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Modality Matters to Parents Who Support Adolescent Online Learners: A Literature Synthesis

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Abstract

In this literature synthesis we investigated parent perspectives on how instructional modality affects the type and amount of support parents need to provide their primary/secondary online learners. Informed by the Academic Communities of Engagement framework (Borup et al., 2020), we analyzed parents' perceptions of their support roles for primary/secondary online learning and their students' support needs given the context of their instructional modality. An intensified need for parents to support primary/secondary online learning was reflected in the literature during the emergency remote teaching (ERT) of the pandemic. We searched ERIC and Education Full Text databases for articles with intersections of four constructs: student engagement, parental engagement support, adolescent online learning, and instructional modality. After identifying an initial corpus of literature, we searched citations and Semantic Scholar using Elicit, an AI-based tool, to triangulate our findings. We discovered how the design decisions online programs make regarding instructional modality can affect parental support roles, parental perception of online school support, other aspects of parents' lives outside the online course, and students' online learning support needs. This study affirmed the importance of purposefully designing teaching modalities to align with desired learning outcomes. A carefully designed blend of synchronous and asynchronous content, defined as bichronous instruction, can alleviate stress associated with parental involvement and improve students' independent engagement. When designing bichronous learning, online programs should consider modality affordances, student engagement, and personal circumstances. This synthesis has implications for how modality decisions affect digital equity given concerns about privacy and discrimination in synchronous learning.

Keywords: virtual classrooms, synchronous communication, asynchronous communication, parent role

Introduction

Full-time primary and secondary online students typically learn from home without the physical presence of a teacher. This makes parental involvement in online learning different from a traditional learning context. Understanding how to provide support in an online context can be confusing for parents because parent and teacher support roles often overlap (Hasler Waters & Leong, 2014). The type and amount of support online students need from teachers and parents is affected by the way online content is delivered. Historically, adolescent instruction has been delivered asynchronously so students could complete their courses any time, any place (Veletsianos & Houlden, 2019). But synchronous online learning is increasingly common, where students learn at the same time but in different places (Martin et al., 2021).

For this literature synthesis, we relied on Borup et al.'s (2020) Academic Communities of Engagement (ACE) framework and Martin et al.'s (2020) explanation of online instructional modalities. The ACE framework affirmed that both institutional and personal communities provide support necessary for the success of primary/secondary K-12 online learners. It provides a theoretical foundation for our research because it explains the central role parents play in online contexts. Additionally, it frames how parents and educators must direct engagement support toward affective, behavioral, and cognitive needs. Martin et al. (2020) introduced

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bichronous delivery as a distinct instructional modality that intentionally combined elements of synchronous and asynchronous instruction.

As COVID-19 "shifted the educational paradigm" (Dorji, 2021, p. 90), many schools relied on a combination of modalities to meet the needs of both immediacy and flexibility. As parents assumed increased learning support roles (Garbe et al., 2020), researchers sought to understand their perspectives on providing online learning support. The focus of this research is to uncover how parents saw instructional modality decisions as a means to support both students and parents in online learning. The possibility for schools to support both students and parents through instructional modality decisions became increasingly clear as parents took more responsibility for their children's education (Lee, 2022). Parents became the focus of research studies across the world to understand their experiences providing online learning support.

Despite the increase in both parental support research and synchronous online instruction during the pandemic, a very limited amount of research has been conducted to address this intersection of modality and parental support roles. To date no review of the literature exists to synthesize the effect of modality on parents' supportive roles for online learners. The purpose of this study is to determine how primary/secondary online instructional modality affects the need that students have for parental support to help their academic engagement. Understanding this issue will better prepare parents, teachers, and schools to support learners in the current landscape of online learning choices.

Review Question

How does primary/secondary online instructional modality affect the need that students have for parental support to help their academic engagement?

Methods

To answer the question, how does adolescent online instructional modality affect the need that students have for parental support to help their academic engagement?, we used a literature synthesis approach. West and Martin (2024) defined a literature synthesis as a larger cover term for many different kinds of review synthesis approaches where the goal is to synthesize, rather than report, findings. According to these authors, in a literature synthesis, the focus during the literature search is on finding relevance rather than comprehensiveness in the articles, and PRISMA and other review protocols are often used to document the process for transparency rather than as a firm criterion. The goal of this type of review, then, is to create insight for practitioners and reviewers by mapping a space in the literature and using narrative to argue for interpretation of the studies. In this way, it bears similarities to what others call narrative syntheses (Tricco et al., 2016), purpose-specific reviews (Sutton et al., 2019), or generically a literature review (Grant & Booth, 2009).

We reviewed articles with intersections of four main constructs in our research question, student engagement, parental support, primary/secondary online learning, and instructional modality. We defined student engagement as "the energy exerted towards productive involvement with course learning activities" (Borup et al., 2020, p. 810). Parental support is defined as support for students' affective, behavioral, and cognitive engagement. Online learning

is learning that uses digital technologies to give students access to education despite boundaries such as geographic distance. In addition, instructional modality is defined as either synchronous, asynchronous, or bichronous meaning a blend of the two (Martin et al., 2020).

Literature and Database Searches

Our primary sources for locating records for this review were the education databases, ERIC (EBSCO) and Education Full Text (EBSCO). We began our search in the ERIC database with descriptors representing the following four constructs: student engagement, parental support, K-12 online learning, and instructional modality. We identified descriptors from the thesaurus and key articles to ensure accurate terms. Additionally, we limited our search to peer reviewed journal articles and excluded ERIC documents, reports, and conference papers (see Table 1). We did not constrain the article search by publication years; we knew research on our topic would be limited prior to the pandemic but we were interested to find any work that had been done on the topic prior to our study.

