

A CONCEPTUAL FRAMEWORK: CULTURAL BASED APPROACH IN COLLABORATIVE ONLINE LEARNING IN PRIMARY SCHOOLS

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ABSTRACT: Collaborative learning has been utilised throughout the years to deliver educational content for various levels of students in schools. Previously, less emphasis was given to the online support mode as the conventional method exists. However, as schools across the globe closed in response to the Covid-19 pandemic, students from various levels experienced a severe disruption to their learning process. Though most schools quickly began offering some online learning, there have been growing concerns about the effects of this unprecedented shift. In addition, such a paradigm shift has also witnessed parents' significant role in ensuring the effective delivery of educational content through online platforms. In such a situation, parents were expected to support the learning process. However, less support from other stakeholders makes it challenging for parents to support their children's learning online. Although various strategies and best practices exist globally, engaging students, parents, teachers, and relevant stakeholders towards collaborative online learning is crucial. Based on relevant previous studies, engagement towards online learning is highly influenced by the user's cultural background in getting successful collaboration among all stakeholders. Thus, the proposed study aims to investigate and propose a conceptual framework for a collaborative online learning model based on a cultural-based approach. It applies a Systematic Literature Review (SLR) based on relevant previous studies. A preliminary study has conducted a comparative review based on strategies and best practices. Initial findings divulge that cultural background influences the teacher-parent engagement towards collaborative online learning provided by the school and relevant authorities. Therefore, findings from the proposed study could improve the quality of learning in primary schools, in line with SDG4 and 4IR.

KEY WORDS: *Collaborative online learning, Parent-teacher engagement, Conceptual framework and Cultural background*

1. INTRODUCTION

As we enter the 2023 school year, teachers, students, and parents will embark on a new journey with unforeseeable challenges. With these new challenges, it's more important than ever that teachers and parents collaborate to help their children progress without delay (Dong et al. 2020). Before this, parent-teacher relationships may have been tense for some, so how does one navigate this new dynamic during

the Covid-19 pandemic? Before the arrival of the Covid-19 pandemic, delivering education was the sole responsibility of the teachers and school authorities (Matteucci, & Helker 2018). However, during the Covid-19 pandemic, providing educational content has witnessed a shared responsibility between the parents and teachers in the students' learning process. The conventional learning process that employed the face-to-face (F2F) approach has been transformed into an online mode of delivery. In the initial stage of the transformation, several issues emerge. Parents and teachers were in limbo, especially during an online class. Parents and teachers have to improvise based on available scarce resources.

Given the situation, parents played a vital role in supporting their children's online classes and activities. Sometimes, parents must supplement the learning with additional teaching after children's online classes. A preliminary study has been conducted to exhibit that such a global scenario has also happened in Malaysia. Surprisingly, findings show that children were considered naturally competent technology users (Dong et al. 2020). Currently, limited guidelines have triggered further studies in collaborative online learning (Chua et al. 2021; Kearney, & Childs 2021). Even though collaborative online learning promises various benefits for parents, students, teachers and schools, its implementation must be carefully considered. Findings exposed that the success rate for collaborative online learning is not prevalent for its intended purpose (Tong et al. 2021). Engagement between parent-teacher is a contributing factor that could ensure the success of collaborative online learning.

In the preliminary study, a comparative review was conducted based on approaches and best practices in various countries whereby initial findings divulge that cultural background influences the parent's engagement towards online collaborative online learning provided by the school and relevant authority (Cheung et al. 2008; Guo, & Kilderry 2018; Lau, & Ng 2019). Such findings are consistent, concluding that students' engagement in online learning is highly influenced by their cultural background (Nordin et al., 2022). Accordingly, it is crucial to consider the student's cultural background and other relevant stakeholders as it is inclined with the basic principles of User-Centred Design (UCD) (Nordin et al., 2021). However, a vital fundamental question arises: What factors are associated with a parent-teacher cultural background that could influence online collaborative learning? The analysis of cultural background is important in determining a culturally-based approach and how it can be practised in different groups of people to have better engagement between parents and teachers.

By identifying the cultural background, collaborative online learning can be cultivated through an appropriate approach among all stakeholders to improve parent-teacher engagement at primary school. This is because collaborative online learning is essential in stimulating a positive partnership between parents and teachers, which is influenced by culture. Therefore, this study explores the support and common understanding from relevant stakeholders, especially parents and teachers, contributing to student performance and progress at school. Many researchers have identified several approaches that promote collaborative learning and parent-teacher involvement. For example, parents attend PTA meetings at school with teachers to better understand the school's goals and future plans, as Quinn (2020) analysed. This study also highlights the significant role of parent-

teacher engagement in improving the learning process and facilitating efficient communication at school.

Furthermore, the proposed study is also in line with Sustainable Development Growth (SDG) 4, which collectively focuses on providing quality education in accordance with the initiatives of the 4th Industrial Revolution (4IR). SDG 4 aims to create a future where education contributes to the success of individuals and the collective survival and prosperity of the global community (Education for Sustainable Development: A Roadmap Education for Sustainable Development A Roadmap, 2020). In contrast, 4IR is a blend of humans and technology, including technology-based tools. The use of technology assists both teachers and students in the classroom to deliver and acquire knowledge, such as using the online learning platform. According to (Butt et al., 2020), using online learning platforms benefits teachers and students and encourages parents to monitor their children's education using technology. Technology skills and knowledge have become necessary in today's world and can open opportunities for stakeholder collaboration in providing high-quality education. Therefore, collaboration among all stakeholders, including parents, teachers, and schools, is necessary to achieve these goals.

In this study, the research has been structured as follows: the aim and objectives, research method, and followed by literature review. The literature review was expanded to include a review of collaborative online learning, related issues, and challenges in primary schools. Global case studies of parent-teacher engagement and approaches were also reviewed to support collaborative learning. In addition, a preliminary study conducted in Malaysia presented the level of parent support for collaborative online learning. Next, the factors associated with collaborative online learning were emphasised to propose a conceptual framework that involves all stakeholders, including parents, teachers, and schools. The proposed conceptual framework revealed the factors related to parent-teacher engagement in primary school. Finally, future studies and recommendations were outlined at the end of the study.

2. AIM AND OBJECTIVES

This study aims to investigate and propose a conceptual framework of a collaborative online learning model based on a cultural-based approach that could increase teacher-parent engagement in primary schools during and post-pandemic era. Below are specific details of the objective.

1. To review approaches in specific countries that influence engagement in collaborative online learning
2. To identify factors associated with the cultural background of parents and teachers that could influence engagement in collaborative online learning
3. To propose a conceptual framework based on a cultural approach to the collaborative online learning model

3. RESEARCH METHOD

The findings of this study were guided by the Systematic Literature Review (SLR), which is a method for identifying, evaluating, and interpreting all relevant research sources that address the issues under study. The appropriate literature

review was accessed from certified, leading journals applicable to the education industry. The review includes previous and current information, concepts, approaches, and discussions related to collaborative learning to carry out the knowledge of the main topic. A systematic search used specific keywords and terms such as 'collaborative online learning,' 'parent-teacher engagement', 'conceptual framework', and 'cultural background'. The search involved 'go backwards' and 'go forward' steps to categorise and filter the relevant literature review. It ensured that the study only used quality and credible academic journal articles to answer the fundamental research question, leading to attaining the research aims. Finally, the proposed conceptual framework was created by reviewing each article's objectives, designs, data collection methods, and main findings and selecting the best ones.

