

Making It Theirs:  
The Case of Portfolio Use by Teachers in a Tutorial Setting

By

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## **Abstract**

While portfolios can help connect teachers and students to the processes and products of learning and assessment (Blake, Backman, Frys, Holber, Ivan, & Sellitto, 1995), many portfolio-based assessment (PBA) methods are abandoned soon after their implementation due to, among other reasons, insufficient training and a lack of on-going curriculum support for teachers. The benefits of portfolios in educational settings are derived from their implementation, namely, the tasks that are used and performances that are elicited as part of an assessment process (Fox, 2014). This research draws on previous literature that highlights the theories and practices behind tutorial-based instruction, and examines the historical progression of different types of assessment, specifically PBA as an alternative assessment method. Focusing on the experiences of four tutors using a PBA approach, this case study further examines their accounts of successes and/or failures of their PBA practices. Furthermore, this research begins to consider the relative value of portfolios as a resource for assessment, and for whom, and focuses on how the implementation of PBA practices can be improved. As a result of three Phases of semi-structured interviews over a six-month period, qualitative analysis of the data suggests varying use of PBA practices depends to a great extent on the teacher's responses to a PBA approach. Whether portfolios are viewed as a valuable resource for assessment depends in part on how issues such as time, cost, and training are addressed.

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## **Chapter 1- Introduction: My Personal Experience with Tests**

Summative tests have played a prominent role in my academic career. Starting at a young age, I remember having to take end of unit outcomes-based tests, as well as New York State grade-completion exams. I never did well. I was not a failing student; however, I was just not at the top of the class. This annoyed me to no end because I would spend hours building up my knowledge and reviewing for each test, only to be defeated when I was given back my less-than-expected score. Taking tests turned learning into, as Shohamy (2007) stated, a feeling of “pain, tension, and unfairness” (p.142).

This continued for many years. My parents, teachers, and I could not figure out why I was not doing well on the tests, despite the long hours I spent studying for them. The initial thought was that I had a learning disability that had not been identified. As a result, I did a series of tests with several psychologists, however I always got the same result: No learning disability.

Fast forward to university when I decided to get tested for a learning disability, again. The results of these tests were different than the ones I had previously taken: I was diagnosed with “Test Anxiety”. This diagnosis helped me understand why I was never doing well on high-stakes, standardized, and timed tests. I would freeze and my mind would go blank because my sub-conscious anxiety about taking tests would overpower me and impede me from being able to answer the test questions properly. While it was great to have a diagnosis, my next thought was, “Now what?”

As a result of my diagnosis, in university, I was provided extra time and a private room to take my tests. This lowered my anxiety while taking the tests and

helped me improve my grades, however, my feelings about the tests had not changed: I felt like I was being assessed on how well I could regurgitate memorized information, rather than my ability to accurately show the information I knew on a daily basis as a result of the course. I knew this needed to be changed, but I was never aware of any other style of test since, in my previous years of schooling, I was always tested with summative, high-stakes, outcomes-based tests.

Following graduation from university, I became an English as a Second Language (ESL) teacher. My experiences while teaching and giving assessments opened my eyes even more to the issues associated with solely using standardized assessments to evaluate students' achievement. The tests I used were pre-developed and provided for me. I was also given no explanation as to why the particular tests we gave were used, nor was I informed about the benefits of using these tests. Shohamy (2007) argues that this lack of information provided to teachers who use pre-developed standardized assessments can have long-term negative impacts on the students and teachers, such as lack of motivation, anxiety, and unnecessary penalization.

It was not until more than five years after I had completed my Bachelor's degree that I learned about alternative testing methods. I was attracted to learning about testing methods that did not require a student to memorize and regurgitate information because of the many years I had struggled taking high-stakes standardized tests. Alternative methods of assessment (e.g., Fox, 2008) meant that students could show what they had learned in different ways, over time, in low-stakes environments. The use of these alternative assessments agreed with the belief that students should be protected from becoming victims of bad testing and,

rather, be encouraged to become actively part of testing and participate in better methods of assessment (Shohamy, 2007).