Table 1

ERIC Database Search Descriptors and Results of Intersecting Articles

Search Construct	ERIC Search Descriptors and Boolean Operators	Number of Articles
Parental Engagement Support	(DE "Family Relationship" OR DE "Parent Child Relationship") OR (DE "Parent Role" OR DE "Parents as Teachers") OR (DE "Parent Participation" OR DE "Parents as Teachers") OR (DE "Parents" OR DE "Fathers" OR DE "Grandparents" OR DE "Mothers") OR (DE "Parent Child Relationship" OR DE "Parent Student Relationship")	42,551
Student Engagement	DE "Student Needs" OR (DE "Learner Engagement" OR DE "Student Motivation") OR (DE "Academic Achievement" OR DE "Educational Attainment" OR DE "Student Promotion") OR DE "Academic Support Services"	91,944

Search Construct	ERIC Search Descriptors and Boolean Operators	Number of Articles
Adolescent Online Learning Context	DE "Online Courses" OR DE "Blended Learning" OR (DE "Educational Technology" OR DE "Instructional Systems" OR DE "Performance Technology") OR (DE "Technology Uses in Education" OR DE "Computer Uses in Education" OR DE "Electronic Learning") OR DE "Virtual Schools" OR (DE "Distance Education" OR DE "Correspondence Study") AND (DE "Elementary Secondary Education" OR DE "Elementary Education" OR DE "Secondary Education")	78,027
Instructional Modality	DE "Synchronous Communication" OR DE "Asynchronous Communication" AND (DE "Electronic Learning" OR DE "Teaching Methods" OR DE "Web Based Instruction")	3,539
Combined Search		5

Unfortunately the search only yielded five articles. We realized that many articles were not being assigned descriptors for modality. We decided to search for articles where the other three constructs intersected and then manually scanned the articles for a discussion of modality. The results of the search without instructional modality yielded 159 peer reviewed journal articles; the 5 articles from our original search were included in this second search. We then conducted a similar search in the Education Full Text database and found 16 articles that were not duplicates from the ERIC search, totaling 175 peer reviewed journal articles. With the 175 articles, we reviewed the titles and abstracts of the articles to check them against the inclusion and exclusion criteria in Table 2.

Table 2

Inclusion/Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Parents are the research subjects	Students or teachers are the research subjects

Inclusion Criteria	Exclusion Criteria
Context is Articles describe parental support during primary/secondary K-12 online learning	Context is Articles describe parental support in traditional schools or higher education
Articles are empirical research	Articles are theoretical, or literature reviews, ERIC documents, reports, and conference papers
Articles give information about the instructional modality of the online learning	Articles describe technology integration

We excluded 115 articles by reviewing abstracts based on the criteria in Table 2 (see Appendix A). We then read the 60 remaining articles and coded them for discussion of modality. The first author read the full text of the 60 articles and coded them for a discussion of modality. Twenty-one articles were excluded due to no discussion of modality. The remaining 39 articles were coded based on the type of modality (asynchronous, synchronous, or bichronous), whether the discussion of modality was explicit or implicit, and terms or phrases that exemplified how the article discussed modality. All articles that did not explicitly discuss modality were then reviewed independently by the second author. We reviewed our findings to ensure agreement on the final designations (see Appendix A). After resolving any disagreements, we compiled a list of common terminology used to describe instructional modality (see Table 3). We hope this list may help future researchers who face similar challenges where modality decisions are not described overtly.

Table 3

Terminology Describing Instructional Modality

Synchronous terms	Asynch	
Live session		Prerecorded videos

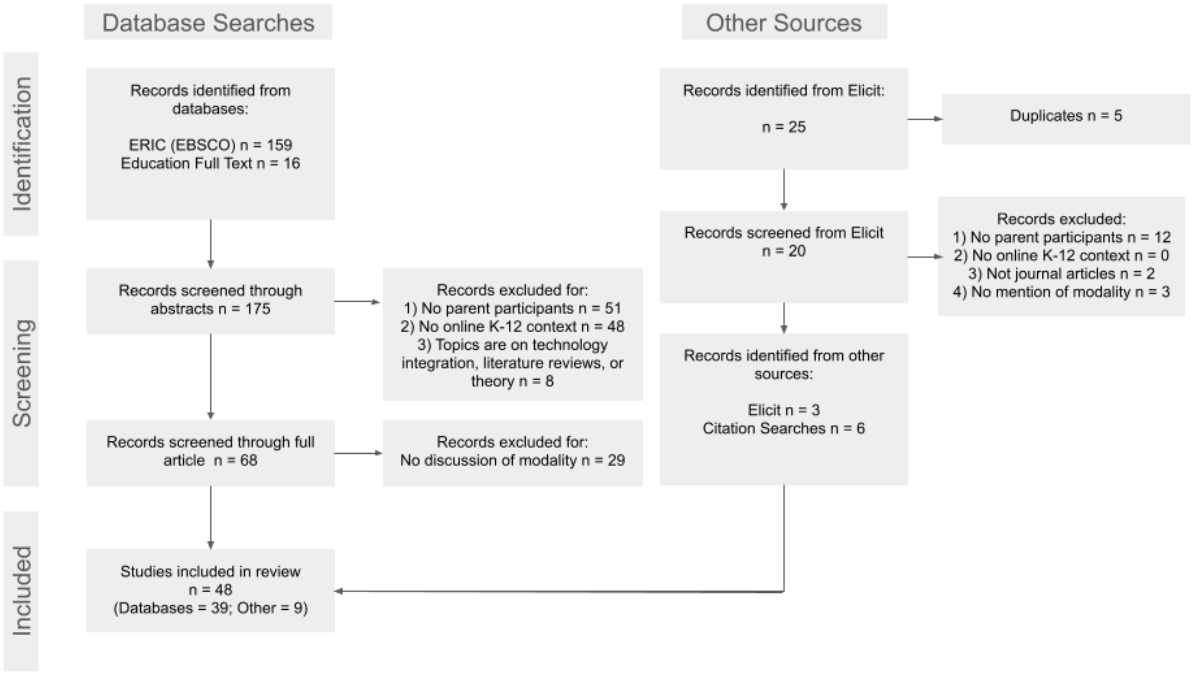
Once we had completed our database search, we reviewed the citations of the included articles and identified six more articles. We also used Elicit, an artificial intelligence tool designed for literature reviews, to triangulate our findings. Based on a semantic analysis of our research question, Elicit conducted a search of Semantic Scholar and OpenAlex. It retrieved 500 papers with semantic relevance to our topic. Elicit then generated a list of exclusion and inclusion criteria. The AI-generated criteria matched ours but added new or more specified criteria in some cases, e.g. rather than searching for parents as the research subjects, Elicit looked for specific evidence of parental support within each article, or Elicit added a new criterion of searching for articles that addressed academic engagement outcomes. The tool then generated a table of the 25 most relevant articles. The characteristics of included studies revealed that defining the instructional modality was difficult for the LLM as well. It was able to identify some synchronous and asynchronous learning explicitly, but other articles were simply categorized as “online learning” or defined by the technological tools they used like Zoom or

Canvas. We reviewed the 25 articles and found that five were duplicates from the database searches and 17 were excluded based on our criteria. We included the three remaining articles in our review.

