Best Practices in High School Distance Education:

Lessons Learned from the COVID-19 Pandemic

Job-Embedded Action Research Project

New Jersey Leaders to Leaders (NJ-L2L) Program

Foundation for Educational Administration

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Executive Summary

In March 2020, the COVID-19 pandemic threw students and teachers at Lawrence High School (LHS) into a distance learning format for which neither group was prepared or trained. Lawrence High School continued delivering all instruction exclusively through a distance learning format through the end of January 2021. While every teacher has been doing their best under the circumstances, they have been doing so largely without specific guidance on best practices in the distance education format and mostly figuring things out as they go along.

This action research project was designed to identify empirically-supported best practices in secondary grade education from the existing literature base as well as to identify emerging best practices from teachers at LHS who have been identified as successful distance learning teachers by their building and content area administrators. While the literature review revealed best practices, their specific applicability to secondary grades should be interpreted with caution. Teachers were interviewed both individually and as a focus group and it was determined that all interviewees were implementing some of the best practices identified from the literature review, but no interviewee was implementing them all. There was significant overlap in the best practices and themes gleaned from the literature review and the best practices identified by the interviewees. Best practices will be shared with LHS staff at large and likely incorporated into training components for a proposed virtual instruction option at Lawrence High School. Specific recommendations for further research specifically geared toward secondary grade students and the distance learning experience appear at the end of this document.

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Chapter I

Introduction

Background

Public schools have historically been tasked with fulfilling partially-developed, unfunded, or otherwise ill-considered mandates in the name of bureaucracy or compliance. Usually, even the worst-timed of these comes with some lead time for school personnel to at least begin considering how to reallocate existing financial, physical, and human resources in order to meet the challenge in front of them. At best, stakeholders might be able to collaborate to put forth a reasonably competent first attempt; at worst, they might patch together a plan that may or may not meet compliance requirements simply for the sake of having it together by the deadline and avoiding sanction. In either event (and across the spectrum of instances in between), these plans should be reviewed and improved upon via an iterative design process that addresses shortcomings while reinforcing areas of strength.

When the COVID-19 pandemic hit the U.S. East Coast in early 2020, it offered schools neither the grace nor professional courtesy of any lead time whatsoever. Within weeks of the first few cases being reported in the United States, schools all over the country were closing their physical spaces down and shifting to what has come to be known as *virtual instruction* or *remote instruction*. By mid-March, many of New Jersey's approximately 600 school districts were completely physically shut down as teachers, administrators, and other school personnel scrambled to figure out how to salvage the last quarter of the 2019-2020 school year. Conflicting philosophies in administrations between (and, in some cases, among) school districts, indecision on the part of state government regarding a unified approach, and issues of educational inequity were laid bare in short order, and continue to press time. While the summer

months provided some respite, both in terms of school and virus spread in NJ, the return to school for the 2020-2021 school year brought with it many new questions, some of which are yet to be adequately answered: when is it safe to return to schools? What does a safe return look like? Does the virus spread in school? How can schools simultaneously bring students and staff back while adhering to CDC safety guidelines, and who pays for it? What does 'good teaching' look like in the remote environment?

Aside from a brief period in October 2020 in which K-3 students and some older students with special needs were brought into their buildings on a staggered basis, Lawrence Township Public Schools (LTPS) in Lawrenceville, NJ, remained on 100% remote instruction from March 13, 2020 until January 19, 2021 for the approximately 4,000 students in grades Pre-K through 12. As of press time, the schools are operating on a hybrid schedule in which some students remain on remote instruction (by parental choice) while the remainder attend physically two days per week (teachers continue to teach all their students in this model from the buildings). While the phrase "these unprecedented times" has already worn thin in popular parlance, it is worth noting that for classroom teachers and support staff, the challenge of engaging and teaching their students over a computer truly was, and remains, an unprecedented experience. With practically no lead time to prepare research or professional learning opportunities to equip staff with even some basic best practices, teachers were left to either figure it out on their own or with colleagues, or follow the most basic of guidance that their administrators could muster, obviously never having gone through this experience before themselves. Despite the lack of lead time, the remote instruction model deserves review and improvement as much as any other initiative. As luck would have it, the administration of Lawrence Township Public Schools and Lawrence High School (LHS) has been discussing incorporating a distance learning option for at

least the past two years. While we hope never to see another reason to require long-term school closures, a distance learning option might appeal to some students, and in the event that it is implemented, much more groundwork would need to be laid in terms of teaching practices that best fit this format.