4. LITERATURE REVIEW

The literature review section comprises three subsections that justify the knowledge of collaborative online learning: a global case study of parent-teacher engagement and preliminary case studies in a Malaysian primary school. The section aims to review previous studies conducted in specific countries, namely Singapore, Hong Kong, Japan, South Korea, Taiwan, Australia, Canada, Finland, and the European Union, that focus on approaches to collaborative online learning. These countries were chosen because collaborative online learning has been widely adopted in primary schools. In addition, emphasis on China has been mainly given because parents' and teachers' cultural background is considered in adopting collaborative online learning.

Besides, a preliminary study was conducted in Malaysia, revealing the potential of collaborative online learning in Malaysian primary schools. By utilising Google Trends and keywords related to collaborative online learning, it was found that there is a high demand for collaborative online learning in primary schools, as indicated by the popularity of Google Classroom. The study further examined the contribution of collaborative online learning involving various stakeholders, including students, parents, and teachers, to support school collaboration. Based on the findings, a proposed conceptual framework has been created to analyse the factors that affect collaborative online learning and parent-teacher engagement. As a result, collaborative online learning has been seen as one method to empower parent-teacher engagement, as studied by (Stroetinga et al., 2021).

4.1. Collaborative online learning

While online learning has been a lifeline for children during school closures, it is no substitute for the classroom and the most vulnerable are left behind (Dong et al., 2020). Many teachers have few resources to adapt their classrooms for online learning, while many students do not have access to a curriculum and learning materials compatible with online learning. Remote classrooms do not reach the most disadvantaged students due to a lack of access to devices and an Internet connection for remote learning. The youngest children often cannot participate due to a lack of support in using technology. Many households must also share learning spaces and devices, making staying focused and learning without interruption challenging. Without support for online learning, many students will feel learning loss, mental distress, and a heightened risk of dropout, especially the youngest learners in critical development stages (Liu et al., 2021a).

To overcome these challenges, collaborative online learning must foster a positive partnership between parents and teachers (Strogilos & Tragoulia, 2013). Support and mutual understanding between parents and teachers of the challenges under remote circumstances must be established. The parent must have better insight into what a student is learning and can assist the Teacher by helping strengthen lessons passively outside of the remote classroom. If a student struggles, there is room for honest dialogue between the parent and Teacher, which can help resolve issues comfortably. The student should learn when there is a good relationship between their parents and Teacher.

Thus, the correlation between a child showing healthy learning habits, better social skills, and better adaptability is evident if there is a strong teacher and parent collaboration (Li et al., 2019a). Strong partnerships between parents and teachers support students' learning and ability to develop lifelong skills while strengthening parents' capacity to engage in their child's school experience. Moreover, establishing a partnership between parents and teachers can help monitor students' progress at school and home and facilitate mutual responsibility towards the student (Al-Hail et al., 2021). A study by (Li et al., 2019b) concluded that high levels of parent-teacher engagement, particularly in developed countries, improve student outcomes such as motivation, attendance and academic achievement.

During the Covid-19 pandemic, the reliance on collaborative online learning has been more than ever, even though it was utilised before the Covid-19 pandemic. Indirectly, it has opened up new frontiers and opportunities for further research on how collaborative online learning can be further applied as part of strategies developed by schools and relevant authorities for re-opening schools following the Covid-19 shutdown (Chua et al., 2021; Kearney & Childs, 2021). Besides, collaborative online learning has become a pioneering topic in education, as scholars have discussed the role of technology in the context of collaborative learning for the past 15 to 20 years (Grothaus & Zawacki-Richter, 2021). Therefore, the global case study has been conducted to measure parent and teacher engagement in primary schools.

4.2. Study of Global Parent-Teacher Engagement in Schools

To identify factors associated with the cultural background of parents and teachers that could influence engagement in collaborative online learning, an empirical study was examined. The preliminary study investigated approaches that support collaborative learning and encourage parent-teacher engagement in various regions, as illustrated in Table 1.

Table 1: Review of the approach that supports collaborative learning that encourages parent-teacher engagement.

No	Country	Approach
1	Singapore	<ul style="list-style-type: none"> ▪ Parent Engagement in the student learning process through government-supported initiatives ▪ Training for parents
2	Hong Kong	<ul style="list-style-type: none"> ▪ Establishment of a Committee on Home-School Cooperation (CHSC) that fostered parent engagement in the school decision-

		making process and promoted home-school cooperation.
3	Japan	<ul style="list-style-type: none"> Parent-Teacher Associations (PTAs) in schools to promote parent engagement in the education process Early intervention by parents based on reports from the school Establishment of the School Governing Committee and the Parents Association
4	South Korea	<ul style="list-style-type: none"> Ministry of Education, Science and Technology has promoted initiatives to increase parent engagement. Training for teachers on parent engagement approach
5	Taiwan	<ul style="list-style-type: none"> Parents representatives in the school management board
6	Australia	<ul style="list-style-type: none"> Central and state government policies to instil the culture of parent engagement Parents' representatives in school councils
7	Canada	<ul style="list-style-type: none"> Establishment of parent advisory councils Provide parents with the opportunity and training to participate in school decisions.
8	Finland	<ul style="list-style-type: none"> Parent engagement starts from the preschool level by involving in the curriculum design. Training on parent engagement for the teachers
9	European Union	<ul style="list-style-type: none"> Parent engagement in education policies and crucial decision-making.

Source: (Maria Manzon, Rifhan Miller, Helen Hong, 2015).

Based on Table 1, policies and initiatives have been established to encourage collaboration between teachers and relevant authorities. It can conclude that engagement between parents, teachers and relevant authorities is crucial in providing quality school education. However, it indicated no formal initiative on collaborative online learning to increase Teacher and parent engagement.

Besides the regions examined in Table 2, the preliminary study also investigated approaches that support collaborative online learning in China. China was selected based on its ranking in 2018 for the Programme for International Student Assessment (PISA): Mathematics, Science and Reading Index – No. 1 out of 79 countries.

Table 2: Approaches that support collaborative online learning.

