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**Assessment Best Practices: A Review of Current Best Practices at the Secondary and Local
Level**

by

Amanda Reed

A capstone project submitted in partial fulfillment of the requirements for the degree of Master
of Arts in Education.

Hamline University

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Capstone Project Facilitator: Jana Lo Bello Miller

Content Expert: Kim Knutilla

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CHAPTER ONE

Introduction

Overview

Often a topic of conversation among education professionals is the topic of state mandated testing. Delandshere (2001) describes mandated, non-local, testing as “a passive and unidirectional act” (p. 129). Reflecting many of the concerns that I continue to hear and read about in this profession, Delandshere (2001) adds that mandated testing is often thought to be assessing and holding schools accountable, however, Delandshere continues, that these tests rarely fix anything or even adequately say what it is that needs fixing (p. 129). The sentiments from a South Carolina judge further support this idea that state testing is inadequate. This issue at hand in the Abbeville County School District vs. South Carolina, was if the state could be held accountable for providing the resources and conditions necessary for supporting the students right to learn. Judge Cooper, the presiding judge, concluded that "this case has never been about what is best for the children of the state," thus steering any educator away from state testing (Darling-Hammond 2010, p. 119).

Therefore, the focus of this paper is on local assessments, as local assessments appear to be trusted more than external assessments by educators, and educators are the intended audience of this paper and project (Duncan, 2019). Specifically, this capstone aims to answer the question: *Is it possible to extend the knowledge of current research, to educators, through the form of a professional development workshop, with regards to best practice for assessments, and related instructional practices, at the secondary level?*

To begin, in this chapter I will first describe both the journey that has gotten me to where I am now as an educator and how that has led me to this capstone project, as well as discuss my rationale for developing this project. I discuss both the importance of assessment from a personal and professional view, as well as in terms of educators as a whole. I will conclude with where the gaps are in terms of assessment best practices, of which I intend to fill, as well as lay out the further sections of this capstone.

The Journey

My interest in assessment started in my first year teaching. During this time I was a traveling teacher in a large school district that was attempting to implement standards-based grading. A traveling teacher, in my case, meant that I worked at two of the high schools in the district, one which needed a 0.6 FTE and another that needed a 0.4 FTE, in order to create one position. Both of the schools were working on the implementation of standards-based grading, as it was the district's plan to have all of the schools implement standards-based grading.

One large focus of standards-based grading is the assessment piece. Some highlights of the practices surrounding standards-based grading that the district wanted to implement were as follows: 1) having only one grade in the gradebook to represent a student's knowledge on a standard, 2) eliminating grades in the gradebook that do not represent a student's level of understanding (participation points, latework reductions, etc.), 3) grading assessments by level, rather than using arbitrary point assignments, weights, percentages, and 4) reassessment. I was lucky that one of the schools that I was in was the school that had done a lot of the front work for this district's implementation. Therefore, I was able to observe both a school that was far in their implementation of standards-based grading (at least 3 years prior to me working there), which

we will refer to as school A, and another school that was only starting to implement the year that I began there, which we will refer to as school B. One thing that I noticed was the difference in the way the students perceived their learning and their grades. School A had students that were less of what I like to call “point-hungry”. Overall, when you talked with the students at school A, the students had motivation that was geared more towards learning, rather than toward gaining points (not to say that no student like this existed at all). This impression that was left on students is an impression that was also left on me as an educator as well as me as a learner.

These two schools showed me the importance of assessment. They showed me that the way in which we assess, and our assessment practices, have a profound effect on our students, by showing them what we value. This is where my interest in assessment began.

Rationale

Teachers trust assessments happening at the local level. We also know that these assessments carry the weight of showing students what it is that those who educate them place value in. Teachers themselves need to make sure that we are proficient in best practices, especially those that are essential to our “core” (Schmoker, 2018).

My interest in assessment was recently furthered. After 3 years in the above mentioned district, I moved out to a much smaller charter school district. I went from a school with 2,000 kids to a school with less than 100 kids. The move to this charter school is where I began to work with many teachers who had never gotten the opportunity to have the extensive professional development that I have had surrounding assessments. This was first apparent when talking with my new colleagues about something on my resume that had addressed my background with standards-based grading. At one point I had talked with a teacher about the claims our school had

made about being standards-based, as I was curious near the beginning of the year as to what practices they were implementing. This teacher, starting her second year at the school and as a teacher, disclosed to me that she really did not know what standards-based grading was. I gave her some of the highlights and she was intrigued. Furthermore, when philosophical questions had been brought up throughout the year by colleagues surrounding our assessment practices, the input that I had from previous learnings in professional developments helped to further said conversations. Through discussions with other teachers, the benefit of a professional development surrounding assessments was an easy choice.

Throughout the school year, as conversations with teachers continued, I continued thinking about what type of professional development would be a good one to suggest. The issue I was coming across was that many professional developments are too specific, either in terms of content area, as this school has no more than two content area teachers in the school, or that they are not basic enough. After further reading into Mike Schmoker's (2018) ideas on schools needing to focus on their "core", I knew that what this school of many newer teachers needed was to collaboratively participate in a professional development that was centered around something so simple, yet so important to the everyday life of teachers and their students - assessment. For example, one topic of assessment that I will later address is feedback. Knowledge of feedback, of course, is something that all educators can make use of. Furthermore, with how often we use feedback in our classrooms, it should go without saying that we need to make sure that we are fully equipped with the best practices surrounding feedback use at the secondary level.

What I needed did not exist. I needed a professional development, accessible to my school, that brought together the current and broad research surrounding assessment. Therefore, I decided that I would create it through reviewing the current best practices that exist in the literature and combining them into a professional development where there is an opportunity for my colleagues and myself to have rich conversations about our practices and philosophies as well as hands-on practice with the material that we are learning. Therefore answering yes to the question of if it is possible to *extend the knowledge of current research, to educators, through the form of a professional development workshop, with regards to best practice for assessments, and related instructional practices, at the secondary level.*

Summary

In conclusion, assessments are an integral part of education that needs to be a strength of all educators. In this chapter I have discussed my professional background and journey leading to the decision to create this capstone as well as the rationale for the topic itself. My journey started with seeing how important assessment can be in shaping the mindsets of students, through the lens of teaching for two schools at different stages of implementation of standards-based grading. This, combined with my experiences within my new school, and the personal and professional importance of assessment, led me to the development of my capstone question.

In chapter two of this capstone, I will review the literature that is currently available that addresses assessments and assessment practices. I will look specifically at the three types of assessments of prior knowledge assessments, formative assessments, and summative assessments. This literature review will take an important look at the extensive research that has been done in the areas of exemplars, feedback, and grading/marking. In chapter three of this

capstone, I discuss deeper the project that I have created, the audience in which the project is intended, the setting, and the purpose for this professional development. Chapter four of this capstone, will reflect on the process of creating this project as well as the possible impact that this project may have on my future students, colleagues, and myself.

