actively participate with the ease of checking which is interpreted as effective. This is followed by the learners follow the directions with clarity (mean=3.98, sd=0.80) and the students talk and respond to questions freely (mean=3.97, sd=0.75) and were both interpreted as effective. Generally, all indicators obtained the general weighted average mean of 3.96 with the standard deviation of 0.75 and interpreted as effective.

Table 3.3. *Teachers' Perception on the Instructional Effectiveness of Blended*

Indicators	*Mean*	*Std. Deviation*	*Verbal Interpretation*
1. ICT can effectively blend with modules for the learners.	3.94	0.83	Effective
2. The discussion with either synchronous or asynchronous session can be facilitated efficiently.	3.93	0.67	Effective
3. Technical problems with the devices in the blended modality can easily productively be utilized.	3.78	0.71	Effective
4 Tools and educational applications in class can be solved.	3.89	0.75	Effective
5. Skills in the use of blended modality can easily be trained.	3.86	0.74	Effective
Mean	3.88	0.74	Effective

The findings indicate that in blended modality, all the presented indicators were effective such as students can participate, talk and respond, follow directions, minimize noise and distractions, and complete modular and online activities. However, among all indicators, students' participation is mostly noticeable. With the blended modality, the teachers encourage and tap the best out of the students to engage in different activities with total participation. Moreover, because all instructions and discussions are clearer in the blended modality with the guidance of the teacher, the students can easily respond with limited difficulties in personal comprehension of the topics. However, since not all students have the same level of cognitive intelligence and skills, not all learners were able to fully accomplish the modules or activities within the indicated time. This further implies the need for reprogramming of the lesson where everyone in the class can relate and be in the same pace of learning engagement toward total attainment of the set learning objectives.

Same with the current findings, competencies are seen as prerequisites of "competency-based" teacher education and consist of the knowledge, abilities, and values a teacher-in-training must display in order to successfully complete a teacher education program (Houstan, 1987 cited in Nessipbayeya, 2017). Also, in response to the requirement for K–12 teacher-specific competences, Pulham and Graham (2018) evaluated 18 papers including either online or BT standards. Their investigation was restricted to five white papers, two books, one literature review, and one website due to the scarcity of peer-reviewed research in this field. Lastly, Short, Graham, and Sabey (2021) analyze a representative sample of 959 artifacts centered on BT practices in order to identify the proficiencies crucial to K–12 BT. The dispositions recognized for BT were present in 87.9% of the artifacts, along with personalization competencies in 58.3%, technology skills in 54.0%, data practices in 46.0%, implementation competencies in 37.1%, online integration competencies in 30.4%, and online interaction competencies in 5.6%.

Significant Relationship between Instructional Effectiveness of Blended Modality and Respondents' Perception

Depicted in Table 4.1. is the relationship between instructional effectiveness of blended modality and respondents' perception on the challenges to blended modality. The analysis of data showed that in terms of issue of context with the p-values of 0.007 (Teaching outcomes), 0.036 (Engagement), and 0.001 (Competencies) that were lower than 0.05 level of significance, the null hypothesis is rejected. Also, with the r-values of .220 (Teaching outcomes) and .261 (Competencies), weak relationship was identified. However, in terms of engagement with .173 r-value, very weak relationship was identified.

Table 4.1. Relationship between Instructional Effectiveness of Blended Modality and Respondents' Perception on the Challenges to Blended Modality

Challenges to Blended Modality	*Instructional Effectiveness*	*Pearson r Coefficient*	*p-value*
Issue of Context	Teaching Outcomes	.220	0.007
	Engagement	.173	0.036
	Competencies	.261	0.001
Learning Design	Teaching Outcomes	.302	0.000
	Engagement	.306	0.000
	Competencies	.337	0.000

Legend: Significant at ≤ to 0.05

Additionally, in terms of learning design with the p-values of 0.000 in instructional effectiveness that is lower than 0.05 level of significance, the researcher rejected the null hypothesis. And, with the r-value of .302 (Teaching outcomes), .306 (Engagement), and .337 (Competencies), weak relationship was identified between instructional effectiveness and learning design of the challenges to blended modality.

