Assessing the Impacts of COVID-19 on K-12 Public School Educators and Administrators on their Practices and Autonomy in East Gainesville

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Abstract

The impacts of the pandemic have rippled through every aspect of daily life; for students and teachers, this manifests predominantly in education. This qualitative case study aimed to evaluate educator opinions on the current state of public education. Data collection consisted of interviewing seven K-12 educators from East Gainesville, a low-income and historically segregated region in Florida, about their experiences teaching during the pandemic. Seven questions captured the largest challenges for educators and students amidst the pandemic. 13 common major themes (nodes) and minor themes (nodes) were identified from these responses. It was found that COVID-19 has had generally negative impacts on the quality of student education and educator morale. Both are partially rooted in the switch from traditional to virtual/HyFlex classrooms, in which educators need to expend much more effort to achieve the same or sometimes worse results. Conversely, there were some benefits of this new education format, including increased versatility, collaboration, and accessibility. Other drawbacks include feelings of isolation for students and inequity for students with less access to technology. Still, educators reported feelings of support from administration and the community and expectations that addressing these challenges would lead to positive changes for education in the future. Ultimately, this study will elucidate the challenges educators face when integrating curricula into virtual platforms, an increasingly popular phenomenon. These findings may serve as guidance for future implementations to promote higher quality, more versatile, and virtual-friendly learning environments.

Keywords: K-12 education, COVID-19, virtual learning, HyFlex, Classroom

Introduction

According to the United States Census Bureau (2020), 17.2 percent of the population in Alachua County, Florida lived in poverty, which is higher than Florida's overall poverty population percentage of 12.4 percent. In 2019, Alachua County's median household income was $49,689 compared to Florida's median household income of $55,660. Additionally, the 2010 population per square mile in Alachua County was about 282.7 while Florida's was about 350.6 overall, meaning that Alachua County is more rural than the entire state of Florida.

Notably, these statistics are not uniform; within Alachua County, there exist two strikingly different regions, East and West Gainesville. Theoretically, East and West Gainesville residents should have access to similar education, employment, and social services. However, East Gainesville is known to be a historically segregated and economically vulnerable region of Gainesville, Florida (Sebris and Rosier, 2016). A presentation by the Envision Alachua Task Force, using U.S. demographics data, states that the average household income in East Gainesville is $45,039, 45 percent lower than that of West Gainesville. The Alachua County Health Needs Assessment (2010) reports that East Gainesville experiences a 31.7 percent poverty level, over three times that of the poverty level of West Gainesville. Moreover, 78.0 percent of East Gainesville residents are eligible for free/reduced lunch, as opposed 44.4 percent of West Gainesville residents (*Task Force Meeting*, 2014).

In addition to these economic differences, there are educational disparities between East and West Gainesville. East Gainesville students have poorer reading performance (Sebris and Rosier, 2016) and are less likely to be accepted into college or have high school diplomas — over 50 percent of the region has no high school diploma. (*Task Force Meeting*, 2014). While progress is being made, the East Gainesville education gap, even measured as early as elementary school, has continued to widen over the past fifteen years (Sebris and Rosier, 2016).

Due to the history of East Gainesville, and the clear disparities in economic and educational quality, it provides an important context for studying educational impacts of COVID-19. With the sudden changes in educational format and teaching brought on by the pandemic, educators were forced to adapt to a completely virtual and HyFlex (Hybrid-Flexible) format (teaching online and in-person simultaneously) while also maintaining educational quality. COVID-19 has exacerbated pre-existing barriers to educational equity in East Gainesville. Hence, this study aims to capture accounts of East Gainesville educators with

respect to how the pandemic has impacted the educational landscape. It is hoped that this study will shed light on reducing teacher burden and improving educational outcomes in underserved areas.