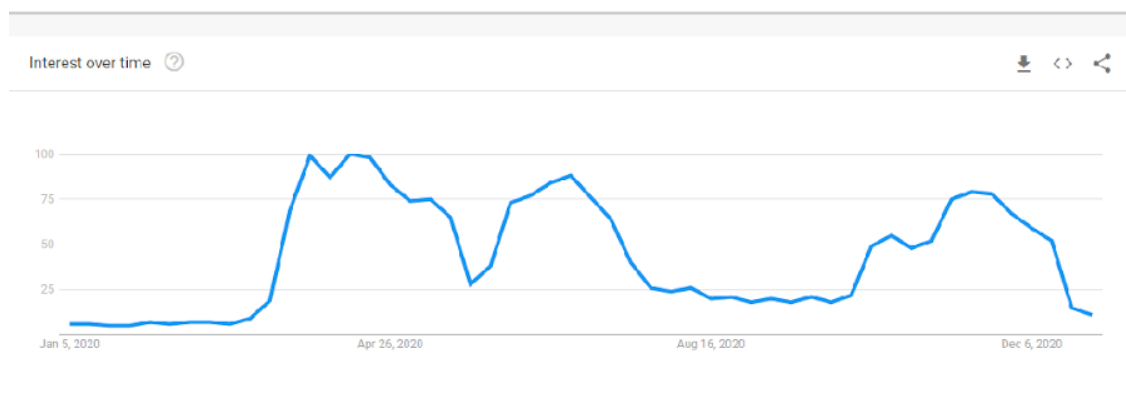
Country	Approach	Source
China	<ul style="list-style-type: none"> Parent knowledge and learning skills Communication among parents Emphasis on culture: teacher, student and parent background 	(K. Guo & Kilderry, 2018)
	<ul style="list-style-type: none"> Initiative and support from the Parent-Teacher Association (PTA) 	(Lau & Ng, 2019)
	<ul style="list-style-type: none"> Parent Engagement in student learning process through online platform 	(Cheung et al., 2008)
		(Tong et al., 2021)

Based on Table 2, it can be clinched that great emphasis is given to initiatives that focus on engagement between parents, teachers and relevant authorities. Engagement is mediated by an online platform regulated by the school authority. Besides that, training and regular meeting are regularly organised by PTA that emphasise parenting knowledge and learning skills which could be applied while assisting their children in daily school activities.

However, the success rate for collaborative online learning is not prevalent for its intended purpose (Tong et al., 2021). Based on findings from other studies, it is recommended to consider a cultural-based approach that could increase teacher-parent engagement in schools (Cheung et al., 2008; K. Guo & Kilderry, 2018; Lau & Ng, 2019). Such findings are consistent, concluding that students' engagement in online learning is highly influenced by their cultural background (Nordin et al., 2021). Thus, a fundamental understanding of the cultural-based approach could aid in formulating the user persona for collaborative online learning that could be useful in terms of interaction design, particularly concerning engagement. To delve deeper into this matter, a preliminary study has been observed in Malaysia's environment to measure parent engagement in children's schools, providing an overview of parental support in children's learning.

4.3. Preliminary Study: Case Study of Parent Support in Malaysia

Previously, it's evident that Covid-19 has severely impacted education practices, especially those related to primary and secondary school, in Malaysia and globally (Yogeswary Kuppusamy, 2021). The preliminary study was conducted based on teachers' and parents' search for educational support in 2019, 2020 and 2021. An analytic-based approach was adopted whereby Google Search Trends was utilised as an analytical tool that visualised teachers' and parents' web search trends (Bacher-Hicks et al., 2021). Keywords such as Google Classroom and its related resources were applied as it is the primary learning management system (LMS) applied in schools in Malaysia. Surprisingly, it reveals that Google Classroom and its related resources were the second-highest keywords searched in Malaysia for 2020, especially at the beginning of the Covid-19 pandemic's lockdown period, as shown in Figure 1. Such findings indicate that parents also sought support for their children's educational needs and demonstrate the importance of a collaborative online learning model for parents, students, and teachers. Furthermore, such findings are consistent in other studies throughout the Covid-19 pandemic's lockdown period (Dong et al., 2020; Liu et al., 2021b; Chua et al., 2021).



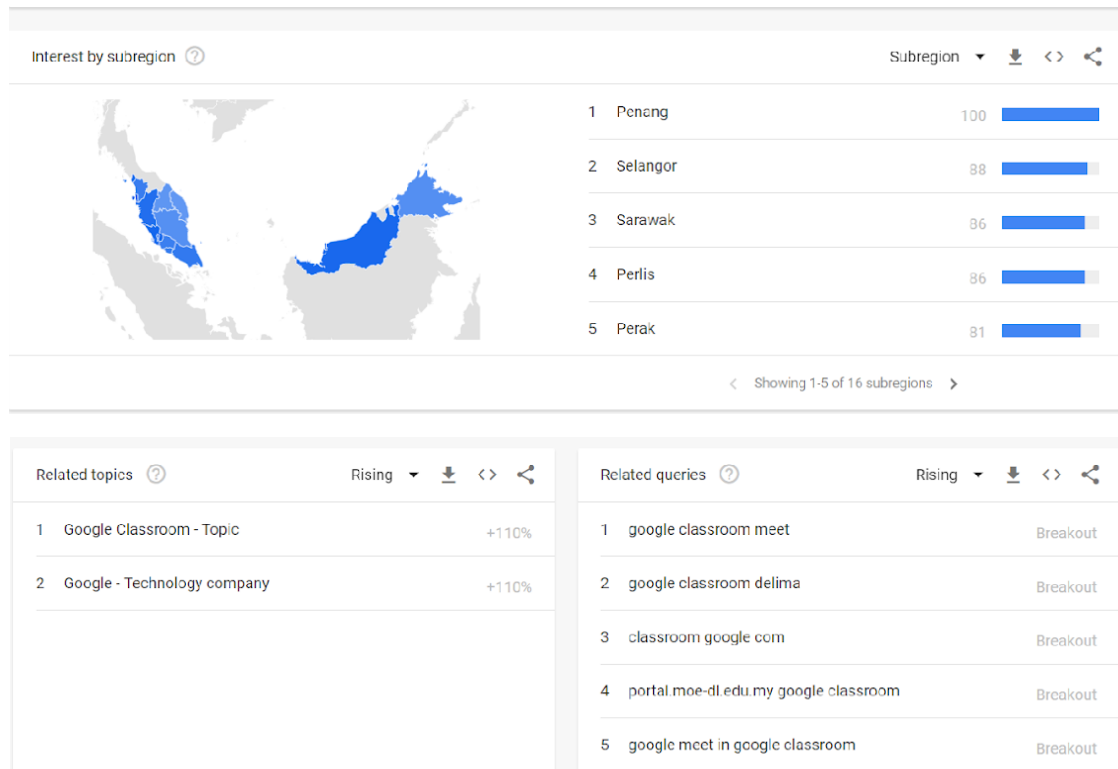


Fig. 1. Web Search Trends in Malaysia for the year 2020

As a result, it can be concluded that parent-teacher engagement has influenced implementation of an effective collaborative online learning model. Various implementation strategies and best practices exist globally but require a cultural-based approach (Hazwani Nordin, Dalbir Singh, 2020, 2021), especially for Malaysian schools. It is related to AKTA PENDIDIKAN, 1996 - Peraturan-peraturan Pendidikan (Persatuan Ibu Bapa dan guru) 1998. P.U.(A) 118: Strategies and best practices for collaborative online learning should complement the existing policies regarding Parent Teacher Association (PTA) in Malaysian schools. It justifies the need for PTA as it is consistent with Sustainable Development Growth (SDG) SDG4 and 4th Industrial Revolution (4IR) that collectively focus on providing quality education.

5. CONCEPTUAL FRAMEWORK

Many studies have shown that the commitment and engagement of all stakeholders (school, Teacher, parents) in ensuring the quality of primary school education positively impact student performance (Ali et al., 2020; Đurišić & Bunijevac, 2017; Popovska et al., 2021). For instance, the positive outcome of the students can be seen through their school attendance, confidence, and motivation to learn, as they are likelier to achieve high scores in their classes (Karuppiah, 2022). However, a study conducted in New York revealed that despite the well-known engagement between parents and teachers, the commitment from parents was low, leading to poor outcomes (Leo et al., 2019).