The alternative method of assessment, portfolio-based assessment (PBA) (e.g., Moya & O'Malley, 1994) specifically appealed to me because students could show their work over time in formative or summative methods, and teachers could evaluate each portfolio as it related to the student's progress and goals, as well as use the portfolio to shape future instruction so that each student's various learning styles could be addressed.

Shohamy (2007) identified herself as a victim of tests, and asserted that tests are often an "unpleasant experience" (p.142). I, too, believe that I was negatively affected by the sole use of standardized outcomes-based assessments. Furthermore, I strongly believe that if portfolio-based assessments were used more in my earlier schooling, I would have been viewed as a stronger student rather than a struggling and confused student. The messages that the tests communicated to my teachers, my parents, and me undermined my confidence.

My unpleasant experiences with tests in education have helped motivate the research for this thesis. Though it may not be practical or useful for an education system to solely use alternative methods of assessment (e.g., Koretz, Stecher, Kelin, & McCaffrey, 1994), the combination of alternative assessments, such as PBA, and standardized outcomes-based assessments could help encourage students to participate in testing and aid teachers in identifying areas where students need pedagogical intervention. This would lead to students' needs being addressed sooner and potentially increase their learning and achievement (Chang & Tseng, 2009; Fox, 2014; Hamp-Lyons & Condon, 1993; Swicegood, 1994). This thesis will focus on the sole use of PBA as a form of assessment in tutorial settings, however I

will also discuss how other forms of assessment could be used in combination with PBA. The decision to exclusively use PBA as the alternative method of assessment researched for this thesis will be further discussed in the following Section.

### **1.1 Portfolio-based Assessment: Why This Research?**

The adaptability of PBA into different learning environments drew me to learn more. Through my initial research, I found that PBA is one of the more frequently used methods that are associated directly with the alternative assessment method (Fox, 2008). It can help show a student's knowledge and learning progress without high-stakes, high-anxiety test settings (Blake, Backman, Frys, Holbert, Ivan, & Sellitto, 1995; Swicegood, 1994). Furthermore, PBA can be adapted to the student's learning style and help show what he/she has learned, in his/her own words (Chang & Tseng, 2009). Accordingly, Hamp-Lyons and Condon (1993) have considered portfolio assessment a "people oriented" (p.178) assessment because it involves self-evaluation. Finally, as a creative-minded person, PBA also piqued my interest because it is an innovative, unique, and creative way to show learned material, other than the more commonly used standardized testing methods (Fox, 2014; Moya & O'Malley, 1994; Savignon, 2002; Swicegood, 1994)

Though PBA is the most often cited form of alternative assessment (Fox, 2008), it is not without drawbacks. Flaws such as pushback from enforced use (e.g. Fox, 2014; Hargreaves, Earl, & Schmidt, 2002; Wolfe & Miller, 1997), increased time necessary for assessment (e.g., Hamp-Lyons & Condon, 1993; Koretz, et al., 1994; Wolfe & Miller, 1997), subjective reliability and validity (e.g., Hargreaves et al., 2002; Koretz et al., 1994; Moya & O'Malley, 1994), increased cost (e.g., Koretz et al., 1994;

Miller & Legg, 1993; Wolfe & Miller, 1994), and essential training (e.g., Hamp-Lyons & Condon, 1993; Hargreaves et al., 2002; Simon & Forgette-Giroux, 2000) have, all too frequently, led to the abandonment of PBA methods in schools.

