Local Case Management Team Holistic Intervention for At-Risk Ninth Graders: A Case Study

Jessica Grant, Russell Yokum, and Glenn Holzman

Abstract: *Based on existing empirical research, schools continue to use single intervention programs for intervening on behalf of at-risk students despite the fact that those programs do not meet with significant success in decreasing dropout rates. The problem is that the phenomenon of multidimensional approaches to intervening on behalf of ninth-grade students has yet to be fully explored and understood. The purpose of this single case study was to describe the case of Local Case Management Teams utilizing a multidimensional approach to intervening on behalf of at-risk ninth grade students in a large suburban school district in Utah. The following research question guided this study: How do local case management teams describe their experiences in ninth-grade intervention/dropout prevention? The theory that guided this study was Communities of Practice by Lave and Wenger (1991) as it explains the relationship between Communities of Practice and Local Case Management Teams. A single case study design was utilized to provide an in-depth analysis of this critical case, bounded by time and activity, and using a variety of data collection procedures and analysis strategies over a sustained period. Participants were chosen using purposeful sampling. Data included interviews, observation, and document analysis and were analyzed using traditional case study analysis methods including memoing, pattern matching, within-case synthesis, and resulted in the development of several themes. Time, accountability, knowledge, escalating intrinsic and extrinsic barriers to success, and multidimensional programming were identified as central themes to this research. Although the participants reported differing experiences, their responses to this type of programming was overwhelmingly positive.*

The school and the classroom play an important role in the life of students at risk for dropping out as they provide pathways for achievement, self-esteem, and self-worth (Kiefer, Alley, & Ellerbrock, 2015). Unfortunately, instead of being proactive, too many schools react after students have already failed and disengaged from school (Goss, 2017). Freeman et al. (2015) suggested that, since dropping out is generally the result of a long process of disengagement, a comprehensive approach that focuses on prevention, tiered intervention, improving school climate because the, and diminishing risk factors seems acutely relevant in addressing the dropout problem. However, new programs are less likely to be adopted by teachers when they are presented as a mandate requiring strict, precise implementation (Edwards et al., 2014; Vennebo & Ottesen, 2015). Conversely, according to Holdsworth and Maynes (2017), "Innovations that are developed or adapted to a specific school context are much more likely to result in long-term and sustainable positive change" (pp. 688–689). Since there is no fast and easy solution to end dropout, and effectual prevention measures must be prudently viewed within a context that provides a foundation for continuing implementation and sustainability of evidence-based practices.

One such evidence-based practice includes the establishment of communities of practice within the school. Lave and Wenger's (1991) theory of communities of practice reasons that learning does not reside with the individual, but it is a social practice of meaning making. While a team is defined by a joint task-driven undertaking that team members have to accomplish together, "A community of practice is a learning partnership related to a domain of practice. Members of the community of practice may engage in the same practice while working on different tasks" (Farnsworth et al., 2016, p. 143). According to Wenger (2016), teachers, who are considered specialists in their field, do not just implement research or policies connection between research and implementation is complicated. Because peoples' identities, along with the practice of teaching, are localized endeavors, and if identity is "viewed from a community of practice perspective, to be an organizing principle in the design of education, we will not create a curriculum of objective knowledge but focus our energies on designing learning contexts that promote identity negotiation" (Wenger, 2016, pp. 149–157). Furthermore, communities of practice can be used to establish an environment for pushing faculty who are resistant to new approaches to begin adopting those practices because they help to fuel an intrinsic motivation in teachers because they are motivated by respected colleagues (Tomkin et al., 2019).

For students, the transition from middle or junior high to high school requires particular attention, since it occurs during puberty and its concomitant psychophysical changes (Longobardi et al., 2016). Students often enter ninth grade unaware that it is a critical year that will likely determine whether they will meet with success during high school (Tobin & Colley, 2018). In fact,

researchers have demonstrated a correlation between insufficient credit accrual in the freshman year and the likelihood that a student will not graduate (Heppen et al., 2016). This pattern can be correlated to the fact that monitoring and support, which occurred in eighth grade, declines in the ninth grade and good academic habits thus become a choice for students (Allensworth, 2013).