The study by (Leo et al., 2019) found that the engagement between parents and teachers only occurred when teachers made a significant effort to reach out to parents and involve them in school or children's activities. According to (Y. Guo et

al., 2019), teachers treated parents as clients and only involved them in formal events, failing to encourage them to become Parent-Teacher Association (PTA) members who could make critical decisions for the school. In China, the PTA is a crucial program for all stakeholders to work together and collaborate in providing clear guidance to schools and attention to their children at school and home (Hashim et al., 2018). PTA comprised of parents working together to achieve the school's goals. It could strengthen parent-teacher engagement (Y. Guo et al., 2019).

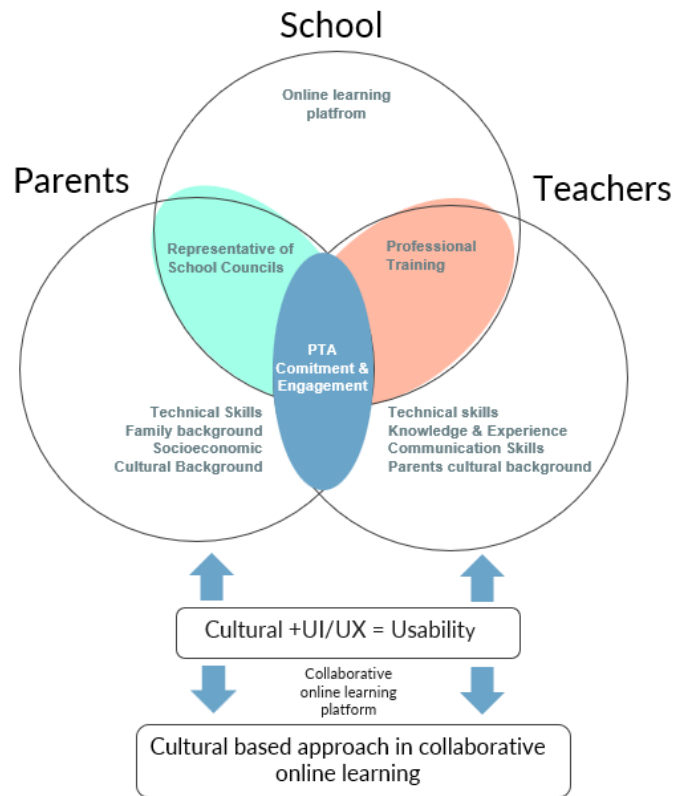


Fig. 2. A proposed conceptual framework

Figure 2 presents the proposed conceptual framework that influences parent-teacher engagement and the key elements to improve such engagement in primary schools, including redefining the role of PTA. PTA serves as a platform for all stakeholders, including parents, teachers, and the school, to meet and exchange opinions, provide feedback and recommendations, and identify issues among students in the school (Hashim et al., 2018; Iremeka et al., 2021). This initiative of PTA promotes mutual understanding, establishes a balanced relationship, and encourages cooperation among stakeholders in achieving their shared goal of enhancing education. Hence, the involvement of parents in their children's activities at school improves their academic performance and confidence (Ben-Tov & Romi, 2019).

Most parents know the importance of involvement in their children's learning and progress at home or school. The evidence from an international study illustrates that parental engagement improves students' learning, attendance, and scores at school (Kamal et al., 2022; Quinn, 2020). (Quinn, 2020) concluded that students' learning, achievement, and well-being improved when teachers, parents and

schools worked together. Therefore, the proposed conceptual framework focuses on PTA, which supports the commitment and engagement of all stakeholders at primary schools. Besides, the proposed conceptual framework is novel as it considers the student's cultural background and other relevant stakeholders. Malaysia has been chosen as the case study, which is a culturally diverse nation. Hence, this study has identified the challenges of parent and Teacher engagement to enhance their commitment and collaboration in primary schools.

5.1. Barriers to parent-teacher commitment and engagement

According to (Iremeka et al., 2021), the commitment and engagement of all stakeholders determine the successful PTA at primary school. However, engagement from parents has been seen as a barrier to effective collaboration between parents and teachers. Several factors have prevented parents from engaging, including language barriers, poor educational experiences, and socioeconomic status (Munje & Mncube, 2018). According to a study (Munje & Mncube, 2018), an issue that impedes parent-teacher engagement is teachers' lack of knowledge and experience in getting parents involved with the school. For instance, the online learning platform used at school to accelerate the teaching and learning process may not be feasible for some parents to support their children. A study by (Portillo et al., 2020) stated teachers might also lack competence in using technology to support parent-teacher engagement, such as setting up online learning platforms, checking attendance online, and utilising tools on the online learning platform to make classes more engaging.

Moreover, online learning requires effort from parents to ensure that their children receive the knowledge effectively from school. Although parents want the best for their children and aim to give them more attention by being present in their children's activities at home, some parents lack technical skills. It can make them less confident in teaching and monitoring their children's progress. Therefore, support and assistance from teachers and the school are necessary to assist parents in engaging with their children's learning which is linked to school strategic goals (Quinn, 2020). Ultimately, technical skill for parents and teachers is essential for collaborative online learning experiences and improving stakeholder engagement.

Given the lack of technical skills of both parents and teachers, the school needs to take the initiative by providing professional training to the teachers and creating events that encourage parents to join the training sessions (Cantabrana et al., 2019). For instance, according to the study conducted by (Le et al., 2018; Stevens & Borup, 2015), parents are encouraged to participate in workshops and training sessions with teachers to ensure that communication between both parties is aligned with the school's vision. The sessions may include the benefits of the online platform to monitor their children's progress and performance at home and school. Moreover, creating the sessions at school can strengthen a mutual understanding between teachers and parents. Those activities may enhance school communication and commitment between parents and teachers (Alanko, 2018).

Creating the sessions requires a massive effort from the school and PTA, which encourages parents' involvement, as shown in some schools in China (Shu, 2019). By doing so, parents can give feedback, opinions, and recommendations to the school and teachers, improving the quality of education for students. These

meetings provide a space for discussion between parents and teachers, establish trust among parents and allow them to be a part of the school's strategy (Al-Hail et al., 2021). The initiative and support from the school to create an active PTA will create a valuable relationship between parents and teachers and promote parent engagement in education. Furthermore, this initiative helps to overcome the barriers between parents and teachers, regardless of their diverse cultural backgrounds.

5.2. Challenges of communication across different cultural backgrounds

Another factor that caused the lack of engagement between parents and teachers is communication. Communication has become one of the challenges in getting commitment and engagement from both stakeholders. For example, miscommunication between parents and teachers has led to different perceptions, as stated by (Stroetinga et al., 2021; Zhang, 2021). Communication skills are also influenced by culture and affect how information is delivered. Therefore, in this study, communication between parents and teachers must ponder cultural backgrounds to avoid misunderstandings that may lead to unsuccessful PTA meetings in schools. The study by (Biberman-Shalev et al., 2019) states that different cultures interpret information differently, which also applies to parenting styles. For example, parents have unique ways of raising their children and may have reasons for not being involved in their children's activities (Schwab, 2013).