Methods

Study Design and Sampling

This study (IRB202002832) was approved on February 2nd, 2021 and employed a qualitative interview-based research design focusing on local K-12 teachers to identify common issues educators faced amidst the pandemic. 256 potential participants from 12 public schools were initially identified using stratified random sampling, with an equal number (of publicly available email addresses) chosen for each school. The following zip codes were selected due to higher poverty and mortality rates, and avoidable emergency department visits: 32603, 32606, 32601, and 32609. Though zip codes do not define the boundaries of East Gainesville, they serve as a geographic estimate. This is colloquially known by the local community as East Gainesville. Study authors contacted potential individuals in the pre-established study population via email, and only those that responded and consented with the research staff were interviewed. Inclusion criteria for the study consisted of being of at least 18 years of age, being an active educator or a paraprofessional at one of East Gainesville's schools, and directly interacting with K-12 students. In total, seven teachers participated in the study who taught a broad spectrum of subjects: arts (2), special education (3), language arts and history (1), and science and social studies (1). Of these participants, six taught elementary school, and one taught middle school. One participant was a paraprofessional, and the remaining six had further education including two having doctorate degrees. Three self-identified as "older educators" who are nearing retirement age. This study involved research volunteers who underwent a two-hour long formal training and weekly group sessions prior to interviewing participants. During this training, study staff provided an overview of the study's objective, interview structure, asking unbiased and probing questions, and email etiquette. Volunteers who successfully completed a mock interview at the conclusion of the training can then proceed with data collection. Each volunteer was provided a protocol to obtain consent from participants and a script consisting of interview questions and probes. Additionally, interviews allowed space for further clarification on the questions provided by trained volunteers and study staff. The questions were specifically designed to be open-ended to capture subjective topics such as mental health. Moreover, for sensitive topics like mental

health, interviewers were instructed to remind participants that they do not need to answer questions they choose not to.

Data Collection

Interviews approximately 45 minutes long were conducted between May 2020 and June 2020. Informed consent was obtained from each participant beforehand, which stated participants could leave at any point. Participants were asked seven open-ended questions related to (a) experiences as educators amidst COVID-19 compared to pre-pandemic times, (b) perceptions on the most pressing needs of the educators and students in the East Gainesville community, (c) how COVID-19 impacted these needs, (d) how school administrators or policymakers are addressing these needs, and (e) what additional resources or changes could be developed for these groups in the future. Each interview was conducted over Zoom and audio-recorded and transcribed with the Otter.ai software (Version 2.1.51, 2021). Transcriptions of the interviews were subsequently verified for quality and accuracy by the research staff, and all identifying information within these transcriptions was removed to further protect anonymity.

Data Analysis

The study utilized Microsoft Excel for content and thematic analysis to deductively and inductively extract major themes (major nodes) and sub-themes (nodes) that support the research objective from the responses of each participant. After transcripts were edited, a pair of researchers (study staff and volunteers) worked independently for initial open coding of themes based on the initial transcripts, utilizing a spreadsheet to categorize text as major themes and sub-themes. Afterwards, this pair compared and finalized relevant themes with focused coding. If a conflict occurred, a third reviewer served as the tie breaker. An interrater reliability score between the two reviewers was calculated. A final codebook was developed that recorded salient themes and sub-themes that were made *a priori* from the data collected. Utilizing this final codebook, researchers closed coded each transcript to ensure accurate categorization of the data.

Results

To determine the impacts of the pandemic on K-12 public school educators on their practice and autonomy in East Gainesville, seven teachers were interviewed across five schools in East Gainesville. Content and thematic analysis were used to identify the common themes across participants with an inter-rater reliability rate of 0.48 to 0.85, with a mean of 0.64.

In Table 1, the most frequent major nodes were emotional and mental health of educators and changes with the virtual/HyFlex classroom format. These changes resulted in both benefits and difficulties, but the table reveals that difficulties were mentioned almost twice as often as benefits. Further, it is evident that COVID-19 caused large shifts in administrative policies and job satisfaction.

Table 1. Frequency of Major Nodes

Node	Frequency
Mental Health (Teachers)	53
Changes with Virtual/HyFlex (Teachers)	50
Administrative Policies	38
COVID Safety	38
Difficulties with Virtual/HyFlex (Students)	30
Job Satisfaction	28
Change in Classroom Format	25
Benefits of Virtual/HyFlex	16
Mental Health (Students)	15
Teacher-Student Relationship	9
Post-COVID	8
Solutions for Virtual/HyFlex	6
Student Demographic	6

Table 1. A table shows the frequency of each major node in the study. All other nodes fall under these 13 major consolidating nodes. Each major node represents a theme, and these major nodes were agreed upon post-interviews to capture every sentiment expressed by educators across all questions.