AI-assisted literature screening has limitations in that searches are not comprehensive, transparent, or reproducible. They require added oversight from researchers to account for potential bias in the AI algorithm retrieval process. We found that queries may misrepresent highly specific concepts, like the types of instructional modality. Knowing these limitations, we intentionally used Elicit as a method of triangulation only after we conducted our original database searches. We hope our paper can provide a guide to others seeking to use AI tools in how they can be used intelligently to triangulate human-based literature synthesis. Figure 1 shows a PRISMA chart, documenting the search process for choosing the 48 articles included in this research.

Figure 1

PRISMA Diagram Chart



Note. Adapted from "The PRISMA 2020 statement: An Updated Guideline for Reporting Systematic Reviews," by M. J. Page et al., 2021, The British Medical Journal, 372. https://doi.org/10.1136/bmj.n71. In the public domain.

Literature Review/Analysis Strategy

To review the articles, we charted information about each study's publication date, nationality of participants, research design, purpose, target population, and modality. We then examined the articles for discussion of instructional modality and noted how parents talked about their parental support roles. We noted the type and amount of support they gave, as well as any

recommendations they made for how online programs' decisions about instructional modality could affect their parental support roles. Although theoretical articles were not part of our database-generated search, we referenced key theoretical articles about parental engagement support and instructional modality along with the findings to give context to the research.

The final list of included articles in this review represented a broad range of geographic locations with parents from 24 different nations. There was a surge of research conducted about parents' experiences supporting online learning during the pandemic, and that is reflected in the articles included in this review. The majority of the included articles used qualitative research methods to capture the emotions parents experienced supporting primary/secondary students during the pandemic (See Table 4).

Table 4

Description of Articles Included in Review

Description of Articles		Number of Articles
Publication Date		
	Before COVID	6
	During COVID	39
	After COVID	3
Research Design		
	Qualitative	29
	Quantitative	13
	Mixed Methods	6
Participants' Country of Origin		
	Afghanistan, Australia, Bhutan, Canada, China, Croatia, Czech Republic, Eritrea, Ethiopia, Greece, Ireland, Libya, Nepal, Pakistan, Palestine, Philippines, Portugal, Qatar, Somalia, Turkey, United Arab Emirates, United Kingdom, United States, Wales	24

Findings

From our review of the 48 articles in our pool, we found that instructional modality decisions can affect the type and level of support primary/secondary parents need to provide their online students, specifically how parents support their students' affective, behavioral, and

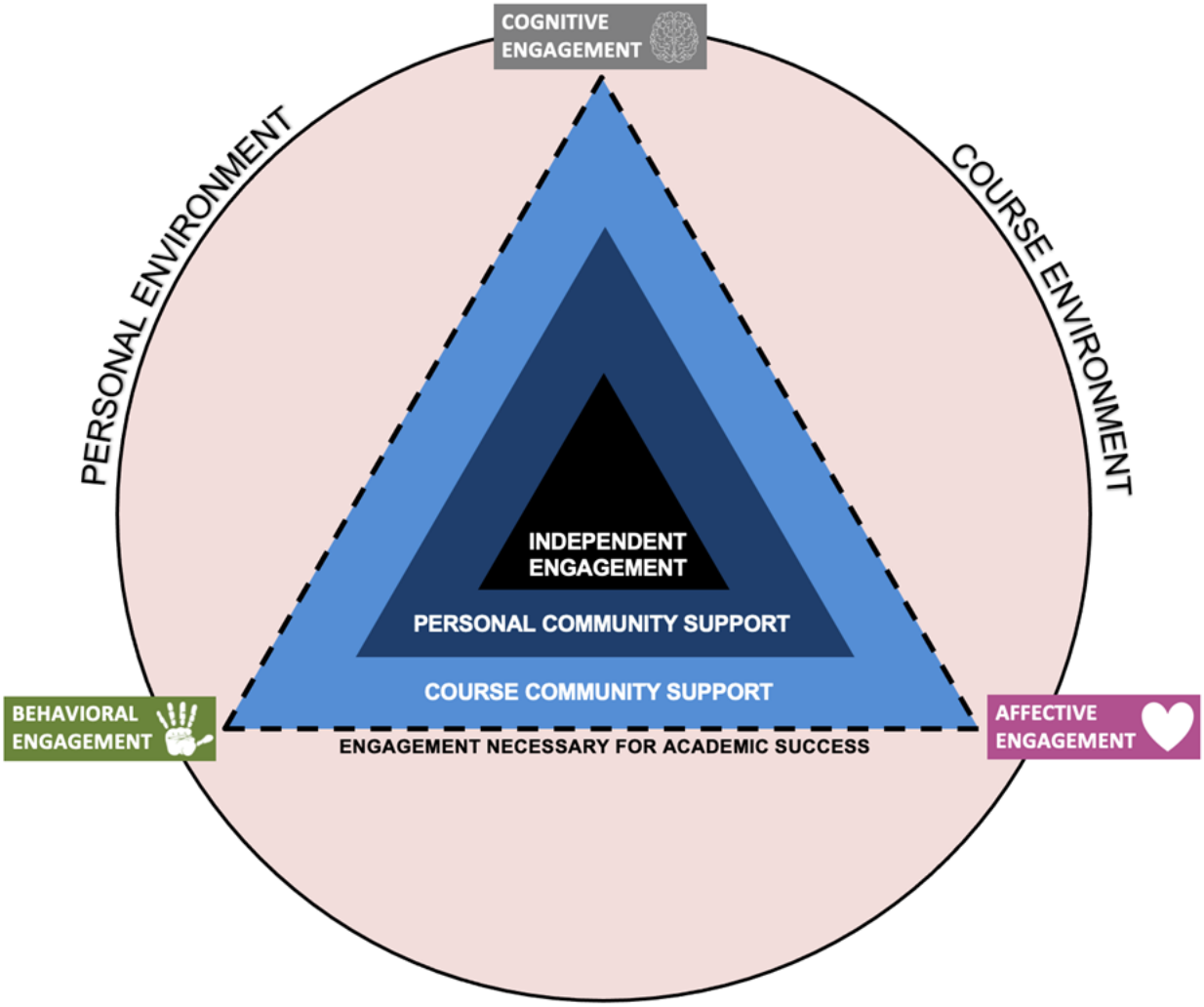
cognitive engagement. Modality choices also influence parent perceptions of school-provided support and impact online students' support needs.