A study by (Grothaus & Zawacki-Richter, 2021; Vu et al., 2012) reviewed Asian culture, where parents are often stressed about exams and scores, while in Finland, scores are not as important as long as children have confidence and motivation to learn and play at the same time (Levinthal et al., 2022). For this reason, parents from different cultures are committed and aware of their children's needs. However, a lack of parental knowledge makes it more challenging to collaborate between parents and teachers. Schools have created many activities in China, such as sports, competitions, and talks. Still, parents sometimes have tight schedules due to their daily jobs, particularly those from low-income backgrounds who may have packed schedules of working throughout the day (Munje & Mncube, 2018). These issues create a barrier between parents and teachers, where parents may not be involved in school activities. Teachers may assume that parents ignore their children and leave the burden to the Teacher without notifying the school.

Moreover, teachers may lack communication skills to encourage parents to be involved, and sometimes parents want to participate in school activities. Still, teachers treat them as clients, thus creating an uncomfortable situation between parents and teachers. A study (Gu, 2017) stated that sometimes parents feel their involvement is not valued or expected by the school or teachers, which makes them less confident about getting involved with the school. As a result, engagement becomes low, as mentioned by (Chan et al., 2021), where parents' and teachers' perceptions affect effective collaboration at school. According to (Shu, 2019), both perceptions were influenced by cultural backgrounds, such as how parents received and responded to feedback about their children. Teachers' communication skills may benefit from professional training to effectively communicate with parents of different backgrounds at school.

As recommended by (Kuusimäki et al., 2019), digital communication among stakeholders is necessary for creating collaboration from all stakeholders using a single platform, such as an online learning platform that reflects the school's

perception, intention, and strategy to cooperate with parents online. A review (Gu, 2017) mentioned 16 specific elements that should be included on a school website: parenting information, parent-teacher associations, student activities and work, announcements, and rules that ensure equal and well-delivered information to parents. All those elements are essential for engagement and commitment towards student performance and progress. In addition, the study mentioned the online learning platform must emphasise culturally responsive guidelines to create a consistent, credible, and equitable platform that meets the needs of different groups of people. (Gu, 2017) stated that the online learning platform must consider cultural and ethnic diversity to ensure equitable access to educational resources at school. Therefore, the importance of culture needs more attention to encourage commitment and engagement between parents and teachers at school.

5.3. The importance of cultural factors

As illustrated in Figure 2, the proposed conceptual framework has included a cultural factor to invent a cultural-based approach to collaborative online learning. Cultural factors have been associated with the cultural-based approach since many studies have emphasised the importance of culture when designing online learning platforms. (Aljasmi & Alobaidy, 2018). The cultural-based approach in this section specifically addresses the impact of culture in supporting collaborative online learning. This approach highlights the value of collaborative online learning that can achieve stakeholder commitment and engagement. According to (Alsswey & Al-Samarraie, 2021; Du et al., 2015), culture plays a vital role in online learning settings, such as how a person responds and reacts while using the platforms. Different cultures can lead to other preferences for interfaces across different cultural groups. For instance, when users use the online learning platform, they must be able to interact naturally and be led to achieve their goals. Another example is the primary design element for an online learning platform, including navigation, layout, typography, and colour must be clear and consistent to better engage with the user's cultural background. A study by (Nordin et al., 2022; Salam & Farooq, 2020) also stated that culturally adapted website design could allow users to perform their tasks more successfully and have greater satisfaction with the interaction. Therefore, it is essential to consider cultural backgrounds in ensuring the usability of online learning platforms.

The study conducted by (Holmlund, 2021) suggests that integrating culture into the development of online learning platforms can result in a meaningful design with an excellent user interface (UI) and user experience (UX). This finding was supported by (Alsswey et al., 2022), who stated that integrating cultural elements into the UI design can promote specific user behaviours. By tailoring the UI design based on user needs, it is possible to improve the usability of the LMS. Several studies have mentioned cultural models, such as Hofstede, Hall, Hampden-Turner, and Trompenaars, to help understand cultural differences. Nevertheless, (Alsswey et al., 2022) informed that the Hofstede model is more holistic in determining UI design, and different countries can treat certain cultural aspects differently (Nordin et al., 2020). It was inspired by Marcus et al., who stated that the cultural dimensions proposed by Hofstede could identify the cultural elements that may influence one's design decisions. This approach makes the design more engaging for all stakeholders and facilitates their use of online learning platforms as the primary communication tool (Munasinghe, 2017). Thus, each design's usability attributes

must be considered to provide a more engaging online learning platform that fosters parent and teacher engagement.

5.4. The impact of usability attributes

According to (Nurazizah, 2022), a good UI and UX can significantly affect the usability of online learning platforms. As described by (Hirval & Zaim, 2021), the usability attributes of the LMS for online learning platforms is crucial in designing the LMS. It includes learnability, efficiency, memorability, satisfaction, and error prevention. Nielsen introduced all of these usability attributes and has been used by many researchers to conduct usability studies. The studies by (Hasan, 2021) (Safie, N., & Morshidi, 2007) stated that usability attributes are an essential aspect to consider to avoid issues that may arise due to cultural and behavioural differences. This finding was supported by (Lachner et al., 2018), who declared that usability attributes are essential elements for designing online learning platforms that are accessible and user-friendly for all users, regardless of their cultural background.

Thus, integrating cultural knowledge with UI/UX into the online learning platform will significantly improve the usability of the online learning platform and the number of users using it. Good usability of the online learning platform will substantially impact the engagement and commitment of all stakeholders to use the LMS. Besides, the usability attributes of online learning platforms can provide better student learning outcomes as the student can easily access the online learning platform. It benefits students, parents, teachers, and schools in giving and receiving information. Furthermore, creating a more accessible and user-friendly online learning platform can benefit all stakeholders involved in the collaborative online learning process. It can lead to better overall collaborative online learning experiences and enhance the commitment and engagement of parents and teachers at school.

In the end, the conceptual framework presented in Figure 2 highlights the importance of considering the cultural background of each stakeholder in achieving successful collaborative online learning. Recognising the unique perspectives and best approaches of collaborative online learning helps design platforms that foster meaningful and effective collaboration among all stakeholders: students, parents, teachers, and schools. Besides, it can have a significant impact on improving student learning outcomes. It has been supported (Gyamfi & Pobbi, 2016) that the commitment and engagement demonstrated by parents and teachers have a notable impact on student performance and progress in school.

5.5. Parents and Teacher involvement impact on student performance

The involvement of parents and teachers has been explored by numerous studies, which have highlighted its advantages in student performance. For instance, the analysis conducted by (Erdem & Kaya, 2020) reported higher percentages of student performance in specific subjects when parents were involved in monitoring their homework compared to subjects without parental monitoring. Another study (Ateş, 2021) emphasised the significance of parental involvement in academic achievement across all school levels, including primary school, middle school, and high school. The studies mentioned a positive and meaningful relationship between parental involvement and academic achievement.

Parental involvement in students' academic performance fosters their abilities, enhances self-esteem, and contributes positively to their academic improvement at school. However, the study conducted by (Chen, 2005) indicates that teacher support complements student progress in achieving higher results. Furthermore, a study (Xie, 2022) highlights teachers' and schools' crucial role in supporting students to achieve better outcomes. Consequently, it is essential for all stakeholders, including parents, teachers, and schools, to have a mutual commitment towards improving student performance. An analysis conducted by (Yulianti et al., 2022) incorporated Epstein's parental involvement model framework, and the results demonstrated that each module of the Epstein framework positively improved student performance through parent-teacher communication, as illustrated in Figure 3.

