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Camera Use in the Online Classroom: Students' and Educators' Perspectives

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ABSTRACT

The global pandemic created by COVID-19 altered the landscape of education, creating the need for flexible methods of teaching and learning and a reliance on technology that many educators and students were not prepared for. Educators adapted their instructional methods to include shifts in pedagogy and the use of remote, hybrid, and flipped classrooms. Despite the additional preparation time, educators found themselves grappling with questions about creating inclusive communities for learners, decisions about how to meaningfully incorporate technology, and how to support student engagement. Without the presence of clear research and guidance, decisions such as whether students should be mandated to enable their cameras during class manifested. Educators were challenged to balance their obligations to assess learning with concerns about increasing equity gaps, access issues, and systemic challenges that are disproportionately experienced by marginalized learners. In an educational environment where video conferencing has become the norm, understanding how requiring camera use is experienced by students and educators and its role in supporting the classroom community is paramount. This study focused on students' and educators' perspectives of camera use in the classroom. Findings revealed that educators and students made sense of the utility of cameras, mandating camera use and their role in developing classroom communities differently. Students generally expressed their capacity to decide for themselves when camera use supported versus hindered their participation and appreciated practicing their agency. Educators generally understood camera use as central and necessary to building classroom community and assessing student involvement, participation, and understanding of class content.

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1. Introduction

In a time when education has shifted to accommodate an ever-changing global public health crisis, educators and students have had to adjust to alternative and flexible methods of teaching and learning. This has included embracing multiple methods of instructional delivery, including remote, online, blended and hybrid classrooms, and the use of new technological resources. Classes that were once taught in person, experienced an emergency pivot to remote instruction in the Spring of 2020, and despite the original belief that this would be a temporary transition, education as we know it has not returned to "normal."

Some of the cited benefits of online and remote learning include flexibility, high level of engagement and facilitation of in-depth discussion for all students including those most reticent to engage in face-to-face discussion, and students' ability to work at their own pace (Kemp & Grieve, 2014; Singh & Matthees, 2021). Research has found that synchronous remote and blended learning have been positively regarded by students as offering collaborative opportunities to increase student engagement resulting in similar performance outcomes to courses that were taught solely as face-to-face (Francescucci & Rohani, 2019).

Despite the benefits of online learning programs and their increasing popularity over the last decade, the sudden shift to online learning of the Spring of 2020 forced upon most faculty was met with questions and skepticism (Pica-Smith & Scannell, 2020). Previously documented concerns related to instructor understanding of online pedagogy, concerns regarding equity between in-person and online models, difficulty in delivering skill-based course content online, technological challenges, and reduced student/instructor interactions (Palvia et al., 2018) as well as lack of motivation, difficulty in creating community, and "lack of a humanized learning environment" (Singh, Steele, & Singh, 2021) were cited. In addition, while online education has been shown to foster collaborative learning, active learning and critical thinking (de Bruyn, 2004), and studies demonstrate no statistically significant differences in outcomes between remote and face-to-face classes (Chen et al., 2008; Page & Cherry, 2018), online and remote teaching and learning, have not been held in high esteem as compared to traditional face-to-face education (Adedoyin & Soykan 2020; Shultz & DeMers, 2020) by faculty who doubt the potential for meaningful student engagement and co-construction of classroom community. This phenomenon is not unusual, however. In a recent article on why the science and scholarship of teaching and learning is often ignored in higher education (McMurtrie, 2022), the author points out the paradox that while SoTL has grown over the last several decades, it is often ignored by faculty who are skeptical of its value or how to apply it in their own classrooms.

Furthermore, the sudden shift to remote learning due to the Covid 19 global pandemic may have exacerbated faculty's reticence to adopt online learning and skepticism of its efficacy (Bozkurt & Sharma, 2020). While there is a difference between "emergency remote teaching" (Hodges et al., 2020; Golden, 2020), which is a temporary measure to respond to the global crisis using technology, and online education, which is a thoughtfully and carefully designed pedagogy to support distance learners (Bozkurt & Sharma, 2020), these are being understood, evaluated, and discussed as one and the same (Hodges et al., 2020).

1.1. Ongoing Debates on the Use and Efficacy of Synchronous Teaching and Learning

Because of some of the positive socioemotional and learning outcomes associated with synchronous virtual learning environments (Racheva, 2018), many higher education institutions

adopted this modality of online education as the Covid-19 Pandemic forced a pivot to online and remote education in the spring of 2020. Within remote teaching in synchronous class time, video conferencing was commonplace. When students and educators engage in video learning through platforms such as Zoom and Microsoft Teams, cameras support the facilitation of community despite geographic differences and the absence of a physical classroom. In the pivot to flexible learning models, the use of video conferencing has become the norm and from this shift has risen great debate and concern regarding camera use by students and whether educators should make this a class requirement. Differences on pedagogical approaches exist in brick-and mortar classrooms, so it is not surprising that there is a lack of consensus on how to effectively manage virtual learning models.

Robust discussions between educators have ensued with some arguing that that camera use should be mandatory to ensure attendance, encourage participation, encourage a sense of engagement, and to avoid instructors' experience of teaching to a blank screen (Schwenck & Pryor, 2021) while others have raised concerns about equity, access, inclusion and the manner in which this requirement symbolizes a disregard for inclusive pedagogy (Castelli & Savary, 2021).

1.2. Perceived Student Engagement and its Impact on Faculty

Instructors who have advocated mandating camera use have argued that teachers rely on the verbal and non-verbal communication of students to inform their understanding and self-evaluation of their students' engagement as well as their own teaching effectiveness (Mottet & Richmond, 2002); thus, seeing students in real time is important to their ongoing assessment of teaching and learning.

Relying on non-verbal cues, may lead teachers to misinterpret students' level of understanding of content. Smiling, head nodding, sitting up straight and leaning forward-- generally "appearing attentive" do not correlate with students' comprehension of content (Mottet & Richmond, 2002). Furthermore, Martin et al. (2020) note that faculty can support social connections, scaffold increased empathy, influence academic success as well as increase motivation and engagement if they are aware of online pedagogy and how to support social presence, cognitive presence, and teaching presence.

Whether or not research supports the notion that educators are correct in their self-assessment of their effectiveness in online education, this assessment guides their sense of self-efficacy, which, in turn, impacts their teaching practice. A qualitative study by MIT's Teaching Systems Lab revealed that educators that described a loss of self-efficacy and "burn out" noted this negatively impacted their teaching (Reich, Buttimer, Coleman, Colwell, Faruqi, & Larke, 2020).

