

(REVIEW ARTICLE)



## English teachers blended learning teaching competencies in Angono national high school: Basis for school learning action cell

Alain Fontanilla Razalan \*

*Department of Education, Division of Rizal, Angono National High School/ Department of English and Applied Linguistics, De La Salle University, Manila, Philippines.*

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### Abstract

Blended learning became increasingly popular particularly with the introduction of COVID-19 which posed a significant issue in the field of education. Because schools in the Philippines were closed, instructors' pedagogies evolved into remote learning modalities in various forms and platforms and blended learning was introduced. Confronted with such scenario, the purpose of this study was to look at the English teachers' blended learning teaching skills at Angono National High School which served as the foundation for the School Learning Action Cell, or SLAC. Particularly, it aimed to investigate the English teachers' level of blended learning teaching competencies with respect to online integration, data practices, and personalization by applying the descriptive type of research. Participants of this study were ten (10) Senior High School teachers of Angono National High School who were teaching English for the School Year 2021-2022. Findings of the study connotes that demographic profile of the respondents are not significant thus this failed to reject the hypothesis. Based on the findings, the paper concludes that planning and preparation are the keys in providing effective blended learning teaching. Moreover, in expectations for blended learning, student involvement should be clearly communicated and structured to complement the blended learning mode. Still, as a work in progress, this study suggests future investigation in a different location and the use of other factors in teaching competences in blended learning.

**Keywords:** Blended learning; English teachers; Competencies; School Learning Action Plan

### 1. Introduction

Blended learning gained more and more popularity specially in the advent of COVID-19 which posed a serious challenge in the world of education. In the Philippines, since schools were closed, teachers' pedagogies transpired into remote learning modalities in various forms and platforms thus, blended learning was injected.

In general, blended learning is one of the key modes in teaching and learning process in the 21<sup>st</sup> century. It is considered an educational method that leads to the transmission of both content (Zheng et. al., 2021; & Sefriani, et. al., 2021), knowledge (Ożadowicz, 2020; Kumar et. al., 2021; & Oweis, 2018) and skills (Nijakowski et. al., 2021; Al-Fodeh et. al., 2021; & Bordoloi et. al., 2021) which can unveil very good outputs of students and maximized preparation of both students and teachers. For teachers, blended learning is a combination of the classical classroom set-up and contemporary educational technology. So, to speak, it is a balance of both tradition and the modern pedagogies.

However, according to Alvarez (2020) and Yarborough (2021) blended learning is still on it's pre conceived age. They posited that there are still a lot of problems to consider and reconsider which centers on the effective and efficient

\* Corresponding author: Alain F. Razalan

Department of Education, Division of Rizal, Angono National High School/ Department of English and Applied Linguistics, De La Salle University, Manila, Philippines.

delivery of subjects and disciplines. Moreover, teachers' concerns on the pedagogies, blended learning are still in question of whether there is the presence of learning.

A plethora of studies showed that blended learning if used properly and accordingly poses great potential (Mabuan & Ebron 2016; Mahyoob, 2020; Amir et. al., 2020; & Verde & Valero, 2021). However, the use of blended learning requires a lot of training of teachers both in the computer technicalities, internet connectivity, facilities and equipment, and teachers' pedagogies in blended learning. Hence, an inquiry on their teaching competency is needed in order to grasp the needs of the teachers that would benefit the learners at the end.

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## **2. Review of Related Literatures**

The studies and literatures to this paper is divided into two topics, first is the concept of blended learning and second is the blended learning in the Philippines.

### **2.1. Blended learning**

As mentioned, blended learning method is highly anchored on (the latest) technology. As defined by Picciano (2006), Lothridge et al. (2013) and Winarto, et. al. (2019) blended learning in the academe is a style where learners engage via media platforms. Moreover, Bonk & Graham (2006), Bersin (2004) and Garrison & Kanuka (2004) articulated that blended learning systems can be termed as a hybrid where classroom face to face modality is mixed with online class instruction. This means that there is an equal allotment between the online and face to face classes.