CHAPTER TWO

Literature Review

Overview of the Chapter

Assessments are a critical part of education, and though the exact critical role they have played in education has evolved throughout the last century, their role is nonetheless significant now. So significant in fact, some literature argues that, though the move from assessment *of* learning to assessment *for* learning was an important one, the current move of education into assessment *as* learning has had narrowing and dominating effects on curriculum (Torrance, 2007). In their earlier forms, after the turn of the 20th century, assessments were used as a tool to measure the success of one's education, this being an assessment *of* learning.

This literature review seeks to inform the question: *Is it possible to extend the knowledge of current research, to educators, through the form of a professional development workshop, with regards to best practice for assessments, and related instructional practices, at the secondary level?* In the following sections we discuss several common assessment types in education: prior knowledge assessments, formative assessments, and summative assessments - with formative assessments showing their current stardom in educational research through several well researched subtopics: exemplars, feedback and grading/marking. In this section we will highlight where there are more clear cases of best practice that exist and are currently being applied in the field of education, what those best practices are at their generalized application level, as well as highlight the need for further guidance in some under researched topics and offer an idea as to why some areas have been left under researched, where we may look for

possible answers to some of our questions about that underdeveloped body of research, some of the critiques of these best practices and how to best adjust ourselves to respond to those critiques.

Prior knowledge assessments/PLA

Prior knowledge assessments, in which students are assessed on their previous knowledge of a topic, sometimes referred to as readiness assessments, was found to have an underwhelming amount of research. Teachers generally use prior knowledge assessments with the intention of allowing them to inform their practice. However, the limited research in how teachers use local assessment to inform their practice, does point to teachers currently using informal formative assessments, such as in classroom observations, more often than formal assessment data (Wilson, 2019). This could contribute to the underwhelming amount of research on prior knowledge assessments, and the overwhelming amount on formative assessments. One study, looking at the predictive validity of prior knowledge assessments on 6th grade ELA students, found their data to suggest that “definitional instructions tapped more directly what students knew, and didn't know, about concepts” as compared to standard free association instructions on prior knowledge assessments (Leslie & Cooper, 1992). However, because of the lack of further research into predictive validity in assessment item structure, “best practice”, as it pertains to assessing students prior knowledge, is an area too underdeveloped to make claims of what is best for teachers - leaving this as an area suggested for further research.

Perhaps prior knowledge assessment (PLA) programs at the higher education level will soon give us more information in regards to best practice. PLA programs allow students that are coming into higher education to count their previous learning outside of that institution, such as certificates, continuing education, licenses, etc., for credits. As for now, PLA programs do give

us a glimpse into how validating such knowledge that has happened, prior to formal education on a topic, can have an impact on student motivation; with PLA students showing longer persistence in their programs compared to their non-PLA counterparts, as well as slightly higher GPAs (Travers, 2012).

In summary, we do not conclude any best practice that could be suggested by the current research as it pertains to prior knowledge assessments. After an underwhelming body of research, we next look to a body of research that has gained a lot of traction in the last 20-30 years: formative assessments. This traction then leads us to a very well developed model of what best practice is on the topic and helps to inform our professional development for secondary teachers on assessment best practices.

Formative Assessments

Formative assessments can vary greatly in their form. On the more formal end of the formative assessment spectrum there are paper and pencil quizzes, and on the more informal end of that spectrum there are conversations with students - with everything in between “counting” as formative assessment. Though some, including Swan (2015), offer a slightly tighter requirement of formative assessments, such that for an assessment to be truly formative, it needs to possess the opportunity to be acted upon afterwards by either the teacher, the student, or the peers of the student. Similar to prior knowledge assessments, we see that item/task development is left up to the teacher to decide what is best for the context (subject, grade, skill, purpose, etc.). Therefore, we will focus on the instructional pieces that precede and follow formative assessments, such as the use of exemplars to aid in the growth of students’ assessment literacy, grading/marking

practices of formative assessments, and, with a vast body of research, feedup, feedback and feedforward.

Exemplars and Assessment Literacy. As we begin to look at subtopics of formative assessments, we will start with exemplars and assessment literacy. Stiggins (1991) suggests that assessment literacy is something better understood through a description of assessment *ill*iteracy - stating that “assessment illiterates lack the tools to be critical consumers of assessment data” (p. 535). Stiggins (1991) also calls for assessment literacy among educators, saying that the best way for individual teachers to combat the current lack of assessment literacy in the profession is to be committed to high-quality assessment practices in their classroom. Newer research calls, not only for educators to be assessment literate, but also students (Alonzo et al., 2019; Denten & McIlroy, 2017; Smith et al., 2013; Stiggins, 1991). With the current research having a focus on students being assessment literate, we should note that that the more recent definitions of assessment literacy have a focus on students as well, with Smith et al. (2011) stating that assessment literacy is:

students’ understanding of the rules surrounding assessment in their course context, their use of assessment tasks to monitor or further their learning, and their ability to work with the guidelines on standards in their context to produce work of a predictable standard (p. 46)

So, why all of the hype to make sure that students are assessment literate? Well, Denton and McIlroy (2107) offer an analogy based on fire in their work regarding assessment feedback, a topic we will soon delve further into in the coming sections, where the fuel and the oxygen are the high-quality information on progress and an atmosphere conducive to learning, respectively.

They finish this analogy of their work with feedback, by stating that the thing that is missing is the ignition of that fire, assessment literacy: “only if students are assessment literate (ignition) will feedback illuminate” (McIlroy, 2017)

Assessment literacy has shown to be worthy of educators attention, as it has shown to be useful in aiding students in their use of feedback (Denton & McIlroy 2011). Next, to make the best use of this information, we must learn how we can help students to develop their assessment literacy. Much of the research does say that this begins with clear learning outcomes for students (Alonzo et al., 2019; Denton & McIlroy, 2017; Smith et al., 2013; Stiggins, 1991). Nevertheless, some researchers still caution that this transparency can possibly lead to some narrowing of curriculum (Torrance, 2007). Though we take this concern to heart, as it is rarely an educator’s goal to narrow curriculum, we do believe that this caution, once recognized by educational professionals as something to look out for, has a lessened effect, as educational professionals take their specific context and apply their best professional judgment on the amount of transparency necessary.

One of the specific ways that educators have made outcomes more transparent for their students has been through the use of exemplars, or typical examples of work, which here we will refer to examples of work at not only the highest level, but at every level. In their study of the effects of different teaching styles in leading in class markings of exemplars, a mixed-methods approach, Hendry et al. (2011), looked at first year higher education students enrolled in an introductory law course. In this study they asked professors of this introductory course to distribute marking (grading) sheets (rubrics) and discuss exemplars of past student work, at a high level, a medium level, and a low level. However, these professors each interpreted and

implemented this in slightly different ways. Three themes of implementation among the teachers emerged, the first was where students were given the marking sheets and asked to mark the exemplars themselves with little to no professor input, the second was where there was professor-led discussion on the exemplar, however that discussion was geared toward highlighting only the errors that were made in the exemplar and how to avoid those mistakes, and finally, the third was where the teacher discussed why the exemplar earned the grade that it did, in its totality. With these three different implementations, Hendry et al. (2011) found that students in all groups rated the marking sheet as useful, and that students achieve at higher levels when their teacher facilitates discussions on the reasoning behind the grading, both good and bad, of exemplars, as compared to students whose teachers focused solely on the avoidance of errors in exemplars, or those whose teachers facilitated little to no discussion. This study is important because it not only highlights the importance of the use of rubrics and exemplars, but it also gives educators a more concrete example of implementation in regards to the use of exemplars.