Modality Affects the Type and Amount of Support Parents Provide

When students learn online, they depend on different sources of support to achieve the engagement necessary for academic success. Borup et al. (2020) developed the Academic Communities of Engagement framework to explain academic engagement in blended and online learning contexts. To be successful, students need to engage in learning affectively, behaviorally, and cognitively. Students' ability to engage independently in all three dimensions varies, so school and personal communities need to provide support to fill the gaps in students' engagement (See Figure 2). Parents, who are the primary actors in the personal community, have to construct new support roles in online learning contexts (Sandberg et al., 2026). The decisions the school community makes about instructional modality can affect the type of support roles parents need to assume.

Figure 2

The Dimensions of Engagement and Communities of Support in the ACE Framework



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Defining Parents' Online Learning Support Roles

Much of the literature prior to the pandemic addressed instructional modality in the context of defining parental support roles in an online learning environment. Those roles are challenging to define, not only because they differ from in-person education contexts, but also

because in online learning, parents' roles often overlap with teachers (Borup et al., 2014). For example, Downes (2013) explored parental support roles in adolescent distance education in remote regions of Australia. Parent supervisors in her study had both asynchronous and synchronous learning support through learning packets and satellite lessons. Even with support in both types of instructional modality, she found that parents filled roles of instructing, assisting with assignments, monitoring progress, preparing lessons, and motivating–all roles that aligned with those of teachers. She compared parents' experiences to that of new teachers, except that parents had no educational training, no professional development, and no teacher network to rely on. In addition, parents often supported students of multiple age groups simultaneously. Despite these challenges, parents reported significant satisfaction in their role as supervisors due to the closer relationships they developed with their children. Because parent supervisors' roles so closely matched teachers' roles, Downes referred to parents as "an often overlooked cohort of educators" that needs attention in the research (2013, p. 31).

Asynchronous learning contexts seemed to exacerbate the confusion this "overlooked cohort of educators" feel in distinguishing their support roles from the teacher's. To differentiate between the roles of parents and teachers, Hasler Waters and Leong (2014) conducted an ethnographic analysis of a mostly asynchronous online program. They concluded that in their asynchronous context, parents' roles were managers and guides for the curriculum, while teachers' roles were instructors and facilitators. Even though they differentiated parent and teacher roles, they still concluded that parents were "co-educators" with teachers (p. 52). Similarly, Borup et al. (2015) found that in an asynchronous learning context parents were more comfortable filling roles of advising, mentoring, and organizing both time and space, but they felt they needed to monitor and motivate their students because they were working asynchronously. Parents reported discomfort when students wanted their help with instructing because parents wanted students to ask teachers their questions about course content. Curtis and Werth (2015) recommended that adding synchronous instruction might improve parents' role confusion by shifting some responsibility back to the teachers. They postulated that synchronous instruction might also improve transactional distance between students and teachers and build caring support communities.

Research conducted after the pandemic about parental support roles included more direct discussion of how the affordances of each instructional modality affected parents' roles. Radcliffe (2023) explored parent perspectives on the affordances of instructional modalities from survey responses of 43 parents of adolescent distance education students in Australia. While synchronous learning allows for direct instruction, live interaction, collaboration, and immediate feedback, asynchronous instruction makes it possible for students to choose from a broader selection of courses, to have flexibility in time and place of learning, and to choose the pace of progress and depth of study. Noting the demographic shift of distance education students from rural communities to urban centers, Radcliffe (2023) suggested that today's distance education students need specific affordances of both synchronous and asynchronous instruction so they can experience both community and deep learning opportunities in an online context.

Modality Affects Parents' Affective, Behavioral, and Cognitive Support Roles

Several studies have found evidence of the effect of instructional modality as they use the ACE framework to explore parental support roles across affective, behavioral, and cognitive

dimensions (Borup et al., 2020). Guo et al. (2024) explored how parents' online learning support is affected by learning modalities. In open-ended survey responses from 567 parents of adolescent online students, parents expressed a need for more synchronous learning. They reported that their students lost motivation for learning when they did not have interactions with teachers or peers. They felt a sense of inadequacy about providing support, particularly in cognitive areas like math where they did not have subject-matter knowledge. This call for more synchronous instruction is interesting given other findings from the survey that indicate parents of students learning in synchronous modalities reported needing to provide more support than parents of students in asynchronous courses.

This call for more synchronous instruction was repeated in many of the studies we reviewed, but like this study, the research suggested that simply increasing the amount of synchronous instruction does not lead to the outcomes parents desired. For instance, Budhrani et al. (2021) explored how parental support roles of organizing, facilitating, monitoring, motivating, nurturing and supporting learning are differentiated based on instructional modality. Parents needed to support asynchronous students with learning loops, assessment, and feedback. In bichronous courses, parents had to provide just-in-time assistance to answer students' questions. Parents noted that although the time their parental support time decreased with synchronous instruction, but the reduced flexibility and time-constrained deadlines for live classes increased the demands for immediate help and caused stress in the family Parents felt that synchronous instruction was so limited that students still needed their help with both the learning loop and the just-in-time assistance. As a result, Budhrani et al. proposed that online school orientations should prepare parents with accurate expectations for parental support within the context of the school's instructional modality.

Beck (2024) found evidence of a nuanced perspective of how parents see their support change based on instructional modality when he examined how virtual schools helped at-risk students engage affectively, behaviorally, and cognitively. Parents noticed their students' affective engagement improved when teachers used time in live classes to assess their emotional wellness. They also said that giving their students time to interact with classmates in break-out rooms boosted their affective engagement. Parents noted improved behavioral engagement from asynchronous support. A weekly newsletter from the school outlining the learning plan for the week or color coding of tasks in the LMS helped students manage their online work. But students also benefited behaviorally from synchronous support, like when a teacher shared her screen to walk the students through each step of how to submit an assignment online. Finally, parents felt synchronous interactions supported cognitive engagement when students could do small group work in zoom rooms or attend office hours where they could get live, one-on-one help from a teacher. Parents noticed their secondary-age students struggled to get their questions answered in the live sessions because of the number of students. They preferred to get cognitive help from teachers in the form of asynchronous feedback, like a video response to their specific question. Parents in Sandberg et al. (2026) similarly noticed that instructional modality particularly affected their ability to provide cognitive support. When parents needed to help students with cognitive tasks, they often tried to relearn the material. Instructional modality choices affected how parents were able to relearn course content. In settings where content was delivered synchronously, parents often listened to live classes along with their students, whereas in asynchronous courses, parents would study materials in the LMS so they could understand and explain the concepts to their students.