In technical terms with regard to blended learning, subject disciplines are embraced in a web based asynchronous and synchronous classes that also employ real classroom set-up (Stein & Graham, 2014; Novak & Tucker, 2021; Tucker, Wycoff, & Green, 2016; & Lim & Wang, 2016). With the presence of scheduled synchronous classes, teachers' classroom preparations are maximized (Khader, 2016; Utami, 2017; Kintu, Zhu, & Kagambe, 2017; & Bervell et.al., 2021) and students can breathe with the demands and constraints of face-to-face classes (Ahmed, 2011; Habib, 2019; & Means et.al., 2013). Students in blended learning are given flexibility to inhale and exhale in their class thus giving them more ample time to learn on their own pace and be responsible on their own learning styles and management. In simplest meaning, blended learning is the integration of face-to-face and online learning, the other being traditional while the other being mediated by the computers. Hence, teachers must be able to have flexibility, adaptability, and tailor-fit pedagogies in both worlds.

### **2.2. Blended learning in the Philippines**

In the study of Tupas & Linas-Laguda (2020) pointed that blended learning approach assists learners towards positive outcomes. In achieving this positive outcome, teachers become instrumental if they are professionally equipped on handling blended learning classes. However, still lack of enhancement trainings, teachers in the basic education sector finds it hard to execute blended learning (Perante et. al., 2021).

Besides teacher training, another serious challenge in blended learning is the internet connectivity and access (Lapitan et. al., 2021; & Balolong, 2022). Some schools are not yet connected to the internet which defeat the purpose of blended learning. Moreover, assuming that connectivity is stable, teachers' readiness on the utilization of web-based and digital courseware and materials like audio-visual conferencing, interactive quizzes, and storage is still a challenge. There are cases where in the students are more tech-savvy on such which teachers find it challenging to interconnect and interface with the learners (Hipol et. al., 2020). It cannot be questioned that teachers can easily navigate face to face classes, however, the navigation in the online class is a different matter for it requires a mastery of technicalities from crafting an online activity, examination links, and creating game-based tasks.

In line with the technological trainings of teachers on blended learning, the study of Adefuin (2020) found out that even if there is a need on improving the computer skills of the educators this is surpassed by the willingness of teachers to be trained on blended learning. In the study, it showed that teachers are motivated towards harnessing the blended learning.

From the perspective of the students, on the investigation of Hinampas et.al. (2018) & Calamlam (2016) posited that even before the pandemic, blended learning approach put learners in their stronger and greater performance. In a blended learning environment, teachers are urged to be more innovative and creative to uplift the academic achievement of the students. Because of this reason, teachers must harness not only the mastery of instructional

approaches in blended learning but also they should can accommodate the instructional materials and assessment of both academic performance and practical competencies (Fabito et. al., 2020; Eliveria et. al., 2019; & Villanueva, 2021).

For Abbacan-Tuguic (2021) student respondents ruled-out that there is a clear technical computer skills gap and technology lapses. This can be seen to gadgets and devices used in blended learning, connectivity failures, and unreliability and its' stability. Confronted with this scenario, still the learners and teachers exhibited positive behavior towards blended learning (De La Torre, 2022). Having the digital classroom as the main feature of blended learning, educational institutions focused more on purchasing and investing to digital devices wherein this must be paralleled with capacitating teachers and learners on the blended learning modality. In sum, blended learning is a positive answer to the arising challenges in pedagogy. Hence, careful planning, training, and consultation in order to execute blended learning in educational institutions is therefore a must.

### 2.3. Statement of the Problem

In light of the foregoing investigation, the following questions were enumerated

- What is the demographic profile of the teachers in terms of:
  - Age
  - Sex;
- What is the English teachers level of blended learning teaching competencies with respect to:
  - Online integration
  - Data practices; and
  - Personalization?
- Is there a significant difference between the demographic profile of teachers and the English teachers' level of blended learning teaching competencies?

### 2.4. Hypothesis

The following null hypothesis was tested:

- There is no significant difference between the demographic profile of teachers and the English teachers' level of blended learning teaching competencies.

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## 3. Methodology

This study used a quantitative method of research, in particular descriptive research. According to Creswell (2008) this research design unveils the relationship between the established variables and in forming differences among them allows the prediction of a phenomena.