Exemplars give educators a way to develop assessment literacy, both in themselves through creation/facilitation (Duncan, 2019), and in students through discussion (Hendry et al., 2011). The literature shows that exemplars hold value in helping students to reach higher levels of achievement through their development of assessment literacy.

Feedback. For assessments to be truly formative, we come back to Swan's (2015) additional requirement of the actions that must be available to be taken by either the teacher, the student, or the students' peers. Here, we focus specifically on the interplay between the action that can be taken by *students* being dependent on the actions that can be taken by *teachers*. In

order for students to take action in making improvement on their understanding, students need feedback on their products related to learning objectives. One way in which students can receive feedback on the appropriateness of their products is through the use of rubrics and exemplars, which we have seen to be of great use. However, the use of rubrics and exemplars only cover a small portion of products that students produce to relay their understanding. Because such products can take many forms, as students can show their understanding in a multitude of ways, both formal and informal, and we know that it is not possible for teachers to have exemplars for each of the possible individual products that students may produce (nor is it reasonable to expect teachers to facilitate a discussion through all of those possible exemplars and at varying levels), it is important that we then address the communicative feedback given by teachers both verbally and nonverbally.

In his study observing student responses and performance, Huxham (2007) intervenes with two specific types of feedback: that of which he calls personal comments, and another of model answers. In this study, students received both interventions of model answers on half of their work and personal comments on the other half. Personal comments being where the students work was given individual annotations along with a mark, and model answers being a correct answer being written side by side to their work, with their mark. Then, students were asked to complete a survey on their perceptions of both of these possible avenues of feedback from teachers. This study also examined the performance of students on their final examinations in the course, tallying in regards to each type of intervention separately. Of the two groups followed, Huxham (2007) found that a majority of the first group had a preference towards having both types of feedback and the majority of the second group had a preference towards the

personal feedback, noting that “no group showed a majority preference for model feedback” (p. 607). Huxham (2007) also found the average marks for the questions that related to the work done with the model answers were higher than those done in relation to personal comments. Furthermore, this data also suggested that if students were to choose one form or the other, that they would prefer receiving the personal comments to the model answers. This study is of importance to us, because it shows two things, first that a hybrid model between model answers/exemplars and personal comments/feedback is a worthy suggested best model to be suggested for teachers - those model answers being discussed earlier through the use of exemplars and the personal comments being discussed below through the different types of personal comments that can be made and second, that the overwhelming amount of literature in regards to formative assessment feedback is justified.

Now that we have addressed the importance of feedback, we must next address the research that has been done in recent years to guide teachers in giving the right type of feedback to students. Before we address the power in which each type of feedback holds, for better or for worse, we must first be clear on what the different types of feedback are. We look to the work of one of the bigger, current, names in feedback, John Hattie, and his colleague, Helen Timperley, to address types of feedback, then discuss some pushback to one of the types of feedback.

Type of Feedback. Hattie and Timperley (2007) establish that the purpose of feedback is to reduce the discrepancies between what the learner already knows and can do, to the desired outcomes. They state that both teachers and students can reduce those discrepancies through trying to answer three questions about the learner. The first of which being where the learner is going/what the goal is, which is sometimes referred to as feed up rather than feedback. Second,

how is the learner going along that path (feed back). Last, where is the learning to go next, sometimes referred to as feed forward rather than feedback. For our purposes we will group feed up, feed back, and feed forward all into one category of feedback moving forward. Finally, Hattie and Timperley established that these questions all work at four differing levels: task, process, self-regulation, and self. The feedback that is made at the task level, FT, is feedback that describes how well tasks are understood and/or performed. Feedback made at the processing level, FP, is feedback surrounding the learners main process needed to understand or perform the task. Feedback made at the self-regulation level , FR, is feedback given to the learner about how well they are self-monitoring, directing, and regulating their actions. Finally, feedback at the self level, FS, is feedback that is a personal evaluation about the learner. Before moving forward, it should be noted that not all of the literature agrees that it is appropriate to describe what Hattie and Timperley say is feedback at the self level as feedback at all, but rather as praise (Percell, 2017). However, this differing opinion on classification does not change how the literature views this communication between teacher and student, and therefore we will choose to use Hattie and Timperley's version of classification: feedback at the self level, or FS.

With these four classifications of feedback, we then must look at how and when the literature suggests to use the different types of feedback. We can first look at FS, this feedback is widely used among teachers, however, this feedback has been shown to actually have a negative effect on students in regard to their own perceptions of their ability and has shown to have little to no effect on student achievement (Hattie & Timperley, 2007; Hattie, 1999). Not only has FS shown to have a negative effect on students, but it has also shown that, when combined with other types of feedback, specifically FT, that do have a positive effect on student achievement,

FS can bring those positive effects down (Hattie & Timperley, 2007). Percell (2017) reiterates this in his framework for purposeful feedback, stating that one of the essential elements of purposeful feedback is feedback that is tied to objectives or standards, therefore FS would not be purposeful, as it is redirective of attention from the standards and objectives to the self at a personal and not a process level. Interestingly, Hattie and Timperley (2007), cite Kluger and DeNisi's findings that no FS actually has a greater impact on student achievement when compared to FS.

Next, we see what the literature has to say about FT, the feedback that addresses if the learner has the correct response, incorrect response, needs to add additional information to their response, or even different information to their response, etc.. Feedback given at this level is most powerful when it helps the student to improve their self-regulation and/or when it can be used to help the student in forming their decisions about which strategies will work best for them(Hattie & Timperley, 2007). This type of feedback, though powerful, has also shown that it is less powerful when accompanied by FS. For example: FT with FS “you are awesome, that answer is correct” vs FT alone: “that answer is correct”. A caution that comes with FT, is that of criteria-compliance, where the focus of the feedback is specific to what the student cannot do, rather than what they can, and becomes a list of errors that the teacher and student then only focus on until the student “has it” (Torrance, 2007; Huxham, 2007).

Furthermore, we look to what can be said about FR, the feedback that addresses how a learner is regulating themselves during the learning process, from the literature. FR has shown to be very powerful especially in relation to “deep processing and mastery of tasks” (Hattie & Timperley, 2007). One specific type of self-regulatory feedback is feedback that is given specific

to the effort in which a student is showing. This type of FR is shown to be most powerful when it is at the beginning of a new topic, rather than later on in the learning process (Hattie & Timperley, 2007). FR is powerful in the sense that it aids students in changing their beliefs in themselves and their interactions with the learning process.