Ultimately, researchers around the world have determined that to better the school community, improving the classroom experience for students is critical (Holdsworth & Maynes (2017). A community of care may not be optional for students at-risk for dropping out to be successful; it may be a prerequisite (Densmore-James, & Yocum, 2015; Ellerbrock et al., 2017). While it takes more time and labor to develop interventions based on individual students' needs, an individual approach that tends to students' social-emotional learning might be more likely to be successful in mitigating dropout (Dougherty & Sharkey, 2017). Qualified case managers, special educators, paraprofessionals, social workers, and counselors are also necessary for struggling students to get the most out of educational settings (Morgan et al., 2013).

According to a recent practice guide commissioned by the Institute of Education Sciences (IES), many ninth-grade transition and intervention programs are not structured to ensure that students receive additional support and personalized care (IES, 2017). The transition program must be comprehensive and rooted within the curriculum and school culture, be ongoing, and must create an environment that concentrates on the special transitional issues of the at-risk ninth grade student (Freeman & Simonsen, 2013). Dougherty and Sharkey (2017) recommend that, instead of schools seeking a one-size-fits-all approach to dropout prevention, they should focus their attention on interventions that address each student's individual risk factors. Freeman and Simonsen (2013), along with many other researchers, bring attention to this need by calling on future research to include more studies that investigate and address multidimensional approaches to dropout intervention (IES, 2017).

Although the research regarding dropout prevention illuminates important findings, little to no significant research was found that has examined the phenomenon of multidimensional approaches to intervening on behalf of students at risk for dropping out and the IES (2017) noted an absence of supporting literature or research regarding effective single intervention approaches. Given such, further research is warranted that could examine this multidimensional approach address the documented problem that single intervention programs have not met with significant success in decreasing dropout rates. The purpose of this single case study was to describe Local Case Management Teams (LCMT) utilizing a multidimensional approach to assist at-risk ninth grade students in a large suburban school district, Mooseland County Public Schools (MCPS) (pseudonym), in Utah. Therefore, the following research question guided the study: How do local case management teams describe their experiences utilizing a multidimensional approach to intervening on behalf of at-risk ninth grade students in a large suburban school district in Utah?

Methods

To describe the case of a Local Case Management Team (LCMT) utilizing a multidimensional approach to intervene on behalf of at-risk ninth grade students, a single (bounded), embedded case study was utilized to allow the participants to best describe their experiences with this approach. According to the most recent demographics available, the high school graduation rate for MCPS in Utah was 95.5% in 2016 compared to 85% in the state of Utah and 84% across the United States (NCES, 2018). Minority enrollment is 16% (the majority of whom are Hispanic) compared with 15.6% across the United States (MCPS, NCES, 2018). Of the student population, 22.1% are eligible to receive free and reduced lunch prices (MCPS, 2018).

Junior high schools (grades seven through nine) in MCPS, which were implementing the LCMT with a high level of fidelity, were invited to participate in the study. Once the LCMT was selected, the lead researcher contacted each individual participant from the LCMT, which included administrators, counselors, special educators, a school psychologist, and general educators, to collect the consent forms and schedule the interviews. Once participants were secured, data collection began with acquisition and analysis of documentary information, participant interviews, and observations. To guide the analysis, the lead researcher relied on theoretical propositions suggested by the theory of communities of practice because they pointed to significant contextual conditions that were described and explanations that were examined (Yin, 2018).

Interviews

Once the concept of the LCMT was explored and understood by the researchers, individual, open-ended interviews of the individual participants began (Appendix A). Yin (2018) suggested that interviews are particularly helpful in suggesting the how and why of significant events as well as insight into the participants' relative perspectives. For the purposes of this study, the researchers determined that in-depth interviews were the most suitable structure (Yin, 2018). There were 11 open-ended interviews, one per participant, lasting approximately a half hour to 50 minutes. No additional follow-up interviews were conducted because participants were given the opportunity to check for accuracy.

Thoughtful and purposeful member checking was used to ensure the transcriptions were accurate and consistent with the participants' experience within an LCMT (Moustakas, 1994). This occurred after the transcriptions and data analysis were complete.