Despite these challenges, when PBA methods are used in schools effectively and continuously, they have shown to more accurately demonstrate depth and breadth of students' capabilities (Pettis, 2011). Furthermore, the overwhelming number of benefits that can result from using PBA range from encouraging student-teacher collaboration (Swicegood, 1994) to fostering the development of cognitive skills (Chang & Tseng, 2009) to the promoting the development of self-assessment abilities (Fox, 2014) to cultivating improved work abilities (Moya & O'Malley, 1994). Among many others that will be discussed later in this thesis, the adaptability and unique methods that are used to present information in PBA make it an excellent practice to use when addressing the various needs of different learners. It is because the numerous benefits of using PBA methods have become, unfortunately, so overshadowed by issues such as time, cost, reliability and validity uncertainty, and implementation issues that I chose to make it the focus of my research. My hopes for the outcome of this research are that school systems and curriculum developers will further consider how strongly the benefits can outweigh the issues, and be motivated to support and encourage teachers to use PBA methods more frequently when assessing students.

## 1.2 Research Questions

In order to understand more about the training methods and curriculum support that influence PBA implementation in tutorial settings, this study is guided by the following questions:

- 1) Are portfolios valuable resources for assessment?
  - a. If so, under what circumstances? For whom?
- 2) As perceived by instructors, what affects the success and/or failure of PBA practices in tutorial settings?
- 3) How can the implementation of PBA practices be improved?
  - a. How can training better support teachers?
  - b. How can curricular support for teachers be improved?

By answering these questions, this research aims to further identify ways to improve upon the implementation of PBA practices, specifically in regards to teacher training and curricular support. It is my hypothesis that if PBA training and support are continuous and catered to the user, the implementation of PBA practices is likely to be successful, and thus it will be deemed a valuable assessment resource.

## 1.3 Why Research PBA in Tutorial Settings?

My initial research design was *not* intended for tutorial settings; it was for primary education classrooms. The majority of research I had found about PBA methods was situated within the context of the classroom. As a result, I wanted to see what contributed to the success and failure of PBA in classrooms, and what could be done to support teachers' use of PBA methods. Finding participants for this

proved to be much more difficult than planned however, so I went looking elsewhere.

The opportunity to do my research at a tutorial company was unexpected, however wholly appreciated, especially because of how it affected and directed my research. Initially, I was apprehensive to carry out my case study in such a different learning environment than a school, and with so few participants, because of the limited results of hands-on PBA use; however, it has resulted in a more hands-on, interactive experience than I believe I would have had with many participants in a primary education setting.

Focusing my research on PBA in tutorial settings has also allowed me to gain additional insight into how tutors typically assess their students. Often, students who seek tutorial help are looking for extra help in a subject they are weak in, or they want additional guidance in a subject they are hoping to excel at more. Through my research, I've found that since tutorial sessions are often less formal than classroom learning environments, assessments rarely take place. This is an issue I have addressed in my research because, if students' progress is not assessed in tutorial settings, how do the tutors know if the student is improving? This issue will be further discussed in my theoretical and empirical frameworks, as well as in how the tutors in this study used implemented and assessed the portfolios they had created for and with their students.

The participants, or tutors, in this research are part of a case study (Duff, 2008; Yin, 2003), which has been developed to examine the phenomena of PBA in tutorial settings from the perspective of the participants within the phenomena. This research design follows Gall, Gall, and Borg's (as cited in Duff, 2008) definition of a case study, which is an "in-depth study of instances of a phenomenon in its natural

context and from the perspective of the participants involved in the phenomenon” (p.22). In Chapter 4, which details the Method used to investigate the research questions, a full explanation of case study as a qualitative research methodology is discussed.

#### **1.4 Hands-on: The Researcher as a Participant**

As an employee at the tutorial company, I am an active participant in my own research. Including myself as a participant in my research has allowed me to view the research from a different perspective, and take a more hands-on approach to the case study. Additionally, as I am the only English tutor at the tutorial company, my participation allowed for additional perspective on PBA use in a subject different than the other participants’.

Throughout my research, I have kept a journal as a participant and as a researcher, to balance both perspectives. Although I am more knowledgeable about PBA methods than the other participants, I believe that my added knowledge of PBA and experience using PBA while tutoring helped me to relate better to the successes and difficulties my colleagues experienced while implementing PBA into their tutorial sessions.