Modality Affects Parents' Perception of School Support

Parents' perception of online school support was affected by the amount of synchronous instruction the school provided. Although they were primarily concerned with how parent perceptions varied across socioeconomic status, one of the features Smetackova and Stech (2021) considered when they administered a questionnaire to 2,528 parents in the Czech Republic was parent satisfaction with school practices during the pandemic. They noted that as students learned online in the Czech Republic, the amount of live, synchronous instruction they received varied. They found that regardless of the amount of live instruction time their students received, parents had positive perceptions of online meetings, viewing them as good substitutes for their traditional classes.

Similarly, Booth et al. (2021) surveyed over 2,000 parents in the UK and Wales about factors that affected learning, including instructional modality and parental support. They found that the instruction time students received in virtual classes varied significantly between state schools and private schools. Where private school students received four hours of live instruction each day, state school students averaged only one hour. Booth et al. (2021) asked parents about their perceptions of students' learning. In contrast to Smetackova and Stech (2021), parents of state school students felt that their students' academic progress had suffered more than parents of private school students. Although the study only measured parent perceptions of outcomes rather than actual academic outcomes, it is interesting to note that just receiving more synchronous instruction time led parents to perceive better academic outcomes.

Modality Decisions Affect School Support for Accommodations

The transition to online learning left many students with disabilities with unmet needs (Ortiz et al., 2021) given the disruption of services and routines (Valcourt-Pearce, 2022). Parents of students with disabilities experienced new and increased support roles as well as a loss in accommodation services with a move to virtual learning (Munsell et al., 2021; Ortiz et al., 2021). Averett (2021) found that families struggled, not only because schools did not provide accommodations or resources at home, but because the students' needs were different when they were learning remotely. Students with disabilities struggled in asynchronous contexts that lacked interaction with teachers and an opportunity to observe visual cues like body language. Maintaining focus was especially challenging in distracting home environments and in lengthy video-based assignments. Synchronous contexts posed other challenges, particularly with behavior, where students needed constant monitoring from parents or one-on-one Zoom meetings with their teacher. Parents reported the most positive outcomes when, regardless of modality, they felt the teachers made added efforts to reach their student's individual needs.

The fact that students with disabilities struggled in both synchronous and asynchronous modalities was echoed by multiple researchers. Parents' in Harkins et al. (2022) had mixed opinions about the effectiveness of each modality. Some believed virtual schools should take advantage of online affordances that would benefit students with disabilities, like recorded class sessions while others disliked synchronous learning because their students struggled to participate appropriately in synchronous settings. Valcourt-Pearce (2022) found that her deaf children benefited from synchronous content delivery because accommodations like closed captions and ASL interpreters in Zoom sessions that helped make content more accessible, but

she also noticed academic losses since other accommodations and services were not available to students learning from home. Yıldırım and Rovshenov (2022) found that parents of students on the autism spectrum struggled in the early weeks of the pandemic when all learning happened asynchronously. But even when courses moved to synchronous delivery, students struggled with distraction and staying caught up with the teacher.

Significantly, parents felt if online learning was the only option then they needed an entirely different system because both the synchronous and asynchronous delivery methods were failing their students with disabilities (Yildirim & Rovshenov, 2022). Parents in Harkins et al. (2022) noted that when students with disabilities transfer to a virtual learning environment, modifications may need to be made to the online instruction and to the IEP. And Munsell et al. (2021) advocated for exploring new, more effective, delivery options for students with disabilities. Specifically, they felt a multimodal approach where schools provide asynchronous materials to parents who need more flexibility with time may reduce parent stress.

Modality Decisions Are Affected by Access to Digital Resources

Many families had limited access to educational content either because they lacked technological tools or proficiency for using those tools. In some cases, language and cultural barriers also prevented access to content provided through the tools. Because many students had insufficient access to technological devices, parents appreciated teachers who made deliberate modality decisions with technology access in mind. Knowing access to digital tools was limited, Libya, Palestine, and Afghanistan each used both synchronous and asynchronous content delivery to ensure a continuity of education during primary/secondary school lockdowns. They created online materials to be completed asynchronously. When they taught in live synchronous sessions, they made recordings for those who could not participate live (Khlaif et al., 2021).

Synchronous content delivery accentuated the problem of limited digital resources, even amongst more privileged families. Bhamani et al.'s (2020) sample of parents came from urban areas of Pakistan, had internet access, and spoke English. Yet even these parents reported a lack of digital resources as one of their challenges. They noted that when schools delivered content synchronously, many families could not participate because they did not have enough devices for multiple students to be in online classes simultaneously.

To account for limited digital access, schools in Bhutan delivered content asynchronously through resources like Google classroom and shared content synchronously through television. However, they found that both modalities had limitations. Synchronous content was ineffective because it did not match what students were learning asynchronously and it was not differentiated for grade level. Students struggled to complete asynchronous learning activities on time given their limited access to digital tools and inexperience with navigating Google classroom. This created significant stress for both parents and students, so much that some students reported parental abuse and cheating because of the pressure they felt to complete assignments (Dorji, 2021).

In locations where technological tools or internet access was even more limited, schools offered fully asynchronous content that required no internet connectivity through self-learning modules (SLMs). Although Filipino students expressed a preference for education content to be delivered through a variety of visual, auditory, and tactile methods (Capinding, 2021), many

schools in the Philippines offered SLMs to ensure that digital access did not determine educational opportunity. Three studies in our review highlight Filipino parents given the integral part they played in supporting learning asynchronously. In Naungayan et al. (2024), parents described the support roles they needed to fill when their children learned in asynchronous SLMs as sustaining motivation, monitoring compliance, and tutoring. Other research assessed how parent demographics affected learning outcomes in SLMs. Capinding (2021) found that parent education and economic status correlated with high mathematics performance from students learning through SLMs in the Philippines. Finally, Collado et al. (2023) assessed how internet access affected students' learning engagement. Interestingly, parents reported that internet access was not a predictor of student engagement. In this case where digital access was a concern, asynchronous activities allowed for high student engagement without internet connectivity.

In other cases, the digital divide was defined less by access to resources and more by an ability to access what they needed from the digital tools. In the United States, parents of English Learners (EL) had difficulty providing the necessary support even when the schools provided devices for each student because they lacked digital literacy skills. Because access, language, and time were all barriers to parental support, the schools offered a variety of both synchronous and asynchronous learning support. Parents responded well to asynchronous family-based learning activities that were translated into Spanish because they met their need for flexibility and comprehension (Delany-Barmann et al., 2021).

