



The Impact of the COVID-19 Pandemic On Parental Involvement of Taiwanese Middle and High School Students' Online Learning Experience

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Abstract

Background: The COVID-19 pandemic led to widespread curfews, lockdowns, and stay-at-home orders, forcing educational institutions globally to shift rapidly to online learning. Overnight, online platforms became the primary mode of instruction, raising questions about the role of parental involvement in student learning outcomes—particularly for middle and high school students. This study was initiated to explore Taiwanese teachers' perspectives on how the pandemic influenced parental engagement in their children's online education. **Objectives:** The research asked: What is the impact of the pandemic on parental involvement in Taiwanese middle and high school students' online learning? It was hypothesized that parental involvement would increase during periods of remote learning. Participants included teachers from a private, faith-based middle and high school in Tainan, Taiwan. **Methods/Approach:** A 17-question researcher-designed survey was distributed electronically to collect data on teacher perceptions of parental involvement before and during the pandemic. The survey aimed to identify trends, shifts, and challenges in parental engagement. **Results/Conclusion:** Findings showed that most parents were involved in their children's learning to some degree prior to the pandemic. This involvement increased moderately during remote learning, suggesting a constructive impact. Teachers reported that most parents would be willing—or more willing—to support future remote learning scenarios. Additional findings highlighted common forms of parental involvement and the challenges parents faced, such as balancing work responsibilities with educational support at home.

Keywords: parental involvement, middle school students, high school students, COVID-19, pandemic, remote learning, virtual learning, Taiwanese schools, academic achievement, student motivation

Paper type: Research article

Introduction

After the COVID-19 pandemic struck, nearly all educational institutions worldwide, at all levels, were compelled to transition to some form of remote learning. As online education became the primary mode of instruction, the question emerged of whether parental involvement would affect learning outcomes differently, particularly for middle and high school students, which served as the catalyst for this study. This researcher is a former middle and high school teacher at the site of this study in Tainan, Taiwan, who has not visited or maintained contact other than occasionally with one former colleague/teacher socially via Facebook. Nevertheless, familiarity with the site (decades ago) is why it was chosen, with the goal of determining whether or not there was a shift in parental attitudes toward involvement because of the pandemic. The purpose of this study was to gather teachers' perspectives on how the pandemic impacted parental involvement in students' remote learning. Middle and high school teachers at a private, faith-based middle and high school in Tainan, participated in the study. A researcher-developed survey was electronically distributed to collect data on the teacher participants' perceptions and insights into how parental involvement impacted their children's in-home learning and to identify any changes that occurred in their involvement as a result of the pandemic. Of interest were parental attitudes towards involvement pre-pandemic, during, and in the event of a future incident that forced migration to virtual learning.

Research Question

What is the impact of the pandemic on parental involvement of Taiwanese middle and high school students' online learning experience?

Research Hypothesis

Parents would become more involved with their children's learning when stay-at-home orders were in place.

Purpose and Significance of the Study

While parental involvement has been extensively studied by researchers, for example Hill and Tyson's (2009) and Jaynes' (2007) meta-analyses, among others, the purpose of the current study was intentionally focused on interpreting the parental involvement of Taiwanese middle and high school students at the onset of the COVID-19 pandemic, as it progressed, and after. When stay-at-home and lockdown orders were instituted, many parents knowingly or unintentionally became 'teaching parents' who were required, practically overnight, to deal with additional responsibilities for their children's learning, for which many were not prepared. These new responsibilities encompassed difficulties with balancing responsibilities (Garbe et al., 2020), exhausted and overwhelmed parents as a result of new and/or additional responsibilities (Rousoulioti, et al., 2022), higher levels of depression (Liu, et al., 2021), and a lack of digital literacy and content knowledge (Garbe, et al., 2020).

It is hoped that the results of this study will provide cogent information and insights into the impact of parental involvement in the event of a future incident that causes a total or near total migration to some form of online learning due to mass school closures. Such findings would be significant to students, parents, teachers, administrators, and other stakeholders involved in the educational process in terms of being better

prepared for dealing with such an event. Additionally, having an overview of the impact of Taiwanese parental involvement also could provide insights and logistical support of such an event to a more global audience.

Literature Review

The purpose of this study was to gather the perspectives of middle and high school teachers at a private, faith-based school in Tainan, Taiwan on how the COVID-19 pandemic impacted parental involvement of students' online learning from home.

Defining Parental Involvement

While parental involvement has been widely studied by educational and social science researchers (Fan & Chen, 2001; Sujarwo & Herwin, 2023), there is a lack of consensus concerning a universally agreed upon definition of the term (Fan & Chen, 2001; Jeynes, 2007). One of the more widely adopted definitions is that of Hill and Tyson (2009) which involves three dimensions of parental involvement including home-based involvement, school-based involvement, and academic socialization. Those researchers state that home-based involvement consists of communication between parents and their children; school-based involvement is the communication between parents and their children's teachers; academic socialization involves parents' aspirations for their children's education. While most Taiwanese parents have high aspirations for their children's education, (based on this researcher's professional observations as a teacher and native of Taiwan), Hill and Tyson's third dimension—academic socialization—is beyond the scope of this study.

Jeynes (2007) defined parental involvement as “parental participation in the educational processes and experiences of their children” (p. 89). Expanding upon Jeynes' definition, and as a working definition for this study and its specific population, parental involvement is defined as Taiwanese parents' participation in the home-based educational activities and experiences of their middle and high school children to assist with (and possibly raise) their children's academic achievements during the time the stay-at-home orders were in place (2020 and later) in Tainan.

Overview of the Impact of Parental Involvement

Parental involvement pertaining to students' academic success is a widely studied topic across various fields, including education, psychology, and sociology. Research on this subject spans several decades and covers numerous aspects, such as the impact of parental involvement on student academic achievement (Sujarwo & Herwin, 2023), motivation (Barger, et al., 2019), self-esteem (Luo, et al, 2022) and overall academic development. What follows are some key findings from the body of research on parental involvement.

