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Map it Out: A School Improvement Plan

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Map it Out: A School Improvement Plan

Breana Biery

Northwestern College

A School Improvement Plan

In Partial Fulfillment of Requirements

For the Degree of Master of Education

Abstract

Curriculum mapping allows schools to have coherent alignment of state standards across grade levels. A research site was in need of both vertical and horizontal alignment of standards. A school improvement plan was created using research-based methods. The plan allows teachers to work collaboratively within professional learning communities to unpack state standards to note priority standards, establish “I can” statements, form big ideas, pose essential questions, and create assessments to ultimately create engaging units in all classrooms. Teachers will work together to eliminate over and under coverage of standards.

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Map it Out: A School Improvement Plan

Standards are an everyday part of teaching. It's not enough for teachers to "know" the standards. Without unpacking the standards, important information will be missed (McTighe, 2012). Teachers will form their own assumptions about what a standard means from simply reading it (ASCD, 2012). Assumptions are misleading. However, dissecting and analyzing standards allows teachers to truly understand what they need to teach. This process promotes better pedagogical methods as well (Morgan et.al, 2014).

This study is a research-based school improvement project. The research site is in the beginning stages of the unpacking standards process. The work has only begun. The building needs a clear plan for professional development for the 2020-2021 school year. The district has been utilizing professional learning communities (PLC) for only one year. Based on feedback from teachers in the 2019-20 school year, PLCs will be improved for the 2020-21 school year by more intentional usage of the PLC model. As opposed to simply meeting with a group and calling it a PLC, complete implementation of DuFour's PLC questions will ground the work of the PLCs in the district: "What do we want students to learn? How will we know if they have learned? What will we do if they don't learn? What will we do if they already know it?" (DuFour, n.d., p.1). In the 2019-20 school year, these questions were not the guiding purpose of the PLCs as they should have been. PLCs were used to discuss problems and issues in the buildings, but not to improve achievement of all students. Curriculum mapping should help to answer all of these guiding questions by ensuring standard coverage is divided evenly across grade levels (Bailey, 2010; Garret, 2010; Mahfud, 2017; McTighe & Wiggins, 2012; Rawle et al., 2017). In order to fully implement a PLC, standards have to be unpacked and curriculum has to be mapped (Ainsworth, 2010; Schilling, 2013).

As a district, the performance profiles varied among the three buildings. In the 2018-19 academic year, the elementary school received a rating of “priority” (Iowa Department of Ed., 2020). The middle school and high school received “commendable” ratings (Iowa Department of Ed., 2020). All three buildings are in need of an improved rating from the Iowa Department of Education. The implementation of the PLC framework prepares teachers to use data and collaborate surrounding the topic of students’ achievement, preparing the district for a culture of success (Cunningham, 2015).

Curriculum mapping also aligns with the core beliefs of the research site. The research site has core beliefs that were formed collaboratively by all staff members in the 2019-20 school year. The core beliefs were intended to make staff a coherent unit. However, these beliefs were not guiding the PLC work as they should have been. These beliefs include: “All students can achieve at high levels and will be held to high expectations. Professional growth and student achievement is rooted in building strong relationships, collaboration, and data informed decision making. A collaborative district team, communicating and working together, can ensure that all students learn. Choosing a positive attitude/growth mindset will result in high levels of success for all. An effective team communicates openly and honestly to promote an effective school culture. Community partnerships are critical; it takes everyone to ensure success.”

Norms will be established within PLC groups to ensure efficiency of meetings (Boudett & Lockwood, 2019). Documents will be shared via Google Drive to track progress and hold teachers accountable for their work. Teachers in PLCs will work together to make valuable research-based decisions while completing a major project (unpacking standards ultimately leading to vertical and horizontal alignment of standards) to perfect their practices. Hirsch (2015) explains that teachers exhibit improved teaching when they are supported by “innovative

learning experiences” through professional learning opportunities within their buildings and districts. Because of this, PLCs will be used for unpacking standards and curriculum mapping process in this school improvement plan.

A professional development plan utilizing PLCs has been created for the research site to continue the process of unpacking standards leading to curriculum mapping and vertical alignment. In the past, the content area teachers were split into different PLC groups. Each PLC group had one of each content area teacher. Trying to unpack content area standards and map curriculum and instruction in PLCs is not possible without collaboration within grade-alike or content-alike teacher groups.

Literature Review

What Are the Standards? How Do They Impact Teaching?

Standards are descriptive expectations of the work quality expected at different grade levels (Hendry, Armstrong, & Bromberger, 2012). According to author and educator Jay McTighe, a content area standard offers a clear description of what students should know and the work they should be able to complete in a specific discipline or content area (McTighe, 2012). Standards provide consistency across education.

Teachers are required to teach the common core state standards (CCSS). These standards were established in 2009 by leaders in each state (CCSS Initiative, 2020). Iowa teachers adhere to the Iowa Core Standards, which are aligned with the CCSS. The State Board of Education adopted the CCSS in Iowa in 2010 (Iowa.gov, 2020).

The CCSS ensure all students have an equal learning opportunity. No matter what public school a student attends, the student will be expected to know the same content standards. All schools must adhere to the CCSS, ensuring consistency in education. Curriculum can vary, but

the skills are the same. These standards were created in an attempt to provide consistent educational goals to prepare all students for a future in college or career readiness (CCSS Initiative, 2020).

The CCSS provide teachers with clear and consistent goals and expectations for teaching; additionally, they allow a collaborative environment for teachers (CCSS Initiative, 2020). Since teachers across the state of Iowa are responsible for teaching the same standards, they can collaborate to provide successful teaching tools and resources.

Thus far, the research is unclear that standards have actually improved student learning (Arabadjis, 2017; Deas, 2018, Loveless, 2020; Polikoff, 2020). Higher standards and expectations for students have not translated to higher achievement (Loveless, 2020). Polikoff (2020) believes this is because the implementation of the standards has been weak. A possible reason that achievement did not increase could be because content standards are the basis of instruction, yet standards do not address the required skills that ensure proficiency (Morgan et.al, 2014). While standards tell teachers what students need to know, they don't explain how to ensure proficiency. Teachers must figure out how to do that on their own. Through the unpacking process, teachers can focus in on that "foundation for instruction" as described by Morgan et al. (2014).

If instruction is done thoroughly, thoughtfully, and completely the first time, it is more likely for students to achieve proficiency the first time, without the need of interventions (Heflebower et al., 2017). By unpacking standards, teachers can get their teaching done right the first time, leading to less reteaching and reassessment, allowing more time to learn new standards. Even if there is clarity in how a standard is originally written, the best way to teach it

is not always evident; furthermore, the standards exemplify the key principles that require constant thought and thorough discussion (ASCD, 2012).

The hope with standards is that rigor and consistency will improve achievement and enable the United States to compete with (and hopefully dominate) other high performing nations with respect to academic achievement (Deas, 2018). Despite the lack of data on the efficacy of the CCSS, Iowa teachers are still required to teach the Iowa Core (Iowa.gov, 2020). Yet, the standards don't tell all, and all standards are not created equally. The standards often lack focus in the required content teachers have to teach and students must learn (Porter, McMaken, Hwang, & Yang, 2011). Polikoff (2020) suggests education policy should provide more guidance on specific curriculum. Unpacking of the standards could provide specific guidance on what each standard expects of students (Heflebower et al., 2017).

Why Do Standards Need To Be Unpacked?

Unpacking (also known as unwrapping) standards allows teachers to gain a better understanding of exactly what they should be teaching each year. This is a fairly new trend in education. "Since Standards documents often contain a mix of knowledge, skills, conceptual understandings, transfer abilities and habits of mind, it is necessary to "unpack" them to clarify the desired results and develop appropriate assessments and instruction" (McTighe, 2012, p. 2). A standard is just like any nonfiction text; teachers must meticulously analyze it in order to interpret its meaning (ASCD, 2012). Unpacking standards has a trickle-down effect. The hope is that when teachers have a better understanding of the standards, their methods are more effective, resulting in deeper learning, and finally the transfer and application of learning (ASCD, 2012).

Standards are typically broad statements, enabling them to encompass a wide range of learning (Morgan et al., 2014). However, this allows room for misconception and misunderstanding of what the standard is trying to measure. The unpacking process enables teachers to zone into the vague standard statements and decipher the unique skills and concepts that must be mastered by students to prove mastery of the academic standard, while adhering to 21st century skills (McTighe & Silver, 2020; Morgan et al., 2014). Teachers have many state standards they are expected to teach in a year (Iowa.gov, 2020; McTighe & Silver, 2020). When implementing standards, they must be carefully translated into curriculum, units, and daily lesson plans (Zengler, 2017). Without a clear understanding of each standard, teachers cannot ensure they are teaching the CCSS.

Another important factor to consider is that standards are not divided equally (ASCD, 2012). Very often standards combine “acquisition, meaning, and transfer goals” without noticing the unique differences between each goal, which require focused instruction and assessment (ASCD, 2012). Furthermore, this mixture of intent in a single standard requires educators to break apart all aspects of the standard.

The structure and format in which standards are written can unintentionally allow teachers to decontextualize learning (ASCD, 2012). Teachers view the list of standards as a checklist to cover. Further, “if transfer and meaning making are the goals of education, they can never be achieved by a curriculum that just marches through discrete content elements, no matter how sensible the hierarchical list is as an outline of a subject’s high points” (ASCD, 2012, p. 4). Standards work together to create a full learning experience.

The Role of Standards in Curriculum Mapping

The curriculum mapping process is “both a vertical and a horizontal one that removes unnecessary curricular repetitions, promotes alignment, emphasizes cross-disciplinary connections, and encourages "spiraling" of essential skills, which involves reinforcing and extending those skills with increasing complexity within and across grades” (Burns, 2001, p. 1). The process of mapping curriculum should ensure the goals of a school are aligned to set standards (Khoerunnisa et al., 2018).

In a study conducted at the University of Toronto Mississauga, it was determined that curriculum mapping “leads to establishing more coherent progression by bridging gaps between levels and courses” (Rawle et. al, 2017, p. 82). The research examined cross-disciplinary departments in the curriculum mapping process and studied the similarities and differences among six common themes that emerged from the research: purpose and motivation for curriculum mapping, the curriculum mapping process, implementation of the maps, terminology and jargon, faculty buy-in and support, and curriculum map visualization (Rawle et al., 2017). Rawle et al. (2017) found that participants in the curriculum mapping process “fostered a collaborative approach to discussing teaching and learning throughout the department.” The study also determined that cross-disciplinary work created an abundance of resources for educators (Rawle et al., 2017, p. 82).

Schilling (2013) discussed research conducted at Westlake High School during and after the implementation of curriculum mapping. The study included twelve staff members, eleven teachers, and one administrator. Three themes emerged from the data, one of which was the benefits of curriculum mapping. The majority of the participants “reported positive perceptions of curriculum mapping as an effective planning tool that can help set up short-term and long-

term instructional goals, eliminate gaps and unproductive repetitions in the curriculum, and provide better alignment of curriculum with state standards.” The process ensures all students are learning the same things and building the same foundations. Participants also reported that curriculum mapping helped them stay focused in their content and prove the intended outcomes are being taught.

A complete and thorough curriculum has to be mapped backwards from desired learning outcomes and performances (McTighe & Wiggins, 2012). Teachers should look at desired outcomes first, then decide on appropriate assessments, finally creating a learning plan (curriculum) (McTighe, 2012). Standards establish desired learning outcomes. However, the CCSS are very clear in stating that the standards do not decide how teachers need to teach (CCSS Initiative, 2020). Teachers can still build their own curriculum and pedagogy around the standards, knowing what content and skills need to be addressed (CCSS Initiative, 2020). But before teachers can form a curriculum map for the academic year, they should begin with the unpacking process. Unpacking a standard leads to clearly identified learning targets (Reynolds et.al, 2017). Learning targets can easily be translated into well-planned daily lessons.

In order to translate the common core state standards into a focused curriculum, teachers must carefully read the standards documents to ensure consistency and clarity regarding the end results and how the two will work together (McTighe and Wiggins, 2012.). Furthermore, curriculum works together with standards to create desired learning experiences (McTighe & Wiggins, 2012).