This paper paid attention to interrelationships that occurred between and among variables. Connections and correlations to the demographic profiles, and English teachers' blended learning teaching competencies are discussed through a discourse of support studies.

### 3.1. Participants

The participants of this study were ten (10) Senior High School teachers of Angono National High School who were teaching English for the School Year 2021-2022. The respondents were selected through convenient sampling technique.

### 3.2. Research Instrument

This study utilized and modified the research instrument used by Graham et. al. (2022). In order to crosscheck the viability of the instruments within the context and research locale, two mode of instrument validation was done. First is the expert validation wherein the instrument was handed down to five (5) research experts while the second is the field validation. The field validation was executed outside the research locale wherein similar respondents and parallel setting were considered. The comments and suggestions from the experts and field validation respondents were incorporated on the instruments.

#### 4. Results and discussion

**Table 1** The profile of the respondents in terms of age, and sex

Profile of the Respondents	Number	Percentage	Rank
<b>Age</b>			
25-35 years old	2	20	2
35-55 years old	8	80	1
Total	10	100%	
<b>Sex</b>			
Male	0	0	2
Female	10	100	1
Total	10	100%	

It can be surmised from Table 1 that majority of the respondents are 35-55 years old, with 8 individuals that is equaled to 80% of the population, hence, ranking number 1. This is followed by 25-35 years old with 2 respondents which is equaled to 20% that ranked no. 2. In addition, the table shows that all the respondents were female.

**Table 2** English Teachers Blended Learning Teaching Competencies with respect to Online Integration

S.N.	Online Integration	Weighted Mean	VI
1.	English teachers can plan how to effectively combine in-person and online teaching.	3.69	VHC
2.	English teachers can create activities that integrate the in-person and online spaces.	3.65	VHC
3.	English teachers can evaluate the design of blended instruction, assessments, and activities.	3.55	VHC
4.	English teachers can create guidelines for managing a blended lesson in regards to behavior (hardware, remembering passwords, student movement).	3.67	VHC
	Average	3.64	VHC

Legend: VI = Verbal Interpretation, VHC = Very Highly Competent

It can be deduced from Table 2 that with regard to online integration, the respondents obtained a 3.64 weighted mean having a verbal interpretation of VHC or Very Highly Competent.

This means that using online technology to teach gives the teacher more tools to assist students. Online technology offers teachers a variety of tools in addition to materials like e-books and worksheets to aid learners in comprehending the subject matter better. It is crucial for teachers to comprehend how a helpful and proactive approach to technology may benefit both them and their students. To be confident in taking the lead in integrating technology in online programs, educators must possess the essential abilities themselves.

The findings of this study are in conformity with the contentions of Adebo (2018) and Washington (2016) that the online learning for students is greatly influenced by teachers. In blended learning set-up, teachers use technology to successfully impart academic information; in this case, the most crucial aspects of an online course are the teachers' expertise and capacity to guide and direct student learning.

**Table 3** English Teachers Blended Learning Teaching Competencies with respect to Data Practices

S.N	Data practices	Weighted Mean	VI
1.	English teachers can create formative assessments with mastery thresholds.	3.56	VHC
2.	English teachers can use data to recommend focused learning activities to specific students.	3.68	VHC
3.	English teachers can identify important patterns in student performance data.	3.90	VHC
4.	English teachers can use data to evaluate and improve assessments and instructional materials.	3.78	VHC
	Average	3.73	VHC

Legend: VI = Verbal Interpretation, VHC = Very Highly Competent

Table 3 reflects that in terms of data practices, teachers attained a weighted mean of 3.73 with a corresponding verbal interpretation of VHC or Very Highly Competent.

It can be inferred that improved data techniques in particular can help teachers better empower students. Good data techniques may generally give instructors a better data foundation and give students more individualized learning help that is crucial for educators' decision. A very successful classroom assessment practice must include appropriate data management, which lays the groundwork for outstanding student tracking and advancement.

This contention of this research findings is fortified by research outcomes of Queiroz (2019) and Rima (2020) that in an online class, competent teachers can design formative tests with mastery and utilize data to suggest targeted learning activities to learners. Teachers can also spot significant trends in student performance data and teachers may utilize data to examine and enhance tests and teaching resources.