Positive Correlation with Academic Achievement

Numerous studies including the meta-analyses by Hill and Tyson (2009), Jeynes (2007), and Sujarwo and Herwin (2023), have shown that students whose parents are involved in their education tend to perform better academically. Parental involvement has been linked to higher grades and test scores. Consistent engagement with homework, school activities, and communication with teachers correlates with better student performance. Additionally, active parental involvement also has been linked to improved classroom behavior in face-to-face learning environments, improved

attendance, and fostering positive attitudes towards school (Henderson & Mapp, 2002).

Jeynes (2007) conducted a meta-analysis of 52 studies on secondary school children that found a strong positive association between parental involvement and student academic achievement. The study reviewed a wide range of parental behaviors, including setting high expectations and consistent engagement with students.

Varied Forms of Involvement

The ways in which parents engage with their children's education vary widely. Home-based involvement, the focus of the current study, involves helping with homework, setting academic expectations, and providing learning resources, among other forms of involvement. Interestingly however, Hill and Tyson's (2009) study found that parents helping with homework had the "strongest negative association with achievement" (p. 757) among middle school students. So helping with homework, which would intuitively seem to be a primary function of parental involvement, may not be a focal part of the process. Moreover, research has indicated that other types of home-based involvement, such as providing a conducive learning environment, can be just as crucial as direct involvement in school-related activities (Epstein, 2011). This is corroborated by the meta-analysis conducted by Erdem and Kaya (2020) who found in their study that parental expectations had the largest effect on academic achievement.

School-based involvement concerns attending parent-teacher conferences, volunteering at school, and engaging with school staff. During school closures, this type of educational support and communication would involve maintaining regular online/digital-only discussions about school progress and academic goals, holding web-based conferences in lieu of face-to-face conferences, and foregoing volunteering in a physical location.

Impact on Different Age Groups

Research indicates that parental involvement has different effects depending on a child's age. Studies of elementary school children suggests that parental involvement is especially impactful in early education, where parents' direct influence on learning habits and attitudes is more pronounced (El Nokali, et al., 2010).

Research involving middle and high school students, the focus of the current study, indicate that although parental involvement tends to decline in adolescence, studies show that continued engagement—through discussions about education and future goals—can still boost academic outcomes and help with navigating complex school environments. In any case, Henderson and Mapp (2002) found that regardless of age, students overall, do better when parents stay involved in their education.

Socioeconomic and Cultural Context

Research also has explored how socioeconomic status and cultural backgrounds influence the nature and extent of parental involvement. Research of socioeconomic factors indicate that lower-income families may face barriers such as time constraints, and/or limited resources, often referred to as the digital divide. Even so, interventions

and support programs specifically designed to engage this parent population have been shown to increase student achievement (Fan & Chen, 2001).

Cultural differences regarding the way parental involvement is expressed vary across cultural groups. For instance, in some cultures, parental involvement may not manifest through direct engagement in school activities. Reese et al., (2000) discussed how cultural differences shape parental involvement practices, such as in Latino communities, where home-based activities and high expectations may serve as the primary modes of involvement. Overall, studies indicate that, while the form of involvement may differ, the effect of parental engagement remains positive across cultural and socioeconomic groups (Fan & Chen, 2001).

Barriers to Parental Involvement

Research on parental involvement has also examined barriers that prevent parents from engaging fully in their children's education (El Nokali, et al., 2010). Nyanamba et al., (2022) found that parents were more vulnerable to parental burnout during the pandemic trying to supervise their children's remote learning in addition to their vocational commitments and other responsibilities. Time constraints, where working parents and those with multiple jobs often find it difficult to attend school functions or help with homework after work hours, also can be a significant barrier.

Educational background can also impact parental involvement. Some parents, especially those with limited education, may feel unqualified to assist with their child's academic needs. Also, language barriers for non-native English-speaking parents often result in struggles to communicate with teachers or understand school systems (Hornby & Lafaele, 2011). Other barriers mentioned by Garbe, et al., (2020) include the lack of digital resources (the digital divide), having learners at multiple grade levels at home, a lack of learner motivation, having special needs learners at home, and the lack of parental content knowledge. Addressing barriers through policy, school programs, and community support is a focus of much recent research, emphasizing the need for schools to engage all parents more effectively (see e.g., Walter, 2023).

Role of Technology in Parental Involvement

Parent-teacher communication via digital platforms such as school portals, email, and apps has made it easier for parents to track their children's progress and communicate with teachers (Hsu & Chen, 2023). Additionally, online resources can allow parents to access online educational resources to support learning at home, especially when direct school engagement is difficult or impossible such as during a pandemic. Moreover, technology has changed the dynamic of parental involvement, and digital tools like those mentioned, are improving parent-teacher communication and helping parents stay engaged in their children's academic progress (Thompson, et al., 2015). Of course, these technology-based tools require that the parents have the digital resources at home to access them.

Role of Policy and School Programs

Many educational policies and school-based programs have been developed to enhance parental involvement, reflecting the growing body of research on its importance (Hsu & Chen, 2023; Thompson, et al., 2015). Also, federal programs such as Title I in the United States mandate parent engagement initiatives as well as

financial assistance, and schools in compliance facilitate involvement by providing workshops, parent-teacher associations (PTAs), and other resources (Title I, 2008). While there have been a number of educational reform movements in Taiwan (Peng, et al., 2011), this researcher has not found Taiwanese educational reforms specific to parental involvement in the literature.

Literature Review Summary

Several studies have not established positive results from parental involvement e.g., Mattingly, et al (2002), who found parental involvement programs demonstrated virtually no influence on student educational outcomes. However overall, parental involvement in students' academic success is a well-researched area, with consistent findings that parental engagement positively influences academic performance. Meta-analyses by Fan and Chen (2001), Hill and Tyson (2009), and Jeynes (2007) among others mentioned above, examining the effects of parental involvement on various student populations all concluded that parental involvement positively influences educational outcomes.