Observations

Once the interviews of the individual participants were completed, LCMT meeting(s) were observed that included those staff members who were previously interviewed using an observation protocol designed based on the defining features of a community of practice. observations were conducted during the weekly LCMT meeting, which generally lasts for one hour. Observations continued until theoretical saturation of the themes that emerged from the participant interviews was achieved (Eisenhardt, 1989). According to Yazan (2015), "Observational data can be integrated as auxiliary or confirmatory research" (p. 87). Yin (2018) expressed that case study research assumes the phenomenon of interest will have some relevant social or environmental conditions that may be observed either formally or informally and may suggest things about the culture or participants' status in relation to the phenomenon. The purpose of observation in this case study was to corroborate findings that may already have been established from both the document analysis and LCMT participant interviews. Observations of the LCMTs were useful in adding a dimension of understanding in order that strategies relating to the successful implementation of LCMT at other sites can be confirmed by robust evidence (Fuller et al., 2003; Yin, 2018).

Document Analysis

Document analysis was the final of three complimentary sources of evidence. documents, which are considered a relevant case study tool in the data collection process, allowed the lead researcher to utilize triangulation of data in the collection methods to enhance trustworthiness as well as to increase understanding of the impact on the participants (Creswell & Poth, 2018; Yin, 2018). Document analysis of items, such as the LCMTs' agendas, minutes of meetings, and other internal records were completed. Specifically, these documents included information related to plans for intervention and designated who on the LCMT was directly responsible for the intervention. This was an important step in the data collection process, as the researcher needs to be able to corroborate information from other sources through the specific details the documents can provide. Document analysis occurred throughout the study with the explicit understanding that documents are written with a specific purpose and for a specific audience, sometimes exclusive of those who are participants in the case study (Yin, 2018).

Sampling Strategy

The participants were chosen using purposeful sampling based on the criterion that the participants were active members of the LCMT being studied (Yin, 2018). Maximum variation was achieved by participation of building administrators, guidance counselors, school psychologist, special educators, and teacher(s) from the LCMT as embedded sub-units (Creswell & Poth, 2018; Yin, 2018). Since the school principal ultimately determines the composition of the school's LCMT, there is some variation between schools in overall team composition. The choice of LCMT participants was bounded by those who have worked a minimum of one school semester on an LCMT and participated on the same LCMT during that time period. Therefore, the sample size included 11 embedded participants, not atypical to a single-embedded case study design (Yin, 2018). Pseudonyms were utilized to protect the identities of the district, the school, the LCMTs, and its participants.

The first embedded case on this particular LCMT was that of the school administration, including the school principal. Although school principals are generally responsible for providing strategic direction for the school, the principals' role within the LCMT is more closely related to their expertise in monitoring student achievement and behavior. The two assistant principals who served on the LCMT were included as part of this embedded case as well. Although these assistant principals are assigned managerial and organizational tasks, they also share duties and responsibilities with the principal. Their roles within the LCMT are more closely related to their areas of expertise and assigned organizational task, e.g., special education, behavioral intervention, etc.

The next embedded case included the junior high's three guidance counselors who served on the LCMT. Each of these counselors maintain a caseload equivalent to roughly one third of the school's population, helping those students in the areas of academic achievement, career, and social/emotional development. Their roles within the LCMT are closely aligned with their day-to-day roles. These counselors are considered experts on the portion of the population they serve, and therefore their expertise is in the holistic view they hold of the students.

The special educators who served on the LCMT were also included as embedded cases. The special education teachers serve as educators and as advocates for students with special needs, managing their individualized education programs (IEPs). Their role within the LCMT is to utilize their expertise in special education to help identify students who have a disability that is impeding their success in school.

The next embedded case was that of the school psychologist. The school psychologist provides expertise

in mental health to help individual students succeed academically, socially, behaviorally, and emotionally. The psychologist's role within the LCMT includes utilizing his/her knowledge and experience to be involved integrally in the screening process, teacher and team consultation to support intervention development, intervention implementation, and monitoring student progress.

The last embedded case was that of three of the school's teachers. The teachers attend to the social, personal and academic needs of students who have been identified as at-risk for failing. The teachers' role on the LCMT is to provide comprehensive documentation of student progress and to develop supplementary education that addresses the specific needs of at-risk students. Furthermore, these teachers use their expertise to facilitate interactions between students and their other teachers while monitoring and supporting the academic progress of those students, further enabling them to make recommendations for further services.

Results

On this day Elan Junior High's LCMT began with a student who had been on their agenda for over six months, Samuel. Samuel ended up on the LCMT's caseload after he was identified by the school's EWS as a truant who was failing all of his classes. In gathering evidence from teachers to inform the intervention process, the LCMT was also notified that Samuel was living out of a car with his parents. Melody, who represents the English department, asked, "Where are we with Sam? What is his history of interventions?"