2. Perceptions of Camera Use and Community-Building

Furthermore, some educators have argued that building community is predicated on everyone's capacity to see/visualize the class. Hence, professors have made webcam use mandatory in the online class. While some online education experts would agree that some camera use can enhance relationship-building (Marquatt, 2021; Marquatt & Russell, 2020), they note that it is not necessary for students to have their webcams on throughout the class. Rather, they argue that camera use should be used if there is a rationale and if professors are engaging students in active learning, group exercises or discussion in groups, breakout rooms, etc. They discourage the use of cameras

during lecture-portions of a class when students are simply listening. Schwenck & Pryor (2021) found that students in synchronous online classrooms in which many of their peers turned off their cameras reported a sense of disconnection, lack of engagement, and lack of community; however, qualitative interview data provided in the study highlight that these participants complained of a classroom environment that did not make use of introductory activities to intentionally build community and where instructors did not provide ice-breaker activities, introductions, and other exercises to facilitate engagement, community, and belonging. It remains unclear whether lack of engagement is related to use of camera and visualization or lack of community-building skills in remote and online education by instructors using unfamiliar pedagogies.

2.1. Perspectives on Equity, Inclusion and Trauma-Sensitive Pedagogies and Camera Use

Those who have advocated for inclusive pedagogies that discouraged mandating cameras use in the online classroom focused on important arguments related to equity, inclusion, and trauma-aware pedagogies. Students learning remotely from home are contextualized in myriad different spaces with differing access to technology, broadband, cameras, as well as having access to private spaces that are conducive to learning. Common Sense Media recently reported (2020) that a persistent gap exists between students who have high speed internet at home and those who do not with 15-16 million K-12 students nationwide lacking access. In addition, inequities exist between those who possess devices and the quality of the devices. A 2020 survey of 38,000 by the Hope Center for College, Community & Justice found that 11% of white students and 17% of Black students did not have adequate internet access (Hope Center for 2020 Report). Furthermore, even when students have access to computers and cameras, when asked to be on camera students may be uncomfortable sharing their home environments with their classmates and instructors (Castelli & Sarvary, 2021; Motala & Menon, 2020). While in the traditional classroom, students enter the same physical space, the same cannot be said for home environments, creating concerns that forced camera use will disproportionately impact already vulnerable student groups (Castelli & Sarvary, 2021). There is a need to recognize the inequitable conditions related to resources and security that students present (Motala & Menon, 2020). Castelli & Sarvary (2021) found that twice as many underrepresented minority students (URM) in their sample reported turning off their cameras because of a "weak internet connection," and 38% of URM versus 24% on non-URM students in their sample turned off their cameras because "I was concerned about other people being seen behind me" (p. 3569).

In addition, mental health professionals are increasingly alarmed about students' mental health as depression and anxiety rates tripled in 2020 and worsened in 2021 (Kassens, Taylor, & Rodgers, 2021; Racine et al., 2021). Anxiety rates among 18-25 year-olds averaged 43.5% between April 2020 and March 2021 (Kassens, Taylor, & Rodgers, 2021). Some educators have expressed concerns that mandating camera use is contrary to a trauma-informed pedagogy (Costa, 2021). A recent MIT study found that being on camera intensified feelings of self-consciousness and thoughts of constantly being observed by others (Reich, Buttimer, Coleman, Colwell, Faruqi, & Larke, 2020). The most cited reason for turning off cameras in Castelli & Sarvary's (2021) study was a concern about appearance, which was more pronounced among URM students, while the second reason was a feeling of being "looked at" for the "entire" class (again, this was most prevalent for URM students). In a time when COVID-19 has stressed the emotional capacity of many college students increasing symptoms of anxiety and depression, requiring to turn on cameras for fear of potential consequences of non-compliance may exacerbate both these feelings

as well as trauma responses for those with a history of trauma and/or depression and anxiety (Costa, 2021, 2020).

Based on the scarcity of research on camera use in the remote and hybrid classroom, faculty and students' perspectives on camera use, and the existing literature that suggests mandated camera use has the potential to widen existing inequalities, this study examined undergraduate students and faculty perspectives on camera usage and mandating cameras in the remote classroom.

3. Materials and Methods

To understand the gap in the current literature and to contextualize the debate regarding mandating student camera use in the classroom, this qualitative study used survey data collected from students and faculty regarding their experiences teaching and learning in hybrid and remote learning classrooms that made use of cameras. The selection of participants was carried out utilizing a criterion sampling approach to identify faculty and students who were presently teaching and learning in remote or hybrid classroom models. The current study was approved by the university's Institutional Review Board.

3.1. Participants

The participants for this study were 95 faculty members and 257 undergraduate students from Assumption University, a small Catholic liberal arts institution. At the time of data collection, the university had 1989 undergraduate students, 143 full time faculty and 144 adjunct faculty. Of the faculty that completed the survey, 64 were teaching a hybrid model of instruction, where they were in the classroom with students simultaneously in the classroom and remote, and 31 taught fully remote courses. 61 of the faculty were teaching hybrid and/or remote models of instruction for the first time with only 34 respondents sharing that they had previous experience. The length of employment at the university ranged from 3 months to 50 years.

3.2. Data Collection

Student surveys were conducted during both the fall 2020 and spring 2021 semesters and faculty surveys were conducted at the end of the Spring 2021 semester. Faculty surveys were collected at the end of the Spring 2021 semester. All faculty at the university were invited via email to participate in an 8-question survey about their experiences with navigating teaching in remote and hybrid classroom models, particularly focused on their decision-making regarding student camera use, how they experienced student use of cameras, their sense of classroom community and how it related to student camera use, and their overall experience in hybrid and/or remote instruction. Additional data were collected including length of time teaching at the university, the method of instruction they employed (hybrid and/or remote), and whether they had taught remote or hybrid classes in the past. All survey responses were collected utilizing SurveyMonkey.

Students were recruited by the researchers from select human services and women's studies courses to complete an anonymous 6-question survey that utilized open ended questions to explore their experiences of using cameras in hybrid and remote courses. Students were given class time to complete the survey, were informed that their responses were anonymous, were told that they did not have to answer any questions that they were uncomfortable with, and were informed that they could discontinue the survey at any time. Survey responses were collected in the Fall of 2020

via Brightspace, the University's Learning Management System (LMS), and in the Spring of 2021 they were collected via SurveyMonkey. Responses that did not include answers for the majority of the questions were removed prior to data analysis.

3.3. Data Analysis

This study utilized thematic analysis to identify themes across survey responses for both the faculty and student survey data. These data sets were analyzed separately and then the data were compared to explore similarities and differences amongst student and faculty responses. 6-phase thematic analysis was employed as recommended by Clarke and Braun (2018) due to its reflexive approach through which the essence and meaning of student and faculty experiences could be captured and utilized to identify themes across the data (Clarke & Braun, 2018; Saldana, 2016).

Analysis of the data revealed interesting themes regarding the differences between how educators and students made sense of the usefulness of cameras, mandated camera use, and the role of cameras in developing and influencing classroom communities. Student themes included we can decide for ourselves, one size does not fit all, feeling observed and broadcasted, and contextual factors impact students' decision making. Overwhelmingly the majority of students believed that decisions about camera use should be at their discretion and not be mandated by instructors. They explained that having the choice decreased a sense of pressure and a perception that camera use was tied to evaluation and grading.