**Table 4** English Teachers Blended Learning Teaching Competencies with respect to Personalization

S.N.	Personalization	Weighted Mean	VI
1.	English teachers can develop a personalization plan for their classes.	3.73	VHC
2.	English teachers can develop a guide for personalizing students' learning goals.	3.65	VHC
3.	English teachers can develop strategies for personalizing learning activities.	3.76	VHC
4.	English teachers can develop strategies for personalizing assessments.	3.58	VHC
	Average	3.68	VHC

Legend: VI = Verbal Interpretation, VHC = Very Highly Competent

Table 4 points out that when it comes to personalization, the respondents achieved a 3.68 weighted mean with a verbal interpretation of Very Highly Competent.

This reveals that both personalization of learning activities and personalization of evaluations are ways that English instructors can create positive learning outcomes. To get the most out of many technologies and student data, teachers in a wide range of positions need personalized style of teaching. Likewise, this indicates that one of the most important qualities that teachers need to possess in today's culture is personalization of learning which has gained significant relevance in the educational setting.

This claim is in consonance with the study conclusions of Gultomn & Suhartini (2021) and Short et. al. (2021) that teachers can create a personalized learning plan for their classrooms as well as a manual for modifying students' learning objectives. Teachers must develop their own data interpretation skills as they have access to additional student data in order to timely modify their lesson. Teachers may be better able to adapt their teaching and learning process to meet the requirements of specific students if they develop their abilities to plan and execute lesson, gather, analyze, and understand the learners.

**Table 5** Significant difference between the age and English teachers' level of blended learning teaching competencies

English teachers' level of blended learning teaching competencies	Group	t	df	Sig.	Ho	VI
Online Integration	25-35 years old	0.898	38	0.375	FR	NS
	35-55 years old					
Data Practices	25-35 years old	-0.805	38	0.0426	FR	NS
	35-55 years old					
Personalization	25-35 years old	0.294	38	0.771	FR	NS
	35-55 years old					
Average	25-35 years old	0.129	38	0.524	FR	NS
	35-55 years old					

Legend: FR = Failed to Reject, NS = Not Significant

It can be deduced from Table 5 that the p-values of age in terms of online integration 0.375, data practices 0.426, and personalization 0.771, and the average of 0.524 are higher than 0.05 value. The findings show that the age of the respondents is NOT SIGNIFICANT to the abovementioned variables in the level of blended learning teaching competencies. The result failed to reject the hypothesis.

This data provides that age does not give different inferences with regards to the mentioned variable of blended learning teaching competencies. It is therefore a challenge to every teacher whatever age group they belong is to grasp online competencies and technology to attain learning success for their students.

The contention of this paper is in agreement with the conclusions of Sun & Chen (2016) and Azizi et. al. (2020) that in a blended learning scenario, students' learning is facilitated, guided, and directed by teachers. Teachers may use technology to enhance their pedagogical strategies and customize learning, which boosts their productivity and effectiveness as teachers.

**Table 6** Significant difference between the sex and English teachers' level of blended learning teaching competencies

English teachers' level of blended learning teaching competencies	Group	t	df	Sig.	Ho	VI
Online Integration	Female	0.765	38	0.449	FR	NS
Data Practices	Female	2.856	38	0.007	R	S
Personalization	Female	1.722	38	0.093	FR	NS
Average	Female	1.781	38	0.183	FR	NS

Legend: FR = Failed to Reject, NS = Not Significant

It can be gleaned from the Table 6 that the p-values of 0.449 for online integration and 0.093 for personalization and the average of 0.183 are higher than the .05 p-value. This connotes that sex is NOT SIGNIFICANT thus this failed to reject the hypothesis.

However, the 0.007 p-value of data practices is lower than the .05 value. This provides that sex with respect to data practices is SIGNIFICANT thus rejecting the stated hypothesis.

In sum, it can be surmised then that sex provides no bearing on the mentioned variables in teachers' level of blended learning teaching competencies. Since all of the respondents are female, this suggest that the total respondents are solid and unified towards the grasping of competencies both in the blended and online teaching. It is vital to be proficient in online and blended learning integration. Innovative teachers have been developing innovative educational delivery strategies for many years by fusing online and in-person learning to bring individuals together electronically.