Veronica brought up his intervention screen. Initially, the LCMT collected data from the teachers on the tier I. interventions they had attempted in their classrooms. Subsequently, the team recommended testing for special education, though it took quite a bit of time to complete the testing because of Samuel's truancy, and he ultimately did not qualify for services. Although the school's administration had been working to develop a better relationship between Samuel and school, Samuel was assigned the choir teacher, who is also a member of the LCMT, as a mentor. The LCMT also contacted Child and Family Services, which subsequently removed Samuel from his parent's custody and placed him with a foster family.

Melody asked, "Have his grades improved since being removed from his parent's custody?" Veronica quickly changed the screen to show Samuel's current grades. "That's impressive," Melody added.

Roger chimed in, "More importantly, we were able to get him counseling, he has a roof over his head, food in his belly, and his foster family makes him come to school." Samuel was ultimately removed from the LCMT's caseload.

Although the team encountered several cases on the agenda after Samuel's that they were unable to close out, primarily due to attendance issues, the team was able to conclude its meeting on a high note. Louis, brought up the last name on the agenda for the day, Andy. Harris, the math representative, said happily, "He's doing a lot better in my class. . ." All of the members expressed their joy at this news. Harris continued, "He's very motivated by track."

Veronica jumped in, "He's failing now with just one 'F.' Do we want to explain it to him, or do we want him to see it on the report card?" She clarified for the group that she was referring to the track coach.

Anthony responded, "We can explain it to the coach so he can continue to run and then add a higher standard for future terms."

For schools in MCPS, one goal is to get to a point where the staff is always proactively looking for students to provide help before a challenge becomes a crisis that prevents the students from moving forward. Over the course of the last five years, Elan Junior High has reduced its number of one-time referrals by 50%, which Roger attributes to the work of the LCMT. Furthermore, teachers in the school take care of about 90% of all discipline issues because the principal feels that teachers are now much more consistent about applying those interventions. The LCMTs represent all of the critical aspects of education, with the goal of having rich conversations that get to the heart of what is happening with students at risk for dropping out.

The LCMTs operate on the premise that in order for any evidence-based practice to have its desired effect on students, it must be implemented effectively, and it also must be sustainable. The district's website references Fixsen et al.'s (2009) Scaling Up Brief utilized in the development of LCMTs: "Students cannot benefit from [interventions] they do not experience" (Fixsen, Blase, Horner & Sugai, 2009, p. 1). The educational science behind MCPS' LCMTs relies heavily on research from the National Implementation Research Network, and specifically on the key drivers to sustained implementation they have identified: (a) identify a problem; (b) use data to analyze the problem; (c) identify and select appropriate interventions, and (d) review and measure the implementation and effects of those interventions (MCPS).

Having data is essential for LCMTs to accomplish their work. Otherwise it would be difficult to pinpoint where a student is struggling or what next steps to take. These data include reading and math Lexiles, Student Assessment of Growth and Excellence (SAGE) scores, and evidence of classroom behaviors. However, MCPS recognizes that although data collection and documentation is necessary, these alone are insufficient;

the collected information should be referred to the right people via a multi-tiered system of support (MTSS) to provide appropriate instruction and intervention for all students in the school. Elan Junior High's tiered levels of intervention represent increasing intensity and individualization in instruction and intervention.

When these tiers are applied to behavior, it is through the framework of Positive Behavior Interventions and Supports (PBIS), a behavior management framework used for developing positive behaviors in students and that supports the academic, social, emotional, and behavioral needs of all students. The implementation of PBIS, which has been embraced by schools nationwide, is not exclusively an Elan Junior High or MCPS initiative. All Utah schools are mandated by law to have a plan in place to foster good behavior and provide appropriate supports for students who misbehave. To comply, MCPS designed and provides schools with a "Tiered Supports-Intervention Finder" and an MCPS "Behavior APP," which capitalizes on technology to benefit schools.