Problem Statement

Since early March 2020, LHS teachers have been teaching in a new mode for which they have never been trained. While staff dedication to meeting the needs of their students has been admirable and tireless, teachers report uneven degrees of student engagement and performance while teaching remotely. Furthermore, it is unknown whether current remote instruction teaching practices at LHS align with research-based best practices in distance learning.

Research Questions

Three primary research questions drive this study:

- What practices, if any, has peer-reviewed research delineated as best for distance learning in secondary grades?

- What practices have LHS teachers found effective in maintaining student engagement and performance?

- What common themes exist across identified best practices that could be extrapolated for future use at LHS?

Context for the Project

Lawrence High School serves approximately 1,100 students in grades 9-12 in suburban Lawrence Township in Mercer County. Lawrence Township borders Princeton to the north and Trenton to the south. As of the 2018-2019 school year, White students constituted the largest racial group (41.2%), followed by Asian (20.4%), Black/African-American (17.4%), and

Hispanic (17%). Students of two or more races (3.9%) and Native Hawaiian/Pacific Islander (0.1%) constitute the remainder of LHS's racial/ethnic groups. 23.3% of students are classified as "Economically Disadvantaged" (NJ Department of Education, 2020). Of particular relevance to this study, all students in grades 6-12 have been issued district-provided Chromebooks for use both in and out of school; this 1:1 laptop program has been in place in LTPS since 2010.

Definition of Key Terms

Remote instruction is used in this paper to refer to any form of distance education in which students and teachers do not share the same geographic location during instruction. For the purposes of this paper, *remote instruction* can be used interchangeably with *virtual instruction*, *distance education*, and *distance learning*, all generally similar descriptors that appear in the extant literature. Clarification will be provided when referring to asynchronous remote instruction and synchronous remote instruction.

Chapter II

Research Base

The studies included in this literature review represent the existing literature base on best practices in distance education. While some studies were found that focused specifically on K-12 or secondary grade distance learning, the vast majority of resources on the subject were developed in a post-secondary context. Peer-reviewed research specifically in the secondary grades is a yawning gap in the existing literature base. Of the nineteen studies to appear in this review, only three were specifically geared toward distance education in grades 9-12. Three were described by the authors as pertinent to grades K-12 and 10 focused on distance education in higher education. The remaining three studies did not specify a grade level. As such, the findings of the literature review should be viewed with caution when considering application to a high school context.

Search Strategy & Inclusion Criteria

The initial search for relevant literature was broad in order to identify the available landscape of literature pertaining to the topic at hand. A primary obstacle to obtaining high-quality, peer-reviewed resources was the lack of access to multiple databases of periodicals such as those found at universities. As such, the present literature review is limited by what was available via searches of EBSCOhost (via the researcher's high school library's subscription), ERIC, and Google Scholar. The search was further narrowed by those articles for which the full text was available. This limitation is intended to limit the results to those that have passed some kind of editorial review; this is important for a number of reasons, not the least of which is that it acts as a barrier to propagating practices not vetted by entities other than the author. As such,

this review may not necessarily represent the entire body of literature – peer-reviewed or otherwise – on the topic.

The search began with a broad search of these databases for the terms "distance education best practices", "distance education k-12", "distance education high school best practices", and "online high school best practices" (with variations on each phrasing for maximal accuracy in results). Results were further narrowed by peer-review status. Any studies that were found to be irrelevant to the focus of the present study were removed.

Since distance education is not a new phenomenon (see 'correspondence classes', a form of distance education that predates the Internet and online learning by several decades), no specific limiters regarding date of publication were set on the search. The publication dates of studies that were eventually included in this review after the previously described narrowing of focus range from 1991 to 2020.