Epstein's framework	PIQ (Parent survey)		
	Number of items	Means	SD
Parenting	6	3.19	.71
Communicating	5	2.44	.77
Volunteering	5	1.71	.79
Learning at home	5	3.01	.74
Decision-making	5	1.78	.65
Collaborating with community	5	2.22	.76
	TIPIQ (Teacher survey)		
Parenting	6	3.14	.45
Communicating	5	3.02	.40
Volunteering	4	2.46	.69
Learning at home	5	3.10	.51
Decision-making	6	2.65	.48
Collaborating with community	5	2.72	.51

Fig. 3. Descriptive statistics of the six Parental Involvement in the Eipstein framework and Teacher Invitations for Parental Involvement

Based on Figure 3, the results show that the impact of parents and teachers is essential, with higher scores observed for the parenting and communicating modules in both the teacher and parent surveys compared to other modules. Parenting and communication involve many stakeholders in promoting parent-teacher engagement in schools. This is also consistent with this studies that highlight parents and teachers as critical contributors to collaborative online learning in schools.

Furthermore, this study was expanded to include new factors, such as cultural factors and collaborative online learning, which prioritise the engagement and commitment of all relevant stakeholders, including parents, teachers, and the school. All stakeholders need strong communication to establish parent-teacher engagement through PTA meetings or collaborative online learning. It makes the engagement more effective and enables monitoring of each stakeholder's involvement in school despite different cultural backgrounds, as mentioned in 5.2. It is also supported by (Wu, 2015), who required further research on the interaction between parents and teachers from different cultural backgrounds. In summary, a cultural-based approach and inclusive design of online learning platforms should be prioritised in creating successful collaborative online learning among all

stakeholders, especially the commitment and engagement between parents and teachers.

6. CONCLUSION AND FUTRUE WORKS

Despite the various factors discussed in previous studies, collaborative online learning has created new opportunities for the education sector to increase parent-teacher engagement. Some countries widely use best practices, including redefining PTA, providing teacher training on parent engagement approaches, and establishing parent advisory councils to foster parent-teacher engagement at school. Besides, parents who have a role in PTA can assist teachers and schools in achieving their goals, as practised by countries such as China, Hong Kong, and Korea, which received the highest PISA rankings in 2018. By reformulating the PTA program in schools, parents could participate in school decision-making and receive appropriate training from teachers and the school. All these approaches help create successful collaboration among all stakeholders. Therefore, effective collaborative online learning, utilising the availability of online learning platforms, may increase parent-teacher involvement at school.

Consequently, collaborative online learning platforms have been widely introduced in education. For instance, Google Classroom, Moodle, and Schoology are online learning platforms that have assisted learning and teaching during the COVID-19 pandemic. The use of these platforms has transformed the way students learn and teachers teach, offering opportunities for flexibility in both time and location. However, the effectiveness of collaborative online learning depends on various factors, including a cultural based approach and the UI/UX of online learning platforms. The quality of the UI/UX can significantly influence user engagement in using online learning platforms, as it can measure the usability of the online learning platform. It helps to improve the engagement and commitment among all stakeholders, especially parents and teachers. Thus, all these factors must take into account.

In conclusion, this study has proposed a conceptual framework that addresses the factors influencing parent-teacher engagement and highlights essential initiatives to support such engagement in primary schools. The proposed conceptual framework is based on a comprehensive analysis of previous studies identifying best practices and the factors that affect parent-teacher engagement. In addition, this proposed framework can guide future researchers in finding the necessary factors and initiatives that all stakeholders should undertake to ensure effective parent-teacher engagement at primary school. Future research could be expanded by evaluating the approaches in specific countries with unique cultures to determine the level of commitment and engagement between parents from different cultural backgrounds.

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REFERENCES

- Alanko, A. (2018). Preparing pre-service teachers for home–school cooperation: exploring Finnish teacher education programmes. *Journal of Education for Teaching*, 44(3), 321–332. <https://doi.org/10.1080/02607476.2018.1465644>
- Al-Hail, M. A., Al-Fagih, L., & Koç, M. (2021). Partnering for sustainability: Parent-teacher-school (pts) interactions in the qatar education system. *Sustainability (Switzerland)*, 13(12). <https://doi.org/10.3390/su13126639>
- Ali, N., Ullah, A., Shah, M., Ali, A., Khan, S. A., Shakoor, A., Begum, A., & Ahmad, S. (2020). School role in improving parenting skills and academic performance of secondary schools students in Pakistan. *Heliyon*, 6(11), e05443. <https://doi.org/10.1016/j.heliyon.2020.e05443>
- Aljasmi, L., & Alobaidy, H. (2018). The cultural impact on user interface design: The case of e-government services of Kingdom of Bahrain. *2018 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies, 3ICT 2018, November 2018*. <https://doi.org/10.1109/3ICT.2018.8855739>
- Alsswey, A., & Al-Samarraie, H. (2021). The role of Hofstede's cultural dimensions in the design of user interface: The case of Arabic. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM*, 35(1), 116–127. <https://doi.org/10.1017/S0890060421000019>
- Alsswey, A., Al-Samarraie, H., & Yousef, R. (2022). Hofstede's dimensions of culture and gender differences in UI satisfaction. *Journal of Reliable Intelligent Environments*, 8(2), 183–191. <https://doi.org/10.1007/s40860-021-00143-4>
- Ateş, A. (2021). The Relationship Between Parental Involvement in Education and Academic Achievement: A Meta-analysis Study. *Pegem Egitim ve Ogretim Dergisi*, 11(3), 50–66. <https://doi.org/10.14527/pegegog.2021.00>
- Bacher-Hicks, A., Goodman, J., & Mulhern, C. (2021). Inequality in household adaptation to schooling shocks: Covid-induced online learning engagement in real time. *Journal of Public Economics*, 193, 104345. <https://doi.org/10.1016/j.jpubeco.2020.104345>
- Ben-Tov, S., & Romi, S. (2019). An interactive model of parents' involvement and their children's functioning in school. *Education 3-13*, 47(2), 217–232. <https://doi.org/10.1080/03004279.2018.1428650>
- Biberman-Shalev, L., Tur, G., & Buchem, I. (2019). Culture, Identity and Learning: A Mediation Model in the Context of Blogging in Teacher Education. *Open Praxis*, 12(1), 51. <https://doi.org/10.5944/openpraxis.12.1.995>
- Butt, R., Siddiqui, H., Soomro, R. A., & Asad, M. M. (2020). Integration of Industrial Revolution 4.0 and IOTs in academia: a state-of-the-art review on the concept of Education 4.0 in Pakistan. *Interactive Technology and Smart Education*, 17(4), 337–354. <https://doi.org/10.1108/ITSE-02-2020-0022>
- Cantabrana, J. L. L., Rodríguez, M. U., & Cervera, M. G. (2019). Assessing teacher digital competence: The construction of an instrument for measuring the knowledge of pre-service teachers. *Journal of New Approaches in Educational Research*, 8(1), 73–78. <https://doi.org/10.7821/naer.2019.1.370>