Theme Development

Themes were developed first from the one-on-one interviews, followed by the observations, and finally the document review. After an intensive analysis using traditional case study methods including memoing, pattern matching, and within-case synthesis, 68 codes were generated which appeared amid a numerical majority of the embedded participant groups – administrators, counselors, school psychologist, special educators, and teachers. The coding began with aggregating the text from the transcripts and documents into small categories of information and then assigning a label to each code. The numerical majority was used as an emergent defining boundary for the selected codes, while the theoretical framework was a prefigured defining boundary for the selected codes. The codes were then compared with the collected documents for parallels. The codes were recorded to show similarities across different sources of data. Many codes were reduced and combined to become part of the thematic analysis, while some codes were ultimately discarded because they did not represent the five overarching themes discovered in the study. The codes were then reduced to major themes—time, knowledge, accountability, escalating intrinsic and extrinsic barriers to success, and multidimensional programming.

Time

Time management is a challenge for the entire school community. For school administrators, time management is problematic as new demands are expected of schools, with fewer resources and no increase of available time. As volunteer members, teachers on the LCMT do not receive a stipend for the time they spend in these meetings and are faced with putting something else on the back burner each time they attend. However, regardless of the time that it takes, teachers report that the time is spent well. Furthermore, for all of the teacher members of the LCMT, the time they spend in the weekly meetings is outside of their contract hours. All the team members agreed that it is a commitment they make because they are all dedicated to working toward improving the outcomes for their students at risk for dropping out. During the LCMT meetings, time is also a commodity. At Elan Junior High the allotted time is five minutes per student, but sometimes that is just really not enough time; consequently, the team might spend 20 minutes on a child. Teachers outside of the LCMT also have issues with demands on their time. Harris observed that teachers are overloaded with classroom duties and legislative demands. He said, "Teachers really are overwhelmed. When you ask them to do one more thing and one more thing and one more thing, it seems like a lot."

Accountability

The additional work that comes with interventions does not fall solely on the shoulders of teachers; other LCMT members share that burden as well. The foundation of the team is built on being accountable for showing up, participating, keeping matters confidential, knowing policy, understanding the Family Educational Rights and Privacy Act (FERPA), taking on the intervention strategy, seeing it through, completing it, and reporting back to the team. However, of the team's core, Michelle said, "We each have a role to play and most of that role is sharing our perspective so that we can problem-solve and help make kids be more successful." In addition to some confusion surrounding teachers' roles on the team, the LCMT experiences difficulty with maintaining accountability to the rest of the school community. Several members of the LCMT indicate there is poor communication between the team and the rest of the staff.

Knowledge

Early in the conversation, Louis shared, "What I've found over the years is that I work with the smartest people I've ever met, and some of them are teachers, some of them are counselors, some of them are administrators." Not only does each of the members have the requisite bachelor's degrees required for their positions in the school district, but among the members interviewed, there are 11 master's degrees and one Ed.D. Furthermore, Louis believes that the team's contributions go beyond their educational backgrounds. Louis followed up by saying, "Knowledge and experience, those are important. Having people on there who know kids personally [is

important]." All of the members of the team, regardless of how long they have been in education, clearly have expertise to contribute to the LCMT.

Escalating Intrinsic and Extrinsic Barriers to Success

Some of the intrinsic issues the team sees involve special education or mental health. The LCMT has seen an increase in cases of students whose academic difficulties appear to stem from mental health concerns. The team's experience parallels 2018 studies that reported nearly 70% of teens aged 13-17 said that anxiety and depression were top concerns. This number has been on the rise for several years (Horowitz & Graf, 2019). Extrinsically, some of the most difficult issues are attendance, discipline, and safe-school violations. In the case of students at risk for dropping out, sometimes the team sees instances of personality conflicts between students and teachers. Also, there are the students who seem to be inexplicably struggling and failing all their classes. While most of the team members know that many of their students face trauma at home and have had adverse childhood experiences that impact school learning, sometimes, as Melody so aptly put it, "It's junior high, and there are some kids who just for whatever reason, can't behave and it takes a special ability to be able to handle that kind of kid."

Anthony reported that the main issue the team deals with is truancy, "How to get kids to school, and once they're here, how to help them improve their schoolwork." Truancy exacerbates many aspects of the team's work with interventions on behalf of students. Of the 19 students on the team's agenda, eight exhibited issues with attendance. Regarding attendance, schools' hands are tied. In the State of Utah, if a parent clears an absence there is nothing the school can really do about it.

Multidimensional Programming

Fortunately for Elan's at-risk population, the LCMT has almost as many interventions at its fingertips as there are issues to which to apply them. In this era of technology, team members have a fair amount of electronic information to help with tracking students and determining interventions. Elan also utilizes technology to remediate credit-deficient ninth grade students. Roger communicated that, "For failing classes we have a 'Base-Camp' program, a credit recovery program where students give up an elective and they can be assigned to a computer lab in the counseling office to make up credit using Grad-Point or Ingenuity." Access to interventions has made its way into the age of technology with an application the district has designed and provides for its schools.