Studies continue to explore new dimensions, such as the impact of digital tools and how different cultural and socioeconomic contexts affect the nature of involvement. Policymakers, educators, and researchers (see e.g., Alharthi, 2023) agree on the need for sustained parental involvement throughout a child's educational journey, and this area remains a crucial focus for education research and practice.

What follows is the methodology utilized in the current study.

Methodology

The focus of this study was to gather the perspectives and insights of middle and high school teachers in Taiwan on how the COVID-19 pandemic impacted parental involvement in students' at-home online learning experiences in that specific online environment.

Research Design

This study utilized a quantitative cross-sectional survey research design. "A cross-sectional survey is one in which data are collected from selected individuals at a single point in time" (Mills & Gay, 2019, p. 200). Additionally, "Cross-sectional designs are effective for providing a snapshot of the current behaviors, attitudes, and beliefs in a population" (Mills & Gay, 2019, p. 200). This study met these criteria.

Limitations

There is a possibility that responses from any self-reported, survey-based study could be affected by the social desirability bias, a type of response bias. This happens when participants give answers they believe will be perceived positively by the researcher or others, rather than expressing their true opinions or experiences (Nikolopoulou, 2023). To mitigate this, the survey was conducted anonymously, contained no leading questions, and used forced-choice questions, which, according to Nikolopoulou, are among the ways to help reduce the likelihood of this type of bias.

Given that this study employed convenience sampling at a single private school in Taiwan (see following section), the findings are not intended to be statistically generalizable. Rather, they offer context-specific insights that may be analytically transferable to similar educational settings in diverse international contexts, particularly those globally that share comparable structural or cultural characteristics. While this study provides meaningful insights into parental involvement during the COVID-19 pandemic in Taiwan, the findings are drawn from a specific population and may not be generalizable to countries with different educational systems, cultural expectations, or digital learning infrastructures.

Given that the current study captures a specific moment in time during an unprecedented global crisis, the extent to which the parental involvement behaviors observed during the pandemic will persist in a post-pandemic context remains uncertain. The unique educational disruptions brought about by COVID-19 may have temporarily amplified certain parental practices that are not necessarily indicative of long-term patterns which justifies further investigation through longitudinal research.

Participants

Convenience sampling was utilized to recruit the participants in this study. Convenience sampling is a non-probability sampling method where a researcher “selects individuals because they are available, convenient, and represent some characteristic the investigator seeks to study” (Creswell, 2005, p. 149). The participants in this study consisted of teachers at a private middle and high school in Taiwan. The teacher participants all have both pre- and post-pandemic teaching experience, which is necessary in order to provide valid responses to the survey questions.

Setting

This study took place at a private, Catholic, co-educational (formerly girls only) middle and high school in Tainan, Taiwan. The grade levels at the site are 7-9 i.e., three years middle school, and 10-12 i.e., three years high school. There were approximately 1,315 middle school students and 1,113 high school students enrolled at the time of the study. There are 108 teachers and 26 staff members on this campus. The campus consists of three buildings containing classrooms and administrative offices, and a library-auditorium complex. The school is located in central Tainan, a major metropolitan area of approximately 1.8 million people.

Assessment Instrument and Data Collection

Prior to the recruiting of participants, the electronic distribution and collection of the voluntary informed consent forms and the survey, and before any data was collected, Institutional Review Board approval (IRB-FY2025-56) was received.

A researcher-developed survey instrument created in Qualtrics titled “The Impact of the COVID-19 Pandemic on Parental Involvement of Taiwanese Middle and High School Students’ Online Learning Experience” (see Appendix A) was utilized to collect data for this study. The survey consists of seven demographic questions, followed by seven 4-point and five 5-point Likert scale questions, and two open-ended questions, which addressed the research question “What is the impact of the pandemic on

parental involvement of Taiwanese middle and high school students' online learning experience?"

In order to maintain anonymity and privacy, at no point in this study were individual participants identified. No names or other identifying information was requested on the survey. Any data displayed or published will be in aggregate, so no individual participant will be identifiable.

As a former middle and high school English teacher at the site of this study in Taiwan, this researcher has made occasional social contact with one former colleague/teacher who was asked, and fortunately agreed to distribute the survey to all the teachers in the building.

Although the researcher was previously employed at the study site, this affiliation ended over 27 years ago. There have been no ongoing professional connections with the school since that time. This substantial time gap mitigates potential bias, and the study was conducted with a commitment to research integrity and reflexivity.

For the recipients who chose to participate, the recruitment email contained a link to the web-based survey in Qualtrics. The first page of the survey was the voluntary informed consent form which also provided an overview of the research. Potential participants were required to give their voluntary consent to participate by selecting YES before they could access the actual questionnaire portion of the survey.

One of the demographic questions asked how many years each participant has been teaching. Any teacher who checked the box "1-4 years" of teaching experience was eliminated from the results as that would mean they had not been teaching long enough to have teaching experience both pre-pandemic i.e., taught in 2019 and earlier, and have taught since the onset i.e., 2020 to present, which is necessary to provide valid answers to the questionnaire.

The survey, which included the embedded voluntary informed consent form, was provided in both Chinese and English by this researcher. Data collection took place during the last half of the Fall 2024 semester and into the Spring 2025 semester. Participants were given two weeks to complete and submit the survey, with a reminder email giving another two weeks to non-responders. There were no incentives offered for participating. Of the 101 surveys distributed, there were 44 valid submissions, however, several participants omitted some questions.

Descriptive statistics were utilized to analyze the data. The results of the data analysis are discussed in detail in the following section.