- Chan, T. C., Shu, Z., & Xiao, H. Y. (2021). Perception of Chinese Parents Toward School and Family Collaboration. *School Community Journal*, 31(1), 54–76. <http://www.schoolcommunitynetwork.org/SCJ.aspx>
- Chen, J. J. L. (2005). Relation of academic support from parents, teachers, and peers to Hong Kong adolescents' academic achievement: The mediating role of academic engagement. *Genetic, Social, and General Psychology Monographs*, 131(2), 77–127. <https://doi.org/10.3200/MONO.131.2.77-127>
- Cheung, C. kiu, Lam, C. man, & Ngai, S. S. yum. (2008). Help from the parent–teacher association to parenting efficacy: Beyond social status and informal social capital. *The Journal of Socio-Economics*, 37(3), 1134–1152. <https://doi.org/10.1016/J.SOCEC.2006.12.068>
- Chua, K. P., DeJonckheere, M., Reeves, S. L., Tribble, A. C., & Prosser, L. A. (2021). Factors Associated With School Attendance Plans and Support for COVID-19 Risk Mitigation Measures Among Parents and Guardians. *Academic Pediatrics*, 21(4), 684–693. <https://doi.org/10.1016/J.ACAP.2020.11.017>
- Dong, C., Cao, S., & Li, H. (2020). Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes. *Children and Youth Services Review*, 118, 105440. <https://doi.org/10.1016/j.chilyouth.2020.105440>
- Du, J., Ge, X., & Xu, J. (2015). Online collaborative learning activities: The perspectives of African American female students. *Computers and Education*, 82, 152–161. <https://doi.org/10.1016/j.compedu.2014.11.014>
- Đurišić, M., & Bunijevac, M. (2017). *Parental Involvement as a Important Factor for Successful Education* (Vol. 7). *Education for Sustainable Development: A Roadmap Education for Sustainable Development A roadmap*. (2020). <http://www.unesco.org/open-access/terms-use-ccbysa-en>
- Erdem, C., & Kaya, M. (2020). A meta-analysis of the effect of parental involvement on students' academic achievement. *Journal of Learning for Development*, 7(3), 367–383. <https://doi.org/10.56059/jl4d.v7i3.417>
- Grothaus, C., & Zawacki-Richter, O. (2021). Collaborative online learning in the cultural context of South East Asia: A systematic review. *Hacettepe Egitim Dergisi*, 36(2), 489–508. <https://doi.org/10.16986/HUJE.2020062020>
- Gu, L. (2017). Using school websites for home–school communication and parental involvement? *Nordic Journal of Studies in Educational Policy*, 3(2), 133–143. <https://doi.org/10.1080/20020317.2017.1338498>
- Guo, K., & Kilderry, A. (2018). Teacher accounts of parent involvement in children's education in China. *Teaching and Teacher Education*, 69, 95–103. <https://doi.org/10.1016/J.TATE.2017.09.018>
- Guo, Y., Wu, X., & Liu, X. (2019). Challenges and Opportunities in Parent-Teacher Relationships in Contemporary China. *Comparative and International Education*, 47(2). <https://doi.org/10.5206/CIE-ECI.V47I2.9331>
- Gyamfi, K., & Pobbi, M. A. (2016). Parental Monitoring and Child Performance in Ghana. *Journal of Education and Practice*, 7(21), 33–41. <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1109409&site=ehost-live>

- Hasan, L. (2021). Examining User Experience of Moodle e-Learning System. *International Journal of Advanced Computer Science and Applications*, 12(11), 358–366. <https://doi.org/10.14569/IJACSA.2021.0121141>
- Hashim, T., Ariffin, A., Abdullah, Z., Bakar Yusuf, A., & Maniam, S. (2018). Parental Involvement in Primary School: Understanding the strategies that promote academic achievement. *Science International*, 30(January), 665–669.
- Hazwani Nordin, Dalbir Singh, Z. M. (2020). An empirical study of e-learning interface design elements for generation Z. *International Journal of Advanced Computer Science and Applications (IJACSA)*, 11(9), 61. <https://doi.org/10.14569/IJACSA.2020.0110961>
- Hazwani Nordin, Dalbir Singh, Z. M. (2021). Interface design for e-learning: investigating design characteristics of colour and graphic elements for generation z Title. *KSII Transactions on Internet and Information Systems*, 15(9), 3169–3185. <https://doi.org/10.3837/tiis.2021.09.005>
- Hirval, & Zaim, M. (2021). The Usability of Learning Management System (LMS) and Students' Perception in English Language Teaching at SMKN 2 Padang. *Proceedings of the Eighth International Conference on English Language and Teaching (ICOELT-8 2020)*, 579, 88–93. <https://doi.org/10.2991/assehr.k.210914.016>
- Holmlund, L. (2021). *Cultural Differences Within User Experience and User Interface*.
- Iremeka, F. U., Ezenwaji, I. O., & Ezenwaji, C. O. (2021). Roles of Parent-Teacher Association in the Management of School Library. *Library Philosophy and Practice*, 2021, 1–12.
- Kamal, S. S. L. A., Masnan, A. H., & Hashim, N. H. (2022). Parental Involvement in Young Children's Education in Malaysia: A Systematic Literature Review. *International Journal of Learning, Teaching and Educational Research*, 21(3), 319–341. <https://doi.org/10.26803/ijlter.21.3.17>
- Karuppiah, N. (2022). What are Singapore parents' perception of play in the early years? *Journal of Childhood, Education and Society*, 3(2), 200–211. <https://doi.org/10.37291/2717638X.202232176>
- Kearney, C. A., & Childs, J. (2021). A multi-tiered systems of support blueprint for re-opening schools following COVID-19 shutdown. *Children and Youth Services Review*, 122, 105919. <https://doi.org/10.1016/j.childyouth.2020.105919>
- Kuusimäki, A. M., Uusitalo-Malmivaara, L., & Tirri, K. (2019). Parents' and Teachers' Views on Digital Communication in Finland. *Education Research International*, 2019. <https://doi.org/10.1155/2019/8236786>
- Lachner, F., Nguyen, M. A., & Butz, A. (2018). Culturally sensitive user interface design: A case study with German and Vietnamese users. *ACM International Conference Proceeding Series*, 1–12. <https://doi.org/10.1145/3283458.3283459>
- Lau, E. Y. H., & Ng, M. L. (2019). Are they ready for home-school partnership? Perspectives of kindergarten principals, teachers and parents. *Children and Youth Services Review*, 99, 10–17. <https://doi.org/10.1016/J.CHILDYOUTH.2019.01.019>
- Le, H., Janssen, J., & Wubbels, T. (2018). Collaborative learning practices: teacher and student perceived obstacles to effective student collaboration. *Cambridge Journal of Education*, 48(1), 103–122. <https://doi.org/10.1080/0305764X.2016.1259389>