Themes that were identified from faculty survey responses included "camera equals community", teaching into the void, arbitrary classroom policies vs. pedagogically-driven decision-making, and heightened sense of responsibility to direct student learning and learning outcomes.

3.4. Student Themes

3.4.1. Theme 1: We Can Decide for Ourselves

The vast majority of students in the current study generally expressed their capacity to decide for themselves when camera use supported versus hindered their engagement or participation in the class. They were aware of the benefits of camera use for themselves and the classroom community, sharing benefits that included decreasing the experience of loneliness during this period of educational and societal disruption (S6, S7, S36) yet they cautioned that the benefits are best contextualized in policies that were flexible and allowed for autonomy in decision making. They cautioned against punitive measures related to camera requirements "encourage but do not punish us" (S101) and suggested that faculty should encourage camera use and engage students in discussions about the connection between camera use and community building in their specific courses (S3, S7, S12, S21, S53, S56, S121, S132, S133, S135, S245).

Many students recognized the increased connection they felt when they and their peers had their cameras turned on (S6, S36, S49). Additionally, a significant amount of students in the present study recognized the benefits to their own focus (17 students) engagement (50 students), and participation (S2, S3, S17, S18, S105), when they turned their cameras on; this was replaced by pressure and stress when it was a requirement for a course or linked to a grade (S89, S101). Many students expressed concern that when camera use was linked to grades it decreased their comfort level in the class, sharing that they would be more likely to feel comfortable turning them on if it were their choice (S28, S29, S55, S238). This speaks to the importance of autonomous decision-

making for students and the connection they perceive with feeling supported and understood by faculty.

The majority of students in the present study expressed that they believed they should have the option to choose whether or not to enable their cameras during class with 77 making comments stating that faculty policies should allow for optional camera use and only ten students commenting that they should be mandatory. “I think that having the choice to keep my camera on or off really aided my success and engagement in this class because I felt responsible for my education and involvement in the class” (S40). This was the case even when students shared that they personally enable their cameras for class. They recognized that their peers may not be in a position to do so and felt that the option should exist to support the many physical and emotional contexts that students are learning in (S11-12, S185, S233, S238) including home or learning spaces, family interactions, competing demands or challenges, mental health, and overall well-being. “I think when teachers make the decision to make cameras mandatory, they should also think about the fact that we never know what’s going on in someone else's home or what someone else's home environment looks like” (S233).

Students also emphasized that they have the capacity for self-direction and that they are able to direct their own learning regardless of their choice related to camera use. “For me personally, I have the discipline to keep my camera off and stay on task and participate during class (S29).” Additionally, students felt that they could take responsibility for their own learning process including focusing, completing assignments, and participating in class and they expressed appreciation for faculty members that allowed them to decide for themselves (S27). “It puts more trust in students and allows them to be in charge of their own learning. (S27)” They expressed confusion at faculty policies that mandated camera use and/or linked it to grading items, sharing that they did not see the connection between their capacity to learn and faculty observing them on camera. “I do not understand why some professors require them or give extra points to people with them on because you can listen the complete same with it off” (S102).

Students shared that they felt that cameras had an important place in the classroom and that they felt the best classroom policies included this recognition. Cameras were identified by students as being important when engaged in hands-on activities such as breakout rooms, classroom discussions, and group projects, but they did not feel that this was the case for classroom lectures (S7, S14, S15, S25-26, S40, S54, S57, S81, S99, S106 S127, S154, S159, S176-179, S187, S198, S208, S221, S230, S246, S251). They emphasized the need for flexibility and expressed concern that faculty may make assumptions about their engagement (S107, S186, S191, S232), attention (S73, S154, S193, S247, S251), dedication as a student, and level of effort in the course (S10). “I think it is a huge misconception that if a student does not have their camera on, they are not paying attention” (S251). S73 shared “just because a camera is off does not necessarily mean we aren't paying attention. Some days it's easier to have cameras on than others.”

Additionally, students were concerned that their decision to keep their cameras off may be interpreted by faculty as being disrespectful or rude (S248), they identified that this was not a factor in their decision-making and they hoped that a choice to have the camera off would not be personalized by faculty (S249). “Sometimes I feel bad because I know you want to see us, but then I remember who is walking behind me and something dumb that they would do in the camera and I feel torn” (S133). In fact, many students centered their decisions around regard for the faculty member utilizing compassion and empathy to guide their choices (S15, S52, S88, S104, S133, S199). “For the most part I keep my camera on because I can't imagine what it is like to teach to a

bunch of boxes with names" (S88). Some students shared that they felt having their cameras on allowed them to show respect for their professors (S52, S104). Other Students recognized their role in making the classroom a success and the give and take nature of the educator-student relationship.

> I like to have mine on most days because I think it makes class more personal. I also feel like if a professor had their camera off I wouldn't like that so I think it's nice for students to have them on when they can. (S15)

Students also expressed feelings of guilt when they did not enable their camera due to the impact that they could see this may have on faculty. "I sometimes feel bad having my camera off because I can see how hard the teacher is working to engage us even though she cannot see more than half of our faces" (199). From their responses it was clear that the students did not take the decision lightly and wanted to ensure that their decisions were not misinterpreted. In addition to cautioning away from policies that mandate camera use, they expressed that practices that highlight or shame remote students significantly detracted from their learning experience. This was particularly the case in instances of cold calling on students rather than allowing for volunteers to participate (S27, S96).

3.4.2. Theme 2: One Size Does Not Fit All

Students raised concerns about blanket classroom policies regarding camera use, sharing that this did not take into consideration the many aspects of their lives, transition to remote/hybrid learning, or the learning environments that they had access to. They questioned the nature of faculty decision-making regarding policies on camera use in the classroom, highlighting a disconnect between faculty intentions and students' understanding of the role of cameras in the classroom as a learning tool.

Students shared the inherent stress in transitioning to an unfamiliar modality of learning and the added pressure created by requirements to be on screen. "Cameras add an extra layer to an already different and difficult learning environment" (S33). They expressed that navigating Zoom as a new classroom environment was intimidating and that they needed time to develop confidence before expectations for participation and engagement were enforced. "I think zoom itself can be intimidating, awkward, and difficult to fully participate in but as we get used to the new normal I find it easier to navigate and have more zoom confidence" (S145). While they recognized and appreciated that technology allowed for continued learning in a time of disruption, they were concerned that faculty did not fully understand the multiple challenges that they were facing as they attempted to continue to engage as students. "I think that some instructors do not understand why it can be hard for people to turn their cameras on. There are a multitude of valid reasons and I think that some professors lack empathy in that regard" (S158). Students also expressed that feeling comfortable and secure in their learning environment was directly connected to their capacity to learn and that optional camera use increased this capacity for them (S53, S94).