Data Analysis and Results

This study aimed to gather teachers' perspectives on how the COVID-19 pandemic affected parental involvement in the at-home online learning experiences of students at a middle and high school in Taiwan. A 17-question researcher-generated survey was electronically distributed to collect data concerning the teacher participants' perceptions about parental involvement with their children's learning, and to ascertain any trends or shifts that occurred in their involvement as a result of the pandemic. The

survey consists of seven demographic questions followed by seven 4-point and five 5-point Likert scale questions. What follows is a detailed description of the demographic and survey data and the results.

Demographic Data Section

There are seven demographic data questions included with the survey. Results of the first demographic question, shown in Figure 1 below, indicated that the teacher participants included 25 females and 19 males. There were no responses to the “non-binary” or “prefer not to say” response options.

Figure 1

Gender of Participants

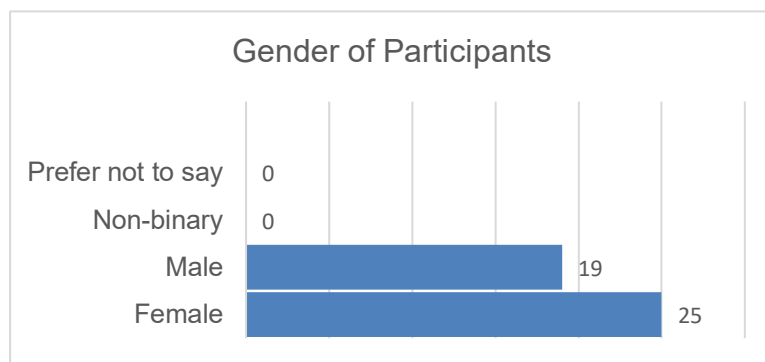


Table 1

Age Range of the Teacher Participants

Range	N	Percentage
22 – 27	1	2.27%
28 – 32	2	4.55%
33 – 40	7	15.91%
41 – 50	16	36.36%
51 – 60	17	38.64%
> 60	1	2.27%
Prefer not to say	0	0.00%

Demographic Question 2, the age range of the participants, varied from 23 to over 60 years old, as indicated in Table 1 above. Seventy-five percent of the teachers were 41 – 60 years old with far fewer young teachers in the study population.

Table 2

Highest Level of Education of the Teacher Participants

Level	N	Percentage
Bachelor's	9	20.93%
Master's	29	67.44%
Post-Master's	5	11.63%

The highest level of education earned by the teacher participants is shown in Table 2 above. Over three-quarters of the participants (79.07%) hold an advanced degree.

Table 3

Years of Teaching Experience of the Teacher Participants

Range	N	Percentage
1 – 4	3	6.82%
5 – 6	2	4.55%
7 – 8	2	4.55%
9 – 10	6	13.64%
11 or more	31	70.45%

Table 3 above indicates the years of teaching experience of the participants. As mentioned, any teacher who checked the box “1-4 years” of teaching experience was eliminated from the results as that indicates they had not been teaching long enough to have teaching experience both pre-pandemic i.e., taught in 2019 and earlier, and have taught since the onset i.e., 2020 to present, which is necessary to provide valid answers to the questionnaire.

Table 4

Grade Level the Participants Currently Teach

Grade Level	N	Percentage
Middle School (7 – 9)	11	6.82%
High School (10 – 12)	15	4.55%
Both	8	4.55%

The fifth demographic question asked the teacher participants what grade level(s) they currently teach. The results are shown in Table 4. At this point, for reasons this researcher was not able to determine, ten of the participants stopped responding to the survey, resulting in N = 34 valid responses. This question was in the multiple-choice format, so selecting more than one answer was not possible, thus not a possible explanation.

Table 5

Number of Courses Taught that Utilize a Web-Conferencing Platform such as Zoom, Skype, Google Meet, Microsoft Teams, etc.

Range	N	Percentage
none	1	2.86%
1	8	22.86%
2 – 4	19	54.29%
5 or more	7	20.00%

The number of courses taught utilizing some form of online content delivery varied, as indicated in Table 5 above. All but one of the teachers have used or are currently using a web-based platform to facilitate online content delivery. The one participant answering “none” indicates that they have no online teaching experience and was eliminated from the responses.

Table 6

Preferred Course Delivery Method of the Teacher Participants

Method	N	Percentage
Traditional – in a face-to-face classroom	20	57.14%
Fully online – with a LMS (Blackboard, Canvas, etc.)	5	14.29%
Virtual – with a web conferencing system (Zoom, Skype, etc.)	2	5.71%
Blended/hybrid – both in-person and online components	8	22.86%

The last demographic question asked the participants to indicate their preferred choice of course delivery method. While all of the teachers were required to migrate to some form of online content delivery platform during the pandemic, their preferred choice of content delivery clearly is the traditional, face-to-face classroom setting as indicated in Table 6 above. Regardless, this researcher does not believe this fact biased the participants’ responses.

Survey Data Section

The survey also consists of seven 4-point and five 5-point Likert scale questions, and two open-ended questions. What follows next is a detailed description of the survey data and the results.

The survey data section of the questionnaire begins with Question 8, “To what extent do you believe parents were involved in their children’s learning before the pandemic (2019 and earlier)?”

Table 7

The Extent Teachers Believe the Parents were Involved in their Children’s Learning from Home Pre-pandemic (2019 and earlier)

Involvement	N	Percentage
Not Involved	0	0.00%
Slightly Involved	12	36.36%
Involved	17	51.52%
Very Involved	4	12.12%

Over half of the teacher participants believe the parents were involved to some extent in their children’s learning from home prior to the pandemic, as indicated in Table 7. The teachers’ perceptions of the extent of parental involvement are based on their level of communication with the parents, conference attendance, student comments, and each student’s required and graded weekly journal entries. None of the teachers believed there were parents who were completely uninvolved in their children’s learning from home. Half (51.52%) of the study participants believe the parents were “Involved” pre-pandemic, while only a few teachers (12.12%) believed the parents were “Very Involved” pre-pandemic.

Question 9 asked, “To what extent do you believe parents were involved in their children’s learning from home because of the onset of the COVID-19 pandemic (2020 and later)?”