Though I am conducting the training sessions for the participants, I am also holding myself to the same standards that I expect from my participants. In addition to keeping several journals, I have completed the same tasks required of my participants. I have also incorporated the changes that were made throughout the case study into my own student’s portfolio.



I am not naïve enough to ignore that my involvement in the case study is not without issues, however. I will address these issues in the Chapter entitled “Implications” later in this thesis.

### **1.5 Organization of Chapters**

In the previous Sections, I have given a brief introduction to why I’ve chosen to do research on portfolio-based assessments in tutorial settings. Additionally, I have explained why I will be an active participant in this research study, and discussed what benefits this has served throughout my research. In Chapters 2 and 3, respectively, I introduce the theoretical and empirical frameworks that have influenced and supported my research. Additionally, in Chapter 3, I discuss the research gap, which this research begins to address. In Chapter 4, I describe the method used to conduct my research and analyze the results. Following a description of my research, in Chapter 5, I present a narrative account of the results of each phase in my study. In Chapter 6, I discuss the findings of my research study in their entirety in relation to my research questions. In the final Chapter, Chapter 7, I conclude my thesis by identifying implications of my results, considering possible limitations of my study, and suggesting areas for future research. The Sections following Chapter 7 include my references and appendices.

## Chapter 2- Theoretical Framework

As discussed in the Introduction to this thesis, my study explores the impact that training methods and curriculum support have on the implementation of PBA in tutorial settings. This study has been guided by three main research questions, which focus on whether or not portfolios are a valuable resource for assessment, the circumstances that affect the success and/or failure of PBA practices in tutorial settings, as perceived by the participants, and ways that the implementation of PBA practices can be improved.

In order to address the research questions, I have drawn on both theoretical and empirical work within applied linguistics. Throughout Chapter 2, I discuss the theoretical framework that has supported my research, specifically situated learning (e.g., Lave & Wenger, 1991), community of practice (e.g., Lave & Wenger, 1991), Vygotsky's Zone of Proximal Development (e.g., Vygotsky, 1987), legitimate peripheral participation (e.g., Lave & Wenger, 1991), and guided practice (e.g., Rogoff, 1990). These teaching processes and theories have helped me to further understand the dynamics of tutorial sessions, learning, and instruction. My interpretation of these also motivated my decision to evaluate assessment as it is used in tutorial settings.

### 2.1 Situated Learning

Situated learning is knowledge learned as a result of a social interaction in daily life (Artemeva, 2008). The idea behind situated learning is that information is gained by involvement *in* an activity, which may or may not include reflection on

what was learned, not just by instruction *about* an activity. Lave and Wenger (1991) assert that, “there is no activity that is not situated” (p.33), suggesting that learning can take place anywhere at any time. Both Lave and Wenger (1991) and Rogoff (1990) liken this transfer of knowledge to that of a master-apprentice relationship. In this situated learning process, the master, or old-timer, provides information to the apprentice, or newcomer, through hands-on experiences that help the apprentice become a master.

In situated learning, it is beneficial for learners to involve themselves in communities of practice. This means that, by being engaged in an activity, a person can better learn information or a skill. Additionally, by participating in an activity within a community of practice (Lave & Wenger, 1991), the collaborative learning environment will provide the learner with the tools to later use the information or learned skills on their own. The idea that a person is able to perform a learned skill as a result of learning in collaboration with others is in following with Vygotsky’s Zone of Proximal Development (Artemeva, 2008). These two learning concepts will be further described below, followed by an explanation of the two models of situated learning: Legitimate Peripheral Participation and Guided Participation.

### **2.1.1 Community of Practice**

For an enhanced learning experience to occur, it is essential for learners to participate in a community of practice (CoP). Wenger (as cited in Artemeva, 2008) defines a CoP as a group of people who “share a concern or a passion for something they do and who interact regularly to learn how to do it better” (p.45). The learning that occurs as a result of situated learning will, hopefully, provide an apprentice with

enough information to become a master and have full participation in a CoP.