Major Themes

A review of the available literature yielded eleven recommendations for best practice in distance education that appeared multiple times (at least twice). Themes were generated via several iterative reviews of the primary recommendations to identify common overarching elements. Table 1 illustrates the eleven recommendations organized by overarching theme, along with the number of times each recommendation was identified in the available literature.

Effective Communication

Chickering & Gamson (1991) identified the need for regular interaction between students and teachers in distance learning scenarios thirty years ago, prior to the current synchronous learning opportunities available via video chat software such as Zoom and Google Meet.

Table 1

Best Practices Sorted by Theme – Literature Review

Practices	Frequency
Effective Communication	
Regular interaction between/among students and teachers	19
Clear communication from teachers	14
Collaboration (students and professionals)	8
Regular high-quality feedback from teachers	7
Effective Instructional Design	
Emphasize active learning	9
Flexibility in meeting course objectives	6
Strong organization	5
Ongoing course evaluation	3
Student Centeredness	
Student voice/agency	6
Student intrinsic motivation	5
Effective Technology Use	
Reliable technology supported by knowledgeable teachers and dedicated technology support staff	11

Synchronous time should be purposely prioritized to the extent possible for interactive learning opportunities, rather than lecture or other activities students can conduct asynchronously (Malinovksi et al., 2014; McGee & Reis, 2012; Murphy et al., 2011; Simonson et al., 2011; Swan, 2003; Trammel & LaForge, 2017). Prioritizing interaction during synchronous instructional time also builds senses of belonging and community (Belair, 2012; Fish & Wickersham, 2009; Snow & Coker, 2020), thereby combating the potentially isolating nature of distance learning. Keegan et al. (2005) recommend regular re-evaluation of levels of interaction between and among students and teachers, and adjusting accordingly.

Clear communication from teachers is important in any educational setting, but the lack of physical presence removes many subtle communication cues, physical or otherwise, that can assist in communicating, so all communication must be exceedingly clear in remote scenarios. The establishment of clear, high expectations of students from the outset is crucial to a successful distance learning situation (Chickering & Gamson, 1991; Keegan et al., 2005). Teacher communication must be regular (Hallyburton & Lunsford, 2013), must establish consistent and clear deadlines for work submission (Trammel & LaForge, 2017), and must provide clear directions or instructions for meeting course objectives as well as providing exemplars of assigned work products to further aid in student understanding of requirements (Lenert & Janes, 2017; McGee & Reis, 2012; Moore, 1998; Swan, 2003). Fish and Wickersham (2009) and Mupinga (2005) also suggest managing student expectations for turnaround time on feedback or teacher responses to messages sent by establishing clear guidelines for that up front (e.g., a 48-hour turnaround time for an email response).

The importance of teacher feedback to students was also a recurrent theme in the literature. Fish and Wickersham (2009) stressed the importance of personalized feedback to each individual student in the distance learning environment. As in the traditional classroom environment, the most valuable teacher feedback was described in the literature alternately as prompt and specific (McGee & Reis, 2012), detailed (Belair, 2012), regular and constructive (Rice, 2006), frequent (Swan, 2003), and immediate (Trammel & LaForge, 2017).

Collaboration among both students and teachers was the final recommendation under this theme, and two primary sub-themes emerged here. The value of assigning collaborative assignments and promoting collaboration among students (as opposed to competition between individuals) was stressed in multiple studies (Chickering & Gamson, 1991; Simonson et al.,

2011; Trammel & LaForge, 2017). The other sub-theme focused not on students, but on the professionals involved. Students and teachers both report greater degrees of satisfaction and success when their distance learning courses are deliberately adapted from the traditional format and redesigned (to the extent necessary) to the distance learning environment, rather than simply transferred whole from one format to the other. This redesign may occur as a collaboration between teachers in the same department or between teachers and instructional designers (Fish & Wickersham, 2009; Lenert & Janes, 2017; McGee & Reis, 2012; Simonson et al., 2011). An example of this was found in an undergraduate biology class, where traditional labs were adapted to "kitchen counter labs" in which students could still meet lab objectives using common household items rather than chemicals stored in the university labs (Hallyburton & Lunsford, 2013).