While camera use was identified as being useful for many students, there was a significant number of students who shared that they did not feel that their ability to engage, focus, or participate was impacted by whether or not their cameras were enabled. Additionally for some, they believe that being forced to turn their cameras on hindered their learning in the course (S19, S159, S171, S181) and created a preoccupation with the camera itself, their appearance, and who might see them rather than an emphasis on the course material (S19, S100). "Some professors force us to turn our

cameras on but do not realize that is hindering our learning, each individual has different needs and some just say learn better with their camera off" (S19).

Many remote students shared the feeling that when they were in hybrid classes that they were "out of sight, out of mind" and did not feel that they were engaged in the classroom community in the same manner as the in person students. They shared that when faculty members zoomed in from a laptop while in the classroom it allowed them to feel that the faculty member was also engaging them directly (S41). They also highlighted that it is hard to know when they should participate and feared talking over someone in person or remote, and that when faculty gave emphasis on remote students having an opportunity to participate, it decreased a sense of being ignored and hesitation (S2, S41, S121).

> Professor engagement helped since she was looking at us on zoom while teaching in person, it made me feel more welcomed in the class. Sometimes in classes profs forgot about the remote students and when people wanted to participate the prof wouldn't see them. (S41)

Students experienced the hybrid model as having more challenges in creating a sense of community (S2, S66, S78, S85) and creating the greatest challenges to learning and class engagement (S30, S85, S115). They recognized that this could not be avoided and highlighted that recognizing these challenges for students can create opportunities for dialogue about success (S2). Students identified with faculty challenges in technology and emphasized the compassion they felt for technology mishaps in the classroom (S52).

To be effective, classroom policies need to be built upon flexibility, and an understanding of the unique differences between hybrid/remote learning environments and traditional face-to-face classrooms. We cannot ignore the differences in student contexts by transitioning expectations for traditional classroom engagement to remote/hybrid modalities.

3.4.3. Theme 3: Feeling Observed or Broadcasted

Students highlighted the difference between attending and participating in an in-person class (where only the instructor faces the students and other classmates face the instructor) and being on a computer screen where the student is watching themselves as well as observing all of the other students observing them. The latter felt like being on stage or watched for the duration of the class time (S81, S263). In hybrid models of instruction, remote students were viewed on a screen in the classroom and while the intention was to create community, remote students in this setting shared discomfort and knowing they were being observed in this fashion (S8, S40, S42, S81, S84, S113, S124, S252) and in class students expressed empathy for students on screen. "It can be a little nerve wracking because everyone is staring at you, or at least that is what it feels like" (S42).

> I understand that teaching to a bunch of black screens is not always the most enjoyable but to me, being on camera, especially when the professor is in the classroom and my face is blown up on a tv is not enjoyable to me either. (S30)

Others shared that while they would enable their cameras if everyone was remote, the hybrid model decreased their comfortability and influenced their decision making. "I personally found that I wouldn't turn mine on if my face was projected to those sitting in class" (124).

Students also shared that remote courses created a feeling that they were directly staring at their peers rather than looking directly at the instructor, which added to their apprehension and

discomfort with camera use “we are almost forced to look at our classmates” (S19). It also added to their fear that someone could be staring at them without their awareness (S16, S40, S81, S84, S200) and increased preoccupation with their personal appearance (S100).

> I think that others should be aware that being on camera for a class and sitting in a physical classroom are two very different things. In a classroom, you can see if others are looking at you. On ZOOM, anyone is able to "pin" your screen without you knowing. This can be a really overwhelming and anxiety provoking thing for some students. (S40)

For many students the transition to remote and hybrid learning modalities exacerbated existing student challenges related to speaking up to participate in class, anxiety (S40), self-consciousness (S50, S81), and motivation (S81). Some students shared that they felt that it was more comfortable to speak up and participate when their camera was off due to the decrease in worry about being observed (S19). Students also highlighted the pressure they felt to be on stage and act in a manner that demonstrated attention (S54, S169).

> When my camera is on, I have found that it is important for me to show attending behaviors and that I am listening in class through my body language. When I turn my camera off I feel less pressure to do this. I feel I can be more comfortable and not think about others seeing me with my camera off. (S169)

The use of cameras also increased students' concerns related to privacy and confidentiality in the classroom (S14, S54, S66, S70) questioning who else could be hearing the class that they were not aware of (S70). They shared that observing peers taking class in a public place, even while using headphones made them feel less comfortable sharing openly in classroom discussions (S14) and others were concerned that having home environments broadcasted felt like an invasion of privacy (S66).

While students believed camera use should be optional, they identified that if faculty employed strategies to increase comfort with camera use, that it may contribute to the willingness of students to enable their cameras and decrease the tendency for students to turn them off because they do not want to be the only ones on screen. Many students also expressed an appreciation of their peers who were willing to enable their cameras and the role that it played in decreasing the stress associated (S18, S58).

> Staring at yourself all day is definitely stress provoking and it is really appreciated when we have the choice. I appreciate when people choose to use their cameras as well so it does not feel like those who do use them are the center of attention. (S18)

They also expressed that they did not experience the same level of stress and concern when they were participating in small group activities, such as in breakout rooms, as they did in the larger classroom setting (S226) which echos the large number of students who believed they should be on in these small settings, and purposely employed for learning strategies.

> I have been in the United States for almost 3 years, and English is not my first language, I have a very bad accent which distracts me from participating in front of the entire class. But I participate in breakout rooms because there are fewer people. And when I talk and gave my ideas in breakout rooms (small group), my group members always liked my accent and they ask me more questions which allow me to share my thoughts. (S226)

Students found success, connection, and greater opportunity for community building in small group settings than in the larger classroom, even when all cameras were enabled.

3.4.4. Theme 4: Contextual Factors Influence Student Decision Making

Students expressed concerns that mandated camera use does not consider the contexts in which students attend classes, socioemotional challenges that were exacerbated or created by being on camera, and the different experience of online versus in-person participation. Even in instances in which students reported that they kept their cameras on during class, they expressed concern about their peers who may experience anxiety, have home environments that they are not comfortable sharing, or experience technology access issues.

Many students shared that their home environments, that now became their classrooms, did not provide the best opportunity for learning, often fraught with distractions and challenges related to the other people in the home (S3, S16, S34, S49, S116, S137, S144). In addition to decreasing the likelihood that they would enable their cameras, students shared that it decreased their level of participation (S16).

> While I believe having the camera on can improve attention and participation, I also think being at home is really hard for some students. Sometimes people come in and out of the room, we have to use the restroom, other private things are occurring behind the scenes. I think it's good for everyone to remain mindful of a student's right to privacy and boundaries. (S116)

Students shared challenges related to having siblings or roommates who are also learning from home (S34, S178), family members who are working from home (S49), not having a desk or table to sit at and thus taking class from their bed (S137). These situations not only decreased their comfort enabling their cameras but in some cases discouraged participation and sharing ideas freely out of fear that they would be overheard by others (S144, S178, S179). "I live with my mom who can be very judgmental, so having conversations about real life situations can be difficult for me" (S144). Others shared that they did not feel that they could speak freely if a topic or issue discussed was about someone who was in their home environment (S178, S179).