Table 2 shows a large spread of different nodes, relative to other major nodes. This does not necessarily reflect a lack of consensus on how the pandemic has impacted educator mental health, but rather the open-ended nature of the interview questions. Many of the sentiments are related to one another, having only nuanced differences. The most common sentiments were health concerns and increased stress, which were both work-related and personal.

Table 2. Frequency of Nodes under Emotional and Mental Health (Teachers)

Node	Frequency
Health Concerns	4
Higher Stress	4
Increased Personal Stressors	4
Feelings of Isolation	3
Lack of Mental Health Resources	3
Pre-Pandemic Mental Health Preparedness	3
Self-Care Strategies of Educators	3
Supporting Coworkers	3
Increased Empathy for Students	2
Increased Self-Care	2
Increased Work Stressors	2
Loss of Student Interaction	2
Never used Mental Health Resources	2
Support from Administration	2
Worries about the Pandemic's Future	2

Table 2. A table displays the frequency of each node under "Emotional and Mental Health (Teachers)" that occurred more than once.

Table 3 reveals that, overwhelmingly, teachers expressed satisfaction with how their school administration handled the pandemic. There was one general dissatisfaction node (not shown). There was, however, dissatisfaction with the governmental response: educators often cited governmental COVID-19 policies and recommendations as being problematic.

Other frequent sentiments were having a static curriculum, meaning that students had to learn the same material as non-COVID-19 years, and varying school responses, indicating educators found that not all (local) schools were responding to COVID-19 the same way.

Table 3. Frequency of Nodes under Administrative Policies

Node	Frequency
Satisfaction	9
Static Curriculum	6
Different School Responses	5
Dissatisfaction with Governmental Response	4
School COVID-19 Policies	4
Change in Education Standards	2
Teacher Involvement in Health and Safety Decisions	2
Impracticality of Regulations for Education	2
Technology Training	2

Table 3. A table shows the frequency of each node under the major node "Administrative Policies" occurring more than once; hence, the minimum frequency shown on the table is 2.

Table 4 shows how the strongest concern of teachers was the decrease in quality of education, which is related to and possibly exacerbated by the other nodes falling under this major node (e.g., more distractions lead to decreased educational quality). Most teachers mentioned this sentiment. Outside of worsened educational quality, there was only one other theme regarding difficulties with virtual/HyFlex, namely that some students prefer schooling in-person (for the social aspect, not due to a difference in their own perceived educational quality).

Moreover, there were many benefits to the shift to virtual/HyFlex learning. These are not visually illustrated as they constitute only a handful of instances. Of the benefits of virtual/HyFlex, "New Strategies for Student Interactions" was the most cited (four instances) and other benefits included safety, tailored teaching strategies, and continued interaction outside of class. Two educators reported that some students preferred digital learning.

Table 4. Frequency of Nodes under Difficulties with Virtual/HyFlex (Students)

Node	Frequency
Decreased Quality of Education	11
Inequity with HyFlex Classroom Format	7
More Distraction	5
Engagement Barriers for Digital Students	2
Lack of Individualized Attention for Virtual Students	2
Slower Learning	2

Table 4. A table shows the frequency of each node under the major node "Difficulties with Virtual/HyFlex Format (Students)."

Table 5 shows job satisfaction-related aspects of educator's working environments during the pandemic. Job satisfaction in educators was promising: the most reported sentiment was feeling a sense of fulfillment at work. However, this seemed to be more of a preface to the educators' discussions of the challenges of their jobs, including a lack of work-life balance, chaos in the workplace due to COVID-19 policies making constant changes necessary, and more. This was remedied by support from the administration, which is also mentioned under the "Emotional and Mental Health" major node.