Effective Instructional Design

As demonstrated by Hallyburton and Lunsford (2013), the need for effective instructional design is equally as important as effective communication. Positioning students as active learners, as opposed to passive recipients of knowledge, is key to successful distance learning experiences (Chickering & Gamson, 1991; Hallyburton & Lunsford, 2013; McGee & Reis, 2012; Moore, 1998; Rice, 2006; Swan, 2003). The degree to which active learning is promoted varies, ranging from advising useful and interesting activities (Moore, 1998) to calls for frequent active learning opportunities in distance learning (Swan, 2003) to specifically advocating for a constructivist approach to distance learning course design (Rice, 2006). Hallyburton and Lunsford (2013) specifically advocate for an inquiry-based, project-driven approach to learning. McGee and Reis (2012) call out specific elements of effective active learning such as

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opportunities for metacognition, discussion, and projects that require balanced consideration of both process and product.

Flexibility was found to be another important element of instructional design for distance learning. Allowing students multiple pathways and options for meeting course objectives was a prevalent theme in the literature (Chickering & Gamson, 1991; McGee & Reis, 2012; Swan, 2003); Hallyburton and Lunsford's (2013) aforementioned kitchen counter labs are one such example. Swan (2003) also advocates for presenting content via multiple modalities and taking advantage of the multiple media options available to teachers, rather than sticking to a single medium that may disadvantage some learners. Beyond the intentional design piece, Budhai and Williams (2016) advocate for teachers to identify the individual needs of each student in an effort to meet them where they are. They provide the example of a teacher and librarian working collaboratively to develop a student survey that helped guide the development of a lesson (Budhai & Williams, 2016); this concept could certainly be extrapolated to a larger unit of study.

Strong teacher organization aids in successful distance learning experiences. Building on the concept of collaboration to specifically adapt traditional courses to the online format, distance learning courses must be well organized and thoughtfully planned and designed with intentionality (Fish & Wickersham, 2009; Hallyburton & Lunsford, 2013; Trammel & LaForge, 2017). While this can mean many things, the sequencing and scaffolding of activities are specifically identified as best practice (Budhai & Williams, 2016; Hallyburton & Lunsford, 2013).

Just as successful students require feedback, so do the successful designers and teachers of distance learning courses. Ongoing course evaluation and adjustment in the spirit of an

iterative design process was recommended throughout the literature (Fish & Wickersham, 2009; Lenert & Janes, 2017; McGee & Reis, 2012).

Student Centeredness

The importance of student voice and agency in distance learning was prevalent in the literature. Moore (1998) and Keegan et al. (2005) all advocate for maximizing student voice and choice in the distance learning environment, with Moore (1998) further advocating for maximizing content relevance to students and allowing students as much control as is feasible over the pace of learning. Lenert and Janes (2017) suggest prioritizing peer presentation and peer assessment in distance learning instructional design; this centers students in much of the design of the course while also speaking to the metacognitive impact of active learning (McGee & Reis, 2012).

The intrinsic motivation of students to participate and succeed in the distance learning environment was identified as a key element of successful distance learning experiences (Delen & Liew, 2016; Malinovski et al., 2014; Simonson et al., 2011; Snow & Coker, 2020); however, the obvious challenge here is the lack of control teachers have over this. While this practice is not necessarily helpful for improving distance education in a situation such as the pandemic shut-down, where distance learning is mandatory, it can be useful as a possible predictor of success for students who may have the option of participating in distance learning in the future.