Students who shared struggles with mental health, expressed that camera use and remote/hybrid learning modalities increased their symptoms and that flexibility regarding camera use allowed them to more effectively manage these exacerbations (S69). "I can walk around my room without distracting anyone and still listen" (S16). Students with difficulties related to attending shared that Zoom and learning from home increased the challenges they experienced in academic settings (S16, S32, S53) and fatigue from trying to manage their symptoms while learning (S53). "Completing classes on Zoom feels almost impossible when you have ADHD" (S16).

In addition, many felt that flexibility in camera use allowed them to attend class when they were not feeling their best and may otherwise have missed the opportunity (S52, S99, S148, S153, S172).

> Some folks don't like people to see what is going on in their homes or if they're having a bad day, sometimes on my bad days I can't even bring myself to go into class, however having the option to just listen and not have anyone see me makes class more accessible on those high anxiety days. (S148)

Students expressed a hope that faculty would be able to consider their decisions related to camera use in context and that this would afford them the opportunity to still be viewed as the strong student that they believe themselves to be.

Many students also experienced successes with instructors who utilized methods to support engagement that did not rely on cameras. They shared that these faculty recognized that students did not sign up to be remote/hybrid students and were inexperienced in this modality and used alternative strategies to ensure classroom engagement (S109, S172). These methods involved creating strategies to ensure that all students (both in person and remote) felt included. For example students cited using the raise hand feature (S175) and alternating between in-person and remote students to answer questions. Students highlighted faculty who greeted them by name when they entered the classroom (S37) and engaging in stimulating conversations before class began as contributing to a feeling of community and a sense of normalcy. Students identified the use of the chat feature in class as a means to allow for participation in a less stressful manner (S116, S211, S240, S250, S256), breakout rooms for small group communication (43 students), and beginning class with a question of the day (S96, S101, S104, S106, S113, S116, S205, S226, S233-234) as contributing to their success in the course. Additionally, students noted the use of discussion posts to allow demonstration of the mastery of course material (S106, S221, S237, S238, S240), weekly checklists for assignment completion (S242, S236), guest speakers, and availability of office hours as useful enhancements to the learning experience.

3.5. Faculty Themes

Faculty experiences in remote and hybrid models also highlighted the psychosocial aspects of camera use, community building, and the need to realign expectations regarding personal comfort and satisfaction with the environmental constraints and changes in learning activities. Some faculty embraced the flexibility necessary during COVID-19, which allowed them to tailor education to the students they educate, while others elected to use the flexibility in much more limited circumstances. Faculty also shared that some aspects of their courses were ill-suited for hybrid and remote learning environments and for those who taught a hybrid model of instruction, there was significant dissatisfaction with their ability to engage both groups of students (those in the in-person classroom and those joining remotely) in a meaningful manner. Assessing and monitoring students was reportedly more challenging, and faculty identified an increased emphasis on student attendance and engagement than when teaching face-to-face. Faculty themes included teaching into the void, cameras equal community, arbitrary classroom policies vs. pedagogically-driven decision-making, and heightened sense of responsibility to direct student learning and learning outcomes.

3.5.1. Theme 1: Teaching into the Void

Similar to the students surveyed, educators also experienced cameras as playing a significant role in their socioemotional experience while teaching in online and hybrid formats. They shared that when student cameras were off it was depressing, demoralizing, and they felt increased experiences of loneliness and disconnection (F36, F43, F46, F63, F66, F69, F87, F99, F109, F114). “Speaking to cameras that are off can feel like talking to a wall (F34).” They shared that their comfort increased when student cameras were on (F50, F63, F69, F80, F81, F87, F99, F100, F114) and many reported similar psychosocial experiences of students i.e. struggling with being watched

by people they could not see. Student camera use was directly tied to faculty satisfaction, motivation, and positive self-appraisal of themselves as educators.

Students who did not turn their cameras on, instead electing to use "blank screens," increased faculty suspicion about whether students were present and engaged during the class (F13, F30, F55, F59, F63, F77, F80, F104). "Turning them off (without notification or reason) presents the suspicion that they have left the classroom or are doing other things (F31)." Some faculty recognized that this was not connected to proof but situated in their interpretation of student intentions and actions (F43, F104). "I have less trust for those that have it off. This I recognize as bias and am working to correct it (F30)." Some faculty shared that this led to consistent checking for student presence "I'm constantly saying to them 'are you still here?' (F59)" This was also evident in faculty concerns that students who were not on camera are more likely to cheat in class (F96).

Faculty also expressed discontent with the experience of teaching to students who did not have the camera engaged "teaching to a bunch of black boxes is abnormal" (F35). Many faculty shared that they were not even sure if there was a person behind the black box on the screen (F43, F55, F63, F80, F81, F94, F104). Which often led to cold calling on students to answer questions (F12, F20, F46, F77, F99), and a preoccupation with how long it took students to go to breakout rooms or leave when class ended (F80, F104). Several faculty shared that they would wait to see how long it took the student to realize class had ended, a preoccupation that began with the transition to hybrid and remote learning modalities. Several faculty noted that they had not previously taken attendance when teaching in in-person classes, but attendance became salient in the remote setting.

Faculty shared that cameras allowed for feelings of validation that students were engaged and learning. F9 shared "it makes it easier to 'read the room' and to engage students." They also highlighted that student engagement directly correlated to their feelings of validation (F30) and success as an educator (F46, F80). "It can be discouraging when they have their cameras tilted in a strange position, when they haven't bothered to get out of bed to attend class, or when they are clearly doing something else" (F46). "For me, I like to see students. Otherwise I might as well be making a video." (F21) While the majority of faculty attributed camera use as contributing to greater feelings of normalcy and success as educators (F58, F87, F89, F100, F104) they also shared that students who were on camera but not fully attentive distracted them from teaching (F68). "Student continuous eating can be distracting. Students attending class in bed is odd" (F58) and they found themselves creating additional rules such as "asking some students to not participate in class if they are driving (F58)."

Many faculty questioned their own experiences and desires and recognized how their current approaches were markedly different from how they traditionally approached teaching. "Cameras do contribute to my comfort but it makes me ask myself why I think that my comfort is potentially more important than my students' comfort in having the choice to keep their camera off. (F8)" Others have challenged their own thoughts about student feedback and have come to meaningful conclusions "I've thought a lot about the comment 'I have my camera off because I'm having an off day' What would they have done before the pandemic? Would they not have come to class? If that was the case, I am glad they joined." (F21) There was also the question posed if the option to attend class remotely decreased student absences for scheduling and other conflicts (F71). This highlights the potential for cameras to increase access to students who are not feeling well and those who may experience challenges related to mental health and well-being.