Finally, we take a look at what the literature has to say about FP, feedback about the process. Percell (2017) states that this type of feedback can help students in developing a growth mindset. Growth mindset has gained a lot of attention in the educational community, and though we will not address growth mindset specifically, we will note the importance of students having a growth mindset, rather than a fixed mindset in which they hold the belief that intelligence is stagnant (Dwek, 2008). Percell (2017), when laying out his framework for feedback, states that “process is paramount” (p. 115). Hattie and Timperley (2007) reiterate this importance by stating that, alongside FR, FP is powerful in such that it helps to develop “deep processing and mastery of tasks” (p. 91).

Feedback is an essential tool that needs to be utilized by educators with the right guidelines on how to use it. Feedback is most important during the formative stage, in part because this is still a time when students have the opportunity to develop their skills and learn on a deeper level, but also because it can help them to develop their assessment literacy and self-regulation abilities. Therefore, it is important that we, as teachers at the secondary level, address our current implementation of feedback in our classrooms, in order to help our students grow as students and lifelong learners.

Next, we take a look at something all educators must consider at some point, however it is something in which they do not always have control over: grading. In this next section we

specifically look at grading practices as they relate to formative assessments, and later we will address grading during the summative stages of assessment.

Grading. Grading is an essential part of the educational profession. Grades are used for data purposes by the public as well as by teachers and colleges - whether we like and agree with the ways that they are used or not, they are being used to make some big decisions and therefore deserve our attention. In later sections we will discuss final student grades and grading practices further as they relate to summative assessments. However, grades for formative assessments are starting to gain a common practice among educators.

When breaking down the four most essential qualities of feedback described in Percell's (2017) year long, qualitative study of 5 teachers and their effective ways of providing feedback, Percell notes informality as one of the essential qualities of effective feedback (p. 113). This urge of informality, combined with the fact that many formative assessments are not able, and/or not meant to, address all of the assessment criteria at once, or in their totality, but rather, to give a snapshot of where students are at in order for educators and students to adapt and reposition themselves to be more student-centered, add to our suggestion that best practice for assessments would currently imply that formative assessments should not be weighted into students' grades, and often not given an official grade at all (Baird et al., 2017). This is also consistent with the idea of feedback with regard to student processing having the highest benefit for students (Hattie & Timperley, 2007). This idea of not formally grading formative assessments is also reiterated by a study by Swan (2015), in which teachers are advised not to grade or score the formative assessments, because those grades may "encourage competition rather than collaboration" (page 43)

Overall, the vast body of research on formative assessments, especially in relation to exemplars, assessment literacy, feedback, and grading, gives us a solid base for developing some generalized guidelines for educators. Furthermore, these guidelines are not so specific as to not be applicable to the majority of educators, specifically educators in different subjects. Next, we will examine further the literature surrounding our final assessment type, summative assessments, to see what conclusions can be drawn from the literature for our professional development on assessment best practices.

Summative Assessments

Summative assessments, though having more research to brag about than prior knowledge assessments, have significantly less than formative assessments (at the local level, not including at the state level and high-stakes testing). Perhaps this is because summative assessments by their informal definition of being in sum, or in totality, of what has been learned, offer to prove what has been learned, and do not offer to improve it. Therefore, many educators seem to focus on what tools we have to improve students' learning, such as formative assessments, leaving summative assessments as somewhat of an afterthought. Most commonly surrounding summative assessments, is research with regard to grading/marking. A spotlight of the last decade or two is that of standards-based grading. Standards-based grading, though multifaceted, with each facet being implemented with contextual needs being taken into account, does have literature to support a baseline of implementation. Alonzo et al., (2019) defines the features of standard-based assessments as: 1. clear criteria, standards and tasks, 2. student understanding of the outcomes 3. Differentiated assessment strategies, 4. Quality and timely feedback, and 5. Fair and consistent assessment practices (p. 639-641). We see similar features

of standards-based grading/assessment in the works of other literature, including Schimmer (2016). Standards-based grading does, however, come with some cautions. Ormond's 2019 paper examining the impacts of standards-based assessments on students claimed that standards-based assessments and the practices that come with them can have a narrowing effect on curriculum. We would agree to some extent with Ormond's statements and caution similarly to Torrance (2007), in his study of different modes and methods of assessment, where he concluded that current educational reform, going from assessment *for* learning into assessment *as* learning, can have that narrowing effect. But, that happens when the teacher takes only what the student cannot do in consideration for further learning, rather than allowing what they can assess that the student does know to have an effect on their instructional decisions moving forward from the assessment. Ultimately, Torrance (2007) urges educators not to allow criteria-compliance and over-coaching to get in the way of learning.

Delandshere (2001), in her consideration of current purposes and procedures of educational assessment, she discusses our current system of higher-stakes testing, such as state testing. In this discussion she brings up an important question of *what exactly are these tests supposed to be testing and what does the information that we gain as educators allow us to do in response*. Though we are not talking about high-stakes summative testing here, but rather local summative assessments, we still need to be asking these same purpose questions of our assessments. Especially when our teachers are showing that they trust their own data more than data that is not local, such as state testing (Duncan, 2019). Often people will tell me that grades represent what a student knows, however, currently, students' grades are made up of categories that are not only evaluative of their current ability of a certain standard, but other nonacademic

skills (Schimmer, 2016). Because of these non-academic skills being taken into account, current educators suggest that grades do not represent what a student knows, and advocate that if we want them to, then we need to begin using a model of standards-based grading (Alonzo et al., 2019; Chiekem, 2015; Schimmer, 2016). Alonzo et al.,'s (2019) definitions of the features of standards-based grading are very general, and open for some interpretation for implementation. We look to Schimmer (2016) for some insight into implementation while keeping our focus on the summative grading aspect of standards-based grading practices. Though he does not offer up one definitive solution for his readers (and neither will we), Schimmer does offer different options that may be sound implementations of standards-based grading/assessment practices. One element he suggests for standards-based grading practices, which aligns with our previous sections suggestion, is that summative assessments are the only grades that should make up a student's grade, and are not to be combined with formative assessments. Additionally, when he gives more insight into the grading practices surrounding those summative assessments, he suggests options for students to retest. For these retests there is always the question of what the resulting grade should look like and take into account. Schimmer specifically advocates against averaging the summative grades, rather he suggests that teachers either give the students the highest mark, the most frequent mark (this, looking at all of the formative and summative assessment data that is had for a student), or the most recent mark. However, which of these three to choose is not always easy. For example, we can look to Schimmer (2016) to give us some insight - beginning his conversation on how he advises teachers to use levels of proficiency with "the journey begins with replacing traditional grade calculations with levels of proficiency that teachers determine through a combination of data and professional judgement" (p 107).