Effective Technology Use

Technology is indispensable to distance learning, whether in the form of video-based chat over the Internet or correspondence courses via VHS cassettes; however, the impact of technology can only be positive insofar as the technology works and is used knowledgeably by staff and students. To maximize the distance learning experience, teachers must not only be

proficient with a variety of technological tools (Keegan et al., 2005; Mupinga, 2005; Murphy et al., 2011), but also be intentional and deliberate in their choices of which technological tools best serve the needs of the students and course objectives (Budhai & Williams, 2016; McGee & Reis, 2012; Snow & Coker, 2020). This presupposes a wide knowledgebase or "toolbox" from which to select the best tool for a given job. Students and teachers must also have appropriate and ongoing access to technology support professionals in order to reduce frustration and increase participation (Fish & Wickersham, 2009; McGee & Reis, 2012; Trammel and LaForge, 2017)

Summary

A review of the research base on best practices in distance education reveals four primary themes: effective communication, effective instructional design, student centeredness, and effective use of technology. Specific sub-themes emerged within each larger theme to provide some illustration as to what each "looks like" in a distance learning context. There appears to be significant overlap between best practices in distance learning and best practices in a traditional, face-to-face classroom environment, but the practices in the current chapter appear to take a special priority in the distance environment. The lack of research specifically geared towards distance education in secondary grades is a notable gap in the literature and is reason to interpret this literature review and its applicability to secondary grade settings with caution.

Chapter III

Methodology

Research Methods

The purpose of this study is to identify whether or not Lawrence High School teachers employ empirically-supported best practices in distance education, as well as what common practices are present among LHS teachers identified as having been especially successful providing distance learning opportunities to their students. Qualitative research prioritizes interactional, observational, and interview data in order to gain insight into a given topic (Denzin & Lincoln, 2005).

Participants

Fourteen teachers at Lawrence High School participated in this study; this represents approximately 14% of the teaching staff at LHS (not including non-instructional certificated staff members such as counselors, Child Study Team, etc.). Of these teachers, 11 are women and three are men. Teachers were selected for participation based on their perceived success in the distance learning format (purposive sampling) as well as an attempt to elicit responses from a broad cross-section of subject areas taught and years of experience teaching. Participants represent the following LHS academic departments:

- Health/Physical Education
- World Language
- Special Education
- Science
- English
- Music
- Social Studies
- Theater
- Family & Consumer Sciences
- Business

The only instructional departments not represented in the sample are Mathematics, English as a Second Language, Visual Art, and Technology/Industrial Arts.

Participants were also asked to identify their number of years of teaching experience. Three teachers (21.4%) have between 0-5 years of experience, two teachers (14.2%) have 6-10 years, five teachers (35.7%) have 11-15 years, two teachers (14.2%) have 16-20 years, and two teachers (14.2%) have over 20 years of teaching experience (percentages may not add up to 100% due to rounding)   .

Data Sources

Qualitative data were collected from a focus group and individual interviews. As the interviews were conducted in December 2020, participants were able to compare their remote teaching experience prior to summer break (March – June) to their experience after the break (September – December) and with the benefit of some preparation time for the fall. Focus group participants who met in June 2020 were only able to speak to their initial experience on remote instruction and did not have the benefit of a summer's worth of reflection and preparation to inform their perspective on any aspects of remote instruction.

Data Collection

A focus group was conducted in June 2020 to reflect upon and discuss successful distance learning strategies teachers had discovered over the prior three months of teaching remotely. This focus group consisted of three Family & Consumer Sciences teachers, three Business teachers, and a Theater teacher. Individual interviews were conducted in December 2020 with an additional seven teachers representing the remaining departments on the list on pages 13-14.

Data Analysis

      Qualitative data were analyzed to identify emerging themes in a similar fashion as in the literature review. In the findings reported in the next chapter, themes from the interviews and focus group are compared to those that emerged from the literature review. Any unique themes that emerged from the focus groups and interviews are also identified.

Chapter IV

Findings, Conclusions, & Recommendations

The purpose of this study was to identify best practices that have emerged from Lawrence High School teachers' practice of remote instruction between March and December 2020. Best practices in remote instruction (primarily in post-secondary contexts) from the research base were identified and categorized in order to provide an initial framework for interpreting interview and focus group responses from Lawrence High School teachers.

Qualitative response data were analyzed in relation both to existing best practices (as per the literature review) as well as for emerging local best practices.

Research Questions

Three central questions drive this study:

- What practices, if any, has peer-reviewed research delineated as best for distance learning in secondary grades?

- What practices have LHS teachers found effective in maintaining student engagement and performance?