3.5.2. Theme 2: Cameras Equal Community

Educators generally understood camera use as the central and necessary tool for building classroom community and assessing student involvement, participation, and understanding of class content. They shared that they found their own energy to be directly influenced by the connection that they felt with the students and expressed concerns related to the lack of visual observation and non-feedback that they rely on to help them pace the class and identify if the students are understanding the material being presented (F9, F13, F59, F62, F70, F72, F74, F77, F79, F81, F87, F89, F92, F93, F109, F111). "When students have their cameras on, I receive multiple forms of non-verbal communication such as nods, head shakes, smiles, thumbs up or down etc. when students choose to keep their cameras off I can't see that. (F8)" F31 believed that cameras helped to alleviate communication issues in these remote and hybrid teaching modalities. "Communication (especially non-verbal) is difficult enough in the online classroom so leaving the camera on compensates in part." Faculty relied heavily on student non-verbal feedback and shared that they felt less able to gauge student mastery of the material without it (F62, F72, F81, F94, F110).

Many faculty attempted to share with students the rationale for camera use as a means to increase buy-in and compliance (F2, F20, F43, F63, F72, F79, F92, F102). "I do explain to them at the beginning of the semester/term how it makes interactions richer (F2)." While many shared that this increased student camera use, some still felt that they had a difficult time navigating how to enforce classroom policies (F15, F50, F69) and often found themselves feeling defeated and abandoning expectations as the course progressed (F75).

Educators also reported that non-verbal feedback, even if on camera, was the closest thing to normalcy that they were able to experience in hybrid and remote classroom environments (F22, F31, F102, F104). "I would like to see an institutional policy requiring students to have their cameras on during class, unless the instructor does not share that preference. Honestly, I can't imagine why anyone would prefer teaching to blank screens over animated faces." (F22). They specifically emphasized the increased experience of loneliness and disconnection and shared that the camera helped to offset some of this, "zoom may be a weak substitute for shared physical space, but it's a tool we can use to approximate sharing the same space" (F22). Others recognized the connection they were making between student camera use and their own engagement (F3, F69, F87, F96, F104, F105).

> On days where the majority of students keep cameras off, I have less motivation to make material exciting, to go in depth to the usual degree, and carry on a full-length class, as there are none of the social cues of students engaged or interested. (F63)

Faculty shared concerns about a loss of connectedness (F63, F87) and made attempts to utilize technology to decrease the sense of loss. "I wouldn't know them if I ran into them on campus. I always know all my students, even the quiet ones, and so this is sad to me. (F2)" They also recognized this same loss of community in their students with many believing that cameras could help to offset this disconnect for students (F43).

When speaking to their ability to build classroom community, there was an overwhelming number of concerns related to the hybrid format of instruction. The majority of faculty who taught with a hybrid model identified specific challenges related to engaging two different groups of students, increased technology demands, and less capacity to be meaningfully engaged and present with

students when trying to simultaneously navigate so many instructional and technological methodologies (F3, F22, F36, F48, F51, F87, F89, F93, F99, F105, F113).

> While technology (like the cameras in the classroom) have allowed me to continue teaching and continue student learning, I long for the day when I can walk into a classroom with all my learners physically there and just teach, not have to log on to this, turn on that, "share" my screen, remember to do a "new share", keep an eye on the chat, look back and forth at the monitor/camera/physical learners/my notes/etc, or be anxious that when I get to the classroom that the technology doesn't work and I lose precious class time. (F3)

Faculty also experienced a difference in their ability to create community when they were teaching hybrid models and feared that in person students felt more connected (F12, F22, F62, F66, F87, F105). F12 shared "it is difficult to create community. I work on it constantly. The reality is some students are in person - they see each other and can react to each other. Zoom is different and lacks the immediacy and closeness." Overall hybrid faculty reported more challenges than those who taught completely remote "teaching hybrid is awful (F35)" and felt less successful and engaged with students (F22, F36, F48, F62, F75, F89). They shared feelings of guilt that they were not able to fully attend to both groups of students and worried that they were letting students down (F62, F67, F87). "I constantly feel like I am neglecting one group or the other" (F62). Additionally, F87 shared "I found the hybrid classroom to be a shoddy compromise: difficult for me, the instructor, to manage, I appear distracted to the in person students when trying to interact with remote students, and remote students likely feel like they are not full participants." Due to these challenges, faculty overwhelmingly shared a belief that classes should either be all remote or all in person.

> There is no clear "winner" for engagement with one class split between online and in person. That is the whole issue with the hybrid model. I firmly believe either all online or all in person. If there must be a separate online section, so be it. (F30)

Some faculty attempted to create community in ways that felt familiar and that would occur naturally in the in person classroom such as inviting students to come early to engage in "chit-chat." P13 highlighted the importance of this connection building "this is something I miss from being in person, and so I encourage them to come to class early to connect in this way." Others started the class with break-out room check-ins to allow students to engage with one another or questions in the chat box, and felt that it increased student camera use and sense of community (F100). While overwhelmingly faculty expressed treading water until they could return to in person learning, many felt that they had faced challenging times effectively. "We did the best we could given the circumstances" (F71).

3.5.3. Theme 3: Arbitrary Classroom Policies vs. Pedagogically-driven Decision-making

Some faculty made decisions about camera policies and camera use based on their review of the literature on online education, prior experience with teaching online, and their pedagogy e.g. allowing students to be off camera during lecture but requiring camera use during breakout room exercises/labs. They recognized that there were concerns related to equity and access and often cited student wifi access and technological challenges as being important factors to consider (F36, F51, F63, F67, F74, F79, F80, F100, F102, F104, F113). "Camera use is optional because every student has a different situation and the home is a private place that encompasses other individuals" (F34). Others recognized the potential for instructional methodologies to further exacerbate

student challenges "I didn't want to disadvantage students with poor WiFi and students who suffer from anxiety (F36). These faculty referred to the research that they had done to ensure that they were providing accessible learning environments and were considering the many experiences that occur in remote and hybrid modalities (F33, F79).

> I've followed online discussions of other college faculty on the topic. I've read about how both faculty and students have expressed dread at logging into a Zoom classroom where only the faculty member is seen. (F33)

Faculty with flexible approaches to camera use shared several examples of engagement strategies that they employed to increase the likelihood of student engagement. These included providing students with discussion questions ahead of class, designing discussion questions that required thoughtful responses, using the chat feature to allow students to engage, employing breakout rooms and group projects more frequently, dividing the class into "teams" and having activities that allowed them to compete or work together, fishbowl exercises that had some students purposefully turn their cameras off while others had them on, and having students who were remote partnered with in person students to create cross group connections (F36, F51).