This contention is in agreement with the findings of Kaur (2013) and Pulham (2018) that blended learning still heavily relies on teachers. Teachers who are proficient in their subject area and have a basic understanding of technology are better prepared to serve the interests of their students both in online and face to face scenario of learning.

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## 5. Conclusion

Planning and preparation are the keys in providing effective blended learning teaching. Expectations for blended learning student involvement should be clearly communicated and structured to complement the blended learning mode. With this in set, it gives the instruction a more personal touch, which is vital regardless of whether on-campus or online learning is the predominant modality. The teacher can generate a high degree of interest, accountability, and accuracy of blended learning approach if teachers with acknowledged competencies also acknowledge the importance and situation of their students. Due to more flexibility and accessibility for both teachers and students of online learning without compromising face-to-face interaction, the approach gives students the best of both worlds. To improve teaching capacity, teachers must be motivated and enthralled to focus efforts on the implementation of blended learning side by side with their competencies in blended learning. The findings of this study suggest that a completely school learning action plan is likely to adequately develop all aspects of an English teacher's competencies in blended learning teaching.

Still this research as a work in progress, recommends further inquiry in a different locale and the use of different variables in teaching competencies in blended learning.

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## Compliance with ethical standards

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### *Disclosure of conflict of interest*

The author declares no conflict of interest.

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## References

- [1] Abbacan-Tuguic, L. (2021). Challenges of the New Normal: Students' Attitude, Readiness and Adaptability to Blended Learning Modality. *International Journal of English Literature and Social Sciences*. Vol-6, Issue-2; Mar-Apr, 2021. Journal Home Page Available: <https://ijels.com/> Journal DOI: 10.22161/ijels
- [2] Adebo, Philip. (2018). ONLINE TEACHING AND LEARNING. *International Journal of Advanced Research in Computer Science and Software Engineering*. 8. 73. 10.23956/ijarcsse.v8i2.549.
- [3] Adefuin, M.C., (2020). A Blended Learning Model for Public Senior High Schools in the Division of Laguna Department of Education-Laguna, Philippines. *The Asian Conference on Arts & Humanities 2020 Official Conference Proceedings*.
- [4] Ahmed, M., (2011). The impact of the use of blended learning in the teaching of chemistry on achievement and guidance towards it and the survival of the impact of learning among secondary students. *J. Sci. Edu.* 14 (3), 173–211.
- [5] Al-Fodeh et. al. (2021). Quality, Effectiveness and Outcome of Blended Learning in Dental Education during the COVID Pandemic: Prospects of a PostPandemic Implementation. *Educ. Sci.*, 11, 810. <https://doi.org/10.3390/educsci11120810>
- [6] Alvarez, Jr., A.A. (2020). Learning from the problems and challenges in blended learning: Basis for faculty development and program enhancement. *Asian Journal of Distance Education*. Volume 15, Issue 2, 2020. Published by EdTechReview (ETR), New Delhi, India, ISSN 1347-9008 <http://www.asianjde.org> This is an open access article under the CC BY-SA license.