- What common themes exist across identified best practices that could be extrapolated for future use at LHS?

Connections to Existing Literature

Among the representative sample of interviewees, LHS teachers appear to have engaged in all the best practices in remote instruction described in the literature base, although not every teacher reported employing every practice. Table 2 illustrates the degree to which each previously identified practice appeared throughout the interviews and focus group discussion.

Table 2

Best Practices Sorted by Theme – Lawrence High School 2020

	Appearances		
Practices	Literature Review	Individual Interviews	Focus Group
Effective Communication			
Regular interaction between/among students and teachers	19	11	Yes
Clear communication from teachers	14	2	No
Collaboration (students and professionals)	8	3	No
Regular high-quality feedback from teachers	7	8	Yes
Effective Instructional Design			
Emphasize active learning	9	2	No
Flexibility in meeting course objectives	6	2	No
Strong organization	5	5	No
Ongoing course evaluation	3	7	No
Student Centeredness			
Student voice/agency	6	3	Yes
Student intrinsic motivation	5	1	No
Effective Technology Use			
Reliable technology supported by knowledgeable teachers and dedicated technology support staff	11	12	Yes

Participants identified *regular interaction between/among students and teachers* and *reliable technology supported by knowledgeable teachers and dedicated technology support staff* most frequently throughout interviews. Especially in the context of the shift to required synchronous instruction beginning in September 2020 (this was not a requirement from March-June 2020), there was a nearly-unanimous sense that the synchronous element was essential to community-building and developing student-teacher rapport, and allowed for more direct communication opportunities. Asynchronous communication opportunities were also lauded, however, for the increased opportunities for individual feedback through comments on Google Docs than would ordinarily take place in a traditional PE class setting. Additional feedback from

the focus group revealed that in the asynchronous setting, more students reached out to teachers on an individual basis (i.e., via email or chat) to clarify or discuss issues than they do during traditional in-person instruction. Some teachers reported starting each class with a light-hearted activity in order to facilitate community-building and student comfort levels in the remote environment (e.g., music, informal surveys/polling, quick games).

Regular high-quality feedback from teachers also appeared several times throughout the data collection process. While this dovetails with the effective use of technology, teachers researched and implemented a variety of technology tools and services that allowed them to provide feedback that was described throughout the interviews as *immediate*, *quick*, *quantitative*, *real-time*, and *right away*.

With little in the way from content-specific directives from administrators, many teachers turned to their colleagues for *collaboration* opportunities to test, improve, and adapt aspects of the traditional classroom for remote instruction. Family & Consumer Science has proven to be one of the content areas most in need of adaptation to allow for not only the variety of materials available in each household, but also the many safety concerns around students operating kitchen equipment potentially unsupervised. As a department, teachers created new safety surveys, required more parent input, and developed multiple lab options for each unit; starting in September 2020, these teachers also began assembling ingredient packages for students to pick up at the school if they did not have access to those ingredients at home. Science teachers also reported having to adapt labs in a manner similar to that described by Hallyburton & Lunsford (2013). Reducing the quantity of work assigned in favor of depth of quality was also a common theme across multiple interviews.

LHS teachers reported that having (or developing) strong *organizational skills* helped immensely with both their execution of lessons as well as their planning process, in addition to managing all the other meetings and obligations (IEP, committee, department) that take place and, in the remote environment, have no structural or environmental reminders (e.g., everyone walking to the faculty meeting at the end of the day).

While few teachers spoke explicitly to *student voice/agency* and *flexibility in meeting course objectives*, those that did indicated great success with those strategies, as well as a desire to continue implementing them once hybrid and, eventually, full-time in-person instruction resumes. Only one teacher spoke explicitly to *student intrinsic motivation*, but her comment was insightful: essentially, she felt that the addition of the synchronous instruction and compulsory attendance requirement in September 2020 diminished her ability to gauge her students' intrinsic motivation.

All participants from the December 2020 interviews provided insight on how they adapted, shifted, or otherwise changed up their approach to remote instruction from the end of the 2019-2020 school year to the start of 2020-2021. While all answers varied based largely on teacher content area, the fact that all interviewees reflected on their experience and were responsive to both their own observations as well as feedback from their students indicates adherence to the *ongoing course evaluation* recommendation from the literature.