Members of the team were quick to relay the diverse programs the school can use to intervene on behalf of its at-risk population. Roger relayed,

We can assign students to 'Lunch and Learn.' We have the opportunity for students who struggle in math to have a math study hall. And, we've got double-blocking of classes for students who struggle in English. For all seventh graders, we've been double-blocking that. We've been double-blocking some of the math classes where we see a low success rate among students.

According to Roger, the school has had success with these programs: "We did have, when I got here, about 85 ninth-graders out of 300 who were going on deficient of core credit. Last year that number was 21." Elan has also put together, in conjunction with the district and with the school's behavior team, a hierarchy of interventions available digitally or in hard copy.

Sometimes the team gets creative with issues with which they are confronted. Sheila said, "If it's an issue of getting up in time, we'll shorten the schedule. . . . I motivate with an, 'I'll buy you lunch; If you come for two weeks straight, I'll get you lunch or get you your favorite soda or your favorite candy.' I'll do anything." Sometimes the intervention is simply taking the time to build a relationship with a struggling student. For financial issues students face, the school has a food pantry that sometimes also includes donations of school supplies. However, it all comes down to having the leverage to match students to the best intervention for the best possible outcome. Michelle explained, "I think the local case management team is a place to come together and give those students who are not successful in some way their best shot at being successful in the education system."

Discussion

Members of the LCMT spoke positively about their experience; the team agreed that they were there to do what is best for kids, despite inevitable frustrations. All members of the LCMT reported one of the best parts of the experience is they do not feel as though they are going it alone; they felt they were part of an established support network. Members of the LCMT believed that it was beneficial to their practice that they were working with a team of people who were also aware of the struggles students were experiencing and who were working with them on interventions to help those students.

With the exception of the guidance counselors, team members felt like their caseloads for interventions were eased by inclusion of a cross-section of staff. For LCMT participants who are not classroom teachers, they stated their time on the team provided a wider perspective of what goes on in the school. Although general educators on the LCMT declared the experience positive, they struggled a bit in understanding their roles and with the added responsibility.

Regarding efficacy in administering interventions to students at-risk, the team members believed they were effective in approximately 80% of the cases managed. Some stated efficacy could be bettered by improving communication with the rest of the school about the students with whom the team works, which interventions have been recommended, and what the expectations are for those who work with those students. The factor that seemed to make the experience genuinely difficult for many members was that some students, even after the team had applied every intervention at its disposal, remained apathetic about their education, and the LCMT was unable to pinpoint the source of the apathy. However, all members agreed that even with those students, the team was committed to try its best to help children become successful.

By all outward appearances the use of MTSS is implemented with high fidelity at Elan Junior High. Elan Junior High reported that it was successful in utilizing short-term, targeted, research-based interventions to reach 93% of its at-risk ninth-grade students who were then able to move on to high school without credit deficiencies. The team reported that when a student's struggle is one that is solvable, the team was highly effective in helping that student succeed. The LCMT collectively agreed that, although the district is rolling out new guidelines for attendance, there is currently no intervention available to them that is effective in addressing truancy.

Delimitations and Limitations

In this study, the delimitations are purposeful decisions the researcher made to limit or define the boundaries of the study. Delimitations of this study included the selection of a single case study as opposed to other forms of qualitative research: Since the purpose of the study was to understand the impact of LCMTs on at-risk ninth-grade students, this was the better choice (Yin, 2018). In this qualitative single embedded case study, the researcher chose one LCMT based on its success in intervening on behalf of at-risk ninth-grade students and the significant decrease in the number of that junior high's students who leave credit-deficient for high school. Another delimitation of this study was the purposeful decision to define the participants as those who those have worked a minimum of one school semester on an LCMT and who participated in the same LCMT location during that time period. This allowed the researcher to determine the impact of an established community of practice in which the members consistently participated. Those delimitations helped define both the scope and focus of the study.