Standards are not curriculum. McTighe and Wiggins also reiterate, “A curriculum envisioned and enacted as a set of maps of content and skill coverage will simply not, by itself, develop a student’s increasingly autonomous capacity to use learned content effectively to

address complex tasks and problems. Such traditional scope-and-sequencing of curriculum reinforces a “coverage” mentality and reveals a misconception” (McTighe & Wiggins, 2012, p. 8). Before diving into curriculum planning, teachers need to spend some time on their state standards. Unpacking standards offers teachers the ability to delete nonessential content that is not applicable to classroom assessment and combine content that is highly essential (Marzano, Haystead, & Association for Supervision and Curriculum Development, 2008). This prioritizing ensures teachers prepare students for successful future endeavors.

Finally, if a curriculum only walks through the list of content area and skills-based standards without a common goal of cultivating independent performance, high school students will still be as dependent on teacher direction and guidance as 4th graders are (McTighe & Wiggins, 2012). Coverage does not equal proficiency and learning. “A curriculum mapped in a typical scope and sequence based on grade-level content specifications – will encourage a curriculum of disconnected “coverage” and make it more likely that people will simply retrofit the new language to the old way of doing business” (McTighe & Wiggins, 2012, p. 10). When creating a curriculum, teachers should look for recurring themes in standards--these will signal importance.

The Curriculum Mapping Process

The process of curriculum mapping is ongoing--constantly tweaking, updating, and moving forward (Morgan et al., 2014; Schilling, 2013). It involves extensive work with the standards, creating engaging units that help students achieve the standards, and mapping curriculum vertically and horizontally to ensure all standards are being appropriately taught (Ainsworth, 2010; McTighe & Silver, 2020; McKinney, 2013; Morgan et al., 2014). The process “provides a tool for educators to analyze the academic content standards at a deep level, identify

the component skills needed for mastery, and then develop a systematic plan for instruction to support the academic achievement of students” (Morgan et al., 2014, p. 140).

First and foremost, after all standards are examined, analyzed word for word, and taken apart, teachers will establish priority standards. The freedom to engage students in deeper understanding and meaning making comes from focusing on fewer, more important ideas and skills (McTighe & Silver, 2020). Priority standards ensure the most important skills are being thoroughly and effectively taught, ensuring proficiency for all students. Teachers cannot possibly teach every single content area standard; this is why they must prioritize what students absolutely must know (Ainsworth, 2010). Ainsworth reiterates that this process allows for multiple learning experiences and opportunities rather than a one-time coverage that has become the norm for many schools (Ainsworth, 2010). Ainsworth also recommends annual review of essential standards (Ainsworth, 2010).

In a study conducted by Morgan et al. (2014), sixteen teacher participants piloted the unwrapping process. They attended a workshop to learn about the process and tools. The participants reported that unwrapping was useful in analyzing content area standards. Participants also felt the process was easy to understand and indicated it was highly likely they would utilize the unwrapping in their own classrooms. The participants also provided feedback stating that unpacking the standards made the content area standards “meaningful” for all the students in their classrooms.

Following the creation of the priority standards, these standards are transformed into “I can” statements, which are then translated into student-friendly vocabulary. Research finds that many students are not able to understand the written descriptions of standards because they are not written in student-friendly language (Hendry, Armstrong, & Bromberger, 2012). If students

do not understand the standard, they don't understand what kind of work they should be completing. This is why "I can" statements are so important. They bring the standard to the student (Hendry et al., 2012). "I can" statements make the standard seem possible and understandable in the eyes of students. Teachers can then analyze these standards and statements and compare vertically with content area teachers of other grades, noting gaps in the K-12 curriculum.

The next step in curriculum design includes creating big ideas. Big ideas can be defined as "a question or generalization that helps teachers decide what to teach and how by centering their teaching units in meaty, complex issues that are open to multiple perspectives and interpretations" (Grant & Gradwell, 2009, p. 2). Big ideas extend past content, but focus on learning within the content (Wiggins, 2010). Big ideas go beyond coverage of a standard; they activate thought, generate ideas, and pose questions (Wiggins, 2010).

Using those big ideas, teachers can create essential questions, finally leading to the collaborative creation of innovative units (McKinney, 2013). These questions should be "open-ended, short answer questions" that evaluate connection of component skills (Morgan et al., 2014). "Essential questions create a problem orientation that leads to exciting learning conversations, to creative problem solving, and to the consolidation of major concepts, connections, vocabulary, strategies, and ideas that can then be used to extend further learning and to solve problems in students' lives and out in the world" (Wilhelm, 2014). McTighe and Silver (2020) recommend using two to four essential questions per unit to ensure deep knowledge and understanding of the standard. According to McTighe, essential questions "promote sustained inquiring and meaning making" (McTighe, 2012, p. 30).

Teachers can first create content area essential questions to match their curriculum and standards. School-wide essential questions foster global exploration across multiple content areas (Frey et.al, 2014). The process of creating essential questions requires extensive collaboration on the teachers' part. Even more, it requires teachers to first have their own standards unpacked, organized, and well-planned in order to find broader ways to connect to other content areas. The use of essential questions provokes thinking by offering opportunities to break the boundaries of a single class or content area (Frey et al., 2014). Essential questions allow students to make connections in order to combine a variety of skills to form an answer (Morgan et al., 2014). They collect important information about student mastery all because of essential questions (Morgan et al., 2014).

In a study conducted by Frey, Fisher, and Anderson (2014), one school used school-wide essential questions to inspire collaboration within the staff and co-curricular thinking among students. Initially the research site limited student responses to the essential questions to written essays or research papers at the end of grading periods; however, their research led them to realize that “complex disciplinary thinking” includes discussion and debate. The site found that nontraditional assessments of the essential questions (such as projects, presentations, debates) stretched student thinking; they refer to this as the “creative component”. Stretching student thinking of the essential questions beyond written responses was one successful finding of the study. It allowed students to transform their learning and make meaning in authentic ways, all thanks to the use of school-wide essential questions.

The last step in unpacking standards includes creating effective assessments (Morgan et al., 2014). Curriculum and daily instruction have to be designed backward by analyzing the standards-based assessments (McTighe & Wiggins, 2012). Multiple standards can be assessed in

one assessment. Projects, papers, and presentations make this possible. Innovative assessments allow students to use their knowledge of many standards to create one final product (Ainsworth, 2010). Formative assessment tracks and determines student mastery of content area standards (Morgan et al., 2014).

The implementation of standards-based assessments must include the involvement of teachers. Teachers have to develop “written descriptions of standards for assessment tasks,” also known as “grade descriptors,” to guide a consistent grading process for teachers and students (Hendry, Armstrong, & Bromberger, 2012, p. 150). Teachers must be involved in creating a common assessment system. The assessment should be appropriate to the standards, meaning an assessment that will accurately give the teacher information he or she needs to know to move forward with instruction (Ainsworth, 2010).

Collaboration and PLCs in the Process

An important aspect of standard unpacking and curriculum mapping is collaboration (Frey et al., 2014; Morgan et al., 2014; Rawle et.al, 2017; Schilling, 2013). In the past, curriculum development and mapping were conducted by outside experts, not allowing teachers to be an active part in the process (Schilling, 2013). While any sort of unpacking system is beneficial, collaboration with colleagues makes this process even stronger (Frey et al., 2014; Morgan et al., 2014; Rawle et.al, 2017; Schilling, 2013). Rawle et al. (2017) found that when learning communities were developed during the curriculum mapping process, it offered many new viewpoints and a plethora of resources to help teachers. When teachers work with colleagues in the process, they are far more likely to “hit the mark” in teaching (Heflebower et al., 2017). Teachers can work together to decide on an unpacking format that works for them. McTighe and Wiggins suggest unpacking standards into 4 main categories: “long term transfer

goals, overarching understandings, overarching essential questions, and a set of cornerstone tasks” (McTighe & Wiggins, 2012, p. 4). Whatever system teachers decide to use, teachers are able to support each other through collaborative conversations in their Professional Learning Communities (PLCs) about how content standards fit into everyday classroom instruction (Heflebower et al., 2017). By engaging in collaborative conversations within PLCs, teachers can translate academic standards to classroom strategies (Heflebower et al., 2017).

Whenever teachers collaborate and work together, the students benefit (Netolicky, 2016; Rawle et.al, 2017). Schilling (2013) researched successes of curriculum mapping in a high school setting. Eleven participants that represented a range of demographics and perspectives on curriculum mapping were invited to participate in an interview regarding the curriculum mapping process, which had been used in the research site for four years. Data was collected in the form of interviews. A major success reported in the data was that all participants valued the increased collaboration and professional dialogue throughout the process (Schilling, 2013).

Netolicky (2016) researched fourteen educators in the form of a narrative study regarding professional learning. She found that participants appreciated collaborative opportunities and felt that personal connections were the most impactful to their professional learning (Netolicky, 2016). PLCs are not just a system for teachers to do separate work, rather a mindset that incorporates all aspects of the school; teachers share responsibility of the common goal: academic achievement of all students (Smith, 2012). These conversations among trained and qualified teachers are the best kind of professional development (Wells & Feun, 2012).

Garrett (2010) used a shift of culture through PLCs to promote student success. A group of teachers within a building began collaborating in the form of a PLC, working on ways to better reach students who were failing classes early on in their high school career (first progress

report of freshman year). The teachers felt the early failures were because of the culture of the building (Garret, 2010). They worked to create a culture that ensured no student was overlooked or allowed to fail (Garrett, 2010). Teachers realized once they were able to work together, the benefits were remarkable. The shared responsibility among teachers in a PLC leads to student success (Garrett, 2010). Allowing teachers to work together inspires teachers and generates new ideas. Garrett's study indicated that the culture and atmosphere of PLCs can be completely different because schools have their very best teachers leading instructional teams (Garrett, 2010).

The inclusion of a professional learning community (PLC) takes collaboration further. When teachers are placed in PLC groups, they can work together through a building initiative, such as unpacking the standards. According to Wells and Feun (2012), PLC work includes both teaching and learning; the work has to include both characteristics.

A study conducted at Silver Valley Middle School examined seven teacher groups over the course of a five-year transition from voluntary to required schoolwide PLCs. The study found that leadership based on expertise that is distributed across many team members and focused on mutual goals has the greatest probability for sustained learning communities that focus on student learning and achievement (Kennedy et al., 2011). The study found that when distributing leadership, the school must recognize and use intellectual and experimental resources, differentiate top-down and lateral decisions, and build culture through dialogue and inquiry (Kennedy et al, 2011).

Leaders who practice distributed leadership recognize the need to draw upon and build from the expertise of teachers (Schilling, 2013). When principals let go of some decision-making control, teachers have the agency and efficacy to guide the process. By giving teachers a voice,

leaders see the value of building an open and honest school culture (Kennedy et al., 2011). PLCs cannot be demanded from administration; rather effective teacher leaders need the opportunity to “own it” (Garrett, 2010).

When creating a year-long professional development plan such as unpacking the standards, PLCs enable schools to spread out the work to each teacher. Leaders guide group members so that content area teachers can work together to solve problems and plan. Furthermore, teamwork demonstrates a “spirit of inquiry” by constantly questioning the data and each other (Kennedy et al., 2011). In an effective PLC each leader must make the choices and changes needed to implement change (Wells and Feun, 2012).

Collaborative time in PLCs pushes teachers toward continuous growth and improvement (Wells & Feun, 2012). Research and practice prove major differences between the formal curriculum created by experts and the actual curriculum used in the classroom because teachers use their own knowledge, experiences, and realities to make the best choices within their classrooms (Schilling, 2013). One advantage of using a PLC format for unpacking standards and curriculum mapping is that it reduces the disconnect caused by teachers making their own choices (Wells & Feun, 2012).

McKinney (2013) shared observations of a three-year collaborative standard unpacking process as a form of professional development. The district used collaboration as the vehicle for teachers to unpack standards, determine power standards, design essential questions and big ideas, and design units that promote creativity (McKinney, 2013). The researcher found that the school culture must support innovation and excellence (McKinney, 2013). The largest factors in the schools’ success included unpacking standards first, building shared understanding, developing student self-assessment, modeling quality instruction, differentiating, gathering

formative assessments, working smarter not harder, expanding teaching resources, seeking creative solutions, aligning assessment, and establishing administrative support (McKinney, 2013). The research states, “after three years of coaching, supporting, listening, and calming teachers, we now have a school that supports standards-based work” (McKinney, 2013, p. 54). All of these findings fit nicely with the Kennedy et al. (2011) PLC unpacking process. The work has to be done with colleagues to reap the benefits.