Emerging Themes and Practices

The majority of responses from the individual interviews and focus group yielded responses that align with empirically supported best practices in distance education. To this researcher's knowledge, none of the participants had conducted a similar literature review or research on distance learning prior to, or in the early days of, forced remote instruction, and

relied primarily on trial-and-error and picking up strategies and resources from collegial conversations or their own informal research. As such, no new themes emerged from the interview data that did not already exist in the literature, but specific themes and practices that are worth calling attention to include:

- Researching, learning about, and turnkeying explicit instruction to students on technological tools is well worth the up-front time investment

- Provide multiple communication pathways for engagement: verbal, text chat, large group discussion, small group breakout rooms, polls, surveys, "ice-breaker" games, and even using Google Translate to bridge communication gaps with English Language Learners in real-time

- Adaptation to the online format is essential, but especially challenging in disciplines that are more 'hands-on' in nature such as Science, Art, Family & Consumer Science, and Technology/Industrial Arts. These disciplines may require additional practical and logistical workarounds beyond adapting the curriculum to the format (e.g., additional cameras and stations for demonstrations; supply distribution logistics)

- While many students were, and remain, excited to return to in-person schooling, there were also students who thrived in the distance learning environment, including students who had previously struggled in the traditional model. The reasons why this might be can certainly be speculated upon but are ultimately beyond the scope of this project

- Synchronous instruction is an essential component of remote instruction

It remains worthwhile to note that these instructional practices were implemented during a pandemic in which remote instruction was mandatory, not optional. With different circumstances and context (e.g., an opt-in distance learning program provided parallel to

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traditional in-person instruction), these practices may need revision, adaptation, or reconsideration.

Research Question Responses

In response to Research Question 1, "What practices, if any, has peer-reviewed research delineated as best for distance learning in secondary grades?", the current literature review revealed a paucity of peer-reviewed research aimed specifically at secondary grades. As described in Chapter II, most resources located were either aimed at higher education distance learning experiences or were non-specific as to the age range of students involved. Themes and practices were gleaned from the extant literature but should be interpreted and applied to secondary settings with caution. A more in-depth review with different databases may yield more resources aimed specifically at secondary grades.

In response to Research Question 2, "What practices have LHS teachers found effective in maintaining student engagement and performance?", there was significant overlap between the practices that emerged from the literature review and the practices identified by LHS teachers. While all teachers reported implementing some of the best practices identified in the literature, no teacher reported implementing all of them. No new themes emerged from the interviews beyond those generated by the literature review, but LHS teachers did provide some elaboration on some themes.

In response to Research Question 3, "What common themes exist across identified best practices that could be extrapolated for future use at LHS?", again, no new themes beyond those generated from the literature review were found in the interview data. The interview data appear best suited for elaboration and local practical examples of the themes and recommendations generated from the literature review.

Chapter V

Application to Leadership Practice

Application

With more codified knowledge of which specific approaches to distance learning tend to yield the best results, the next step is to disseminate that information to teachers responsible for teaching in this mode. As of March 2021, Lawrence High School remains in hybrid instruction mode, with approximately 60% of the student body opting to remain fully virtual and the remaining 40% attending in person twice per week, split alphabetically between two cohorts. As such, some degree of remote instruction will be in place at Lawrence High School for the foreseeable future; however, whether all teachers will be involved or just an identified corps of virtual instructors remains to be seen.

School Improvement Action Plan

The School Improvement Action Plan is located in Appendix B, as per directions from NJPSA. The two primary components of this action plan are:

- Provide professional learning opportunities to LHS staff regarding best practices in distance learning

- Preparation for future opt-in distance learning program

  - Self-evaluation for students regarding 'goodness of fit' for online learning

  - Training specifically designed for instructors in the distance learning program incorporating all elements of empirically supported best practice, including a self-evaluation instrument

Dissemination

The Lawrence Township Public School district calendar ordinarily incorporates three to five professional development days for staff throughout the year. These days would be ideal times to provide professional learning opportunities for the entire staff; however, this year, the district front-loaded the entire year's professional development days into a single week in September in order to give teachers the maximum amount of time to prepare for the return to the virtual classroom (with new mandates such as a synchronous learning schedule) prior to the students' return.