> I think the zoom chat and polls are great. Many students engage via chat, even if they never speak out loud. So this alternative means of expression definitely seems to help some of the students. Breakout rooms work ok, but the activities have to be well thought out, and I admit not all of mine are. With more time I can probably revise many of them to be more effective, but there just hasn't been enough time and resources to make it happen. (F36)

Other faculty plainly decided to adopt a blanket policy that cameras should be on and marked students as absent or decreased their participation grade if their cameras were not on (F9, F11, F14, F18, F25, F31, F33, F51, F58, F59, F68, F69, F71, F73, F75, F81, F89, F94, F110). In addition, these faculty shared that if a student did not turn their camera on that they would ask them to turn it on (F18, F62) "if a student has it off, I ask them to enable their video" (F18) with some recognizing that they were more likely to call on students who did not have their cameras on (F12, F20, F46, F59, F66, F99). Rationale for this classroom policy pointed to the requirement that students attend in person face-to-face class during "normal times" and should not be surprised that they are expected to be seen (F18, F81) "if they were in person they would need to be in class so having cameras enabled seemed logical to me (F18). "Neither I nor students in the classroom like communicating with disembodied voices (F14)." Some faculty expressed that while they had heard a multitude of reasons for not requiring cameras to be on that "those students" did not attend this university (F89) and others believed that the benefit of cameras to the educational experience of student outweighed these concerns (F105).

Yet another subset of faculty allowed students to decide whether or not to turn on their camera but did so because of their perception that it was what they "should do" to be inclusive and flexible (F66, F74, F77, F87, F109, F114). These faculty resoundingly expressed that these decisions were made out of feelings of responsibility and obligation rather than a decision related to how they best felt the course material should be taught. While these decisions were made out of a desire to support students, this lack of connectedness to instructional delivery may have led to arbitrary classroom policies and an overall feeling of being disconnected as an educator.

Faculty also expressed wanting the administration to provide instructions for students so they did not have to be the ones responsible for the decision-making and to decrease variability across

courses and disciplines. They shared that this would help them to manage situations where they felt that students were making excuses such as broken cameras or the internet not working (F22, F58). “That answer is not satisfying to me, but without a university-wide policy or statement of expectation, what am I to do? (F22).” They shared that university wide policies would decrease the stress in trying to discern if students were being honest (F30, F58). There were suggestions from faculty about whether or not cameras being off could be built into student accommodations so that there could be a formal process for its implementation (F109).

Overwhelmingly, faculty appeared to be making decisions that they believed were in the best interest of the students, often shifting in response to student feedback (F79).

> “I encourage cameras on because of feedback that I received from term 1 students who said that when other students had their cameras off it distracted them from learning and they felt that when they had their cameras off they themselves were more distracted and less engaged.”

F79 also shared trying to take into account multiple forms of feedback “I adjusted according to student evals, university expectations, and my own response to how the Spring 2020 semester felt.” This speaks to the genuine desire to provide high quality learning opportunities for students that may have been guiding decision-making related to classroom policies on cameras.

3.5.4. Theme 4: Heightened Sense of Responsibility to Direct Student Learning and Learning Outcomes

Many faculty perceived a correlation between student camera use and performance outcomes finding students with cameras on to be more engaged, ask more questions, and to do better on tests and exams (F11, F13, F18, F20, F35, F43, F46, F50, F58, F62, F66, F67, F70, F73, F80, F81, F89, F95, F96, F100, F104, F105, F111). “Students who have their cameras on are more engaged, do better on assessments, and ask and answer questions more. F35 echoed this sentiment “students who don’t keep their cameras on get worse grades.” Additional perceptions of faculty include that camera use correlates to students that are “distracted or seemingly checked-out” (F33). While faculty recognized that they did not have evidence to support this and used tentative language when suggesting that students were not really present, it increased their emphasis on cameras and preoccupation with student learning.

The connection that was created between cameras and student engagement appears to have contributed to faculty developing speculative narratives about students who were remote or who chose to have their cameras off.

> Remote students do not participate as much as in person ones do. I think they feel as though the in-person students will do the contribution to class. I’m sure muting and unmuting is also a factor for remote students (F18).

Others shared that students who had their cameras off were less likely to respond to questions posed to the class (F9, F11, F12, F18, F20, F63, F104, F113), were less focused (F50, F81), were less interested in what was being taught (F87, F89, F96, F99), were more likely to be younger students (F20) “senior students are more likely to have their camera on” (F15), and do not care about the course (F87).

Faculty expressed feeling as if they were more focused on teaching students who had their cameras on (F69) and that this divide led to their increased emphasis on camera use and its perceived

influence on learning outcomes. For example, faculty perceived that being able to see students on camera allowed them to give more direct feedback (F70) which they believed contributed to students' positive learning outcomes. "It aids me in doing my job" (F81). The increased focus on engagement by visual means is directly connected to faculty feelings of responsibility as educators to provide quality instruction coupled with feelings of uncertainty and unpreparedness to be effective in hybrid and remote teaching modalities

Classroom policies and methods appear to have been designed by faculty as a means to experience some control in a situation that felt uncertain and trying. "On any given day there is probably some percentage of students who are not there at all and whom I therefore cannot get through to at all" (F77). Most faculty viewed this time frame as temporary and these teaching modalities as being pandemic related stating that they were "in survival mode" waiting to get back to normal (F77).

Despite the multitude of concerns raised by faculty about hybrid and remote teaching, many shared that they have increased their knowledge of Brightspace, the learning management system used at the university, and have employed approaches to teaching that they are likely to carry into future teaching (F2). They also shared that with time and preparation these modalities could become better perfected and "smoother with more practice" (F77). Faculty cautioned about an overemphasis on the struggles that could overshadow our ability to remember the strategies that were effective such as keeping technology simple (F13, F69), pre-recording videos (F77), using specialized apps to demonstrate techniques in the classroom (F77), providing low-stakes assessments (F), and using options like google forms, regular check-ins and surveys to get real time feedback from students about their learning process (F79).

4. Discussion

Overall, it is important to note that many faculty and students in our study described online learning as a necessary substitute for the in-person classroom experience and not as another viable teaching and learning modality. Furthermore, even when describing an emergency and temporary adaptation of courses to online and hybrid format, some faculty identified their teaching as being informed by online pedagogy. Thus, it is important to note that there may be some confusion regarding what constitutes carefully-designed online instruction versus emergency remote adaptation of face to face teaching, a common misunderstanding that has been observed and documented in the literature (Hodges et al., 2021). The overwhelming consensus from faculty and students was that this was a necessary emergency transition, one that they needed to continue until they could return to "normal" and students recognized that while it was not ideal that faculty were doing their best.

With regards to camera use in online and hybrid classrooms, while some consensus exists between students and faculty on the utility of camera use to promote community building and effective and collaborative teaching and learning environments, students and faculty members generally perceive camera use (and mandating cameras) in the classroom differently. This study highlights the need for more effective, pedagogy-driven, and productive integration of cameras into hybrid and remote college classrooms.

It seems important to note the stark difference between the perspective of students who identified being on camera as adding stress to already taxed and fragile emotional well being versus faculty who viewed being present on camera as the same as being present in the face-to-face classroom.