Wells and Feun (2012) conducted a study that researched eight middle schools from two districts (four middle schools from each of the two districts) that were in the process of implementing PLC elements. A survey of fifteen questions was used to gather data about the implementation of PLC concepts. A theme in the results of the study concluded that teachers reported benefits to working in a PLC. The benefit reported the most by teachers was the opportunity to share materials, lessons, assessments, and teaching methods with PLC team members. Another benefit included examining and comparing student results. Differences among the two districts and the eight buildings showed how PLCs vary from building to building.

When working in PLCs, trust among team members is valuable (Hallam et al., 2015; Kennedy et al., 2011). Trust is the “willingness to be vulnerable to another party based on the confidence that the other party is benevolent, honest, open, reliable, and competent” (Zheng et al., 2016, p. 524). PLCs allow the possibility for reflective practice and culture shifts within schools (Wells and Feun, 2012). Leaders have to trust teachers, and teachers have to trust each other (Zheng et al., 2016). In Kennedy et al. (2011), leaders shifted from external systems of accountability to internal evaluations and support provided by teachers.

Zheng et al. (2016) examined the “relationship between leadership practices and professional learning communities” on the mediating role of trust in colleagues in 215

elementary school teachers in China. They gathered data through the use of questionnaires. The scale that evaluated trust was called Trust in Colleagues (TiC). Teachers rated items in the questionnaires ranging from “strongly disagree” to “strongly agree” (Zheng et al., 2016, p. 521). The teachers involved in the study rated trust in colleagues positively. Researchers found that trust in colleagues “had a significant positive correlation with all leadership practice factors and PLC factors” (Zheng et al., 2016, p. 526). Their research found that trust in colleagues had a positive impact on PLC beliefs, including a “shared sense of purpose, collaborative activity, collective focus on student learning, deprivatized practice, and reflective dialog” (Zheng et al., 2016, p. 521).

A study conducted by Hallam, Smith, Hite, Hite, and Wilcox (2015) researched the impact of trust on PLC team collaborative practices. It sampled two cases consisting of four schools. It found dissatisfaction when teachers were micromanaged in their PLC assignments. Micromanaging occurs when trust is not present. In one case, participants felt their principal did not trust their work because he micromanaged the teams. Both cases reported trust was built among teams when members responsibly completed requirements of the team. Another theme that emerged from the study was that when PLCs have trust among members, they “developed confidence” in the advice of their team. The study proved that “a culture of trust enables people to openly admit errors, take risks, and share ideas without fear” (Hallam et al., 2015, p. 221). Overall, “greater trust enables greater collaboration” (Hallam et al., 2015, p. 205).

Collaborative work through PLCs to create vertical alignment of standards is important (Schilling, 2014). It is important for teachers to understand that their daily work is not separate and isolated, rather it is part of an “intentional aligned and whole system” (Ainsworth, 2010). If a department does not have a clear end goal, all of the wonderful learning experiences in

individual classrooms won't always fit together to achieve the desired learning results (McTighe & Wiggins, 2012). Schools must utilize the PLC model for collaboration in the unpacking process. "PLCs appear to be worth the considerable effort put into creating and developing them" (Wells and Feun, 2012, p. 236).

Faculty Resistance

Teacher buy in is an important factor in any professional development initiative (Schilling, 2013). As with any professional development initiative, administrators and school leaders must find ways to genuinely engage teachers in the unpacking process (Hirsch, 2015). In order to do this, teachers must feel they are a valued part of the process. In Rawle et al. (2017), one department dropped out of the curriculum mapping process initiative because of the lack of buy-in and support from department members.

A major problem schools have with new initiatives is that too many have come and gone with little impact (Smith, 2012). Teachers know this. Veteran teachers have been through many initiative movements that have died out without any long-standing effect (McKinney, 2013; Wells & Feun, 2012). When introduced with a topic such as unpacking standards, some teachers will have the mentality that they will push through and get by, thinking in a year or so they will be done and move onto something new (McKinney, 2013). According to Smith (2012), schools need effective leaders that believe in the process and can share that belief with all staff. Schools need something to transform those foundational beliefs into longstanding classroom experiences (Smith, 2012).

Another cause of teacher resistance comes from lack of time to complete tasks (McKinney, 2013; Smith, 2012; Signorelli & Reed, 2011; Wells & Fuen, 2012). If regular work time is not scheduled, it is unlikely teachers will make time to complete tasks. If teachers are

provided with a clear layout of the step-by-step plan, they will feel more confident in the ability to complete the task (Ainsworth, 2010). A clear schedule with work time blocked out for teachers will put them at ease (Signorelli & Reed, 2011).

Fear leads to resistance. Many teachers feel overwhelmed by the vastness of a multi-year professional development process (Hirsch, 2015). Yet, Ainsworth (2010) reassures that multi-year professional development is completely possible if broken down appropriately in incremental steps. If a goal is clear, fear will fade so long as teachers have the appropriate support to make the initiative possible (Hirsch, 2015). Professional development initiatives will be successful if they are rooted in “motivation, continuous improvement, collaboration, and building the professional learning culture of schools” (Netolicky, 2016).

Another important aspect of easing teacher resistance is communication (Schilling, 2013). Confusion and push back occurs when teachers are confused about what is expected of them (Wells & Feun, 2012). If teachers feel that their input is valued and changes are made based on their feedback, they are more willing to work on something outside of their comfort zone (Smith, 2012). PLC leaders should frequently check in with team members and invite feedback (Morgan et al., 2014). Schools can adapt PLCs to fit the needs of their own building culture by inviting help and input from all teachers (Netolicky, 2016). By including teachers in the decision-making process, support can be accomplished (Schilling, 2013). A study conducted by Gallup (2014) found that praise enhances performance (Toolkit Managers, 2014). Leaders need to thank teachers for their hard work and show appreciation of the extra hours teachers are working to complete the process (Schilling, 2013). Finally, teacher resistance occurs when the connection between the professional development and their day to day teaching is not clearly communicated to teachers (Schilling, 2013). Hirsch (2015) found that selecting professional

development that is appropriate to teacher needs was key in the eyes of teachers. When a clear plan is communicated with specific tasks and due dates, teachers are more apt to complete expected work (Ainsworth, 2010).

From the Literature to the Plan

A school improvement plan implemented to facilitate the unpacking of standards and curriculum mapping among teachers should utilize the PLC model. Clearly, the literature shows that collaboration reaps success in the process (Frey et al., 2014; Morgan et al., 2014; Rawle et al., 2017; Schilling, 2013). In order for effective collaboration throughout the process, trust will drive the implementation of distributed leadership into the plan (Kennedy et al., 2011; Schilling, 2013). A supportive culture will be established through the use of norms within PLC groups (Boudett & Lockwood, 2019; Garrett, 2010). The end goal of the curriculum mapping process should be a vertically and horizontally aligned curriculum across the research site (Case & Zucker, 2005). The research has guided the creation of the school improvement plan.

Data

Justification for the Plan

The goal of the 2019-2020 school year was to unpack standards. The first problem with this was teachers were not given sufficient time to unpack all of the standards they teach. It was then decided that half of the standards should be unpacked before the 2020-21 school year. The other half needs to be unpacked in 2020-21. Since the PLCs were not set up to accommodate the unpacking that had been done already, this may have led to gaps and overlaps in curriculum. Teachers will need to reassess the standards already unpacked. Yet, the unpacking that was conducted at the research site is only the very beginning of the larger curriculum mapping process. This was not addressed in the 2019-20 school year. The proposed plan solves that

problem. Simply unpacking standards is not enough. Standards give teachers the “what” of teaching, but it doesn’t show them “how” to ensure the standards are mastered. Standards are only the foundation (Morgan et al., 2014).

Teachers will need to unpack the other half of their standards (which includes finalizing priority standards, and creating “I can” statements), utilize big ideas, work on essential questions, conduct assessment, and notice gaps in vertical alignment (Ainsworth, 2010). This plan will be implemented on thirteen early dismissal Wednesdays throughout the 2020-21 school year. The plan will provide agendas for each professional development day, as well as master documents to track progress. The plan is based on the literature regarding PLCs and the unpacking and mapping process. By the end of the year, content area teachers will have verified a clear understanding of which standards are priority standards at each grade level.

The research site needs a curriculum that is vertically aligned. Vertical alignment is the coherence of different parts of an educational system, including curriculum, content, stakeholders, classroom instruction, and student achievement outcomes (Case & Zucker, 2005). In a vertically aligned building, “What students are learning builds on what they have learned previously, and lessons are not unnecessarily repetitious or redundant across courses, subject areas, and grade levels” (The Glossary of Education Reform, 2014, p. 1). Furthermore, teachers will know and understand what is being taught in other classrooms to ensure students are learning what they need to be learning at each grade level (The Glossary of Education Reform, 2014). This vertical alignment progress will be measured using shared master documents in which teachers can analyze and examine the priority standards, I can statements, big ideas, essential questions, and assessment.

Purpose of the Improvement Plan

The purpose of this school improvement plan is to create a professional development plan for a high school building to guide teachers in collaboratively completing the unpacking process and curriculum mapping process throughout the 2020-2021 school year. For the 2019-2020 school year, PLC teams split up content area teachers. The same content area teachers were in separate PLCs. In order to utilize PLCs for this initiative, content area teachers need to be in the same PLCs to unpack standards and map curriculum. This process cannot be successful without collaboration among content area teachers. In the 2019-2020 school year, not enough time was made available to complete the entire process: unpacking standards, creating priority standards, writing “I can” statements, composing big ideas, posing essential questions, forming assessments, and vertically aligning curriculum. This evidence was made clear in the shared documents used to track progress and collect data. The instructional coach used shared Google Sheets for teachers to input information. One document was titled “Priority Standards 2020” and had tabs/pages for each content area. On the document, teachers determined all of their priority standards. The instructional coach and principal tracked progress on the document. None of the teachers were able to complete the process of unpacking and creating “I can” statements for more than two of their classes. Several whole group PD sessions stated the need for more time in the upcoming year to complete the first two steps of the mapping process.

State of Unpacking

The research site is a rural high school located in the Midwest. The district serves three communities with schools in two towns. The high school has 171 students in grades 9-12. According to the Iowa Department of Education, the school received an overall “commendable” rating in the 2018-19 academic year (Iowa Department of Education, 2020). The research site’s

average achievement rate in English Language Arts scores at 50.26%, while the average achievement rate in Mathematics is 50.74% (Iowa Department of Education, 2020). Both of these areas score slightly above the state average achievement rate of 50%. The data shows room for improvement in both content areas. The building principal and instructional coach have chosen standards unpacking as a way to improve student learning while embracing the PLC framework.. However, the researcher found in the literature that unpacking standards isn't enough; a full map of the curriculum must be created (McTighe & Wiggins, 2012). The researcher has been tasked with developing a 9-month plan to achieve that goal (with the addition of mapping curriculum) using research-based practices in curriculum mapping and PLCs.

Before 2020, content area teachers of the research site were not given time to collaborate and work through standards and curriculum. This led to content being over and under covered. Some standards were hit multiple times in multiple grade levels, while other standards were rarely addressed and often skipped over. According to the research site's instructional coach, the school had received informal feedback from graduates of the district stating they were "unprepared" in various settings, including college and the workplace (J. Kenny, personal communication, 22 July 2020). The district takes this type of feedback seriously. Feedback such as this warrants a change and steps toward improvement.

The instructional coach also stated Iowa Assessment data always showed lack of proficiency in some areas. There had never been time given to teachers to sort this information out. The coach also stated that "historically collecting data has not been a strong suit" at the research site (J. Kenny, personal communication, 22 July 2020). Initiated by the instructional coach and principal in 2020, the research site saw a need to break this cycle.

In the 2019-2020 school year, teachers at the research site determined priority standards and “I can” statements for those priority standards for 2 of their classes. Most teachers in the building teach 4-5 classes per semester, often with different electives the next semester. The time spent on determining priority standards and “I can” statements includes three two-hour professional development sessions. Teachers worked with content area colleagues, but not in a PLC setting. Content areas with only one teacher worked with other content areas.