- [7] Amir et. al. (2020). Student perspective of classroom and distance learning during COVID-19 pandemic in the undergraduate dental study program Universitas Indonesia. *BMC Med Educ* 20, 392. <https://doi.org/10.1186/s12909-020-02312-0>
- [8] Azizi, S.M., Roozbahani, N. & Khatony, A. (2020). Factors affecting the acceptance of blended learning in medical education: application of UTAUT2 model. *BMC Med Educ* 20, 367. <https://doi.org/10.1186/s12909-020-02302-2>
- [9] Balolong, M. (2022), Challenges of Blended Learning: A Phenomenological Inquiry (May 6, 2022). Available at SSRN: <https://ssrn.com/abstract=4103847> or <http://dx.doi.org/10.2139/ssrn.4103847>
- [10] Bersin, J. (2004). "How Did We Get Here? The History of Blended Learning" (PDF). *The Blended Learning Book: Best Practices, Proven Methodologies, and Lessons Learned*. Wiley. ISBN 978-0-7879-7296-7.
- [11] Bervell et.al., (2021). Blended Learning Acceptance Scale (BLAS) in Distance Higher Education: Toward an Initial Development and Validation. *SAGE Open* July-September 2021: 1–19 © The Author(s) 2021 DOI: 10.1177/21582440211040073 [journals.sagepub.com/home/sgo](https://journals.sagepub.com/home/sgo).
- [12] Bonk, C.J. & Graham, C.R. (2006). *The handbook of blended learning environments: Global perspectives, local designs*. San Francisco: Jossey-Bass/Pfeiffer.
- [13] Bordoloi et. al. (2021). Perception towards online/blended learning at the time of COVID-19 pandemic: an academic analytics in the Indian context *Asian Association of Open Universities Journal* ISSN: 2414-6994 Open Access. Article publication date: 16 February 2021 Issue publication date: 21 May 2021
- [14] Calamlam, J. M. (2016). Effectiveness of Blended E-Learning Approach in a Flipped Classroom Environment. December 2016. Conference: *The Asian Conference on Society, Education & Technology 2016At: Kobe, Japan*.
- [15] Creswell, J.W. (2008). *Educational Research: Planning, conducting, and evaluating quantitative and qualitative research* (3rd ed.). Upper Saddle River: Pearson.
- [16] De La Torre, J. (2022). Using Edmodo in Blended Learning: Its Benefits and Drawbacks. *Asian Journal of Multidisciplinary Studies* Vol. 2, No. 1, (2019) ISSN 2651-6691 (Print) ISSN 2651-6705 (Online)
- [17] Eliveria et. al. (2019). Investigating students' engagement in a hybrid learning Environment. *The International Conference on Information Technology and Digital Applications IOP Conf. Series: Materials Science and Engineering* 482 (2019) 012011 IOP Publishing doi:10.1088/1757-899X/482/1/012011
- [18] Fabito et. al. (2020). Barriers and Challenges of Computing Students in an Online Learning Environment: Insights from One Private University in the Philippines. *International Journal of Computing Sciences Research* (ISSN print: 2546-0552; ISSN online: 2546-115X) Vol. 5, No. 1, pp. 441-458 doi: 10.25147/ijcsr.2017.001.1.51 <https://stepacademic.net>.
- [19] Garrison, D. R. & Kanuka, H. (2004). "Blended learning: Uncovering its transformative potential in higher education". *The Internet and Higher Education*. 7 (2): 95–105. doi:10.1016/j.iheduc.2004.02.001
- [20] Graham, C. R., Borup, J., Jensen, M. A., Arnesen, K. T., & Short, C. R. (2022). K-12 Blended Teaching Competencies. In C. R. Graham, J. Borup, M. A. Jensen, K. T. Arnesen, & C. R. Short (Eds.), *K-12 Blended Teaching (Vol 2): A Guide to Practice Within the Disciplines*, Vol. 2. EdTech Books. <https://edtechbooks.org/k12blended2/competencies>
- [21] Gultom, Adelina & Suhartini, Suhartini. (2021). Student Interaction, Teacher Competence, and Technology in Online Learning: Does it Create a Meaningful Learning?. Conference: *6th International Seminar on Science Education (ISSE 2020)* DOI:10.2991/assehr.k.210326.024
- [22] Habib, H., (2019). Effect of Blended Learning on Student Achievement. *Research Guru: Online Journal of Multidisciplinary Subjects (Peer Reviewed)* 12. 370-373. *Research Guru: Volume-12, Issue-3, December-2018 (ISSN:2349-266X)*.
- [23] Hinampas et.al., (2018). Blended Learning Approach: Effect On Students' Academic Achievement And Practical Skills In Science Laboratories. *INTERNATIONAL JOURNAL OF SCIENTIFIC & TECHNOLOGY RESEARCH VOLUME 7, ISSUE 11, NOVEMBER 2018* ISSN 2277-8616.
- [24] Hipol et. al. (2020). Impact of blended learning instruction in academic performance of grade 10 students in a selected private high school in San Juan City, Philippines. Published under licence by IOP Publishing Ltd *Journal of Physics: Conference Series*, Volume 1470, The 7th South East Asia Design Research International Conference (SEADRIC 2019) 25-27 July 2019, Yogyakarta, Indonesia.