The findings indicate that there is generally significant relationship between the instructional effectiveness of blended modality and the respondents' experienced challenges in its implementation. However, though significant, the relationship is weak and negligible. This comes because of the number of respondents, that though there is weak relationship, it was observed among majority of the respondents that made it significant. Also, the findings imply positive weak relationship that with the low increase in the degree of challenge increases, the effectiveness of blended modality also increases at the same level in the number of respondents in both issue of context and learning design. This can be traced back from the collaborative efforts of the teachers and schools upon cognition of the challenges in the actual learning scenarios that when there are more challenge, the teachers doubled their efforts in the conduct of blended learning to overcome the observed or perceive challenges. Additional factor can also be of the concern of the

school and the collaboration of the stakeholders that overwhelm the issues that may rise in the environment and the need to strategize learning designs and curriculum.

Conforming with the current findings, Halverson and Graham (2019), found that there is a correlation between the challenges experience by learner's in engagement and significant educational outcomes as reflected in instructional effectiveness of blended modality, such as academic success and satisfaction. Although research is currently examining learner involvement in mixed environments, no theoretical framework guides inquiry or practice, and engagement definitions and operationalizations lack consistency and clarity. To determine if changes in instructional approaches (facilitators) result in increased learner engagement, it is vital to develop definitions, models, and assessments of the characteristics that indicate learner engagement (measured via indicators). Likewise, competence is defined as "an underlying individual characteristic that is causally related to effective or superior performance." These distinguishable characteristics include enduring motivations, traits, self-concepts, values, knowledge, and abilities.

Significant Relationship between Instructional Effectiveness of Blended Modality and Respondents' Perception on the Learning Experiences

Table 4.2. relationship between instructional effectiveness of blended modality and respondents' perception on the learning experiences.

Concerning the learning experiences, the r-value of .520 (Teaching outcomes), .451 (Engagement), and .437 (Competencies) were identified and interpreted as having moderate relationship with the p-value of .000 that is lower than 0.05 level of significance in all dimensions of instructional effectiveness that rejected the null hypothesis.

Table 4.2. *Relationship between Instructional Effectiveness of Blended Modality and Respondents' Perception on the Learning Experiences*

Learning Experiences	*Instructional Effectiveness*	*Pearson r Coefficient*	*P-value*
Learning Environment	Teaching Outcomes	.520	.000
	Engagement	.451	.000
	Competencies	.437	.000
Clear Shared Outcomes	Teaching Outcomes	.520	.000
	Engagement	.470	.000
	Competencies	.393	.000
Varied Content Materials and Method	Teaching Outcomes	.748	.000
	Engagement	.635	.000
	Competencies	.635	.000
Practice and Feedback	Teaching Outcomes	.757	.000
	Engagement	.613	.000
	Competencies	.596	.000
Complex Thinking and Transfer	Teaching Outcomes	.840	.000
	Engagement	.690	.000
	Competencies	.670	.000

Also, in terms of clear shared outcomes with the r-values of .520 (Teaching Outcomes), 470 (Engagement), and .393 (Competencies) were identified having moderate relationship with. Also, with the p-values of .000 in instructional effectiveness which also rejected the null hypothesis at 0.05 level of significance.

Additionally, concerning the varied content materials and method, the r-values of .748 (Teaching outcomes), .635 (Competencies), and .635 (Engagement) were identified with strong relationship that was significant at 0.05 level of significance where the p-value of 0.000 were determined in instructional effectiveness that rejected the null hypothesis. Moreover, in practice and feedback strong relationship was identified in terms of teaching outcomes (r=.757) and engagement (.613) but moderate relationship with competencies (.596) which also rejected the null hypothesis at .05 level of significance with the p-value of .000 in instructional

effectiveness. Lastly, with the complex thinking and transfer strong relationship were identified with engagement (r=.690) and competencies (r=.670) but with very strong relationship with teaching outcomes (.840). Also, the p-values resulted to .000 that was lower than 0.05 level of significance which rejected the null hypothesis.