The teachers were advised by the instructional coach that 2-3 standards per category of the content area should be priority. For example, the English Language Arts standards are broken down into the following categories: reading for literature, reading informational text, writing, speaking and listening, and language (CCSS Initiative, 2020). Each of those categories were to include two to three priority standards. By the end of the 2019-2020 school year, all teachers were to have the content area standards from two classes unpacked with priority standards selected. However, it’s important to note, “A coherent curriculum is mapped backwards from desired performances” (McTighe & Wiggins, 2012, p. 7). The point of curriculum mapping is to look at the standards they teach, then decide where in the curriculum the standards are being taught, covered, and assessed adequately. A goal of the plan is to get away from curriculum driving standards and toward standards driving curriculum (McTighe & Silver, 2020).

The Template for Prioritizing Standards (see Figure 1) was given to teachers by the instructional coach in the final month of the 2020 school year to assist them in determining which standards for their grade level and content area should be designated as a ‘priority standard.’ The template helped teachers “rate” standards in five different categories. Ainsworth’s 2010 research supports the categories used in the figure. Endurance relates to knowledge that goes beyond a grade or course but rather will relate to life skills (Ainsworth, 2010). Leverage

includes cross-curricular learning (Ainsworth, 2010). Finally, readiness shows prerequisite skills and knowledge needed to start a new grade or course (Ainsworth, 2010). Since the research site is in Iowa, the standardized form of state testing includes the Iowa Statewide Assessment of Student Progress (ISASP). The more categories a standard met, the higher the probability that it should be a priority standard. After collaboratively completing this chart for every content area standard, teachers analyzed this data to determine their priority standards for each category of content.

Figure 1

Template for Prioritizing Standards

| Template for Prioritizing Standards | | | | | |
|--|-----------|----------|-----------|-------------------|--------------------|
| <p>Directions: Read the standards within your overarching goal and mark if the standard meets the priority criteria. Write the standard and substandard if applicable in the "standards" box and put an x in the boxes to the right if it meets the criteria listed. Do not overthink this.</p> <p>Goal: To create a set of essential standards that every student will learn.</p> | | | | | |
| Standards | Endurance | Leverage | Readiness | Teacher Knowledge | Assessment (ISASP) |
| | | | | | |
| | | | | | |

Note. This template was given to teachers members to work through collaboratively.

Once priority standards were established, teachers made a list of their priority standards.

After determining learning targets, prerequisite skills, academic vocabulary, and depth of knowledge level, teachers collaboratively wrote their own “I can” statements (see Figure 2).

Figure 2

Template for creating I can statements

| | | | | |
|---|--|----------------------------|----------------------------|-------------------------|
| I Can Statement: (To be completed after unwrapping) | | | | |
| Essential Standard: | | | | |
| Learning Targets | | Prerequisite Skills | Academic Vocabulary | DOK/ Rigor Level |
| Students will know or Understand concepts or Information (Big Ideas) *Skills or Verbs | Students will Do or Demonstrate *Nouns or Direct Instruction | | | |
| | | | | |

Note. This template was given to teachers to work through collaboratively with content area partners.

The table for “I can” statements was completed for every priority standard for half of the classes teachers taught in 2020. The other half will need to be completed in the 2020-2021 school year.

PD anchors are leaders of PLC teams. The anchors facilitate and lead PLC meetings, gather feedback, and report to the instructional coach. PD anchors ensure PLC team members complete required tasks and responsibilities. PD anchors were chosen at the end of the 2019-2020 school year. This allowed time for leaders to begin participating in meetings over the summer to prepare for the new school year. A competitive process was used in the selection of the PD anchors. Teachers K-12 applied by writing a letter of intent explaining their interest in the position and their qualifications for the job. A team of administrators and teachers selected applicants to be interviewed. Candidates were interviewed by a team of teachers and administrators (principals and instructional coaches). This strategy was used to ensure it was not just one administrator making the decisions, but rather a team, fitting in nicely with PLC characteristics. Applicants were asked several interview questions (Garrett, 2010; Rawle et al., 2017). The team then chose the leaders. The PD anchors will lead a PLC group throughout the

year. Each building will have two PD anchors. The PD anchors will report to the instructional coach, and the instructional coach will report to the principal. Multi-layered leadership (formal and informal positions) is a significant aspect of a successful curriculum mapping process (Schilling, 2013).

Teachers need a clear plan, communicated at the beginning of the year. In the 2019-20 school year, a plan for the year was not given to teachers. Just like students, teachers need to see the end goal and end plan as they begin the year (Ainsworth, 2010). The plan will include a year-long professional development schedule to be distributed to teachers at the beginning of the year, as well as agendas for all thirteen professional development days for PD anchors and leaders to follow to guide all teachers. PLCs need strong and persuasive leaders who can create cooperation from teachers (Garrett, 2010).

Intended Outcomes of the Plan

An intended outcome of this plan is for teachers to find gaps in curriculum. The plan will include a document to track standards instruction to ensure all standards are being taught. Further along in the plan, vertical alignment with middle school teachers will also help teachers find gaps in teaching and learning. The plan will ensure all content areas have a clear curriculum plan. The PD anchors, instructional coach, and principal will work together to assess the shared documents that discuss standards coverage. Leaders will help teachers make a plan for eliminating gaps and over coverage.

Throughout the 2020-2021 school year the following curricular outcomes will occur: all standards will be unpacked, “I can” statements will be made, big ideas will be noted, essential questions will be posed, assessments will be written, and curriculum will be fully mapped and vertically and horizontally aligned.

Another intended outcome is to build a culture of communication, trust, and collaboration among teachers. This will be possible using PLCs. In the 2020-21 school year, PLCs will be fully implemented to ensure the PLC characteristics are utilized: focus on learning, professional collaboration, and focus on results (DuFour, n.d.; Garrett, 2010). Without addressing those elements, the work cannot be considered PLC work. As with any professional development initiative, administrators and school leaders must find ways to genuinely engage teachers in the process (Hirsch, 2015). PD anchors, the instructional coach, and the principal will also work to transform this initiative into a longstanding experience that can be reviewed and reflected on regularly, even when the initial work is complete (Smith, 2012). Ample amount of time to complete the work will ensure success and engagement of teachers (McKinney, 2013; Smith, 2012; Wells & Fuen, 2012). The plan will be successful if it is rooted in “motivation, continuous improvement, collaboration, and building the professional learning culture of schools” (Netolicky, 2016, p.270).

The Problem with the Past

The research site is in need of improvement regarding the unpacking of standards, curriculum mapping, and vertical alignment. As a district, the performance profiles among the three buildings are varied. In the 2018-19 academic year, the elementary school received a rating of “priority” (Iowa Department of Ed., 2020). This means the school must make it a priority to improve achievement. The data warns that change has to happen. The middle school and high school received “commendable” ratings (Iowa Department of Ed., 2020). While commendable is better than priority, the school strives for a higher rating. The data sets up the obvious need for an improvement plan. The instructional coach also verified that data analysis has not historically been a strength at the research site (J. Kenny, personal communication, 22 July 2020).

Until the end of the 2019-20 academic year, teachers at the research site had never unpacked Iowa Core standards or evaluated the coverage of standards. Analysis of standards coverage needs to take place to ensure all students are getting a quality K-12 education (CCSS Initiative, 2020). Even when the issue of unpacking standards was introduced at the end of the 2019-20 school year, teachers did not have enough time or collaboration to complete the task. In addition, teachers were unclear on the purpose. Even if they unpacked the standards, would it just be for their own use? The process didn't seem long-standing to teachers. Unpacking is only a small step in an entire curriculum mapping process (Ainsworth, 2010). To simply unpack the standards isn't enough to make a difference in student learning (McTighe & Wiggins, 2012). In order to really improve teaching and learning, a full curriculum mapping process has to be implemented (Ainsworth, 2010; McTighe & Wiggins, 2012; Rawle et al., 2017).

This will be implemented through the use of PLCs. The 2019-2020 school year was the first year PLCs were implemented at the research site. PLCs are still a work in process. In the 2019-20 school year PLCs were only used to discuss problems, initiatives, and issues within the building. However, PLCs should be used to answer the four PLC guiding questions: "What do we want students to learn? How will we know if they have learned? What will we do if they don't learn? What will we do if they already know it?" (DuFour, n.d.). The instructional coach explained that "PLCs need to improve because it will help identify where the gaps are in student achievement and how to overcome them" (J. Kenny, personal communication, 22 July 2020).

In the past, content area teachers were not in the same PLC group. It seems obvious that content area teachers should be in the same PLC groups to collaborate; however, this was not happening in the research site. This made collaboration regarding standards, materials, lessons, and curriculum impossible in the PLC setting (Garrett, 2010).

All of these problems warrant a school improvement plan. Addressing PLCs and curriculum mapping are complete systems of change (J. Kenny, personal communication, 22 July 2020). This type of change demands a clear plan of action.

School Improvement Plan: Year-long Professional Development Plan

The Process

The research site's school improvement plan includes a year-long strategy for professional development (PD) to unpack the standards and map out curriculum. The improvement plan was built on the work of Ainsworth (2010), Grant and Gradwell (2009), McTighe and Wiggins (2012). The use of curriculum mapping will enable teachers to get away from viewing standards as a checklist; rather, standards will drive the curriculum (Ainsworth, 2010; McTighe & Wiggins, 2012). Everything being taught in the classroom should be directly related to the standards (Ainsworth, 2010).

For the 2020-2021 school year content area teachers will be grouped together in PLCs. This collaboration will result in the creation of priority standards, "I can" statements, big ideas, essential questions, creative units, assessment, overall curriculum mapping, data analysis, standard tracking, and vertical alignment. Collaboration equals greater success for teachers and students (Hallam et al., 2015). The PD will take place from 1:30-3:30 (2 hours) on thirteen Wednesdays throughout the 2020-2021 school year. In total, 26 hours have been set aside for the implementation of the plan. The complete process and timeline are summarized in Figure 3. The detailed, research-based agendas are provided in the Appendices A-M.

The research site built PD agendas using infinitives. "Meetings that matter" are "crafted with care" (Van Soelen, 2015, p. 1). An infinitive is a basic form of a verb without any inflections; for example, to inform could be an infinitive used on an agenda. The use of

infinitives in agenda building helps prioritize and focus meetings (Van Soelen, 2015). Teachers often attend PD and meetings that are managed inefficiently. However, basing agendas on infinitives ensures that nothing gets put in the agenda without a purpose; “no infinitive = no reason to include” (Van Soelen, 2015, p. 1).

Due dates will keep teachers on track (Ainsworth, 2010; Hirsch, 2015; McKinney, 2013). When mapping curriculum, the first step is to dig into the standards. “A coherent curriculum is mapped backwards from desired performances” (McTighe & Wiggins, 2012, p. 7). By October 14th, all content area standards must be unpacked. State standards can be difficult to decipher (ASCD, 2012). By unpacking the standards, teachers will gain a deeper understanding of the skills students need to master (McTighe, 2012). On November 4th, estimated dates for teaching specific standards will be completed on the Master Standards Document. For the December 2nd session, prerequisite skills will be determined for priority standards. December 16th and January 8th will be dedicated to collaboration among all three buildings to establish alignment and coverage of standards. On February 17, teachers will determine a plan of action to address the gaps that were noticed in achievement through alignment with other buildings and data analysis. March will be dedicated to determining big ideas and essential questions for one class. April will offer time for teachers to establish big ideas and essential questions for the other classes they teach.

Figure 3

Professional Development Schedule for the 2020-2021 School Year

| |
|--|
| <p>Professional Development Schedule for 2020-2021 School Year Wednesday, September 2: Teachers will review progress made on unpacking standards in 2019-2020 school year. PD anchors will establish PLC groups for the 2020-2021 school year. PLCs will build trust among group members. Teachers will continue to collaboratively unpacking standards for the two classes they have not yet unpacked</p> |
|--|

Wednesday, September 16: Teachers will work on unpacking standards.

Wednesday, October 14: Teachers will map out priority standards coverage throughout the year

Wednesday, November 4: Teachers will create common rubrics and assessments for priority standards in each content area

Wednesday, November 18: Teachers will analyze gaps in vertical alignment.