However, since the apprentice in situated learning is interested in learning more and doing things better, he can still learn within specific CoP. Lave and Wenger (1991) stated that, “to become a member of a community of practice requires access to a wide range of ongoing activity, old-timers, and other members of the community; and to information, resources, and opportunities for participation” (p.101). In this situated learning experience, the newcomers and old-timers are involved in a social learning experience within a CoP, whereby their actions are interrelated and promote development. The result of the learning experience that takes place in the social interaction should enable the learner to use the learned information on his own. The responses to the social learning interaction are in accordance with Vygotsky’s notion of Zone of Proximal Development.

### **2.1.2 Vygotsky’s Zone of Proximal Development**

Artemeva (2008) explains that Vygotsky’s “concept of Zone of Proximal Development (ZPD) allows us to observe how participants in [social] interactions acknowledge and respond to each other’s knowledge and how their individual levels of knowledge change in the process and affect the goal of the interaction” (p.41). This learning concept encompasses and encourages situated learning, legitimate peripheral participation, and guided participation within a community of practice. His learning theory explains that apprentices learn best by engaging in a social interaction with a master who guides him to learn a new skill. The apprentice’s learned skill is then facilitated through teachings within different social communities, which help him learn how to become a contributor to the CoP, and

thus a master (Lave & Wenger, 1991; Rogoff, 1990). Theoretically, when the apprentice becomes educated enough to become a master, he should then be able to use the taught skills on his own. This learning process follows Vygotsky's notion that "what a [person] can do today in collaboration with others is an indicator of what they will be able to do tomorrow alone" (as cited in Artemeva, 2008, p.40).

With regard to situated learning, however, there are two schools of thought: 1) legitimate peripheral participation (e.g., Lave & Wenger, 1991); 2) guided participation (e.g., Freedman & Adam, 1996; Rogoff, 1990). Both models of situated learning are relevant when considering the learning that takes place in tutorial settings, which is the focus of this thesis. Both of these accounts of situated learning are discussed below.

## **2.2 Legitimate Peripheral Participation**

Legitimate peripheral participation (LPP) is a process of learning whereby newcomers learn knowledgeable skills from old-timers (Lave & Wenger, 1991). Providing a situation where the apprentice engages in the learning experience, rather than being an object of the learning experience "may well be a condition for the effectiveness of learning" (Lave & Wenger, 1991, p.93). This means that, when apprentices are given the opportunity to practice what they are learning, through the guidance of a master, they are likely to have an enhanced learning experience and eventually become masters themselves.

### 2.3 Guided Participation

Freedman and Adam (1996) contrast legitimate peripheral participation with guided participation because the latter is “a process that characterizes various forms of apprenticeship” (p.398). While still similar to legitimate peripheral participation, in guided participation, learners collaborate with instructors— or apprentices with masters— in hands-on problem-solving activities, which promote learning and understanding as a result of the experience. Rogoff (as cited in Freedman & Adam, 1996) states:

The process of communication and shared participation in activities inherently engage children and their caregivers and companions in stretching children’s understanding and skill...and in the structuring of children’s participation so that they handle manageable but comfortably challenging sub-goals of the activity that increase in complexity with children’s developing understanding” (p.398).

As a result of this collaborative teaching and learning process, Lave (1988) asserts that, apprentices learn how to think, act, argue, and interact in a CoP. The intersubjectivity, or verbal and non-verbal communication used to support understanding (Rogoff, 1990), which is promoted by guided participation, is in accordance with Vygotsky’s learning theory, ZPD, where “social interaction is expected to promote development through the guidance provided by interaction with people who have achieved some skill in the use of those intellectual tools” (as cited in Rogoff, 1990, p.140). Furthermore, the method of instruction used in guided practice “provides bridges between familiar skills or information and those needed to solve new problems” (Rogoff, 1990, p.66).