Table 8

The Extent Teachers Believe the Parents were Involved in their Children’s Learning from Home Because of the Onset of the COVID-19 Pandemic (2020 and later)

Involvement	N	Percentage
Significant Decrease	2	6.06%
Moderate Decrease	2	6.06%
No Change	5	15.15%
Moderate Increase	17	51.52%
Significant Increase	7	21.21%

A small percentage of the teachers believe that there was a decrease in parental involvement because of the onset of the pandemic. The findings indicate a high probability that this is due to the teachers' awareness of some or all of the issues listed in the Barriers to Parental Involvement section above. Be that as it may, almost three-quarters of the participants (72.73%) believe that parental involvement increased at some level once the pandemic struck as indicated in Table 8. It is argued that this finding is due to the fact that the students, at that point (once the onset occurred), were all home-bound and forced to complete all learning activities from home, which could have instinctively triggered more participation by the parents.

Question 10 in the Survey Data section of the questionnaire asked the participants, "In your experience, how did parental involvement (e.g., monitoring assignments, setting schedules, etc.) impact students' motivation to engage in learning from home during the pandemic?" The focus here was to determine the teachers' perceptions concerning to what extent the pandemic might have caused the parents to get more (or less) involved in terms of motivating their children.

Table 9

How Parental Involvement (e.g., monitoring assignments, setting schedules, etc.) Impacted Students' Motivation to Engage in Learning from Home During the Pandemic

Impact	N	Percentage
Very Negative Impact	0	0.00%
Negative Impact	2	6.06%
No Impact	3	9.09%
Positive Impact	20	60.61%
Very Positive Impact	8	24.24%

As indicated in Table 9, well over half (60.61%) of the teachers believe the onset of the pandemic contributed to progress in terms of the parents being more involved in motivating their home-bound children's learning. For the purposes of this study, "motivating" was defined as monitoring assignments, setting schedules, checking grades, and generally providing additional reminders to keep their children on track and to encourage them to be more engaged with their online assignments.

Question 11 asked the teachers to rank order five common forms of parental involvement they observed in supporting students' learning from home during the pandemic. The provided list of forms of parental involvement included: communicating with their children, communicating with teachers, setting schedules, supervising assignments, and providing technological support.

Table 10

Ranking the Five Most Common Forms of Parental Involvement

Field	1 most common	2	3	4	5 least common
Communicating with their children	5	4	9	11	3
Communicating with teachers	4	15	1	6	6
Setting schedules	3	5	11	13	0
Supervising assignments	14	3	9	1	5
Providing technological support	6	5	2	1	18

As indicated in Table 10, the results of the teachers' submissions varied. "Supervising assignments" was clearly the form of parental involvement most often ranked number one i.e., the most often noticed. Also, "Communicating with teachers" was the form of parental involvement most often ranked second. The form of parental support noticeably noticed the least often was "Providing technological support". This study contends that the variations in the rankings are due to the grade level of the students for any individual teacher. And further, that the low ranking of technical support is due to the fact that very often the students are more tech-savvy than their parents (researcher's personal teaching experience).

Question 12 asked, "To what extent do you believe the involvement of parents during the pandemic affected students' ability to manage time and complete assignments independently?"

Table 11

The Extent Teachers Believe the Involvement of Parents During the Pandemic Affected Students' Ability to Independently Manage Time and Complete Assignments

Impact	N	Percentage
No Impact	0	0.00%
Very Little Impact	3	9.38%
Some Impact	12	37.50%
Significant Impact	17	53.13%

As indicated in Table 11, most teachers (90.63%) clearly believed that parent involvement had some, or significant impact on their students' time management and ability to complete assignments independently. Very few (less than 10%) believed the pandemic had very little or no impact.

The goal of Question 13 which asked "Compared to pre-pandemic (2019 and earlier), how would you rate the academic performance of students who you know had active

parental involvement during the pandemic?” was to determine if teachers thought the pandemic resulted in any changes in the academic performance of students whose parents were actively involved pre-pandemic.

Table 12

How Teachers Rated the Academic Performance of Students Who They Know had Active Parental Involvement During the Pandemic as Compared to Pre-pandemic, (2019 and earlier)

Academic Performance	N	Percentage
Lower	1	3.13%
Somewhat Lower	2	6.25%
Unchanged	7	21.88%
Somewhat Better	12	37.50%
Much Better	10	31.25%

As indicated in Table 12, only a few teachers (slightly over 9%) believed academic achievement decreased during the pandemic. This differs from the U.S. where academic gaps, particularly in reading and math, still exist (Ross, 2024; Schwartz, 2023). However, in Taiwan at the site of the current study, well over half (68.75%) believed that academic achievement improved. The evidence suggests that the improvement in academic performance was due to an increase in parental involvement once stay-at-home orders were in place and all student work was done from home and overseen by the parents.

Interestingly almost 22% of the teacher participants in this study did not believe there was any change in academic achievement compared to pre-pandemic scores. This is possibly because the only results teachers saw during that time period in all probability were grades. With everything online, there was no in-person interaction or other ways of assessing achievement.

The goal of the next-to-the-last survey question was to determine what challenges the teachers believe parents face in supporting their children’s online learning. Question 14, a multiple-select format (resulting in the much higher total N), asked, “What challenges do you believe parents face in supporting their children’s online learning? (Choose all that apply.)” and provided four common challenges from which to select.