Wednesday, December 2: Teachers will establish prerequisite skills for each class using priority standards.

Wednesday, December 16: Teachers will meet with middle school teachers to discuss: priority standards, coverage of nonpriority standards, and prerequisite skills.

Wednesday, January 13: Teachers will meet with middle school teachers to discuss: priority standards, coverage of nonpriority standards, and prerequisite skills.

Wednesday, February 3: Teachers will discuss and analyze data.

Wednesday, February 17: Teachers will determine a plan of action to address gaps in achievement.

Wednesday, March 3: Teachers will design big ideas for one class.

Wednesday, March 17: Teachers will design essential questions for one class.

Wednesday, April 17: Teachers will begin the process of planning a cross-curricular unit for next year.

Note. Figure 3 will be given to all teachers at the beginning of the 2020-2021 school year.

The standards will be shared on a master document on the Google shared drive (see Figure 4). PD anchors keep track of the work completed on the document. On the document, teachers will list all of the standards they're required to teach (Ainsworth, 2010; Marzano et al.,

2008). After unpacking, teachers will highlight priority standards in yellow. Next to the priority standards are “I can” statements created by teachers (Ainsworth, 2010). This same document will be used to track when and how standards are taught and assessed. It will also provide information regarding proficiency. Proficiency is determined at the time of assessment using the 4-point scale. If a student scores a 3 or 4 on the standard, they are considered proficient. Big ideas and essential questions will also be shared and tracked on a master document shown in Figure 5 (McKinney, 2013; McTighe & Wiggins, 2012.; Morgan et al., 2014).

Figure 4

Standards Master Document

| | A | B | C | D | E | F | G | H |
|---|-----------------|--|--|-------------------------------|--|--|---|-----------------------------------|
| 1 | Standard number | Standard (Should have all standards 9-12 for each given content area.) | I can statement (formed after the unpacking process) | Date taught/Date to be taught | Assessment tool used to rate proficiency | What class is this standard being addressed? | Prerequisite skills (for priority standards only) Write these in the form of I can statements | Number of students not proficient |
| 2 | | *Priority standards should be highlighted | | | | | | |
| 3 | | *You may organize these by grade level or topic/content | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |

Note. The tabs on the bottom allow a “page” for each content area.

The date column will be the biggest indicator of gaps and overlaps. If a date is not listed next to a standard, it is assumed this standard is never being taught. If a standard has several dates listed, it is assumed it may be an over-covered standard.

Figure 5*Big Ideas and Essential Questions Master Document*

| | A | B | C | D | E |
|---|----------|---------------------|------------------------------|--------------------------|---|
| 1 | Big Idea | Essential questions | Connected priority standards | Content/unit description | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |

Content Area Tabs: English, Math, Music, Art, FAC, Spanish, Social Studies, Science, AG, Industrial Tech, STEM

Note. The tabs on the bottom allow a “page” for each content area.

PLC teams will use the documents to some capacity at every PD throughout the year. Teachers will fill out their work on the designated tab for their content areas. PD anchors will continuously monitor the documents between PD meetings. In addition, PD anchors, the instructional coach, and the principal will meet twice a month to evaluate the documents for completion (Heflebower et al., 2017; Killion, 2013; Smith, 2012).

PLCs are valuable resources for teachers committed to continuous learning (Signorelli & Reed, 2011). Following DuFour’s PLC model (n.d.), the research site’s PLCs will implement three key elements: a focus on learning, professional collaboration, and a focus on results. The PLC teams will endure continuous analysis, reflection, and action as they set norms and work through tasks together (Garrett, 2010).

Reflective dialogue will ensure the PLCs continue to grow and move forward as a team (Mahfud, 2017). For so long, the teachers at the research site have taught in isolation, without the collaborative ideas of their colleagues available (Garrett, 2010). Teachers in the district have reported feeling very isolated and disconnected from their colleagues. Without the work of PLCs, all of the innovative learning opportunities in individual classrooms didn’t always fit

together to achieve the desired learning results of the district (McTighe & Wiggins, 2012). PLCs ensure a common goal is being reached. Rawle et. al (2017) found that collaboration develops consistency and allows clear data to be adequately analyzed across the district or institution.

Internal leadership is important. Instead of spending money on experts from around the country, schools can keep money within their buildings by utilizing the expert teachers they already have (Garrett, 2010). In this school improvement plan, two classroom teachers have been designated with PD anchor roles. Change always requires leadership (Schilling, 2013). Distribution of leadership is beneficial for administration, teachers, and students (Kennedy et al., 2011). Too often expert teachers get overlooked for leadership; however, the use of PD anchors ensures teachers have a voice and are advocated for in decision-making (Garrett, 2010).

The success of the PLCs will depend on their abilities to find and maintain a mutual effort (Signorelli & Reed, 2011). PD anchors will aid in this process. Furthermore, PLCs are the most sustainable type of PD (Garrett, 2010). Unlike one shot PDs in which schools bring in someone to teach the teachers for a day or two, PLCs are ongoing. The research site no longer has to bring in specialists and experts to implement an initiative like it has in the past. It is now relying on the work of teachers right in the district to complete new tasks. These leaders know the school culture and environment best. They are the most reliable resource when helping implement a change. These organic PLC groups are far more effective and sustainable than outside experts and conferences (Garrett, 2010). PLCs are an “advanced program for professional educators so that they can make the process of sharing among professional teachers, and the teachers who want to up the process of standardization of professionalism of teachers” (Mahfud, 2017, p. 28). Teachers have the ability to follow through and continuously work on a project together. It doesn’t end when a speaker leaves the building.

DuFour makes clear that PLCs should be constantly addressing these four questions: “What do we want students to learn? How will we know if they have learned? What will we do if they don’t learn? What will we do if they already know it?” (DuFour, n.d.). Starting in the 2020-21 school year, these questions will guide the work of the PLCs.

The benefits of PLCs prove to be worth the work and effort required to create and develop them (Wells & Feun, 2012). Due to the small size of the school, different PLC groups for each content area would be insufficient to reap the benefits of a PLC (Bailey, 2010; Hallam et al., 2015; Mahfud, 2017). Each content area only has one or two teachers. The PLC groups will be broken down by content area, but several content area teachers will make up the whole PLC team, see Figure 6 for clarification. Due to the small size of the school resulting in only two PD anchors, the groups will consist of a few different content area teachers working together so there is room for extra collaboration (Bailey, 2010; Hallam et al., 2015; Mahfud, 2017; Smith, 2012). For group decisions, discussions, and directions, PLCs will work as a whole group. Within the groups, teachers can split by content area to work on standards unpacking and curriculum mapping. For example, English teachers will work on their standards together, math teachers will work together, and so on. Content areas that only have one teacher (family consumer science, agriculture, STEM, industrial tech, and art) will be grouped together so they are able to collaborate. The single content area teachers were grouped as alike as possible. They will work to unpack 21st century skills together. The groupings are listed in Figure 6.

Figure 6*PLC Groups*

| PLC Groups | |
|--|--|
| Group 1 (9 teachers) | Group 2 (7 teachers) |
| English Department (2 teachers) Math Department (2 teachers) Music Department (2 teachers) Art/Family Consumer Science/Spanish (3 teachers) | Social Studies Department (2 teachers) Science Department (2 teachers) Agriculture/Industrial Tech/STEM (3 teachers) |

Note. Content area teachers are in the same PLC groups.

Research indicates that professional learning is most effective when it has flexible and informal elements that are highly applicable to the job, while adding in smaller doses of formal learning (Killion, 2013). The PD plan agendas include short amounts of formal/whole group learning, and longer amounts of collaborative partner work and work time (McKinney, 2013; Signorelli & Reed, 2011). Killion (2013) also recommends inviting feedback from teachers. This plan is subject to change based on feedback from teachers throughout the process. A survey will be provided to teachers in the middle and the end of the year to formally request their feedback (see Figure 7). The survey will be reviewed by PD anchors, the instructional coach, and principal to adjust the agendas to meet the needs of the teachers (Killion, 2013; Smith, 2012).

Figure 7*PD Feedback Survey*

| |
|---|
| <p>Professional Development for the 2020-2021 school year survey</p> <ul style="list-style-type: none">-Has collaboration with content area partners resulted in successful work?-Has the unpacking process shown me gaps in my curriculum?-Has the unpacking process lowered the number of standards being retaught?-How has the workload of the process been? Have you had sufficient time?-What has been beneficial about this process?-What suggestions do you have to make this process better?-Any additional comments. |
|---|

Note. This survey will be given to teachers at the middle and end of the 2020-2021 school year to gain feedback on the PD utilized throughout the school year.

Assessment

Assessment is an important aspect of professional development (Killion, 2013; Smith, 2012). Assessment of the plan will include informal discussion, a midpoint and final survey, and the tracking data in the shared documents (see Figure 4 and Figure 5.) As a team the PD anchors, the instructional coach, and principal will analyze and interpret the assessment tools (Killion, 2013; Smith, 2012).

Many of the agendas include an informal share out time for teachers to express their struggles and victories in the process (Smith, 2012). This feedback offers authentic assessment to PD anchors and administrators. During meetings PD anchors will take notes on feedback provided by team members. PD anchors, the instructional coach, and the principal will meet

twice a month to evaluate feedback and adjust PD agendas as needed. Teachers need to feel that their concerns are being heard; if they have a voice, they are more willing to take on new roles and complete tough tasks (Smith, 2012). Furthermore, these discussions allow leaders to be flexible. Leaders have to be willing to change based on the needs of the team (Killion, 2013). PD anchors should invite feedback from team members (Killion, 2013). These discussions acknowledge the efforts of teachers (Schilling, 2013).

The *PD Feedback Survey* (see Figure 7) will be used at two different points in the year (middle and end) to assess how the school improvement plan is progressing. The survey is open-ended. Teachers are not limited to a specific number or percentage; their entire thoughts can be expressed and shared with leaders (Smith, 2012). PD anchors will analyze the responses of the PLC team members. They will categorize responses by themes. Then, the instructional coach and PD anchors will meet to address the common themes and decide what steps need to be implemented to ease the concerns of teachers.

PD anchors are responsible for checking the progress of all PLC team members. This can be viewed on the *Standards Master Document and Big Ideas and Essential Questions Master Document* (see Figure 4 and Figure 5). If teachers do not meet the due dates outlined in the plan, the PD anchors will be responsible for intervening to offer support and extra help to teachers in need of it (Hallam et al., 2015; Kennedy et al., 2011). Teachers will first receive an e-mail reminder that a deadline was missed, letting the teacher know that he or she has 2 days to get the tasks completed. The next step will be a meeting with the PD anchor in which the anchor will offer help in completing the tasks (Garrett, 2010). Step three includes a meeting with the instructional coach (Boudett & Lockwood, 2019). Step four will be addressed by the principal (Kennedy et al., 2011).

In addition to simply completing the work, PD anchors, the instructional coach, and the principal will evaluate the work during their team meetings twice a month. By evaluating the work on the spreadsheets, they will notice if teachers need extra direction and support. Each step of the process will be “checked” by the PD anchors before the content team can move on to the next.

If teachers are not on track, PD anchors should be able to notice this before the leadership meetings. During the PLC work time, PD anchors will be informally gathering assessment on the quality of work as they conference and work with teachers. If it is clear that teachers are not completing the task properly or putting in the effort, the PD anchors will continue to work with the content teams, ensuring quality work. Extra meetings may be set up before or after school (still during contract time) if the PD anchors deem additional support is needed.

Conclusion

Future Plans

Following the collaborative work of unpacking standards and curriculum mapping in 2020-2021, the goal of the research site for 2021-2022 is for teachers to create cross-disciplinary units. This will allow students to see the transfer of skills from one content area to the next. These connections ensure students are ready for the real world. Each grade level will be exposed to one cross-curricular unit to be implemented in the 2021-2022 school year.

The process of vertical alignment and curriculum mapping will be continuous. In the 2021-2022 school year teachers will meet at least once to review the maps and plans. The teachers should also begin to collect and evaluate assessment data to determine whether the

curriculum is sufficiently leading to students that achieve the standards. After a year, plans will need editing and revising.