Digital access was also determined by cultural barriers for participation in synchronous and asynchronous learning. Due to privacy concerns, parents in Afghanistan, Libya, and Palestine restricted their daughters from showing live images of themselves during synchronous instruction. Consequently, researchers found that women were more likely to participate in online asynchronous discussion boards, while male students participated freely in both synchronous and asynchronous instruction (Khlaif et al., 2021). This example highlights how modality decisions affected equitable access to learning for all students. Racial barriers also affected digital access. Other students hesitated to participate in live classes due to a fear of discrimination. Zhang and Halpern (2021) looked at a case study of a mother living in northern California whose twin students experienced discrimination at school due to their Chinese heritage. During the pandemic, the school implemented district-wide Zoom classes where students were supposed to keep their cameras on. Although they struggled with engagement, the twins kept their cameras off as it shielded them from the microaggressions they experienced in face-to-face classes. Educators ensure access when they make decisions that are sensitive to issues of privacy and equity that arise with diverse student demographics.

Modality Affects Other Aspects of Parents' Lives

Through the articles in this review, we documented how instructional modality either constrained or improved other aspects of their lives. Time and stress were common concerns for parents supporting online learning, and instructional modality had the potential to impact both. As mentioned previously, parents felt that live classes added stress because of time-constrained deadlines (Budhrani et al., 2021). Parents also reported that supporting online learning created significant stress in their lives (Timmon et al., 2021) because it placed heavy demands on their personal time, especially those who were working full-time jobs. When a brick-and-mortar school administered online web courses for students in remote Canadian provinces, they noticed

what an "enormous amount of school-personnel time" it took to do what parents are required to do when they set up, supervise, and support students' online learning (Philpott et al., 2010). Garbe et al. (2020) also detailed the emotional toll on parents of providing online learning support within the first month of the pandemic, explaining that parents were overwhelmed from balancing responsibilities of their employment while supporting online learning.

In a large, quantitative study Ribeiro et al. (2021) documented how the amount of time parents spent supporting online learning differed based on age, student autonomy, and instructional modality. By surveying 21,333 Portuguese parents, researchers found that parent support time was highest when students were in the youngest level of school. Parental support time was also affected by student autonomy. Students with high independent engagement abilities required less parental involvement than their less autonomous peers. Finally, instructional modality also affected the amount of parent support time. Parents reported spending less time supporting private school students who received more synchronous instruction than public school students. One limitation of this large quantitative study is that close-ended responses may have limited parents' ability to share their attitudes about the time they spent providing online learning support.

Social status of students' families was another factor that affected parental support. Demir and Yildizli (2022) documented at-home learning experiences of 20 parents of public and private school students in Turkey. They found that parents' positive and negative feelings about their role in providing support varied according to the socioeconomic status (SES) of the family. Low SES families who lacked technological resources or academic abilities expressed more negative emotions about online learning and worried the pandemic would widen the academic divide. High SES parents were more likely to express positive emotions about online learning and to leverage additional resources to support their students' learning. Demir and Yildizli (2022) argued that improved instructional practices, like building asynchronous e-learning materials and training teachers in better synchronous teaching techniques and communication, would help address the concerns of low SES families. And ultimately, these changes could benefit all students regardless of their SES status.

Although many parents felt the increased time supporting their students added stress, others reported that it strengthened their relationships (Drvodelic & Domović, 2022; Harmon & Arnold, 2023). The parents who responded to Roy et al.'s (2022) survey felt the biggest benefits of remote learning were (a) more family time, (b) flexibility in the child's schedule and ways of learning, and (c) better parent understanding of child's learning style, needs, or curriculum. In open-ended responses, parents asked for both more live synchronous sessions and better asynchronous learning materials because they felt that modality choices affected their relationships with their students. Similar to Budhrani et al.'s (2021) finding, Roy et al. (2022) found that when synchronous classes were too rigid, they created stress instead of support, as students demanded more just-in-time help from parents.

Modality Affects Students' Online Learning Support Needs

As researchers interviewed and surveyed parents about their students' support needs while learning at home, they found that parents worried about social interactions, student engagement, and insufficient teacher support. They were concerned that the lack of preparation

for online teaching during the pandemic led to insufficient teacher support. They felt that online schools could use instructional modality to address some of these student support needs.

Social Interactions

Parents worried about their children's feelings of isolation and social development while learning online (Bhamani et al., 2020). Chances for learning through collaboration and interaction were limited. Researchers concluded that more synchronous learning could improve social challenges in remote learning (Flynn et al., 2021). Looking specifically at the affective, behavioral, cognitive, and psychosocial dimensions of engagement, Flynn et al. (2021) surveyed 2733 parents of adolescent students in Ireland to describe the effects of online learning on social development. Informed by Vygotsky's social constructivist ideas, their study confirmed the need for social collaborative environments and scaffolded learning opportunities with more knowledgeable peers. They recommended additional synchronous learning activities like live online classes and collaborative learning with peers.

Harmon and Arnold (2023) also asserted that learning needed to be engaged, active, meaningful, and socially interactive. They perceived remote learning as inferior to in-person learning partly due to its lack of social interactions. They recommended that online schools consider how they structure and deliver education, including using technology to improve online interaction. Despite their concern over social isolation, parents in this study also noted that although their students had limited peer interactions, they had more time for positive family interactions.

Student Engagement

Parents in multiple studies noticed that a blend of synchronous and asynchronous instruction was beneficial in supporting student engagement. Some research suggested that instructional content needed to be delivered using varied methods so students could engage in learning both on-line and off-line (Lau et al., 2020). Respondents in Lei et al. (2022) described how parents felt their students' engagement was affected by instructional modality. They noticed it was challenging for students to engage affectively in asynchronous learning, and sometimes in synchronous sessions if the teacher did not facilitate good interactions. But even when there were noticeable deficiencies in teachers' online facilitation, parents still felt that synchronous delivery improved engagement since students were able to ask questions, get feedback, and interact with teachers and peers. Eight highly educated Czech mothers of Primary school-aged children also advocated for blending modalities. They noted that well-prepared synchronous instruction had a positive impact on student engagement, technical skills, and independent engagement, but their students' engagement suffered if they had to maintain focus in a synchronous environment all day (Kostelecká et al., 2021). Other parents worried that too much synchronous instruction led to excessive screen time and was damaging to their students' learning engagement (Drvodelic & Domović, 2022; Lau et al., 2020; Saliverou et al., 2021).