Table 13

Causes of Challenges the Teachers Believe the Parents Faced in Supporting Their Children's Online Learning and Their Frequency

Parental Challenges	N	Percentage
Lack of technological knowledge	18	19.15%
Lack of understanding the content	24	25.53%
Time constraints	27	28.72%
Balancing work and home responsibilities	25	26.60%

Nearly 29% of the teachers believe that time constraints are the most frequently faced challenge by the parents in supporting their children's online learning. As mentioned in the *Barriers to Parental Involvement* section, working parents and parents with more than one job have additional time constraints and often find it difficult to attend school functions or help with homework after work hours. While this researcher intuitively expected to see more of a variance, there was less than a 10% difference between the range of the four challenges listed, as indicated in Table 13 above. In this researcher's experience, the educational background of the parents can vary widely i.e., the parents typically are not a heterogeneous group. This leads to some of the items listed not necessarily being a significant challenge for some parents, depending upon the education level, SES, and other factors. Also, when the pandemic forced the migration to online learning, the majority of Taiwanese K-12 schools utilized Google Meet, a web-based conferencing platform rather than a learning management system (P.-E. Wu, personal communication, August 2024). Students, most of whom are tech-savvy, were given a link and knew that link took them to their daily assignments, so technical support by the parents in many cases was mostly not needed, thus the least challenging and with the lowest percentage as Table 13 shows.

The last closed-ended question in the Survey Data Section, Question 15, asked, "Now that parents have experienced dealing with home-based learning for their children, how willing do you believe that parents today would be to become involved in their student's learning in the event of being forced into a remote learning environment again e.g., because of a predicted typhoon?"

Table 14

How Willing the Teachers Believe the Parents Would Be to Becoming Involved with Their Children's Learning at Home in the Event of Being Forced Into Another Remote Learning Environment

Parental Challenges	N	Percentage
Less willing than before	4	12.12%
Somewhat willing	12	36.36%
More willing	17	51.52%

A little over half (51.52%) of the teacher participants believe the parents would be more willing to become involved in their student's learning from home in the event of a forced remote learning environment such as another pandemic or a predicted typhoon in the future. The evidence suggests this is because the parents now are more aware, as a result of the COVID-19 pandemic, of the need for parental oversight of their children's work from home. A little over a third (36.36%) of the teachers believe the parents would be somewhat willing, but not necessarily more willing to become involved in their student's learning from home in the event of another forced remote learning environment.

A plausible interpretation is that the response is based on the fact that, post-pandemic, the parents are perhaps even more aware of the realities and time commitments associated with overseeing their children's work from home, while still recognizing the need for parental oversight. Once again, because of some of the challenges mentioned in the Barriers to Parental Involvement section above, those teachers who suspect that some parents (12.12%) would be less willing to become involved in their children's learning from home probably believe this because of conversations with parents during the pandemic, and the frustrations and stress the parents experienced and expressed to their children's teachers.

Open-ended Questions

Two optional open-ended questions completed the Survey Data Section of the questionnaire. A text box was provided for participant responses. All open-ended responses (translated from Chinese) are listed below.

Question 16 asked, "In your opinion, what strategies could schools implement to better involve parents in their children's online learning experience from now on?" The following responses were provided:

- Self-study or self-learning
- Provide the necessary hardware equipment, internet access, and a complete instructional video explaining the implementation process.
- None or N/A (Not Applicable)
- None or N/A (Not Applicable)
- Emphasize the impact of parental involvement on a child's learning.
- Parents can also participate simultaneously in online classes to observe the teaching situation.
- Regularly hold online parent meetings to share the school's learning plans and progress.
- Provide a user manual for the online learning platform to help parents understand how to support their children.
- Regularly send surveys to parents to understand their needs and opinions in order to improve the school's strategies.
- Directly ask parents to accompany their children to class.
- Use the parent guide to provide instructions.
- Use parent-child activities to collaboratively create solutions.
- Record instructional videos on setting up remote teaching to assist parents in guiding their children.

Question 17 asked, “If you have any other information or experiences concerning parental involvement in your students’ learning that was not mentioned above, please share your views.” The following responses were provided.

- None or N/A (Not Applicable)
- None or N/A (Not Applicable)
- None or N/A (Not Applicable)
- None or N/A (Not Applicable)
- In addition to academic support, emotional encouragement, and understanding are also very important. Parents should be attentive to their children's emotional needs and help them cope with stress and challenges
- None or N/A (Not Applicable)
- Parents hope their children can return to school as soon as possible, as they will be overwhelmed trying to balance work and supporting their children at home.
- What follows next is a discussion of the results of this study, possible areas of future research, and conclusions.

What follows next is a discussion of the results of this study, possible areas of future research, and conclusions.

Discussion, Future Research, and Conclusions

To reiterate, the goal of this study was to gather teachers’ insights and perspectives into how the COVID-19 pandemic impacted parental involvement in the at-home online learning experiences of students at a middle and high school in Tainan, Taiwan.

Discussion

The analysis indicates that the findings from this study provide valuable insights into teachers' perceptions of how parental involvement in students' at-home online learning experiences at a middle and high school in Taiwan was impacted by the COVID-19 pandemic. The results reveal several key trends and shifts in parental involvement due to the pandemic, and how this involvement impacted students' learning experiences.

Prior to the pandemic, the majority of teachers believed that parents were involved in their children’s learning to varying degrees. This suggests that even before the pandemic, a significant portion of parents were engaged in supporting their children’s education at home, though the level of involvement was not universally high. The evidence suggests that this baseline of involvement set the stage for the increased parental engagement observed during the pandemic.

When the pandemic forced a migration to an entirely online learning format, nearly three-quarters of the teacher participants reported an increase in parental involvement, with some observing a significant increase. It is reasonable to infer that this move to at-home learning, where students were no longer physically attending school prompted many parents to take a more hands-on approach, as they became increasingly more directly responsible for overseeing their children's learning. This increased involvement could also reflect the teachers’ awareness of parents’ need to monitor and support students in the absence of face-to-face classroom instruction.

The effect of parental involvement on students' motivation was overwhelmingly positive, with most teachers believing it had a positive or very positive impact. This suggests that the more parents engaged in activities such as monitoring assignments, setting schedules, and checking progress, the more motivated students were to complete their tasks. Evidence suggests that the increased motivation could be attributed to a more structured environment that parents helped create, as well as the reassurance and encouragement parents provided during the pandemic – a time of significant uncertainty.