Final Information

Curriculum mapping is an important process. It ensures the schools' goals are being adequately met (Schilling, 2013). Vertical alignment allows teachers to look at students' education as a whole and ensure all students are getting the same education (Khoerunnisa et al., 2018; Schilling, 2013). In the process, collaboration among teachers is foundational to success (Rawle et al., 2017).

Before the plan, content area teachers never had built in time to work together or discuss curriculum or standards. No communication was happening to ensure all of the banded grade level standards were being taught. With a mapped-out curriculum the site can be confident that all students are being taught all of the standards at some point during their K-12 educational career. Teachers will also reap the benefits of the collaborative environment PLCs will build to share resources and discuss strategies (Rawle et al., 2017).

DuFour's (n.d.) four PLC guiding questions will be the driving force behind the PLCs. These questions will ground the work being done in the classroom every day. Student achievement is attainable and achievable because of DuFour's work. Finally, these questions open the doors to data analysis, which has historically been a weakness of the district.

The school improvement plan is created with research-based strategies and tools. Student achievement and a culture of success will surround the research site.

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Appendix A

Professional Development Day 1: September 2, 1:30-3:30

Intended Outcomes:

- Teachers will review progress made on unpacking standards in 2019-2020 school year.
- Teachers will establish PLC groups for the 2020-2021 school year.
- PLCs will build trust among group members.
- Teachers will continue to collaboratively unpacking standards for the two classes they have not yet unpacked.

| Infinitive | Points to discuss | Discussion Questions | Process | Rationale |
|------------------------------|--|--|---|---|
| <p>To share (10 minutes)</p> | <p>-overview and schedule of year-long PD -review what a PLC means -6 essential characteristics of a PLC: “shared mission, collaborative teams focused on learning, collective inquiry, action orientation and experimentation, commitment to continuous improvement, results orientation” (Bailey, 2010, p.1). -Share outs of the work that was done last spring. - The four PLC guiding questions: “What do we</p> | <p>-Why is the district unpacking standards? -How will this impact learning and teaching? -How will students benefit? -What is a PLC? -Questions? -Thoughts/ideas</p> | <p>The Instructional Coach will share the schedule and overview with the whole teaching staff. Instructional Coach will open up for discussion</p> | <p>Studies have proven teachers like to know a clear plan. If a goal is clear, fear will fade so long as teachers have the appropriate support to make the initiative possible (Hirsch, 2015). Communication of goals is vital to the success of a program. In a PLC, teachers work collaboratively in teams to complete a common goal in which they are all accountable (Bailey, 2010). PLCs are an “open space for fellow teachers to share their experiences and knowledge related to teaching and learning, student discipline, and the achievements that have been or have not been obtained by a particular teacher” (Mahfud, 2017). Guidance principles ensure programs have clear rules and procedures (Mahfud, 2017).</p> |

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| | <p>want students to learn? How will we know if they have learned? What will we do if they don't learn? What will we do if they already know it?" (DuFour, n.d.). -District core beliefs</p> | | | |
| <p>To establish groups and move to meeting rooms (5 minutes)</p> | <p>-PLC groups and rationale for choosing groups</p> | <p>-Why were groups divided in this way? -How does collaboration make this process more fruitful?</p> | <p>Group lists will be shared on a projector. Meeting rooms will also be shared. Groups will get up and go to meeting rooms. Each PD Wednesday, groups will meet in designated meeting room.</p> | <p>The PLC groups will be broken down by content area. However, since there are only 2 PD anchor leaders, the groups will consist of a few different content area teachers working together so that there is room for extra collaboration. Within the groups, the PLCs can split by content area. For example, English teachers will work on their standards together, math teachers will work together, and so on. Teachers who do not have a content area colleague (Family consumer science, Agriculture, STEM, industrial tech, and art) will be grouped together so they are able to collaborate. The teachers who do not have a content area colleague were grouped as alike as possible. Many single content area teachers will work to unpack 21st century skills together.</p> |

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| To build trust (15 minutes) | <ul style="list-style-type: none"> -Leaders have to trust teachers, and teachers have to trust each other (Hallam et al., 2015). -District's core beliefs | <ul style="list-style-type: none"> -Why is trust important? -How can groups create trust within PLCs? | <p>2 truths 1 lie activity. Each group member will receive a notecard. On the notecard they will write 2 truths and 1 lie about themselves. Each member will take a turn, they will write the 3 statements on the whiteboard. Whoever guesses the lie first will be up next. This activity will help create a community.</p> | <p>"Greater trust enables greater collaboration" (Hallam et al., 2015).</p> |
| To create PLC group norms 30 minutes | <ul style="list-style-type: none"> -Because PLCs consist of different group members this year, it is time to re-establish team norms. -When creating norms, consider the following categories: "time, listening, confidentiality, decision making, participation, expectations" (Bailey, 2010). -Norms should be limited to 5-7 to ensure priorities (Boudett & Lockwood, 2019). | <ul style="list-style-type: none"> -How can the group ensure all members feel safe to participate? -How can the group work efficiently? | <p>The PD anchor leader will have the 6 categories listed on the board. As a group, they will go through each category and brainstorm norms. They will create a large list first, then slowly combine and reduce into a set list of norms. The group will work collaboratively to select the norms.</p> | <p>"Norms are shared agreements about how a group will work together" (Boudett & Lockwood, 2019). Furthermore, norms enlist the perspectives of all group members (Boudett & Lockwood, 2019).</p> |
| To review (10 minutes) | <ul style="list-style-type: none"> -Review the process of unpacking from last year. | <ul style="list-style-type: none"> -Why is the school doing this? Why are teachers unpacking standards? -What work has been done? -What work | <p>This will be a group discussion led by PD anchor.</p> | <p>Because it has been 4 months since the last PD, the PD anchor will need to review the unpacking process. If teachers are provided with a clear layout of the step-by-step plan, they will feel more confident in the ability to complete the task (Ainsworth, 2010).</p> |

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| | | needs to be done? | | |
| To explain (10 minutes) | -Explain process/work that needs to be done -Share documents with teachers to complete the tasks | -Why do we need to track this information? -How is a shared document helpful? | Teachers will track their progress on master documents on Google Drive. All standards will be listed under the appropriate content area "sheet". Priority standards will be highlighted. "I can" statements will be written in the appropriate column. At this point, do not worry about dates taught, assessment, and proficiency. | Part of PLC work is action orientation and experimentation (Bailey, 2010). Teachers will learn the importance of the work by doing it (Bailey, 2010). |
| To work (25 minutes) | -work on unpacking final 2 classes (2 classes were to be completed last May) -PD anchor will meet with new teachers and help them unpack standards/prioritize standards/I can statements The unpacking process is best done in collaboration with colleagues (Heflebower et al., 2017). | -How will collaboration enhance this process? | Work on unpacking standards for final 2 classes collaboratively with content area partners | Because most teacher resistance is due to lack of time to complete tasks, it is crucial that administration give teachers work time to complete school initiatives (Smith, 2012). Collaboration is the spirit of a PLC; it ensures continuous learning (Mahfud, 2017). |
| To plan (5 minutes) | -Plan for next PD -expectations for teachers to be working on | -Questions from team members? | PD anchor will thank teams for the work and make a plan for the next PD (september 16 at 1:20). PD anchor will take any questions. | When plans are clear, teachers are more confident in the effectiveness of the initiative (Ainsworth, 2010). |

Appendix B

| Professional Development Day 2: September 16, 1:30-3:30 | | | | |
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| Intended Outcome: Teachers will work on unpacking standards. | | | | |
| Infinitive | Points to discuss | Discussion Questions | Process | Rationale |
| To review (10 Minutes) | -review norms established by PLC group -review unpacking process -ensure all members are tracking info on shared documents -4 PLC questions (DuFour, n.d.) -district core beliefs | -Where are you at in the process? -How many standards do you have left? | PD anchor will read and post the list of norms review the unpacking process and the documents to track data and progress | Teams must continually revisit norms to hold teachers accountable (Boudett & Lockwood, 2019). Boudett and Lockwood also recommend including a norms reminder as part of agendas (2019). |
| To gain feedback (10 minutes) | -The unpacking process -Progress check-ins | -How is the process going for teachers? -How can leaders and administration make this process easier? -How can PD anchor help? -What do teachers need to be successful? | Round table discussion. If teachers feel that their input is valued and changes are made based on their feedback, they are more willing to work on something outside of their comfort zone (Smith, 2012). Furthermore, PD anchors must be flexible and adaptive (Killion, 2013). | It is important to listen to the feedback of all team members. Teachers need to feel that their concerns are being heard. If they have a voice, they are more willing to take on new roles (Smith, 2012). |
| To work | -priority | -How are | Work collaboratively with content area | Priority standards allow |

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| (90 minutes) | standards and “I can” statements | priority standards established? -Why are priority standards necessary? -How are “I can” statements helpful to teachers and students? | partners to complete the process of unpacking the rest of the standards. PD anchor will circulate and work with each content area group. | teachers to zoom in on the most important aspects of a class (McTighe & Silver, 2020). “I can” statements translate standards into student-friendly language (Hendry et al., 2012). In order for students to become proficient, they must be able to understand what the standard is requiring them to be able to do. |
| To plan (10 minutes) | -Discuss next steps - Expectations for completion before next PD (October 14) | -Did everyone finish? -How can leaders help you? -If you aren’t finished, has a plan been set to finish? | Open discussion. PD anchor will track progress on how many standards are not yet completed. PD anchor will explain that all standards must be unpacked by October 14. | Plans provide clarity and provide a clear path to a common goal (Ainsworth, 2010). |

Appendix C

| Professional Development Day 3: October 14, 1:30-3:30 | | | | |
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| Intended Outcome: Teachers will map out priority standards coverage throughout the year | | | | |
| Infinitive | Points to discuss | Discussion Questions | Process | Rationale |
| To review (15 minutes) | -review established group norms -unpacking process -4 PLC questions (DuFour, n.d.) -core beliefs | -How was the unpacking process? | Open PLC group discussion. | Professional learning must be personalized by the unique educators that make up a PLC (Garrett, 2010). Norms make this possible. |

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| <p>To explain (10 minutes)</p> | <p>-Year long mapping of priority standards, then non-priority standards</p> | <p>-How will teachers ensure priority standards are being taught? -How will teachers ensure non-priority standards are being taught?</p> | <p>A complete and thorough curriculum has to be mapped backwards from desired learning outcomes and performances (McTighe & Wiggins, 2012). PD anchor will explain and show teachers where to put tentative dates for teaching standards (on the Master Standards Document).</p> | <p>A clear plan of action lessens fear and resistance among teachers (Ainsworth, 2010). This overarching plan is continuing to be played out in this process. Knowledgeable teacher leaders (PD anchors) share their expertise by leading PLC groups (Garrett, 2010).</p> |
| <p>To work (90 minutes)</p> | <p>-Map out standards coverage for the year</p> | <p>-Why must teachers map out the year in terms of standards?</p> | <p>Think about the units/lessons you teach while looking at your list of standards. First, notice when/what units you teach the priority standards for each class. Then, map out if/when you cover non-priority standards. This part will be done individually. PD anchor will meet with each PLC member. Write in tentative dates on the Master Standards Document.</p> | <p>If work time is not scheduled it is unlikely that teachers will find the time to complete the work (Signorelli & Reed, 2011).</p> |
| <p>To close (5 minutes)</p> | <p>-Completion -Thank teachers for their hard work!!!! -Gather feedback</p> | <p>-How did it go? -Are teachers noticing gaps in coverage?</p> | <p>The dates should be filled in by November 4.</p> | <p>PD anchors will gather informal assessments on the PD. Leaders must be flexible and willing to change based on the needs of team members (Killion, 2013).</p> |

Appendix D

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| <p>Professional Development Day 4: November 4, 1:30-3:30</p> | | | | |
| <p>Intended Outcome: Teachers will create common rubrics and assessments for priority standards in each content area</p> | | | | |
| <p>Infinitive</p> | <p>Points to discuss</p> | <p>Discussion Questions</p> | <p>Process</p> | <p>Rationale</p> |
| <p>To review (5 minutes)</p> | <p>-PLC group norms -4 PLC</p> | <p>-Why do we have PLCs?</p> | <p>One group member will read the norms to the group</p> | <p>Norms must be revisited often in order to keep team members accountable</p> |