Blending modalities in an online course has benefits that can be linked to improved student engagement. Since students prefer a variety of visual, auditory, and tactile learning methods when they are completing online coursework (Capinding, 2021), changing modalities expands the possibilities for how students can engage with their work. Varying modalities may be one way for teachers to adapt learning activities to suit the learners in their course (Burns et

al. 2023). Because teachers understand the needs of the individual students in their course, they can make decisions about how to deliver content most effectively, rather than following district-mandated modality decisions (Timmons et al., 2021).

Parents appreciated that their students gained confidence in their abilities to engage independently as they learned online (Drvodelic & Domović, 2022; Philpott et al., 2010). Wilson-Forsberg et al. (2024) interviewed and conducted focus groups with 10 refugee mothers from the Horn of Africa who were living in Canada during the COVID-19 pandemic. Due to language barriers, the mothers had to rely on interpreters to communicate with the school. When the pandemic restrictions limited any in-person contact, these mothers lost their ability to communicate face-to-face with the school. Consequently, they relied on their students to act as interpreters in their home-school communication. Their students developed significant independence as they managed coursework that required both synchronous and asynchronous interactions and acted as liaisons between their mothers and the online schools.

Interestingly, parents' behavior impacts student engagement in certain modalities. Shishakly (2024) found that parents both negatively and positively affect online student engagement by how they interact with students during their synchronous learning. Parents' interference in online classes negatively affected teachers conducting the classes. Conversely, parents positively impacted student engagement when they encouraged students to have good attitudes and pay attention.

Insufficient Teacher Support

Parents worried that teachers' lack of training in online pedagogy, especially in asynchronous contexts, would lead to poor academic outcomes (Lau et al., 2020; Lei et al., 2022). Ye et al. (2022) argued that increasing student-teacher interactions in both synchronous and asynchronous courses would support students academically and emotionally. As parents noted deficiencies in teachers' online course facilitation, they called for training in online pedagogy and assessment (Demir & Yildizli, 2022). Kaphle and Rana (2023) noticed that teachers in Nepal initially struggled to teach through Zoom, but classes worked better when parents sat with their students during online classes. Teachers realized how crucial parents' participation was if students were going to be successful learning online. They relied on parents to get their students to enroll and participate in classes. They needed them to provide technological support and create an environment at home that was conducive to learning.

Despite the fact that teachers needed training for online course facilitation, parents felt that teachers should be allowed to make their own decisions about content delivery. Parents in Timmons et al. (2021) felt that some synchronous instruction improved their children's ability to engage with learning and receive affective and social support. However, teachers were constrained in deciding which modality to use because of directives from other entities like school administration, school boards, and unions. Given their knowledge of both the students' needs and their access to technological tools, parents felt teachers were best equipped to make modality decisions for their classes.

Discussion

This review synthesized parents' perspectives on how instructional modality affects the need adolescent online students have for help from their parents. Our review indicates a steady move in online learning toward more synchronous instruction, although it is not a call for completely synchronous schedules. Parents recognize that adding synchronous instruction does not absolve them of support responsibilities, but it does alleviate some of the heavy demands of online learning support. The desire to add more synchronous instruction is not a call for completely synchronous schedules. The rigidity of live sessions and time-sensitive assignments adds stress (Budhrani et al., 2021) and may even increase parental support responsibilities (Guo et al., 2024). But a meta-analysis showed synchronous instruction had a small but significant positive effect on cognitive engagement (Martin et al., 2021). And offering more synchronous learning options increased parents' perceptions of support from their school (Booth et al., 2021). We recommend that primary/secondary online programs should support parental involvement by incorporating a blend of synchronous and asynchronous instruction into their course offerings. Most research examining the best practices for designing bichronous instruction is based on teachers' perspectives (Martin et al., 2024). This review synthesis uncovers parents' perspectives on what is important when designing bichronous instruction, including consideration of the affordances of modalities, student engagement, and personal circumstances.

Affordances of Modalities

Just as blended learning research provided direction on how to design effective instruction when combining online and in-person learning contexts (Graham et al., 2024), the pandemic propelled researchers to consider how synchronous and asynchronous learning can be effectively combined (Baba et al., 2021). Blending modalities is most successful when teachers carefully plan instruction (Kostelecká et al., 2021) based on the purpose of the course and the affordances of the modalities (Martin et al., 2023). Teachers' firsthand knowledge of their students' needs should also guide instructional decisions (Timmons et al., 2021). Well-planned bichronous instruction requires considering how each modality supports the desired learning outcome. Changing modalities should expand the possibilities for how students engage with their work (Capinding, 2021) and enable students to experience both community and deep learning opportunities in an online context (Radcliffe 2023). Bichronous instruction may provide the best learning outcomes for adolescent online students (Moorhouse & Wong, 2022).

When planning online instruction, teachers should consider using synchronous activities that encourage human interactions. Synchronous interactions can support emotional wellbeing (Beck, 2024), build community through social interactions (Curtis & Werth, 2015; Flynn et al., 2021), enable immediate feedback from teachers (Lei et al., 2022; Radcliffe, 2023), allow teachers to demonstrate how to use the LMS (Beck, 2024), facilitate one-on-one academic help and small group work (Beck, 2024), and improve the transactional distance between students and teachers (Curtis & Werth, 2015). Live interactions with teachers relieve some pressure from parents who typically are not subject-matter experts (Borup et al., 2015). Online instructors confirmed the parent perspectives in our synthesis with a similar list of affordances for synchronous instruction including one-on-one discussions, explanations of material, group work, answering questions, and conducting assessments (Martin et al., 2023).

Asynchronous learning affordances center around flexibility and choice. Communicating announcements, facilitating online discussions, giving feedback, and providing strong instructional materials are examples of effective asynchronous course components (Martin et al. 2023). The ability to learn any time, any place has been a mainstay on online learning (Veletsianos & Houlden, 2019). Autonomous learning continues to be a draw for students who choose online education (Sandberg et al., 2025). It enables a broader selection of courses, flexibility in time and place of learning, and choice in the pace of progress and depth of study (Radcliffe, 2023). Asynchronous activities support engagement across affective, behavioral, and cognitive domains (Beck, 2024).

Student Engagement

Student engagement necessary for academic success is a concern for many parents whose children enroll in online courses (Flynn et al., 2021; Harmon & Arnold, 2023; Shishakly, 2024). In traditional school settings, students interact with content, teachers, and peers. Students' interactions with content in asynchronous contexts is limited primarily to learner-content interactions (Moore, 1989). We found that parents hoped instructional modality decisions would support better student engagement. Parents focused specifically on using synchronous activities to expand interactions with content and facilitate collaboration with peers and teachers (Flynn et al., 2021; Kostelecká et al., 2021; Lei et al., 2022).