Most important to be noted is the professional judgment that must be taken into account. Before giving us some helpful guidelines for our professional judgement, he poses a case of two students and their writing sample results from their ELA class. With this complex example, Schimmer never says what the ‘answer’ is or should be for both of their grades, but rather, he suggests one based on the data that we have, but reiterates that there are many contributing factors, including the “teacher’s decisions about the order and nature of the assignments” (p. 73). Therefore, we can see that the choice of one summative grade to describe one learning objective is easy in theory, however, in application the specific decision on the highest, most frequent, or most recent makes the decision one that is less generalizable than being one statement, but rather a set of guidelines that comes with exceptions within our specific context and professional judgment - these guidelines that are laid out by Schimmer, see Appendix A. Therefore grading summative assessments can easily be worked into our professional development on best practices for assessment, however, there will need to be discussions among the participants in the workshop about the context in which they are planning to use some of the suggested best practices for summative assessments - specifically pertaining to averaging avoidance.

Next, because standards-based grading has the aspect of retaking tests, we need to address the feedback that would need to happen between the original summative assessment and the next, that the teacher would give. Hattie and Timperley (2007) suggest that formal assessments, which would include summative assessments, are often not the time to make feedback for students, except at the task and process level - hence, suggesting that no feedback should be made at the self and self-regulation levels for summative assessments. Additionally,

they suggest that the reflection on the summative assessments should still be a time for teachers to reflect and inform their future instruction.

In conclusion, the research that has been done on summative assessments gives us enough of a background to give some guidance on best practices related to grading pertaining to summative assessments as well as some of the feedback that comes with that grading. These best practices are important to fill the gaps in our knowledge on being able to adequately convey the knowledge that has been learned in our classrooms and will therefore be represented in our professional development.

Summary

In summary, the literature does not point to many best practices for secondary educators on prior knowledge assessments. However, it does give us many best practices on the topic of formative and summative assessments, including specifically practices surrounding exemplars, feedback, and grading.

The purpose of this literature review was to investigate the question of if it was possible *to extend the knowledge of current research, to educators, through the form of a professional development workshop, with regards to best practice for assessments, and related instructional practices, at the secondary level.* In conclusion to this literature review, we find that yes, for the areas of formative and summative assessment, there are current best practices that could be easily relayed in, and improved upon, through a professional development. In the following chapter we describe what the intended professional development will look like, not only in terms of content, but also in terms of setting, methodology, and participants.

CHAPTER THREE

Project Description

Introduction

I began teaching in a traveling position where I was able to see two schools with a similar goal. The two schools had such varying assessment practices, as well as differing levels of achievement with their goals, which helped me come to the realization of just how powerful assessment is in education. In the previous chapter I reviewed the literature on, and surrounding, assessments with a goal of gaining a better understanding of what has shown to be most effective for assessment practices currently in education. Assessments are an essential part of any educator's profession, classroom teacher or not, though I have primarily targeted teachers at the secondary level for this professional development. The purpose of this professional development project was to take the recent research and pair it down for educators in order to give them a simple guide on what is current best practice, as well as give them time to apply those best practices within a community of other educators. As a result of this professional development educators will be able to apply the current best practices being used in education, at the secondary level surrounding assessments, to their learners.

Overview

In the following sections we will discuss who will be participating in this professional development and the setting in which they will be participating and in which this professional development will be taking place. We will also describe the research paradigm and methodology that informed the creation of this professional development as well as describe the project itself and the assessments we plan to use to test the effectiveness of this professional development,

concluding with an expected timeline of the project. All of which come back to us trying to answer the question of if it is in fact possible *to extend the knowledge of current research, to educators, through the form of a professional development workshop, with regards to best practice for assessments, and related instructional practices, at the secondary level?*

Research Paradigm

The goal of my professional development project was to inform my coworkers of the current, research-based, best practices surrounding assessment. Additionally to provide them also with some time and support to work with the implementation of those practices.

The school in which my colleagues and I work is a very new school. The charter district it is in has only been a district for about 8 years, and the middle school extension of the elementary only for two years. With a previously high turnover rate, and other factors, this school, though it currently has many returning teachers, is still filled with many teachers that are inexperienced. Due to this, and the factor of our small school causing our PLCs to be a maximum of two of the same content teacher, made a professional development surrounding something as generalizable as assessment as the topic an easy choice. Not only was assessment an easy choice because of generalizability through content, but also because our school often has a focus during our workshops and PLCs to look towards assessment data to guide us, like many other teachers do. With assessments guiding so much of what we do, I thought that it would be important as well as beneficial for teachers to talk with other professionals at their level about their assessment practices and improvements that could be made toward them.

Based on the generality of the best practices found, as well as the hopes of allowing teachers within my school to work together with other content area teachers, I knew that I

wanted the professional development to have many opportunities for teachers to reflect with other professionals, both on past work and future goals. This was especially important for me because the work that these teachers do together, or not, can set the tone for the professional community for the school year and the communication that happens within that professional community. The hope is that this professional development would also be beneficial in building a community at the school that is supportive of its teachers - both through using the work of one of its teachers as their professional development, as well as the act of participation in a professional development that is not content specific, which has been rare for this school.

Once I had set my eyes on professional development for my project, and after digging a little deeper into professional development, I found that the research supported the idea that teachers needed a support system in which they can collaborate, practice, and reflect on their practices and those being suggested, as well as discuss with their professional community (Garet et al., 2001). This solidified my decision on creating and instructing a professional development that had hands-on pieces that were collaborative, as well as pieces that continued to support teachers after the initial professional development.

Methods

At the beginning or end of almost every professional development I have been a part of I have heard the presenter say the words “we want to be mindful of your time”. Whenever I hear this I start to get nit-picky about what in the professional development was “worthy” of my time, and what felt like a waste. Therefore, when I started to envision this project I knew that I wanted to be smart and think about what the teachers around me and myself had given for feedback of professional developments we have had in the past. One of the first things that was important to

me at the early stages, as previously discussed, was time for the teachers to practice/work, and in a way that gives them something that they can use later on. Additionally, if teachers were going to work within non-content groups, which is the case for the intended audience, the work that the professional development was surrounding needed to be generalizable to all of the teachers. That is not to say that some of their discussions will not be content specific, which they will be, as assessment does not happen in a vacuum, but to say that teachers will still feel like all of the professional development is applicable to them and that listening to others talk about their content specific examples will still hold some weight in their own development. Additionally, though I am terrified of presenting in front of my peers, I also came to the conclusion that it would be important for me to be the presenter for this professional development, as Mills (2018) states that something that teachers believe is missing from the work that is presented to them is the lack of authority of the presenter, with my “authority” coming from me being someone in their specific professional community (p. 19). Bates and Morgan (2018) and Darling-Hammond et al. (2017) reiterate a similar ideas, with Bates and Morgan stating that it is important for the facilitator of the professional development to be knowledgeable about its content and Darling-Hammond et al. stating that the facilitator be someone who the participants trust.