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| | <p>questions (DuFour, n.d.). -core beliefs</p> | | | <p>(Boudett & Lockwood, 2019).</p> |
| <p>To explain (15 minutes)</p> | <p>-common assessments and their role in unpacking standards -Formative assessment</p> | <p>-What are common assessments? -Why do content area teachers need common assessments?</p> | <p>PD anchor will explain and demonstrate an example. The PLC will brainstorm together a list of assessment options for the standard- “Find and understand the main idea of a text”. Narrow down the list, explain why that assessment is appropriate for that skill. The chosen assessment tool should be written/tracked on the document titled “Standards Master Document” under the Assessment column.</p> | <p>Formative assessment “provides information about student understanding at a point when the teacher and students can act productively on that understanding, rather than demonstrating what students "know and can do" after instruction” (Schoenfeld, 2015, p.13). Forming common assessments helps teachers continue the process of unwrapping standards (Data Warehousing, 2013). When teachers create an assessment, they unknowingly dig deeper into the skills needed for proficiency of the specific standard. That is why common assessments are part of the unpacking practice (Data Warehousing, 2013). It is beneficial to seek input from colleagues on the best practices for assessing students (Data Warehousing, 2013). Since priority standards have already been established, the next step is finding a way to assess proficiency of those standards. Schools need a consistent and somewhat standardized way across grade levels to assess the key skills.</p> |

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| <p>To collaborate (90 minutes)</p> | <p>-Common assessment -ways to assess learning -innovative assessment</p> | <p>-How will common assessments be beneficial to students and teachers? -What are the best ways to assess student progress in your content area? -One content area teachers-- how would you like to do this? Who would be the best person for YOU to collaborate with? Other content areas, PD anchors, coaches, principal?</p> | <p>Content area teachers will collaborate through discussion. They will jot down ideas. From their initial list, they will narrow down and eventually choose the best form of assessment for each particular priority standard. When chosen, teachers will keep track of the information on the shared document under the assessment column. PD anchor will work with each group and offer suggestions and tips. Take breaks as needed!</p> | <p>Most secondary content area standards are banded by 2 or more grade levels, meaning the standards need to be thoroughly taught anywhere in those grade levels (“Frequently,” 2020). Because of this, many single standards apply to both teachers of that content area. Both teachers will teach many of the same standards. They need to find the best way to assess that skill. Common assessment allows teachers to better analyze proficiency if they are being assessed in the same way. The assessment should be appropriate to the skill (Ainworth, 2010). All standards should not be assessed the same way. - There are several priority standards--assessment forms should be chosen for each one. Hence, the large amount of work time to accomplish this task.</p> |
| <p>To praise (5 minutes)</p> | <p>-Praise teachers in their very hard work today!</p> | <p>-THANK YOU teachers for all of this time and dedication you have put into this tiresome and long process! Each PD, the building gets closer to our goal of vertical alignment of standards! Thank you!!!!</p> | | <p>“recognition is a short-term need that has to be satisfied on an ongoing basis” (Toolkit Managers, 2014).</p> |
| <p>To review</p> | <p>-Assessment</p> | | | |

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| (5 minutes) | columns should be filled in for priority standards! -Next PD will do a check in on vertical alignment. | | | |
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Appendix E

| Professional Development Day 5: November 18, 1:30-3:30 | | | | |
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| Intended Outcome: Teachers will analyze gaps in vertical alignment. | | | | |
| Infinitive | Points to discuss | Discussion Questions | Process | Rationale |
| To review (5 minutes) | -PLC group norms -4 PLC questions (DuFour, n.d.). -core beliefs | -How have norms helped the team stay on track? | One group member will read the norms to the group | Norms must be revisited often (Boudett & Lockwood, 2019). |
| To explain (15 minutes) | -Vertical alignment -Process | -What is vertical alignment? | Look for what Ainsworth 2010 calls “gaps, overlaps, and omissions” in standards. Talk with table partners--How many times has the team felt their students didn’t know important skills that should have been taught at a lower level? What’s the best way to fix this? PD anchor will explain the process. When looking at the Standards Master Document independently, fill in the column “What class is this standard being taught?” After everyone has filled in their classes, take a look at what standards are doubled up on or missed entirely. | Burns 2001 explains that curriculum mapping ensures horizontal and vertical alignment by ensuring curricular repetition is avoided. Schilling 2013 explains that curriculum mapping and vertical alignment grounds and focuses teachers on their content. According to Ainsworth 2010, after priority standards have been developed for each grade level, they must be |

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| | | | With your content area team (single content area teachers, work with who you have been working with-- including 21st century skills) have discussions about how to 1. Address the missed standards-are they priority standards? 2. Address overcoverage. Are the standards being taught the exact same way in both classes or differently? Come up with a plan to reach more standards and rationalize why that standard would better fit with that teachers' curriculum. | aligned vertically with the priority standards in the grades above and below. When curriculum is vertically aligned, learning that takes place in one class builds on previous classes and prepares a student for the next class (The Glossary of Education Reform, 2014). This ensures students are not learning some standards several times and other standards not at all. |
| To collaborate (95 minutes) | -vertical alignment -teaching of standards -over and under coverage | -How will this process ensure a quality education for all students? | Complete process explained by PD anchor | Teachers are able to support each other through collaborative conversations in their PLCs about how content standards fit into everyday classroom instruction (Heflebower et al., 2017). |
| To celebrate (5 minutes) | -Shout out to all team members for working so hard on this process! It takes a team! | -What victories have teachers notice through this process? -How can teachers be better supported in this process? | Leaders will thank teachers and team members verbally. | Praise and appreciation enhances performance (Toolkit Manager, 2014). "Celebrating progress is an aspect that is most often overlooked while change is implemented in the school setting" (Schilling, 2013). |

Appendix F

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| Professional Development Day 6: December 2, 1:30-3:30 | | | | |
| Intended Outcome: Teachers will establish prerequisite skills for each class using priority standards. | | | | |
| Infinitive | Points to | Discussion | Process | Rationale |

| | discuss | Questions | | |
|-----------------------------|---|--|--|---|
| To review (5 minutes) | -PLC group norms -4 PLC questions (DuFour, n.d.). -core beliefs | -How have norms helped the team stay on track? | One group member will read the norms to the group | Norms must be revisited often (Boudett & Lockwood, 2019). |
| To explain (10 minutes) | -Vertical alignment -Prerequisite skills | -How did the building-wide vertical alignment process go last PD? -What is considered a prerequisite skill? -Why do classes need prerequisite skills? How do these relate to the standards? How will this help teachers? | PD Anchor will explain the process. With your content partner (singletons continue to work with who you have been working with) go through all priority standards for your content area. Determine the skills students need to know BEFORE taking the class those standards are taught. The skills should be based on the knowledge of the priority standards for that grade level. Look at those standards and back track--in order to learn this, students have to this. You only need prerequisites for the priority standards. It may be helpful to look at the standards for the lower grade level to help you write these. Please write the prerequisites in the form of an I can statement. Add these to the the Standards Master Document in the appropriate column. | When teachers collaborate and work together, results are far greater than if they did the work on their own (Heflebower et al., 2017). In a vertically aligned school, "Teaching is purposefully structured and logically sequenced so that students are learning the knowledge and skills that will progressively prepare them for more challenging, higher-level work" (The Glossary of Education Reform, " 2014). |
| To collaborate (90 minutes) | -Prerequisite skills -I can statements | -Why is it important to have prerequisite skills? -How will this process better help teachers? | Teachers will work collaboratively on determining prerequisite skills. | Signorelli & Reed 2011 remind PD leaders that it is vital to offer work time for teachers to complete important tasks.. |
| To celebrate (10 minutes) | -Build trust -Celebrate the gains that have been made -Connect | -How has this process been helpful | Thank you teachers for all of your hard work! Today's PD will end by sharing out two victories you have had in the classroom this year. | "Greater trust enables greater collaboration" (Hallam et al., 2015). Building trust starts with teachers becoming comfortable with their group. |

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| | | | | Celebrate success to promote a positive culture (Schilling, 2013). |
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Appendix G

| Professional Development Day 7: December 16, 1:30-3:30 | | | | |
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| Intended Outcome: Teachers will meet with middle school teachers to discuss: priority standards, coverage of nonpriority standards, and prerequisite skills. | | | | |
| Infinite | Points to discuss | Discussion Questions | Process | Rationale |
| To review (5 minutes) | -PLC group norms -The process thus far -The overarching plan of this year's PD -4 PLC questions (DuFour, n.d.). -core beliefs | -How have norms helped the team stay on track? | One group member will read the norms to the group | Norms must be revisited often (Boudett & Lockwood, 2019). |
| To explain (15 minutes) | -Reasoning -Processes that have been completed -Future plans | -Why is vertical alignment important? -How will this benefit students? | Middle school teachers have joined for today's PD. They have been through the same processes regarding the unpacking process. It is time to work with them and ensure standards and prerequisite skills are lining up vertically. Content areas have been designated to meet in specific rooms around the building. One member has been determined to be a group leader and another member is a scribe. Use the Standards Master Document to collaborate. The scribe will take notes on a separate GoogleDoc and share with the entire group. Have | A vertically aligned school ensure all teachers are aware at what is being taught in each grade level (The Glossary of Education Reform," 2014). "Curriculum alignment is the best practice in the development and implementation of the curriculum because it requires a strong relationship between goals with assessment, objectives with |

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| | | | <p>discussions, question each other. Look for over and under coverage of skills and standards. Check into prerequisite skills--are those currently be taught? How will they fit into the curriculum.</p> <p>PD anchors, instructional coaches, and administrators will be floating and joining meetings.</p> <p>*Content areas that only have one teacher--if you have a match in the middle school meet with them. Otherwise, continue to work with the team you have been working with. Notice if skills are being taught in exploratories at the middle school.</p> | <p>instructional activities, and assessment with instructional activities (Khoerunnisa et al., 2018).</p> |
| <p>To collaborate (90 minutes)</p> | <ul style="list-style-type: none"> -Priority standards -Nonpriority standards -Gaps in coverage of skills -prerequisite skills | <p>-What do kids have to know in each content area?</p> | <p>Collaborate in content area teams. Leaders will be floating and joining groups.</p> | <p>Collaboration enhances student proficiency (Heflebower et al., 2017).</p> |
| <p>To debrief (10 minutes)</p> | <ul style="list-style-type: none"> -Time needed -Success -Setbacks -Survey | <ul style="list-style-type: none"> -What was successful? -What areas lacked support or slowed the group down? -How much time is needed to complete? | <p>Each small group will have an open discussion about today's work. Please note on your document how much more time is needed to complete this work.</p> <p>Teachers will complete survey evaluating the PD thus far.</p> | <p>PD has to be fluid and flexible based on the needs of teachers (Killion, 2013).</p> |

Appendix H

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| <p>Professional Development Day 8: January 13, 1:30-3:30</p> |
| <p>Intended Outcome: Teachers will meet with middle school teachers to discuss: priority standards, coverage of nonpriority standards, and prerequisite skills.</p> |

| Infinitive | Points to discuss | Discussion Questions | Process | Rationale |
|-----------------------|---|---|---|--|
| To review (5 minutes) | <ul style="list-style-type: none"> -PLC group norms -The process thus far -The overarching plan of this year's PD -4 PLC questions (DuFour, n.d.). -core beliefs | <ul style="list-style-type: none"> -How have norms helped the team stay on track? | One group member will read the norms to the group | Norms must be revisited often (Boudett & Lockwood, 2019). |
| To check (15 minutes) | -mapping of standards coverage | <ul style="list-style-type: none"> -What standards are OK to not teach this year? Are they being taught at a different grade level? | It is halfway through the school year. Check on the pacing of your curriculum. Make a list of standards that have not yet been taught, consider if/when these standards will be taught. Try to keep on track! | <p>While mapping is really important, do not forget teaching and learning goes beyond “coverage.”</p> <p>“A curriculum envisioned and enacted as a set of maps of content and skill coverage will simply not, by itself, develop a student’s increasingly autonomous capacity to use learned content effectively to address complex tasks and problems. Such traditional scope-and-sequencing of curriculum reinforces a “coverage” mentality and reveals a misconception” (McTighe & Wiggins, 2012, p.8). This mapping is only the beginning stages! Essential skills and big ideas will help accomplish synthesis of learning.</p> |