- [25] Lapitan, L., Jr., Tiangco, C. E., Sumalinog, D., Sabarillo, N. S., & Diaz, J. M. (2021). An effective blended online teaching and learning strategy during the COVID-19 pandemic. *Education for Chemical Engineers*, 35, 116–131. <https://doi.org/10.1016/j.ece.2021.01.012>.
- [26] Lim, C. P. & Wang L. (2016). Blended learning for quality higher education: selected case studies on implementation from Asia-Pacific Corporate. UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific. ISBN: 978-92-9223-565-9.
- [27] Lothridge, et al. (2013). "Blended learning: efficient, timely, and cost effective". *Journal of Forensic Sciences*. 45 (4): 407–416.
- [28] Khader, N.S.K. (2016). The Effectiveness of Blended Learning in Improving Students' Achievement in Third Grade's Science in Bani Kenana. *Journal of Education and Practice* www.iiste.org ISSN 2222-288X (Online) Vol.7, No.35.
- [29] Kintu, M.J., Zhu, C. & Kagambe, E. (2017). Blended learning effectiveness: the relationship between student characteristics, design features and outcomes. *Int J Educ Technol High Educ* 14, 7 . <https://doi.org/10.1186/s41239-017-0043-4>
- [30] Kumar et. al. (2021). Impact of the COVID-19 pandemic on teaching and learning in health professional education: a mixed methods study protocol. *BMC Med Educ* 21, 439. <https://doi.org/10.1186/s12909-021-02871-w>
- [31] Kaur, Manjot. (2013). Blended Learning - Its Challenges and Future. *Procedia - Social and Behavioral Sciences*. 93. 612-617. 10.1016/j.sbspro.2013.09.248.
- [32] Mabuan, R. & Ebron G., (2016). Blended Learning Approach to Teaching Writing: Using E-mail in the ESL Classroom. Presented at the DLSU Research Congress 2016. De La Salle University, Manila, Philippines. March 7-9, 2016.
- [33] Mahyoob, M. (2020). Challenges of e-Learning during the COVID-19 Pandemic Experienced by EFL Learners. *Arab World English Journal*, 11 (4) 351-362. DOI: <https://dx.doi.org/10.24093/awej/vol11no4.23>
- [34] Means et.al., (2013). The Effectiveness of Online and Blended Learning: A Meta-Analysis of the Empirical Literature. *Teachers College Record* Volume 115, 030303, March 2013, 47 pages. Copyright © by Teachers College, Columbia University, 0161-4681.
- [35] Nijakowski et. al. (2021). The Effectiveness of the Blended Learning in Conservative Dentistry with Endodontics on the Basis of the Survey among 4th-Year Students during the COVID-19 Pandemic. *Int. J. Environ. Res. Public Health*, 18, 4555. <https://doi.org/10.3390/ijerph18094555>
- [36] Novak K. & Tucker C., (2021) UDL and Blended Learning Thriving in Flexible Learning Landscapes, Publisher IMpress, ISBN 9781948334327
- [37] Ożadowicz, A. (2020). Modified Blended Learning in Engineering Higher Education during the COVID-19 Lockdown—Building Automation Courses Case Study. *Educ. Sci.*, 10, 292. <https://doi.org/10.3390/educsci10100292>
- [38] Oweis, T. I. (2018). Effects of Using a Blended Learning Method on Students' Achievement and Motivation to Learn English in Jordan: A Pilot Case Study. *Hindawi Education Research International* Volume 2018, Article ID 7425924, 7 pages <https://doi.org/10.1155/2018/7425924>
- [39] Perante et. al. (2021). Mag-Aral ay Di 'Biro: A Phenomenological Study on the Lived Experiences of the Students on Blended Learning Amidst COVID-19. Vol-7 Issue-1 2021 IJARIIE-ISSN(O)-2395-4396. 13600 [www.ijariie.com](http://www.ijariie.com) 735.
- [40] Picciano, A.G. (2006). Blended Learning: Implications for Growth and Access. *Journal of Asynchronous Learning Networks* 10(3): 95-102
- [41] Pulham, E. (2018). Blended Teaching Competency Assessment. Unpublished doctoral project manuscript, Department of Instructional Psychology and Technology, Brigham Young University, Provo, Utah. Retrieved from [https://scholarsarchive.byu.edu/ipt\\_projects/12](https://scholarsarchive.byu.edu/ipt_projects/12)
- [42] Queiroz, Vera. (2019). Roles and Competencies of Online Teachers. Project: CEST - Centro de Estudos Sociedade e Tecnologia.