One idea that is reiterated throughout this project comes from the work of Holland (2005), who states that the more alignment between what is being taught in the professional development and what teachers are doing in their classroom, the more the strategies are likely to be implemented. Therefore, teachers participating in this professional development have been continually asked to connect the best practices being taught to their current classroom practices. Taylor (2006) adds that making such connections helps the participants in finding the

professional development beneficial, as well as believe that they can apply and be successful in implementing what they have learned in the workshop.

Another idea that is reiterated throughout this project comes from the work of Darling-Hammond et al. (2017), who highlights the importance of the participants ability to collaborate with their peers about what is being presented in the professional development. Educators need time to both make the connection between the content of the professional development and their classroom, as well as time to reflect on how they will implement the information moving forward (Darling-Hammond, 2017).

In summary, this professional development has been made to give the participants ample time to collaboratively reflect throughout the workshop on their own practices in relation to the best practices being taught. Additionally, this professional development has been made to be facilitated by someone that is, and has been, a member of the learning community in which it is being taught as well as someone who is knowledgeable on the topics being discussed surrounding assessment best practices.

Participants

The participants of this professional development are intended to be secondary school teachers, specifically the ones that I work with. This group of twelve secondary teachers is made up of many subject areas, and range in levels from 6th to 8th grade, with most teachers teaching at all three levels, as they teach at a small charter school of about 100 students. These teachers have differing levels of experience. The most amount of teaching experience being 8 years, the least being a teacher who would be just starting their second year, with a majority of the teachers being in their third to fifth year teaching.

Setting

The setting for this project is in a 6-8 middle school. The size of the school was about 100 students (current and estimated enrollment for next year). The teachers consisted of two math, one science, one social studies, two ELA, one ELL, two SPED, and one P.E./Health. Support staff in this setting included one speech and language pathologist, one occupational therapist, one dean of students, one instructional coach, two office workers, one director/principal, five support staff who work as educational assistants as well as work the lunch program, and two custodians. The staff was very welcoming and worked hard for their students. Of the classroom teachers, four were female and 5 were male. The staff was a diverse group of people, with people from different nationalities, races, religions, and cultures.

Looking at the demographics of the students, this school had 81% black or African American students (majority of those students, more specifically were Somali) and 19% Hispanic or Latino. This group of students had over 90% of its students qualifying for free and reduced lunch, and therefore all students at this school received free breakfast and lunch every school day. About 45% of this student population was considered English Language Learners, and about 17% of students were in Special Education.

Before we look to the community, it is important to note that we will be talking about the community that surrounds the school, even though many students did not live in/near the surrounding community of the school. A majority of the surrounding housing types were single-family homes. The school is in the metropolis of the state, located near a larger lake and park in the city. This neighborhood has several places to eat, get coffee, and run errands nearby. As a whole, the community was a welcoming community for staff, students, and parents. As a

school we worked hard to build our community through special field trips, assemblies with exciting games, spirit weeks, an all school website for keeping up with others and making fun videos and having built in community building time in our daily schedule with our homeroom students, as well as many others.

Project Description

This project consists of two sessions, both sessions are on separate days and roughly sixty to ninety minutes each. This professional development is to be implemented during workshop week, which for this school runs for two weeks at the beginning of the school year in August. The lesson plans for the presenter can be found in the appendix of this paper (see appendix G).

The learning objectives for the first session are as follows: 1. Teachers will reflect on their current use of assessments as well as their practices surrounding assessments, and 2. Teachers will understand current best practices surrounding assessment at the secondary level. Because of these two learning objectives the first session starts out by asking participants to reflect on what assessment is in general to them and to us and then moves into why the professional development is important to educators as a whole. While this happens, the presenter will pass out the notes sheet that is to be used for both the first and second session (see appendix B). Next, participants are asked to reflect on their use of prior knowledge assessments in their classroom through a partnering strategy called SuHuPu (Stand up, Hand up, Partner up). After this reflection participants are presented with the limited information and suggestions based on what was found in the literature review surrounding best practices for prior knowledge assessments. Next, participants will use the “So what, Now what?” graphic organizer to begin to organize their thoughts for their eventual goal (see appendix C). The “so what, now what?”

graphic organizer asks participants what confirmed or challenged their thinking, as well as what questions they still have and is implemented throughout the professional development several times.

After this reflection, participants move into reflection on what formative assessments are, specifically reflecting on the need for the opportunity to be acted upon afterwards by an involved party (Swan, 2015). There is a mid-session assessment where participants will give themselves a “fist of five”, rating themselves on how they are doing with the objectives for the day, and then moving into a short break. When returning from this break, teachers are then asked to reflect on formative assessment in their own classroom. After these reflections I share my personal favorite formative assessment, post-it race, which leads into a group share out of our current favorite formative assessments in the form of a write-pair-share, as well as asking teachers to write down an example from a colleague that they would like to try out.

After this, participants are presented with the best information and best practices found surrounding both assessment literacy and exemplars. Then, participants have the opportunity to share their current use of exemplars in their classroom, as well as reflect on how well they believe their students’ assessment literacy skills are doing, through the use of an inside-outside circle. After these two formative assessment pieces have been reflected on, the participants are then asked to once again give themselves a fist of five rating for the days objectives, and then come back to the “so what, now what?” graphic organizer for the second time. Finally, participants are told what materials they will need for the second session on the next day.

The objectives for the second session are as follows: 1. Teachers will understand current best practices surrounding assessment at the secondary level, 2. Teachers will continue to

examine their own practices surrounding assessment, and 3. Teachers will develop a goal surrounding best practices that best suits the needs of their classroom. This session begins by talking about the different types of feedback, the ways in which they are best used, giving examples of each type, asking participants to make their own examples, and going over the model of effective feedback given by Hattie and Timperley (2007). Accompanying the information on feedback types is a graphic organizer for participants to keep track of all of the information regarding each type (see appendix D). Also discussed here is the appropriate timing of feedback, as well as the flow in which feedback will be of most use to students. A review of the effective feedback model is followed by a brief break in the session.

After the break participants are asked to reflect on the use of feedback in their classrooms. Next, the participants move into the final formative assessment subtopic of grading. Finally, participants move into a discussion of their current summative assessment practices, followed by the information and best practices found on summative assessments. Participants then fill out the final reflection section on their “so what, now what?” graphic organizer, surrounding feedback and summative assessment.

To sum up the second session participants are then asked to take 15 minutes with their group to answer the following questions: 1. In your teacher preparatory program, which of the topics of this workshop have you covered previously? To what extent?, 2. Which of the practices that we have discussed have you personally reflected on before this workshop? Explain. and, 3. Which area is sticking out for you as an area you think you need to make the most growth? Why?. After discussing these questions with their groups, participants are left with information

on how to access two forms: the goal and the survey, both of which are the formal assessments of the project, which will be discussed further in this next section.