Without any more designated professional development days in the 2020-2021 school year, this information may be disseminated in "bite-size PD" sessions during faculty meetings. Administrators are certainly capable of sharing the findings of this research project, but it may be more impactful coming directly from the teachers who initially shared this information. It is not uncommon at LHS to have teachers speak briefly at department or faculty meetings about recent successes or "FYI" tidbits; doing this at each of the subsequent monthly faculty meetings would be one way of getting the information out to the staff.

These findings will also be shared with the LHS administrative team and LTPS central office administrators for their use in providing feedback on observations, walk-throughs, and consultation with staff.

Implications and Recommendations for Future Study

The present study collated and identified best practices in distance education, as well as described the extent to which these have been implemented among a select group of LHS teachers. It is also important to remember that the teaching and learning circumstances in which LHS teachers and students have found themselves since March 2020 is the result of a global

pandemic and the emergency response thereto. There is a major difference between emergency

virtual learning due to a pandemic (and the attendant trauma) and voluntarily participating in a

virtual learning program. As such, the experiences explored in this paper are not necessarily

representative of a 'normal' secondary distance learning experience. The following

recommendations for further research are offered:

- More peer-reviewed research specifically aimed at best practices in distance education

  for students and teachers in secondary grades

- An examination of why some high school students thrive in the distance education

  format, especially those who did not do as well in the traditional format

- Longitudinal study documenting the successes and challenges of secondary students and

  teachers in a distance learning setting

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Appendix A

Interview Questions

What instructional practices (instruction, assessment, etc.) have you found to be most effective in the remote format?

- Were any of these practices you engaged in prior to remote instruction?
- Were any of these new to you in the remote instruction environment? If so, how did you learn about it?

Are there any non-instructional practices you have engaged in during the remote instruction period that you have found to be effective (e.g., community building, technology skills, etc.)?

Learning the required technology to provide remote instruction presents different levels of challenge to different people. Reflecting on your experience learning a variety of new technology skills, what advice would you give to yourself in February 2020, prior to the start of remote instruction?

Consider your overall experience teaching remotely in Spring 2020 vs. Fall 2020. What have been the key differences, for better and/or worse, between the two experiences?

What has been the biggest 'a-ha moment' for you regarding teaching and learning while on remote instruction?

Appendix B

School Improvement Plan

Phase I: Lawrence High School staff at large

- March 2021: Overall best practice findings themes/practices shared at monthly faculty meeting (see Table 2; complements assistant principal Lopez's dissertation research on teen communication among digital social networks)

- April – June 2021: "Bite-size" professional development offered at each monthly faculty meeting in which teachers interviewed for this project speak to their colleagues about elements of distance learning that have been successful (within framework of themes & practices from Table 2)

- September 2021: Resume "bite-size" professional development at monthly faculty meetings as applicable to distance learning situation at Lawrence High School; recruit more staff members to share distance learning successes aligned with major themes each month

  o Administrators can build these into our walk-through Google Forms – add a section on evidence of distance learning best practices observed

Phase II: Lawrence High School 'Virtual Academy' (timelines will be heavily dependent upon ultimate development/implementation of virtual academy)

- Incorporate findings of this action research project into professional training module for interested virtual cohort teachers

- Recruit successful virtual teachers to train colleagues

- Budget time and funds for full curricular adaptation to virtual model – pay teachers as we do to write curriculum

- Start with required core courses: English, Math, Science, Social Studies, PE/Health, World Language to provide virtual cohort

- Branch out to graduation requirement electives (may have to be hybrid at first): visual/performing arts, financial literacy, 21st century skills

- Grant to consult with instructional designer

- Design a tool for self- and/or peer evaluation of evidence of best practices (a la Danielson) for initial/ongoing evaluation (quarter/semester/year TBD)

- Design a student survey tool to help them determine potential for success in distance learning