Although there were several limitations in this study that were beyond the control of the researcher, the most relevant was the inherent limitation of the single case study design. MCPS granted access, but to only a single LCMT at a single site. After this conditional approval was received, the researcher was unable to conduct cross-case analysis between multiple LCMTs throughout the district, thus potentially raising issues of construct validity. The limitation most often cited in discussions of single case studies is a lack of reliability and replicability of obtained effects in contrast to those that could be obtained with a larger sample (Gustafsson, 2017). Therefore, the potential exists to conclude that the conclusions of this research applies to all schools and districts. This limitation could not be overcome by extending the reach of the study since the researcher was only able to locate LCMTs in the state of Utah, and more specifically, in MCPS. An additional related limitation of this study was that the participants on this particular LCMT were narrowed by ethnicity, which did not reflect the student population it serves.

Implications

Recently, Lave and Wegner's (1991) theory of communities of practice has been applied predominately by sociologists in corporate settings to analyze business strategy. However, the origin of communities of practice was in learning theory. Redefined in learning theory for those working in a tiered structure of intervention, Lave and Wenger's (1991) supposition explains how the collective relationship between pedagogical differential diagnostic reasoning and the educational clinicians creates a dynamic, effective, and productive community of practice in the domain of heuristic intervention (Wenger, 2002).

The National Dropout Prevention Center (NDPC) identified 15 effective strategies that have positive impact on reducing dropout rates (2019). Though these can be employed as stand-alone strategies, positive outcomes are more likely when schools develop programs that utilize most or all the strategies (NDPC, 2019). Schools need to discard the notion that a one-size-fits-all approach that may include an expensive prepackaged intervention program will prevent dropout. Instead, schools should focus efforts on interventions that address students' individual needs. Both the findings from this study and the NDCP point to a specific set of capabilities identified within this inter-disciplinary, multidimensional approach, illustrated with the model in Figure 1.

Furthermore, school districts could benefit from utilizing the expertise they have at their disposal in the way of professional, trained experts who should be assembled to reach out to all students at risk for dropping out and to extend their knowledge, tacit or otherwise, to help when a student suddenly surfaces as at-risk (Wenger, 2002). It is vital that administration, and even counselors, nurture

and support the development of teacher leadership as part of these interdisciplinary teams. Findings from this study suggest that because teacher leaders must enlist colleagues to support the work of the LCMT and convince those colleagues of the imperative nature of their endeavors, teacher-leaders must be respected for their ability to collaborate with others. This ability to collaborate is a hallmark of school leadership and is crucial to achieving gains in student learning. According to Danielson (2007), working with one's colleagues is "profoundly different from working with students, and the skills that teachers learn in their preparation programs do not necessarily prepare them to extend their leadership beyond their own classrooms" (p. 15). Furthermore, this level of leadership requires proficiency in curriculum planning, assessment design, intervention, behavior, and data analysis, which are skills not typically taught in teacher preparation programs. Although teachers have a rightful and necessary place in these communities of practice, when extending membership on the LCMT, administrators must discern between inviting teacher-members who take the initiative to address problems and/or to institute new programming and who are influential and respected within the school community and teachers who are merely willing volunteers.

Additionally, while the financial input for such a program is minimal because districts will capitalize on the talent they already have available, districts will need to redirect some of their budgets for professional development into training for the individuals involved in each school's LCMT. This training can begin with school administrators, who can, in turn, relay that training to the staff until the LCMTs are well-established, at which time the trainings might shift to more nuanced trainings designed around what scholarly research has deemed the most effective interventions available. Finally, districts need to ensure program fidelity by utilizing a method for evaluation both by the teams themselves and from the district. MCPS utilizes a rubric that LCMTs use to evaluate their effectiveness periodically, which serves as a reminder to incorporate all the tenants of a community of practice and multidimensional programming. The Tiered Supports Coordinators for MCPS are working on a revision of this document that will be available to the schools in the fall of 2019.

There are several practical implications of this study which deserve further consideration. The first major practical implication of the present research is that there is a necessity for an intermediate level or tier between the teachers in the classroom and those designing and implementing interventions. For example, in their documents on structuring LCMTs, MCPS indicates the necessity for grade-level Professional Learning Teams (PLTs) that act as this intermediate step. In this examination of Elan Junior High's LCMT, evidence of such a PLT was not uncovered. This might explain some of the difficulties the team had in communicating with the rest of the staff. The PLT would also contribute to teacher buy-in. It would be a logical step in the MTSS and PBIS frameworks the district and school utilize for providing appropriate instruction and intervention for all students in the school.