Assessments

The two types of assessments that we will be using for this professional development will be formative and summative assessments. Throughout the professional development there will be many informal assessments of the participants, both by the instructors and also by the other participants in the group. Much of the formative assessments will be in the form of partner and group discussions. Often after being given new information in the professional development participants will be asked to write down their thoughts to the information (was it new, what surprised them, how it relates to their classroom specifically, etc.). Other informal assessments include an inside outside circle, notes, and graphic organizers. Finally, are two summative assessments given at the end of the second and final session. The first assessment is in the form of a goal. The “so what, now what” graphic organizer leads the participants to take the best practices and think of ways that they can put them into action, and come up with their final goal. Participants access this form to create their own personal goal related to assessment for the school year through a link which leads to a google exit ticket (see appendix E). The second summative assessment is also accessed by participants through a link, which then leads them to an anonymous survey (see appendix F). In this survey participants are asked about the presenter of the professional development, the relevancy of the topics presented, their resulting learning, their resulting motivation, the usefulness of the professional development as a whole, and finally for any other suggestions or comments.

Timeline

In order to complete this project I first needed to understand the literature and its implications. This work with the development of chapters 1-3 were done in the Spring of 2020. The remaining parts of my paper as well as my project and its supporting materials were created during the summer of 2020 - these including the Google Slides presentation that included the reasoning behind my topic of choice, the purpose behind the learning that would be taking place, an overview of the professional development, teaching the best practices for assessments and assessment practices along with built in reflection questions, and exercises to help teachers to determine their goal surrounding the best practice that they would like to implement or improve on for the upcoming school year. This also included creating the google forms that teachers will use their laptop to fill out their goal for us to keep electronically as well as a second survey via google forms that teachers will fill out anonymously to give feedback on the professional development. Overall, the timeline of the creation for this project took about 7 months from starting to research the topic, to having a final product that was ready to be shared and presented to my colleagues.

Conclusion

In summary, I created and shared a professional development for teachers to use as a tool for developing their assessment skills in a collaborative setting. In this, I provided participants with information about current best practices being used in the field of secondary and higher education as well as research-based. Beyond this, I also provided opportunities for teachers to see examples, communicate with their colleagues, and create a goal related to the professional development in order to expand their growth beyond this professional development. This chapter described the details of such professional development, its participants, setting, paradigm,

timeline, methods, and assessments. In chapter four I will reflect on the process of creating this professional development as well as the possible impact that this project may have on my future students, colleagues, and myself.

CHAPTER FOUR

Conclusions

Assessment literacy is very important to me, both for the teacher and for the student. In the upcoming school year, 2020-2021, teachers around the world will face many new challenges brought upon by the COVID19 pandemic. These challenges will range from the technical issues of teaching remotely to the logistical issues of teaching in person. However, among the chaos, teachers will be rising to the occasion in order to teach their students. In doing so, teachers will need to rely on data. This year, more than in recent years, teachers will need to rely specifically on their data from local assessments, as most (if not all) of the state mandated testing was canceled, due to the pandemic, in the spring. Therefore it is crucial that teachers are assessment literate, as well as our students.

The goal of this capstone project was to answer the question: *Is it possible to extend the knowledge of current research, to educators, through the form of a professional development workshop, with regards to best practice for assessments, and related instructional practices, at the secondary level?* In this chapter I discuss my learning that has taken place as a result of this capstone project, revisit the literature review, note the current and future implications, state the limitations of this project, and discuss where I plan to go from here.

Learning

Through the capstone process I have learned much about myself in regards to myself as a researcher, learner, and writer. As a researcher I have taken a deeper dive with this project than I ever had previously in my formal education. With that dive came vulnerability in a sense of not knowing what I was doing much of the time and letting both my professors and those who came

before me lead the way. I have learned a lot about how to find and paraphrase sources as well as how to properly give credit to those sources. I have learned about different methodologies used in research, and when those different methodologies make sense to be used, and when they do not.

I have also learned that I am as passionate about research as I am about learning, as this project has inspired me to return in the future to add to the body of research surrounding assessment and, more specifically, standards-based grading. My interest and passion for assessment is tied greatly to standards-based grading, an area that I would like to both learn more about as well as contribute to. I have also learned about myself as a learner and my needs in regards to pacing myself and making time for my personal learning goals.

Last, I have learned about myself as a writer, in that I write very similar to the way that I speak, which is too fast. Working on draft after draft of this project has given me time to slow down and revisit my work, ultimately bringing out a more calculated and considerate writer in myself who is more appreciative of the writing process. I have also learned many of the details of writing in APA style, as well as where to go when I am unsure of specific formatting needs I may have in the future. Of these things that I have learned about myself as a researcher, writer and learner, none come as a surprise, but more as a welcomed and expected growth within the capstone process.

Literature Review

When I look back now at the literature review for this project, the parts that proved to be the most important was the literature that was grouped under formative assessment. This group of literature was important because the body of it was vast, and because of the way that many

educators view learning. For example, as a teacher, one of my goals is to help my students become lifelong learners. Because of this, it is hard to see assessment as a before learning, during learning, and at the end of learning, and therefore I relate personally to the literature found related to formative assessment.

Of the literature reviewed related to assessment I think that the literature highlighting the importance of assessment literacy in students through the use of exemplars as well as the literature on feedback was most important to this capstone project. Specifically, Hattie and Timperley's (2007) detailed work with regard to the feedback process was possibly the biggest stand-alone influence of the reviewed literature. Not only did Hattie and Timperley (2007) lay out an effective model of feedback, but they also took the time to break down different types of feedback as well as when and how they are proven to be the most effective in the instructional process.

Implications

One implication of this capstone project stems from the majority of the literature being found surrounding formative assessments rather than prior knowledge assessments and summative assessments. I believe that there are implications for educational professionals to readdress the way that we categorize and talk about assessments, especially considering some of the push for reassessment of standards, some of which reassessing at the students request, and some of which reassessing as a mandatory and built in part of the learning process. These practices would blur the lines between the current categories of assessments that we have in education.

Another implication of this capstone project is that even experienced teachers need help keeping up with what is currently best practice in education. Both myself, a 5th year teacher, as well as old coworkers with much more experience than myself, had learned pieces of new information from this capstone project's literature review. We need to find ways in education to get the word out about best practice better than the teachers who are currently formally furthering their education bringing PD to our teachers and better than following each other on social media.

Limitations

One of the limitations to this capstone project is that, because the majority of the research was done at the secondary level or higher education level, this information and these practices are less applicable to the elementary level. This professional development and the research to support it is geared towards secondary educators. The professional development was also created for the specific small charter school that I currently work at. Therefore, another limitation of this capstone is that the activities and goals associated with this professional development might not be as suitable for a larger school or district.

Where from Here

After the submission of this project my personal goal for the use of this project will start with me making my own goals related to assessment for the school year, and, in trying to reach those goals, possibly create more physical reminders for my classroom and for my colleagues' classrooms about best practices. Also, talking with my colleagues throughout the school year more about assessment, in the hopes that next school year I will be able to present this

professional development to my colleagues as it has been designed for them and our specific school setting.