- [43] Sefriani, et. al. (2021). Blended learning with Edmodo: The effectiveness of statistical learning during the COVID-19 pandemic. *International Journal of Evaluation and Research in Education (IJERE)* Vol. 10, No. 1, March 2021, pp. 293~299 ISSN: 2252-8822, DOI: 10.11591/ijere.v10i1.20826.
- [44] Short, Graham, and Sabey (2021). K-12 BLENDED TEACHING SKILLS AND ABILITIES: AN ANALYSIS OF BLENDED TEACHING ARTIFACTS. *Journal of Online Learning Research (2021)* 7(1), 5-33. Winner of the 2021 Society for Information Technology and Teacher Education K-12 Online Learning SIG Promising Scholar Award.
- [45] Stein, J. & Graham, C. R. (2014). *Essentials for Blended Learning: A Standards Based Guide*, Taylor & Francis Group. All rights reserved.
- [46] Sun, Anna & Chen, Xiufang. (2016). Online Education and Its Effective Practice: A Research Review. *Journal of Information Technology Education: Research*. 15. 157-190. 10.28945/3502.
- [47] Tucker C., Wycoff T., & Green J.T. (2016). *Blended Learning in Action*. Corwin Teaching Essentials. Imprint: Corwin Edition: 1, SAGE Publications. ISBN: 9781506341156.
- [48] Tupas, F., & Linas-Laguda, M., (2020). Blended Learning – An Approach in Philippine Basic Education Curriculum in New Normal: A Review of Current Literature. *Universal Journal of Educational Research*, 8(11), 5505 - 5512. DOI: 10.13189/ujer.2020.081154.
- [49] Rima, R. (2020). Student Teachers' Acceptance towards Blended Learning in Teaching and Learning Psycholinguistics. *JEEs: Journal of English Education Studies*, 2020, Vol. 3 No. 1, Page: 11-17.
- [50] Utami, I., (2017). The effect of blended learning model on senior high school students' achievement. *SHS Web of Conferences* 42, 00027. <https://doi.org/10.1051/shsconf/20184200027.GC-TALE>.
- [51] Verde A, & Valero J.M. (2021). Teaching and Learning Modalities in Higher Education During the Pandemic: Responses to Coronavirus Disease 2019 From Spain. *Front. Psychol.*, 24 August 2021 Sec. Educational Psychology. <https://doi.org/10.3389/fpsyg.2021.648592>.
- [52] Villanueva, J.A.R. (2021). Teaching Presence in K-12 Blended Learning Classes under the Alternative Delivery Mode. *IJODEL*, Vol. 7, No. 1, (June 2021).
- [53] Washington, R. (2016). *Enabling Change: Faculty and Student Perceptions of Blended Learning*. Unpublished Doctoral Dissertation. University of the Incarnate Word.
- [54] Winarto, et. al. (2019) Students' acceptance towards blended learning implementation. *MSCEIS 2018 Journal of Physics: Conference Series* 1280 (2019) 032031 IOP Publishing doi:10.1088/1742-6596/1280/3/032031.
- [55] Yarborough K.T. (2021). *Teachers' Perceptions of Blended Learning in High School Classrooms*. Unpublished Doctoral Dissertation. Walden University.
- [56] Zheng, W., Ma, Y.-Y., & Lin, H.-L. (2021). Research on Blended Learning in Physical Education During the COVID-19 Pandemic: A Case Study of Chinese Students. *SAGE Open*. <https://doi.org/10.1177/21582440211058196>.