While there is value to intervening after the event, there is also value in exploring pre-interventions to shield students against challenges before they occur. Perhaps schools need to add treating the causes of dropout to the myriad of interventions used for pupils who require amelioration of their symptoms. Figure 2 represents how this would add to the multifaceted nature of intervention presented in Figure 1.

As part of successful multidimensional programming, schools must consider whether a lack of resiliency among some students is a mitigating factor on their path to dropping out. According to Lukianoff and Haidt (2018), America has taught an entire generation expertise in the habits of anxious, depressed, fragile, and vulnerable people, who never question the underlying culture in which this symptom of anti-intellectualism seems to thrive. While this study acknowledges the value to intervening after the event, there is also value in exploring pre-interventions. Schools spend a great deal of time and resources treating children who have learned to blame instead of learning to grow. In fact, this approach may even have implications in resolving the chronic issues of attendance. There is no question that there are many reasons why students miss school, many of which involve blaming struggles in the classroom, bullying, or challenges at home, and that blame game only results in their trajectory toward graduation becoming riddled with even more barriers to success. This research suggests the practical solution of building resiliency in children before they become students who have factors to blame and subsequently require intervention for their symptoms.

Recommendations for Future Research

Considering the study's findings and the limitations and delimitations of the study, there are multiple recommendations and directions for future research. A qualitative study on school culture in those schools that utilize the LCMT model as prescribed by the district might be useful to determine if the LCMT has a broad impact at the Tier One level with their student populations. Conversely, it would be beneficial to describe the experiences of students who were cared for by an LCMT. Ultimately, not all districts across the United States use the junior high model. Thus, it would be prudent to conduct a qualitative study on the benefits of this type of programming (focused on eighth grade) to determine if it can achieve the same level of success.

A significant question left unanswered is how schools can alter the trajectory of students who encounter stressors and/or experience increased vulnerability, which are circumstances that might lead them to drop out. A qualitative study on the impact of social-emotional learning that is inclusive of programming which encourages resiliency and growth mindset is warranted. Furthermore, there is a great deal of opportunity for research to investigate whether training teachers on how they can support social-emotional learning that will bolster both the emotional needs of students and their academic success (Zaff et al., 2017).

A quantitative study on the impact of LCMTs on high school graduation rates might indicate specifically whether students who were on the LCMT caseload were ultimately able to graduate after four years of high school. Lastly, a quantitative study comparing the success of districts/schools of similar socio-economic composition versus some of the reportedly more effective single intervention programs could further validate the value of the multidimensional intervention model that utilizes communities of practice. LCMTs are used exclusively in MCPS, which is limited by geography and socio-economic status. In contrast to the experience of the Elan Junior High LCMT, schools with decidedly different geographical and socio-economic circumstances might not experience the same level of success.

While some students may benefit most from mentoring, other students may instead benefit from more clinical interventions, which follows from the unique finding that the work of intervention carried out by school professionals using inter-disciplinary collaboration is an effective approach to getting involved on behalf of students who need additional supports (Avant & Swerdlik, 2016; Dougherty & Sharkey, 2017; Freeman & Simonsen, 2015; IES, 2017). This collaboration among the members of Elan's LCMT was successful in making these involvements a more deliverable resource among the various practitioners on the LCMT, and they were able to provide more effectual front-line intervention programs to the students at risk for dropping out in their care.

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Authors

Jessica Grant, EdD, has over 20 years invested in teaching and working with struggling students in various school districts throughout the United States. She is currently teaching at the secondary level for Davis School District and serving as an interventionist. Dr. Grant enjoys pursuing research interests in education, including academic and behavioral intervention, truancy, and teacher leadership.

Russell Yocum, EdD, has over 20 years of experience in educating students Pre-Kindergarten through adult and is currently a research methodologist and doctoral dissertation chair for Liberty University's School of Education. Most recently, Dr. Yocum has taught qualitative research methods at the doctoral level and enjoys pursuing a variety of research interests, including education, spirituality, criminology, and psychology.

Glenn Holzman, PhD, has over 40 years of teaching and administrative experience in public schools and private Christian education. He has been an adjunct professor in the Graduate School of Education online program for Liberty University since the fall of 2006, instructing a variety of courses. He has also served as chairperson and committee member for dissertations in the Graduate School of Education at Liberty University. He is currently serving as the founding president of Elim Christian School in Houston.