When asked about the academic performance of students with active parental involvement during the pandemic, the majority of teachers reported that this population of students performed better or much better compared to pre-pandemic times. This is a noteworthy finding, especially when compared to reports from other countries, such as the United States, where academic achievement, particularly reading and math, generally declined in the wake of the pandemic. In Taiwan, it appears that the increase in parental involvement during the pandemic may have positively affected students' academic outcomes, possibly due to better time management, more structured learning environments, and closer monitoring of assignments and academic progress. While the study is situated in Taiwan, as mentioned above, it intentionally included an international comparison—with the U.S.—to situate the findings within broader educational responses to the COVID-19 pandemic. To that end, and in order to draw more explicit parallels between the study's themes and broader global shifts in parental involvement and remote learning during the pandemic, a more in-depth global analysis is provided here connecting the findings of the current study more clearly to international educational trends.

A study by Karabanov, et al., (2023) of 2-8 year old children in Bulgaria, Israel, and Spain during the pandemic found differences between the cultures including, Spanish and Bulgarian parents were more involved in their children's literacy and digital activities than Israeli parents. Spanish children had more independent screen time than Bulgarian and Israeli children. We found that parents of larger families were less involved in literacy and digital activities with their children. Educated parents were more involved in book-reading activities and selecting digital content, and their children were less exposed to screens. Finally, controlling for the children's age, we found a general association between parent-child literacy and digital activity measures. (p. 1027).

Doll, et al., (2022) examined how parental involvement of children enrolled in 12 international schools in Korea, China, and Southeast Asia were impacted by the pandemic. This group of researchers found that parents struggled with challenges related to balancing competing priorities such as employment demands of the parents. Parents reported increased levels of stress and anxiety in their child/ren during this time, largely attributed to increased isolation, uncertainty about learning tasks, low levels of motivation and engagement, as well as lack of feedback about their learning progress. They concluded the need for further research on the topic of parents as co-educators.

In a study focused on Portuguese parents' perceptions of their involvement in their children's learning during the pandemic by Ribeiro, et al., (2021) it was found that parents reported involvement in their children's online work for at least 30 minutes a

day. The findings also indicated that parental involvement was based on a number of factors including level of education, the number of children at home, the children's age, and the children's gender.

As mentioned earlier, parents of first-graders in Greece were exhausted and overwhelmed as a result of the new and/or additional responsibilities of parental involvement created by COVID-19 (Rousoulioti, et al., 2022). Additionally, these researchers found that Greek parents tend to view helping with homework as the only meaningful form of parental involvement, considering their participation in other aspects of their children's school activities to be relatively unimportant.

In a qualitative phenomenological study of six Saudi Arabian mothers' involvement in their children's learning during the pandemic, it was found that they preferred to "keep their chosen role rather than fulfil the teaching role imposed on them by COVID-19": (Alharthi, 2022, p. 345). This researcher also found that external circumstances i.e., the closing of schools due to the pandemic, contributed to an extra level of involvement, but this was temporary. As schools reopened, parental involvement was resumed at previous, pre-pandemic levels.

A study of 15 middle-class Canadian families focused primarily on the impact of economic inequities and middle-class privilege on parental engagement during the pandemic (Anthony-Newman, et al., 2023). The researchers defined middle-class as parents who have a university education and jobs with a sizable level of autonomy.

Thus, social class of the participants played a role in the Canadian parents' ability for parental engagement. At the time of the pandemic, the Canadian education system had a lack of available computers and inconsistent broadband internet coverage, particularly in rural areas and among low income families, which impaired parental involvement. This study was corroborated by Reimers's (2022) research, which found that in higher income countries such as Finland, Japan, and Singapore the socio-economically privileged students had access to higher quality online learning opportunities, while less privileged students were forced to depend on a mix of online platforms, printed materials, or phone-based resources used to relay content.

Thus, the findings of the current study reflect global educational trends regarding parental involvement during the pandemic. The current study also identified several challenges that parents faced in supporting their children's online learning. The most frequently cited difficulties selected from a provided list included time constraints, balancing work and home responsibilities, and a lack of content knowledge. It is plausible that these challenges limited the extent to which some parents could provide consistent support. Furthermore, despite the increase in involvement, the least common form of support reported was providing technological assistance (with the lowest percentage in the rankings among the choices listed in the previous section), suggesting that students were generally more adept at using technology than their parents, thus reducing the need for parental intervention in this context.

Finally, when asked about future parental involvement in the event of a future forced remote learning situation, half of teachers believed that parents would be more willing to become involved. This is an encouraging sign, indicating that many parents now recognize the importance of their involvement in their children's learning, especially in

remote learning environments. However, a small portion of teachers believed that parents would be less willing to engage, due to the stresses and challenges experienced during the initial shift to online learning during COVID-19.

Future Research

There are multiple opportunities for future research concerning this important issue. Further research could explore how different parental engagement strategies contribute to student success by investigating specific methods of involvement that lead to the most positive educational outcomes. For example, studies could examine whether more structured forms of support, such as parents setting daily schedules, supervising assignments, or facilitating discussions about course content, result in higher levels of student engagement and academic achievement compared to less structured forms, such as general encouragement or providing emotional support.

Additionally, exploring how different types of parental involvement affect various student demographics (e.g., grade level, academic ability, and socio-economic background) could offer a deeper understanding of which strategies are most effective in different contexts. Also, exploring how individual teacher demographics (e.g., age, number of years of teaching experience, online teaching experience, grade level taught) might impact findings could also be useful data to possibly predict outcomes concerning parent involvement and/or student success based on teacher characteristics.

Research could also identify best practices for supporting both parents and students in future online learning environments. For instance, determining the most effective ways to equip parents with the necessary tools and resources to help their children succeed in online educational environments, such as providing training on a school's technology platform or guidance on how to assist with academic content, could prove very beneficial. Further, investigating the role of teachers in fostering parental involvement—through communication channels, feedback mechanisms, or virtual office hours—could provide valuable insights into how educators can better collaborate with parents to ensure consistent support for students.