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| To collaborate (90 minutes) | -vertical alignment with middle school teachers | -Should priority standards be staggered among grade levels? | Continue working with middle school teachers. Pick up where the team left off in December. This will be the last day of work time to complete the vertical alignment of priority standards and prerequisite skills. | Work is best done in collaboration (Heflebower et al., 2017). Curriculum alignment ensures that the structure and materials of curriculum aligned with the objectives of the school and reflect standards (Khoerunnisa et al., 2018). |
| To review (10 minutes) | -overarching goals of PD this year -use of PLCs | -How has the use of PLCs helped this process? -What do you need to feel better supported? | PD anchors will pass out a blank notecard. Do not write your name on it. Provide feedback to PD anchors, instructional coaches, and administration regarding PD this year so far. Include what you have liked and found helpful and things that were not beneficial. Please include any other pertinent feedback to help the PLC culture thrive! | Teachers need to know their feedback is valued and taken into consideration (Smith, 2012). Killion 2013 found that leaders need to invite feedback from all teachers members. |

Appendix I

| Professional Development Day 9: February 3, 1:30-3:30 | | | | |
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| Intended Outcome: Teachers will discuss and analyze data. | | | | |
| Infinitive | Points to discuss | Discussion Questions | Process | Rationale |
| To review (5 minutes) | -PLC group norms -The process thus far -The overarching plan of this year's PD -4 PLC questions | -How have norms helped the team stay on track? | One group member will read the norms to the group | Norms must be revisited often (Boudett & Lockwood, 2019). |

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| | (DuFour, n.d.). -core beliefs | | | |
| To collaborate (30 minutes) | -PLCs -Unpacking standards -Vertical Alignment | Created by teachers! | Socratic Seminar style discussion. Each member will write down 3 questions that spark discussion relating to PLCs, unpacking standards, curriculum mapping, or anything the building has been working on this year. One person will ask a question and the group will discuss. The team will discuss the process thus far. | Leaders must be flexible and listen to feedback (Killion, 2013). Furthermore, this is an example of formative assessment. By doing this activity, teachers can see how easy it is to facilitate within their own classrooms. |
| To analyze (85 minutes) | -Data from the last five years | -What does the data show? -Where are the gaps in achievement? | Use the info shared to you to view data regarding school proficiency and achievement for the last five years. Work in full PLC teams. Scan the data independently, then make your own notes. We will then come together in about 20 minutes to notice common themes we noticed. PD anchor will take notes of major gaps/themes | Furthermore, teamwork demonstrates a “spirit of inquiry” by constantly questioning the data and each other (Kennedy et al., 2011). |

Appendix J

| Professional Development Day 10: February 17, 1:30-3:30 | | | | |
|--|--|--|---|---|
| Intended Outcome: Teachers will determine a plan of action to address gaps in achievement. | | | | |
| Infinitive | Points to discuss | Discussion Questions | Process | Rationale |
| To review (5 minutes) | -PLC group norms -The process thus far -The overarching plan of this year’s PD -4 PLC | -How have norms helped the team stay on track? | One group member will read the norms to the group | Norms must be revisited often (Boudett & Lockwood, 2019). |

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| | <p>questions (DuFour, n.d.). -core beliefs</p> | | | |
| <p>To plan (100 minutes)</p> | <p>-achievement gaps -data -compare data/standards</p> | <p>-Last PD gaps were discussed. Why are their gaps here? How do those gaps align with priority standards? How can the curriculum better address these gaps?</p> | <p>PD anchor has shared the document with the common themes and gaps in proficiency and achievement. Working in the same teams as the last PD, go through the lists that relate to that content area. Compare those lists to our standards document. Where are the skills? Teams will make a plan of action for ensuring proficiency, this may include extra interventions, reteaching, etc. This may also include altering priority standards to meet these needs. Each group should create their own plan on a shared document. PD anchors will be assisting the groups.</p> | <p>Teams must work together and dig deep into analyzing data. Analyzing includes questioning the data as well as the curriculum (Kennedy et al., 2011).</p> |
| <p>To review, celebrate, and debrief (15 minutes)</p> | <p>-action plans -celebrate success</p> | <p>-How will the action plans help teachers? -What steps need to be taken in implementing these? -How have priority standards shifted or not shifted because of the data?</p> | <p>First of all, THANK YOU to all team members in this frustrating, long, and tiresome process. Your work is benefiting teaching and learning greatly! If there is time left, give teachers time to make a plan to implement the new action plans.</p> | <p>Teachers need validation for their work (Toolkit Managers, 2014). Acknowledge efforts of teachers throughout the process of change (Schilling, 2013).</p> |

Appendix K

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| <p>Professional Development Day 11: March 3, 1:30-3:30</p> |
| <p>Intended Outcome: Teachers will design big ideas for one class.</p> |

| Infinitive | Points to discuss | Discussion Questions | Process | Rationale |
|-------------------------|---|--|---|--|
| To review (5 minutes) | <ul style="list-style-type: none"> -PLC group norms -The process thus far -The overarching plan of this year's PD -4 PLC questions (DuFour, n.d.). -core beliefs | <ul style="list-style-type: none"> -How have norms helped the team stay on track? | One group member will read the norms to the group | Norms must be revisited often (Boudett & Lockwood, 2019). |
| To explain (10 minutes) | <ul style="list-style-type: none"> -Big ideas -the way units are organized | <ul style="list-style-type: none"> -What are big ideas? -How will big ideas transform learning? | <p>PD anchor will explain the following points: Using priority standards, develop big ideas for the units you teach. Big ideas “reflect students’ personal insights developed over the course of a unit” (Ainsworth, 2010).</p> <p>Big ideas must be written as a complete sentence (Ainsworth, 2010). This demonstrates the type of work expected of students. Big ideas convey what teachers want students to be able to “discover and state in their own words by the end of the unit of study” (Ainsworth, 2010).</p> | <--listed under process |
| To work (70 minutes) | <ul style="list-style-type: none"> -Big ideas -Unit outcomes | <ul style="list-style-type: none"> -How do big ideas relate to priority standards? -How are big ideas created? | Individually and with the help of PD anchor, think about the units you teach. Come up with a big idea for each of the units you teach. Focus on one class you teach. Spend some time thinking and brainstorming what exactly students should get out of the unit. Jot down | <p>Leaders have to provide work time for teachers to complete task (Smith, 2012)</p> <p>Because only one teacher teaches each class in a district the size of the research site, teachers will do the initial work</p> |

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| | | | your work. Tie to the priority standards addressed in the unit. | somewhat on their own. However, PD anchors will be dedicating time to each teacher during this work time, as well as setting up times with each teacher outside of PD to further this process. McKinney 2013 states this [collaboration] will lead to collaborative invention of units. |
| To collaborate (30 minutes) | -Big ideas | -How can collaboration benefit the work being done to unpack standards? -How can big ideas be improved? | Get together with content area partner/team. Go through the big ideas you have each created. Collaborate and discuss these. Bounce ideas off each other, help each other! | Collaboration creates successful learning experiences (Heflebower et al., 2017). |

Appendix L

| Professional Development Day 12: March 17, 1:30-3:30 | | | | |
|---|---|--|--|---|
| Intended Outcome: Teachers will design essential questions for one class. | | | | |
| Infinitive | Points to discuss | Discussion Questions | Process | Rationale |
| To review (5 minutes) | -PLC group norms -The process thus far -The overarching plan of this year's PD -4 PLC questions (DuFour, n.d.). -core beliefs | -How have norms helped the team stay on track? | One group member will read the norms to the group | Norms must be revisited often (Boudett & Lockwood, 2019). |
| To explain (15 minutes) | -Big ideas Essential Questions | -What are essential questions? | Consider the units being taught in one of your classes. Big ideas have been created. | According to Ainsworth 2010, big ideas are simply the student |

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| | | <p>-Why do teachers need essential questions? -How can essential questions transform learning? -How do essential questions bridge the gap between content areas?</p> | <p>The next step in the process of unpacking standards is creating essential questions because the unpacking process goes from “concrete to abstract” (Ainsworth, 2010). Essential questions “promote sustained inquiring and meaning making” (McTighe, 2012). Essential questions must start with the words “how” or “why” and push students to think critically (Ainsworth, 2010). They go beyond recall of knowledge and into synthesis of knowledge. Furthermore, essential questions enable students to see connections between content areas (Frey et al., 2014). It is recommended that teachers have two to four essential questions per unit (McTighe & Silver, 2020). Essential questions are open-ended and interesting questions used to inspire students (Ainsworth, 2010).</p> | <p>responses to the essential questions determined by teachers. This definition offers room for reflection and connection (Ainsworth, 2010). There are many “correct” answers to an essential question (Ainsworth, 2010). “Essential questions create a problem orientation that leads to exciting learning conversations, to creative problem solving, and to the consolidation of major concepts, connections, vocabulary, strategies, and ideas that can then be used to extend further learning and to solve problems in students' lives and out in the world” (Wilhelm, 2014). Essential questions should engage student interest (Ainsworth, 2010).</p> |
| <p>To work (70 minutes)</p> | <p>-essential questions for each big idea created</p> | <p>-How can essential questions further thinking?</p> | <p>Remember, 1 big idea and 2-4 essential questions per unit. Go through the big ideas you created for the chosen class. Work on creating those essential questions for the class you have chosen. PD anchor will meet with each of you. Take breaks as needed.</p> | <p>Leaders have to provide work time for teachers to complete task (Smith, 2012) Because only one teacher teaches each class in a district the size of the research site, teachers will do the initial work somewhat on their own. However, PD anchors will be dedicating time to each teacher during this work time, as well as setting up times with each teacher outside of</p> |

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| | | | | PD to further this process. McKinney 2013 states this [collaboration] will lead to collaborative invention of units. Netolicky 2016 found that teachers value a combination of self-direction and collaboration. Some things need to be done independently. |
| To collaborate (30 minutes) | -Essential questions | -How will the essential questions created spark interest as well as critical thinking? | Get together with content area partner/team. Go through the essential questions you have each created. Collaborate and discuss these. Bounce ideas off each other, help each other! | Collaboration creates successful learning experiences (Heflebower et al., 2017). |

Appendix M

| Professional Development Day 13: April 17, 1:30-3:30 | | | | |
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| Intended Outcome: Teachers will begin the process of planning a cross-curricular unit for next year. | | | | |
| Infinitive | Points to discuss | Discussion Questions | Process | Rationale |
| To review (5 minutes) | -PLC group norms -The process thus far -The overarching plan of this year's PD -4 PLC questions (DuFour, n.d.). -core beliefs | -How have norms helped the team stay on track? | One group member will read the norms to the group | Norms must be revisited often (Boudett & Lockwood, 2019). There is a need for cross curricular collaboration to "ensure that [these] learning outcomes are met across programs" (Rawle et. al, 2017). |
| To inform (15 minutes) | -cross curricular unit | -How can essential questions and big ideas lead to cross curricular | Pair up with a content area teacher or teachers that teach the same grade level as you. Think about the units taught. | Professional learning is messy, hard, and nonlinear (Netolicky, 2016). |

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| | | learning? | Look at big ideas and essential questions--where is there room for cross-curricular learning? -Create units to be taught at the same time that can address the same essential questions. | This horizontal alignment allows teachers to collaborate and promote innovative and inspiring learning experiences for students (Burns, 2001). |
| To collaborate (90 minutes) | -Cross curricular unit ideas | -Why is cross curricular learning important? | Work with grade level teams to brainstorm and begin the process of creating a cross-curricular unit to use next year. Note essential questions Note standards that will be addressed Guestimate a general timeline This is only the beginning. This will continue next year. | Frey et al. 2014 study found that school-wide essential questions led to deeper learning across multiple content areas. |
| To review | -Thanks -Survey | -How has this years' PD been beneficial? -What needs to happen next? | THANKS to everyone on their dedication and hard work during Wednesday PD this year. Looking ahead to next year: big ideas and essential skills will continue to be created and mapped Plan to implement one cross-curricular unit next year Please take the PD survey to provide feedback on PD this year. See Figure 3. | Noticing and accepting feedback from teachers is important (Smith, 2012). Leaders should always keep the clear plan of action in vision for all teachers (Ainsworth, 2010). Surveys are an important form of monitoring an initiative (Schilling, 2013). |