Table 5. Frequency of Nodes under Job Satisfaction

Node	Frequency
Fulfilled	5
Challenges of Being an Older Educator	4
Challenges of Work-Life Balance	3
Chaotic Work Conditions	3
Dissatisfaction	2
Feeling Unsafe at Work	2
Frustrations with Working Conditions	2
Instability	2
Support from Administration	2

Table 5. A table displays the distribution of nodes relating to job satisfaction.

Discussion

The purpose of this study is to assess the views of K-12 educators in Gainesville regarding the impact of COVID-19 on education, particularly in underserved communities of East Gainesville. Additionally, this study aimed to identify how changes in education due to COVID-19 may alter learning modalities in the K-12 classrooms in the long term and shine light on the mental health struggles of teachers and their students during this global pandemic. Lastly, the study inquired about the feasibility of implementing public health safety measures in a school setting.

Potential Positives of New Teaching Strategies during COVID-19

Despite some drawbacks, educators described many new strategies that they were able to incorporate because of the problem-solving necessitated by the changes resulting from the pandemic. Notably, the widespread use of digital platforms and HyFlex allowed educators to facilitate previously impossible connections, like student interactions across countries. Furthermore, the pandemic pushed educators, administration, and students to find new ways to ensure learning. Along with the novel strategies that educators implemented, as mentioned in the results, other studies have demonstrated divergent thinking responses among students as a result of the pandemic (Kohnke & Moorhouse, 2021). Students reported challenges with the learning process with relatively less face-to-face feedback from teachers. However, virtual platforms were also a great tool for collaboration, prompting students to find alternative learning strategies and tools on their own to navigate the difficulties of not being able to meet with classmates in-person. Although there are several logistical issues with this new format, institutions can take the

positive outcomes of HyFlex and focus on providing equitable solutions to improve and standardize the student experience.

Mental Health of Teachers and Students

During interviews, multiple teachers articulated how the pandemic negatively impacted their students' mental health. HyFlex teachers reported that their online students felt isolated because they were unable to fully engage with in-person peers. Many teachers implemented strategies to create opportunities for online and in-person students to interact, to help alleviate that isolation. One study of high school students who transitioned online in March 2020 found that 43 percent of its participants reported feeling isolated (Gazmararian et al, 2021). In a survey of the parents of elementary and middle school students, parents reported that their children socialized less with their friends and developed more mental health issues including anxiety and depression (Balayar & Langlais, 2021). In addition to reporting feelings of isolation in students, teachers also mentioned their students' fear of getting sick from COVID-19. Teachers witnessed students experience loss of family members and fear that absent teachers were sick. One study found that minority students were more likely to worry about themselves and their families getting sick from COVID-19 (Gazmararian et al, 2021).

Educators experienced increased stress in using the HyFlex format. Specifically, teachers felt they were teaching two classes for every one class period while doing HyFlex. They often needed to create a separate curriculum to engage online students, and they found it difficult to flip their attention between the online and in-person students. One teacher expressed, "it's like you're doing twice this work, but you're reaching the same milestones as you were before COVID-19 at the same time."

Conversely, with a fully virtual format, many teachers, particularly those who self-identified as "older educators," found converting their information to the digital format challenging. Other studies found that teachers disliked online teaching due to lack of familiarity with online platforms (Minhyun et al., 2021). A study focusing on the mental health of elementary school teachers reported that many teachers felt exhausted due to the increased workload and stress of online teaching (Chan et al., 2021). This study recommends that school and district administrators help teachers decrease their workload by overseeing technology and attendance issues of online students.

There were also challenges with teaching in-person during the pandemic. One educator expressed stress with losing touch with families who had increased absences during COVID-19, for reasons including financial difficulties, transportation inaccessibility, or illness. A few educators also remarked feeling disheartened without being able to connect with their younger students with distancing and mask-wearing requirements. For example, physical touch such as hugging and holding hands that were incorporated into their teaching style had to be put on hold for the sake of students' safety, which had visible impacts on some students and their connection with their educators.