Additionally, future research also might explore how schools and communities can build stronger support systems that reduce the barriers to parental involvement, such as time constraints and a lack of technological knowledge. By identifying the factors that help parents overcome these challenges, future educational policies and strategies can be tailored to ensure that parents as well as students are adequately supported in an online learning environment. Such research could ultimately contribute to the development of more effective models of parental involvement in education, particularly in times of crisis, ensuring that students have the resources and support they need to succeed academically in virtual learning settings as well as in traditional classroom settings.

While the current study was intentionally designed to explore parental involvement as perceived by teachers, whose insights offer a valuable and practice-informed lens into patterns of parental involvement, a future study that incorporated the voices of parents, could provide additional multi-perspective view of this important issue.

Another possibility for future research would be to replicate the current study but examining other cultural groups to determine the extent to which the findings of this

study hold true across more diverse or international populations. This could help situate the current study within a larger global framework. Future research could expand upon this work by using longitudinal designs and cross-cultural comparisons to better understand the dynamics of parental involvement in diverse contexts.

Lastly, while this study does not explicitly adopt a cross-disciplinary framework, it does lay a foundation for future research to build on its findings, using interdisciplinary approaches, in areas such as public health, technology ethics, or comparative cultural analysis.

Conclusion

The COVID-19 pandemic significantly increased parental involvement in students' at-home online learning in Taiwan, which in turn reflected an improvement in student motivation and academic performance. While many parents faced challenges such as time constraints and a lack of content knowledge, their increased involvement during the pandemic helped mitigate some of the learning disruptions caused by the unexpected shift to online education. Teachers' perceptions suggest that the pandemic may have led to more consistent and effective parental support, which improved students' ability to manage their time and complete assignments.

Looking forward, there appears to be a growing awareness among parents of the importance of their role in supporting their children's education, and a willingness to engage in future remote learning scenarios. The findings of this study highlight the importance of fostering a strong partnership between parents and teachers, particularly in times of crisis, to ensure the continued academic success and well-being of students.

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Appendix A

The Impact of the COVID-9 Pandemic on Parental Involvement of Taiwanese Middle and High School Students' Online Learning Experience

Demographic Section

1. Please indicate your gender:
☐ female ☐ male ☐ non-binary ☐ prefer not to say
 2. What is your age?
☐ 23-27 ☐ 28-32 ☐ 33-40 ☐ 41-50 ☐ 51-60 ☐ over 60 ☐ prefer not to say
 3. What is your highest level of education?
☐ Bachelors ☐ Bachelor's plus graduate hours ☐ Master's ☐ Post-Master's
 4. How many years of teaching experience do you have?
☐ 1-3 ☐ 4-5 ☐ 6-8 ☐ 9-11 ☐ 12 or more
 5. What grade level do you currently teach? ☐ Middle School ☐ High School ☐ Both
 6. How many courses have you taught that utilize a web-conferencing platform such as Zoom, Skype, Google Meet, Microsoft Teams, etc.?

☐ none ☐ one ☐ 2-4 ☐ 5 or more
 7. If you had a choice, what is *your* preferred course delivery method?
☐ traditional – in a face-to-face classroom
☐ fully online – with a Learning Management System (Blackboard, Canvas, etc.)
☐ virtual – with a web conferencing system (Zoom, Skype, Google Meet, Microsoft Teams, etc.)
☐ blended/hybrid – both in-person and online components
-

The following questionnaire aims to gather teachers' insights into how parental involvement has influenced students' online learning and any shifts from pre- to post-pandemic.

Survey Section

8. To what extent do you believe parents were involved in their children's learning *before* the pandemic (2019 and earlier)?
☐ Not involved ☐ Slightly involved ☐ Involved ☐ Very involved
9. To what extent do you believe parents were involved in their children's learning *from home* because of the onset of the COVID-19 pandemic (2020 and later)?
☐ Significant Decrease ☐ Moderate Decrease ☐ No Change ☐ Moderate Increase

☐ Significant Increase

10. In your experience, how did parental involvement (e.g., monitoring assignments, setting schedules, etc.) impact students' *motivation* to engage in learning from home during the pandemic?

☐ Very Negative Impact ☐ Negative Impact ☐ No Impact ☐ Positive Impact

☐ Very Positive Impact

11. What were the most common forms of parental involvement you observed in supporting students' learning from home during the pandemic? Rank order the following from 1 (least often) to 5 (most often).

___ Communicating with their children ___ Communicating with teachers

___ Setting schedules ___ Supervising assignments ___ Providing technological support

12. To what extent do you believe the involvement of parents during the pandemic affected students' ability to manage time and complete assignments independently?

☐ No impact ☐ Very little impact ☐ Some impact ☐ Significant impact

13. Compared to pre-pandemic (2019 and earlier), how would you rate the academic performance of students who you know had active parental involvement during the pandemic?

☐ Lower ☐ Somewhat lower ☐ Unchanged ☐ Somewhat better ☐ Much better

14. What challenges do you believe parents face in supporting their children's online learning? (Choose all that apply.)

☐ Lack of technological knowledge ☐ Lack of understanding the content

☐ Time constraints ☐ Balancing work and home responsibilities

15. Now that parents have experienced dealing with home-based learning for their children, how willing do you believe that parents today would be to become involved in their student's learning in the event of again being forced into a remote learning environment e.g., because of a predicted typhoon?

☐ Less willing than before ☐ Somewhat willing ☐ More willing

Open-ended Questions (optional)

16. In your opinion, what strategies could schools implement to better involve parents in their children's online learning experience from now on? (Please use the space below to respond.)

17. If you have any other information or experiences concerning parental involvement in your students' learning that was not mentioned above, please share your views. (Please use the space below to respond.)