In light of increasing concerns about exponentially higher levels of depression and anxiety among students (Kassens, Taylor, & Rodgers, 2021; Racine et al., 2021) as well as the literature and our findings highlighting the exacerbating impact of mandatory camera on feelings of being watched, self-consciousness, and discomfort among students (Reich et al., 2020; Castelli & Sarvary, 2021), camera use policies must be informed in inclusive and trauma-sensitive online pedagogy (Baez & Marquart, 2020), which supports optional use of cameras and the use of multiple methods for community building and engagement.

In addition, students in our study noted that they can self-direct their learning, participate in class discussion, and engage without using their cameras. Even when students themselves reported that they preferred having their cameras on, they understood that this may not be their classmates' preference for a myriad of reasons including learning in a challenging home environment and feeling anxious on camera. Students also expressed agency and appreciated when faculty trusted them to make decisions for themselves. Furthermore, students were concerned about their privacy and the fact that using cameras ushered the instructor and other students into their homes and them into the homes and environments of others. This concern reflects previous literature in which one of the most prevalent reasons that students do not turn on their cameras is concern about their physical surroundings (Castelli & Sarvary, 2021). Blanket policies mandating camera use do not create the conditions to maintain confidentiality, privacy and safety that are at the cornerstone of safe classroom communities, a concern that faculty in this study did not echo or identify.

Faculty perceived that camera use influenced classroom community and engagement when students were on camera and connected this to their own feelings of enthusiasm and success as an educator. Likewise, they believed students were more responsive, attentive, engaged, learned more and earned higher grades when they had their cameras on. Yet, it remains unclear whether this perception accurately describes the role of cameras or if faculty expectations, perceptions, and engagement strategies played a role in these experiences. Faculty's decisions about camera use were often driven by an attempt to create feelings of normalcy by replicating the visual piece of the face-to-face classroom and employed ideologies about attendance and participation that did not account for major differences in student contextual factors that influence the learning environment and process for students. Teaching to blank screens was described as depressing and discouraging; hence, camera use served to assuage some of the discomfort and provided feedback that faculty rely on to meet their own psychosocial needs. Both faculty and students experienced hybrid and remote learning as lonely and disheartening and sought ways to decrease this through course engagement.

Again, it is worth noting that an important discrepancy emerged between students' perception that cameras in the home environment decrease confidentiality and privacy and faculty's sense that cameras increase community engagement. Creating a safe classroom space is integral to building a classroom community where students can actively participate, speak up, and create a culture of trust (Jennings, 2018). Forcing students to be projected into others' bedrooms, living rooms, kitchens, dorm rooms without knowing who is able to see or hear them disempowers students. For students who have experienced trauma this can be particularly harmful. Thus, while faculty wanted to increase participation and engagement through camera use, they may have unintentionally hindered it for some students who felt over exposed.

For faculty with more flexible camera use policies and who were confident using technology, using features like the chat, breakout rooms, and other online tools to engage learners in real time provided them a sense that students were, indeed, participating even without their cameras on. In

fact, it seems noteworthy to point out that several faculty stated that some students may have been participating more, protected by the anonymity of a dark screen and a private chat platform. Student responses also reflected this phenomenon; in particular students who identified as experiencing anxiety noted they participated more by staying off camera and using the chat. However, these same faculty noted that using these strategies and tools took much planning, monitoring, and learning, which they did not always accomplish due to the lack of familiarity with online pedagogical principles and the many demands of teaching during pandemic times.

Regarding fully remote versus hybrid models of instruction, both faculty and students voiced concerns related to the hybrid model of teaching as being less preferable, requiring dedication to engaging two separate groups of learners, and creating barriers to creating community and participation. Faculty expressed feeling guilty that they could not give either group of learners the attention they would have liked and feeling overwhelmed by classroom technology. Remote students in the hybrid classroom experienced increased barriers to participation, increased feelings of self-consciousness due to being broadcast into the classroom, and a decreased sense of being a part of a classroom community, often stating they felt ignored or forgotten. This highlights the need to conceptualize hybrid classrooms in a manner that is different from fully remote learning, using an awareness of the different experience of the remote learners, and to identify strategies to ensure that both groups of students are included in community building strategies.

4.1. Recommendations

Recommendations from the current study include making cameras optional and creating institutional guidelines and procedures to encourage the use of cameras when using cameras supports pedagogy (during project-based learning, labs, experiential exercises, discussion groups, etc.). This can be accomplished through a conscious effort by administrators and educators to provide infrastructure of learning, professional development, and support that allows faculty to develop and employ pedagogy for effective remote and hybrid learning environments. If hybrid models are to be used, faculty must be prepared and supported to engage both in person and remote students. This includes support and skills to engage in community-building and engagement strategies including conversations about when and how to use cameras in the classrooms**.** Students should understand why camera use is being encouraged and for what teaching and learning purpose. Likewise, because issues of access and equity impact camera use as do history of trauma, depression, and anxiety, guidelines and procedures to minimize these barriers must be in place if cameras are to be used and encouraged in remote learning.

Finally, we noted that faculty could benefit from a space to engage with one another in reflexive praxis as well as professional development as we collectively engage in new modalities of teaching and learning in the midst of unprecedented global challenges and isolation. While answering the survey several faculty asked and answered questions for themselves worthy of discussion among peers. For example, as faculty discussed their discomfort teaching to the void, to the blank screens, one faculty pondered why their comfort should be prioritized over their students if their students may be uncomfortable turning on the camera. Questions like these are fundamental to engage as we move forward, together, as an inclusive and reflexive learning community.

4.2. Limitations

Although this study contributes to the literature about perspectives on camera use in remote and hybrid classrooms, there are some study limitations that should be considered. The present study utilized convenience sampling to explore perspectives of students and faculty who were teaching and learning in remote and hybrid formats. This sample, while sufficient in size, is drawn from one liberal arts institution in Massachusetts, therefore a larger sample with a greater geographic consideration may have revealed additional insights.

The participants in this study varied in terms of their experience with online teaching and learning environments, with many experiencing these formats for the first time. While no major discrepancies appeared related to previous experiences, future studies could compare the experiences of individuals with substantial experience with teaching in an online or hybrid format with those who are doing so for the first time. Longitudinal studies could also explore how these perceptions and experiences change with increased exposure and experience.

4.3. Conclusion

While most educators and students expressed a desire to "go back to normal"and viewed the current modalities as temporary, the ongoing nature of the Covid-19 pandemic has underscored the need for us to remain fluid in our approaches and highlighted the importance of adopting pedagogy that supports this need for flexibility. Findings of this study highlight the need to plan for careful and pedagogically-driven online instruction that will benefit and support all students as they learn and develop through and beyond the vicissitudes of this moment. By taking into account the perspectives and voices of learners, we may be better-able to plan for more effective online and hybrid instruction.

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