These engagement supports can lead students to develop independent engagement skills, which is one desired outcome for parents who enroll students in online programs (Drvodelic & Domović, 2022; Zhang & Halpern, 2021). Students' engagement abilities vary significantly across individuals (Borup et al., 2020). Young students and students who are new to online learning often struggle with autonomy and locus of control. They require support from either teachers or parents to engage academically (Cavanaugh et al., 2009). How that support is offered can help or hinder students in developing independent engagement (Sandberg et al., 2026). Parents may need to step back from providing support to help their students develop independent self regulation skills (Borup et al., 2019). Teachers also should consider how their course design can support the development of independent engagement, like the color coding that helped students navigate the LMS with less parental supervision (Beck, 2024).

Personal Circumstances

Parents, who have been called "co-educators" (Waters & Leong, 2014, p. 52), typically assume their role without formal training, professional development, or teaching experience (Downes, 2013). This means that the weight of what parents are asked to do can feel heavy, with some parents even reporting experiencing more depression when they had to act as their child's teacher (Burns et al., 2023). In online contexts, parents must construct new roles because their involvement differs from traditional school contexts (Sandberg et al., 2026). Similarly, online schools need to adopt new support roles with a dual purpose of supporting both students and their parents, especially for parents of students with special accommodation needs (Munsell et al., 2021). When making decisions about how to deliver course content, teachers or online programs should consider how the modality will interact with the circumstances of students and their families.

The effect modality decisions have on family relationships is complicated. Limited synchronous instruction can actually increase the stress families feel. Time-constrained deadlines for assignments in live classes increase students' demands for immediate help and reduce flexibility (Budhrani et al., 2021). Heavy demands on parents' time can hinder them from providing adequate support to their students even if they are willing and able to do so (Hoover-Dempsey and Sandler, 2005). However, synchronous instruction can also alleviate stress and improve bi-directional communication, allowing parents to focus on strengthening their parent-child relationships and have insights into their student as a learner (Bhamani et al., 2020; Budhrani et al., 2021; Flynn et al., 2021; Harmon & Arnold, 2023; Roy et al., 2022). If online programs plan bichronous instruction that makes parent support more feasible, then parents can focus more on these positive outcomes of providing online learning support.

Finally, online programs must recognize that engagement and family support are not the only issues affected by modality decisions. In fact, modality decisions are central digital equity. Not only are students with unequal access to digital tools affected by modality decisions, but students of diverse cultural backgrounds may also be affected. Privacy and discrimination concerns were a significant barrier for women and minorities in synchronous modalities (Khlaif et al., 2021; Zhang & Halpern, 2021). Modality choices are not neutral; they have the potential to adversely affect underprivileged students and create additional barriers to learning. As online learning moves toward increased use of synchronous instruction, designers must ensure equitable access by creating policies that are culturally inclusive, particularly those that affect privacy and identity like camera policies and participation expectations.

Review Limitations

This review, as mentioned in the methodology section, followed a narrative synthesis methodology with systematized procedures, but is not a full systematic review methodology. Consequently, the findings are not as generalizable as a systematic review. Specifically, the findings are limited by not completing searches in all databases, although the use of two databases, reference searches, and AI-assisted searching provided a robust collection of papers. In addition, the review is limited by not employing double coding by multiple researchers and calculating interrater reliability, instead relying on coding/screening by the primary author with the second author double coding the articles categorized as implicitly focused on a modality. This was done because the articles with implicit modality definitions were the ones most open to subjective interpretation. Still, the lack of double coding of all articles is a limitation.

There are further limitations in the articles selected for this review. The substantial number of studies conducted during the pandemic is partially due to the limited number of articles that discuss modality prior to the pandemic. The COVID studies likely reflect parental perceptions that are based on emergency remote teaching rather than intentionally planned online learning. The studies selected reflect a global perspective but may be biased in that the databases drew from English language journals which may have excluded international or grey literature. It is also important to acknowledge the potential of algorithmic bias from the AI-generated search, although the number of included articles from Elicit was small.

Implication for Future Research

This synthesis of literature revealed a growing trend toward including more synchronous instruction in primary/secondary online learning. We have advocated for practitioners and online programs to carefully consider the affordances of online learning, student engagement, and personal circumstances as they blend synchronous and asynchronous learning. Instructional modality is one significant way that online programs distinguish themselves from each other so that parents can make decisions about the type of learning experience they feel best matches their student's needs (Sandberg et al., 2025). Online programs help families choose carefully when they make their decisions about content delivery transparent.

Although we know that instructional modality has the potential to impact the type and amount of support parents need to provide adolescent online learners, there is very little research exploring the intersection of parental support roles and instructional modality. We recommend that researchers give more overt consideration to instructional modality. Despite the impact of instructional modality decisions, we found that many researchers do not address the topic directly. Thus, our first recommendation is to make modality an overt part of defining the study context for research into online learning, and that surveys and questionnaires ask parents to describe their instructional context. Second, these online learning contexts are often treated as homogeneous, when in reality, they have significant variation, and so we recommend that researchers analyze data about online learning taking modality specifically into account as they are different learning environments.

Implication for Future Practice

One implication of this review is a call for schools to support parents in adjusting to their new roles as they support their online learners. Part of this comes from recognizing the different stresses placed on the family from modality choices, as synchronous learning may relieve some of the pressure parents feel in co-teaching their children, but may affect issues of equity and access to learning. We recommend that adolescent online programs should utilize a blend of synchronous and asynchronous instruction to support learners and provide choices that families can use in deciding how and whether to learn online. Offering modality choices may provide more equitable opportunities for students to participate regardless of their gender, cultural background, access to technology, or learning accommodations. In addition, many times asynchronous programs can offer synchronous mentoring options for students that need it, which can be helpful for parents. Finally, schools can provide resources and communities of support for parents as they navigate and learn their new roles in supporting their students.

Conclusion

This review of literature extends the ACE framework applications of parental engagement support and shows how instructional modality affects the support parents provide to primary/secondary online learners. Implications from this study suggest that online programs should offer careful blends of asynchronous and synchronous instruction that aim to lighten parents' support load, improve student engagement, and consider the individual circumstances of learners. Research has not fully captured what is happening in primary/secondary online education as online enrollments have skyrocketed since the pandemic. The implications for

families, particularly of young learners, are significant. Research about how to better support the supporters is crucial if we hope to have parents fill the gap of academic engagement needs that is necessary for online students to have academic success.

Declarations

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