Impracticality of Regulations for Educators/Logistical Challenges

Numerous educators expressed the impracticality of regulations without the means to fulfill them. Teachers were frustrated with the inability to implement social distancing in their classrooms because there was not enough space. In one study, 93.6 percent of K-12 school employees showed concern about the ability for the students and employees to social distance at school (Pattison et al., 2021). The same study found that 88.8 percent of the participants were concerned about health supply availability. In this study, however, most teachers reported that they had adequate safety supplies such as masks and hand sanitizer.

Inequity with HyFlex Format/Disparities and Which Populations Were Most Affected

As seen in the educators' responses, there were not only logistical issues with adapting to the HyFlex format, which incorporates both online and in-person teaching, but also between student populations that were educated in-person vs. online. HyFlex became more widely used during the pandemic and involves educators teaching students who are in-person and students who are online through video-conferencing platforms at the same time. In terms of student responses to HyFlex, students attending a six-week course through HyFlex reported communication challenges between students using different modes. However overall, these students demonstrated an appreciation of the flexibility that the HyFlex learning environment afforded along with the opportunity to think more critically about assignments and work more collaboratively with one another through digital platforms and tools (Kohnke & Moorhouse, 2021). Teachers also implemented more flipped classroom strategies in which students completed work for class before the live session. This allowed for better organization and consequently more active learning within the classroom (Kohnke & Moorhouse, 2021).

With these differences in student experiences, it is important to focus on subsets of the population that were most impacted to help develop future educational strategies that support these underserved populations who already experienced an education gap pre-pandemic. Students experiencing poverty in East Gainesville tend to lack adequate and consistent access to technology or Internet access at home. Although schools and communities were mobilized to provide laptops and internet hotspots, teachers maintained that these students are still at a significant disadvantage due to unfamiliarity with these resources. Additionally, the study focused on East Gainesville, which has historically experienced disparate rates of financial hardship, lack of nutritious food access, limited educational resources, and more compared to surrounding areas (*Understanding Racial Inequality*, 2018). These challenges are part of a larger picture as to how the disproportionate makeup of Gainesville has contributed to health disparities feeding into such educational disparities during COVID-19.

Study Limitations

While all publicly available selected educator emails were contacted with information about the study, only those who replied to the emails were interviewed, potentially causing selection bias. In addition, only seven interviews were included in this study, so it is possible that the sample of teachers interviewed was not representative of the opinions of all East Gainesville K-12 educators. Further, not all East Gainesville schools were represented, and the study did not collect demographic information, both of which lessened the representation of the study. Additionally, while educators from elementary, middle, and high schools were recruited for interviews, no high school educators were interviewed. Lastly, this study did not compare teachers' experiences from high-poverty schools and low-poverty schools, so it cannot be determined from the study's results alone how the pandemic impacted these populations differently.

Conclusion

During COVID-19, educators were challenged with balancing heavier workloads with developing creative ways to engage students online. The majority believe that online students did not receive an equal quality of education compared to in-person students and worry about the long-term impact of this educational loss. Numerous teachers believed that neither they nor their students had adequate mental health resources during the pandemic. Despite frustration with

work-life balance, teachers still felt an overall fulfillment with their job and were satisfied with the responses from their school administration. Many educators believed that they had sufficient safety equipment and protocols to keep the school safe. However, a common theme among educators was frustration towards the government's response regarding COVID-19, and they felt unsafe due to statewide health and vaccination policies.

Educators hope that the pandemic brought to light the importance of quality education and equip the nation with guidance to support the school system in the case of another pandemic. Some educators saw benefit in HyFlex as a long-term learning platform while others were eager to get back to in-person only. A priority of school administration should be ensuring that all educational institutions have the appropriate resources and personnel to facilitate virtual/HyFlex learning if they were to be used again. This study provides a lens to analyze and improve educational modalities for both decreased educator workload and better student educational and developmental outcomes. These insights from educators illuminate the importance of equitable solutions, including providing technology access to all schools and students and regularly facilitating mental health conversations and spaces in a culturally sensitive manner. Using the inputs shared by these K-12 educators in East Gainesville, schools can further a dialogue to support the mental and emotional health needs and educational environment for their students and faculty.

Acknowledgements

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