Summary

The goal of this capstone project was to answer the question: *Is it possible to extend the knowledge of current research, to educators, through the form of a professional development workshop, with regards to best practice for assessments, and related instructional practices, at the secondary level?* In this chapter I discussed the learning that has taken place for myself in regards to my writing, myself as a learner, and myself as a researcher. Then, I noted some of the most important literature that stood out in this project, which had the biggest impact. Next, I highlighted some of the implications and limitations of this capstone project. And finally, I discussed what the goals for this project are beyond this point, and where I believe it will go from here.

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Appendix A

Figure 1. *Most Recent Versus Most Frequent Results* (Schimmer, 2016).

Most Recent Versus Most Frequent Results	
Most Recent Is Most Accurate When...	Most Frequent Is Most Accurate When...
<ul style="list-style-type: none"> ● There are few (if any) variables in how students demonstrate proficiency. ● Student growth toward proficiency is fairly straightforward. ● Teachers are assessing foundational knowledge and fundamental skills. ● Teachers are assessing building blocks for deeper learning and understanding. ● New assessment takes precedence over previous demonstrations of learning. 	<ul style="list-style-type: none"> ● There are a number of variables in how students demonstrate proficiency. ● Student growth toward proficiency is complex, given all the elements that contribute to the demonstration of learning. ● Teachers are assessing deeper understanding of strategies and processes. ● Teachers are assessing applications of foundational knowledge and skills in a variety of circumstances. ● New assessment evidence leads to contextual reconsideration of previous evidence.

Appendix B

Assessment Best Practices at the Secondary Level - Notes Handout

	Current Practices	Best Practices
Prior Knowledge Assessments		
Formative Assessments: Exemplars and Assessment Literacy		

Formative Assessments: Feedback		
Formative Assessments: Grading		
Summative Assessments		

Appendix C

So WHAT? Now WHAT?

Reflection #1

Reflection #2

Reflection #3

My goal

Appendix D

Feedback Types with Examples

Task Feedback

- Describes how well the student has performed on a task.
 - Correct/incorrect answers
 - Acquiring information/building knowledge
- Should focus on what a student can do rather than what they cannot.
- More powerful when it results from faulty interpretations, not a lack of understanding.

Task Feedback Example

"Your goal was to write the numbers in order from least to greatest. Yes, you have written the least number first, but after that your numbers become jumbled.

Your next step is to go back to find/match which numbers are furthest left on the number line. Which came second, third, etc? Then you can use that matching to rewrite them in that order."

My Task Feedback Example:

Process Feedback

- Describes the process underlying or related to tasks.
 - Strategies to detect/learn from errors.
 - Ways to establish a relationship among ideas.
- Helps to develop "deep processing and mastery of tasks" (Hattie & Timperley, 2007).
- Most beneficial when it helps students reject erroneous hypotheses and provides cues to directions for searching and strategizing.

Process Feedback Example

"Remember that the thing we are working on is factoring. I see there is something not quite right here. Why don't you have another look and identify what you think needs to be fixed? Then come and have a chat about this before you begin the problem again"

My Process Feedback Example:

Feedback Types with Examples

Self-Regulation Feedback

- Describes how learners can monitor, direct, and regulate their own actions as they work.
 - Foster the willingness and capacity to seek and effectively deal with feedback.
 - Encourage students to self-assess and self-correct.
- Very powerful especially in relation to “deep processing and mastery of tasks” (Hattie & Timperley, 2007).
- Effort feedback is most effective earlier in the learning process.

Self-Regulation Feedback Example

“How about you self-assess this assignment? Try looking at the success criteria and the exemplars to get started. You could work with Abdinajib and Saeeda to assess each other’s. Then, can you come up with ideas for what you might try to do different next time? That would be great to share with the class afterward.”

My Self-Regulation Feedback Example:

Self Feedback

- Personal evaluations (usually positive) about the learner
- Commonly used by teachers, however it is tied to negative impacts on a student’s perceptions of their own abilities and shown to have little to no effect on student achievement
- When combined with other types of feedback, self feedback can bring down the positive effects of the other kinds of feedback

Self Feedback Example

“Wow, you are really good at this, you are awesome!”

My Self Feedback Example:

*This example is one that should be avoided.

Appendix E

My Assessment Goal

Before you leave today, answer the following questions.

Name *

Short answer text

Email

Short answer text

What is one goal that you would like to make for yourself related to assessment best practices and areas you identified for growth?

Long answer text



Appendix F

Capstone Project PD Survey

anonymous survey

* Required

1. The presenter of this professional development was knowledgeable about the topics presented. *

Mark only one oval.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

2. The topics of this professional development were relevant to me and my practice. *

Mark only one oval.

- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

3. I have learned something new as a result of this professional development. *

Mark only one oval.

- Strongly Agree
 Agree
 Neither agree nor disagree
 Disagree
 Strongly Disagree

4. I plan to try something new as a result of this professional development. *

Mark only one oval.

- Strongly Agree
 Agree
 Neither agree nor disagree
 Disagree
 Strongly Disagree

5. This professional development was a productive use of my time. *

Mark only one oval.

- Strongly Agree
 Agree
 Neither agree nor disagree
 Disagree
 Strongly Disagree

6. Suggestions/Comments I have for this professional development.

Appendix G

LESSON PLAN: Presentation #1

Central Focus: Professional development on best practices surrounding assessment.

Learning Objectives: Teachers will reflect on their current use of assessments as well as their practices surrounding assessments. Teachers will understand current best practices surrounding assessment at the secondary level.

Presentation Description: This session will start with talking to participants about the need for the PD and help them to find a “why” for themselves. Then, will introduce best practices for both prior knowledge assessments and start to address formative assessments as well. All throughout the session participants will be asked to reflect on their current practices and make connections which will eventually lead into the goal made at the end of the second session.

Assessments: Informal observations through share outs, small group discussions, and fist of five for the objective check-ins.

Instructional Resources and Materials:

Google Slides Presentation

Note-taking handout

“So what, now what?” graphic organizer

LESSON PLAN: Presentation #2

Central Focus: Professional development on best practices surrounding assessment.

Learning Objectives: Teachers will understand current best practices surrounding assessment at the secondary level. Teachers will continue to examine their own practices surrounding assessment. Teachers will develop a goal surrounding best practices that best suits the needs of their classroom.

Presentation Description: This session will continue to add to the best practices surrounding formative assessments and conclude with those surrounding summative assessments. Again, this session will ask participants to reflect on their current practices and make connections which will eventually lead into the goal they make at the end of this session, related to assessment practices.

Assessments: Informal observations through share outs and small group discussions. Formal assessments through the “goal” exit ticket (electronic) and the PD survey (electronic).

Instructional Resources and Materials:

Google Slides Presentation

Note-taking handout

“So what, now what?” graphic organizer

“Feedback types with examples” graphic organizer

Extra devices that can access the exit ticket and survey