- Leo, A., Wilcox, K., & Lawson, H. (2019). Culturally Responsive and Asset-Based Strategies for Family Engagement in Odds-Beating Secondary Schools. *School Community Journal*, 29(2), 255–280.
- Levinthal, C., Kuusisto, E., & Tirri, K. (2022). Exemplar Parents' Practices of Engagement with Their Children's Learning in Finland and Portugal: A Multiple-Case Study. *Education Research International*, 2022. <https://doi.org/10.1155/2022/2991438>
- Li, G., Lin, M., Liu, C., Johnson, A., Li, Y., & Loyalka, P. (2019a). The prevalence of parent-teacher interaction in developing countries and its effect on student outcomes. *Teaching and Teacher Education*, 86, 102878. <https://doi.org/10.1016/J.TATE.2019.102878>
- Li, G., Lin, M., Liu, C., Johnson, A., Li, Y., & Loyalka, P. (2019b). The prevalence of parent-teacher interaction in developing countries and its effect on student outcomes. *Teaching and Teacher Education*, 86, 102878. <https://doi.org/10.1016/j.tate.2019.102878>
- Liu, K., Yang, Y., Li, M., Li, S., Sun, K., & Zhao, Y. (2021a). Parents' and adolescents' perceptions of parental involvement and their relationships with depression among Chinese middle school students during the COVID-19 pandemic. *Children and Youth Services Review*, 129, 106190. <https://doi.org/10.1016/J.CHILDYOUTH.2021.106190>
- Liu, K., Yang, Y., Li, M., Li, S., Sun, K., & Zhao, Y. (2021b). Parents' and adolescents' perceptions of parental involvement and their relationships with depression among Chinese middle school students during the COVID-19 pandemic. *Children and Youth Services Review*, 129, 106190. <https://doi.org/10.1016/J.CHILDYOUTH.2021.106190>
- Maria Manzon, Rifhan Miller, Helen Hong, L. K. (2015). *Parent Engagement in Education*.
- Munasinghe, A. (2017). A Culture-Centered Design Approach to Improve a User Interface for Migrants. *Degree Project Computer Science and Engineering*. www.kth.se
- Munje, P. N., & Mncube, V. (2018). The lack of parent involvement as hindrance in selected public primary schools in South Africa: The voices of educators. *Perspectives in Education*, 36(1), 80–93. <https://doi.org/10.18820/2519593X/pie.v36i1.6>
- Nordin, H., Singh, D., & Mansor, Z. (2020). An empirical study of e-learning interface design elements for generation Z. *International Journal of Advanced Computer Science and Applications*, 11(9), 507–515. <https://doi.org/10.14569/IJACSA.2020.0110961>
- Nordin, H., Singh, D., & Mansor, Z. (2021). Interface design for E-learning: Investigating design characteristics of colour and graphic elements for generation Z. *KSII Transactions on Internet and Information Systems*, 15(9), 3169–3185. <https://doi.org/10.3837/tiis.2021.09.005>
- Nordin, H., Singh, D., Mansor, Z., & Yadegaridehkordi, E. (2022). Impact of Power Distance Cultural Dimension in E-Learning Interface Design Among Malaysian Generation Z Students. *IEEE Access*, 10, 64199–64208. <https://doi.org/10.1109/ACCESS.2022.3183117>
- Nurazizah, C. B. (2022). Analisa UI Google Classroom Sebagai Platform Pembelajaran Jarak Jauh Siswa. *IMATYPE: Journal of Graphic Design Studies*, 1(1), 36. <https://doi.org/10.37312/imatype.v1i1.5229>
- Popovska, N. G., Popovski, F., & Dimova, P. H. (2021). Communication strategies for strengthening the parent-teacher relationships in the primary schools.

- International Journal of Research Studies in Education*, 10(14).
<https://doi.org/10.5861/IJRSE.2021.A076>
- Portillo, J., Garay, U., Tejada, E., & Bilbao, N. (2020). Self-perception of the digital competence of educators during the covid-19 pandemic: A cross-analysis of different educational stages. *Sustainability (Switzerland)*, 12(23), 1–13.
<https://doi.org/10.3390/su122310128>
- Quinn, C. (2020). Parental Engagement: Teachers and Parents Working Together for a Common Goal. In *Journal of Applied Research and Innovation*. www.jari.net.au (Vol. 1, Issue 2). www.jari.net.au
- Safie, N., & Morshidi, A. (2007). An Evaluation of Cultural Roles and Usability Attributes in Learning Management System. *Multimedia Communication*, 5(1).
- Salam, M., & Farooq, M. S. (2020). Does sociability quality of web-based collaborative learning information system influence students' satisfaction and system usage? *International Journal of Educational Technology in Higher Education*, 17(1). <https://doi.org/10.1186/s41239-020-00189-z>
- Schwab, K. W. (2013). Individualism-Collectivism and Power Distance Cultural Dimensions: How Each Influences Parental Disciplinary Methods. *Journal of International Education and Leadership*, 3(3), 1–8.
- Shu, Z. (2019). Chinese Teachers' Perceptions of School Family Collaboration: A Study of Elementary Schools in Zhejiang Province. *Educational Planning*, 26(1), 23–41.
- Stevens, M., & Borup, J. (2015). Parental engagement in online learning environments: A review of the literature. *Advances in Research on Teaching*, 25, 99–119.
<https://doi.org/10.1108/S1479-368720150000027005>
- Stroetinga, M., Leeman, Y., & Veugelers, W. (2021). Primary School Teachers' Practices of Collaborating with Parents on Upbringing. *School Community Journal*, 31(1), 259–281. <http://www.schoolcommunitynetwork.org/SCJ.aspx>
- Strogilos, V., & Tragoulia, E. (2013). Inclusive and collaborative practices in co-taught classrooms: Roles and responsibilities for teachers and parents. *Teaching and Teacher Education*, 35, 81–91.
<https://doi.org/10.1016/J.TATE.2013.06.001>
- Tong, F., Zhang, H., Zhen, F., Irby, B. J., & Lara-Alecio, R. (2021). Supporting home literacy practices in promoting Chinese parents' engagement in their children's English education in low-SES families: An experimental study. *International Journal of Educational Research*, 109, 101816.
<https://doi.org/10.1016/J.IJER.2021.101816>
- Vu, U., Ratliffe, K., & Salzman, M. (n.d.). *Home-School Partnerships-A Comparison between American and Asian Approaches*.
- Wu, P.-J. (2015). Teacher-Parent Interactions in Taiwan: A Qualitative Investigation of Teachers' Perspectives. *Universal Journal of Educational Research*, 3(5), 307–316. <https://doi.org/10.13189/ujer.2015.030501>
- Xie, Q. (2022). The role of parents in the school accountability system: Insights from a Hong Kong case. *Studies in Educational Evaluation*, 72(December).
<https://doi.org/10.1016/j.stueduc.2021.101114>
- Yogeswary Kuppusamy, H. N. (2021). Technology Skills and Readiness to Implement Online Learning and Facilitation During the Pandemic Era Among Teachers

- in Tamil Primary Schools. *2nd International Conference on Education, Social Sciences and Engineering (ICESE 2021)*, 290–304.
- Yulianti, K., Denessen, E., Droop, M., & Veerman, G. (2022). School efforts to promote parental involvement: the contributions of school leaders and teachers. *Educational Studies*, 48(1), 98–113. <https://doi.org/10.1080/03055698.2020.1740978>
- Zhang, T. (2021). Chinese parents' perception of emergency remote K-12 teaching-learning in China during the COVID-19 pandemic. *Asian Journal of Distance Education*, 16(1), 2021. <http://www.asianjde.org>