The findings indicate that there was a significant relationship between the instructional effectiveness of the respondents' learning experiences. This is generally positive and moderate concerning learning environment and clear shared outcomes but positively strong in terms of varied content materials and methods, practice and feedback, and complex thinking and transfer. Results also indicate that when there is moderate increase in meaningful experiences of the students in learning environment and clear shared outcomes, the instructional effectiveness in teaching outcomes, engagement, and competencies also reflect moderate increase that is significantly observed among a number of respondents. Also, with the strong relationship between the instructional effectiveness and learning experiences show that the significant increase in the learning experiences of the students in the use of content materials and methods, practice and feedback, and complex thinking also reflects significant increase in teaching outcomes, engagement, and competencies of the learners.

The relationship can be traced back from the learners' acquisition of the meaningful learning experiences that help them engage in different activities, improve their acquisition of the most essential learning competencies, and enhanced their demonstration or completion of the teaching outcomes. Whenever there will be a movement in the experiences of the students in learning, the effectiveness of using blended learning in the instruction also move noticeably and it is felt by the students. This further implies the need to improve teachers' skills in developing the learning space of the students toward more effective delivery of instruction that can also maximize the benefits and effects of blended learning modality.

Similar to the current findings, teachers monitor and assess students' participation in a blended mode of instruction. Learner's experiences and engagements with cognitive and emotional energy to complete a learning activity (Schunk & Mullen, 2012), has been demonstrated to correlate with significant educational outcomes, such as academic performance, perseverance, satisfaction, and a sense of community (Wang & Degol, 2014).

Conclusion

This study aimed to determine the teaching-learning challenges and instructional effectiveness encountered in public elementary schools with the use of blended modality. This aimed to identify the public elementary school teachers' perception on the teaching- learning challenges they encounter in blended modality as to issue of context and learning design; the teachers' most manifested teaching-learning experiences in blended modality as to learning environment, clear-shared outcomes, varied content, materials and methods of instruction, feedback and practices, and complex thinking and transfer; teachers' perception on the instructional effectiveness of the blended modality as to teaching outcomes, engagement, and competencies; and identify the relationship between instructional effectiveness of blended modality and respondents' perception on challenges to blended modality and learning experiences. This employed the descriptive survey of quantitative method as participated by 15 public elementary schools with 148 elementary teachers who were selected using purposive sampling procedures. Survey type questionnaires were developed and validated to gather data with properly established communications with DepEd officials and personnel. Weighted Average Mean (WAM) and Pearson R Correlation.Based on the study's results and conclusions, several recommendations were made. The study revealed difficulties and challenges in the conduct of blended modality, hence, the teachers are suggested to attend training on the use of alternative assistive technology in teaching the subjects that may serve as the blending modality to the common modality of the students and parents that is appropriate to learners' context without compromising the learning designs. Since the study showed that learning environment, materials, and feedback are often manifested, the school heads and advisers are also recommended to prioritize the establishment of proper connections and collaborations with the parents and stakeholders which are the keys in creating positive learning atmosphere toward facilitating clear students' learning outcomes, understanding the meeting the learners' needs, and providing real-life activities for continuous learning beyond the school borders. The results also showed that the blended modality is effective, therefore, the educational leaders and DepEd officials are suggested to strengthen the implementation of blended modality as it was found effective in terms of teaching outcomes, engagement, and competencies through relative memoranda, upskilling of teachers, and provision of the necessary resources that is sustainably

appropriate in the schools' context.Findings also showed significant relationship on the challenges to blended modality and the learning experience, hence, parents and students are also recommended for separate orientation on the different aspects and dimensions of blended learning that can maximize its instructional impact as how it is used and implemented by the school and teachers.

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