## 2.4 Practice and Theory in a Tutorial Setting

The teaching concepts and theories discussed above have informed my understanding of learning, teaching, and assessment in tutorial settings, which are the focus of this study. In tutorial settings, the tutor can be considered the master, while the student is the apprentice. The aim of the tutoring sessions is for the tutor— who has advanced knowledge of a subject as a result of a passion or desire to learn more about the it— to give hands-on, one-on-one instruction to the student— who has only a minimal or beginner comprehension of a subject, but is hopeful to develop a better understanding. The hopeful result of the tutorial session is that the student can use the taught information at a later time on his/her own at a level of understanding close to the tutor's. Due to the advanced knowledge of the tutor and method of instruction, this social learning experience directly follows the practice of situated learning, legitimate peripheral participation, and guided practice within a community of practice.

Due to the methods of instruction utilized in tutorial settings, these practices and theories have been used to frame the research of this thesis. Artemeva (2008) states, "it is the eye of the practitioner that gives meaning to the theory" (p.68). I agree. While I recognize there may be differing interpretations, my interpretations of these practices, the theories that account for them, and how the theories inform methods of instruction utilized in tutorial settings, as previously discussed, have been used to explain why the case study for this thesis was situated within a tutorial setting. The purpose behind examining assessment procedures within tutorial settings will be further discussed in the "Assessment in Tutorial Settings" Section of Chapter 3.

Having introduced the topic of this thesis in Chapter 1 and discussed the theoretical framework and its relation to this research in Chapter 2, the following Chapter will discuss portfolio-based assessment in relation to the history of assessment (including, testing)<sup>1</sup>. In addition to the above practices and theories, the history of assessment and PBA has helped frame the research reported in this thesis.

## **2.5 Practice and Theory in PBA Training and Use**

In addition to the ways that the aforementioned practices and theories can be applied to the instruction and learning that takes place in tutorial settings, training teachers to use the PBA method also actively applies these practices and theories.

In terms of this case study, for example, the participants attended professional development and training sessions in which they, as novices, learned how to use the PBA method from an informed PBA researcher, or old-timer. This presentation of information actively applies Lave and Wenger's (1991) idea of legitimate peripheral participation.

Following the training, the participants then applied and reflected upon what they had learned while using the portfolios in their tutorial sessions. This application of learned information is just example of how the idea of situated learning (Lave & Wenger, 1991; Rogoff, 1990) was applied in this case study.

Finally, after using the PBA method, participants were encouraged to reflect upon their use of the method, as well as actively participate in problem-solving discussions about any issues they had while using the portfolios. These problem-solving discussions took place during the professional development and training

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<sup>1</sup> The word *assessment* is the umbrella term for all forms of evaluation, from classroom-based to standardized testing.



sessions (discussed more in a later Section), which included other tutors who were applying the same assessment method. As a result of these discussions, the participants were able collaborate and learn from each other, rather than just from the PBA researcher. Promoting this social interaction and collaborative learning environment enabled me to further apply the ideas behind community of practice (Lave & Wenger, 1990), Zone of Proximal Development (Vygotsky, 1987), and guided participation (Rogoff, 1990). Furthermore, by motivating continuous involvement in the problem-solving discussions, as well as in the hands-on experience of using the PBA, situated learning (Lave & Wenger, 1991) was continuously present throughout the participants' training and use of the PBA method. The design of the case study, which created the opportunity for these learning experiences, will be further explained throughout Chapter 4.

## **Chapter 3- Empirical Framework**

This Chapter presents the history of testing and assessment and PBA. I begin by considering of the differences between formative and summative assessments, and how they have been, and are being, used in classrooms today. I will then define what alternative assessments are and why they have become popular in recent years.

Before I discuss portfolio-based assessment and its uses, types, benefits, and issues, I will give a brief summary of what a portfolio is and how it evolved as an assessment approach. Finally, I discuss the limited ways in which assessment has been used in tutorial settings, as well as the gaps in research that this thesis addresses.

### **3.1 Formative vs. Summative Assessment**

Summative assessments are end-of-unit, formally graded tests that are recorded for the overall assessment of a student (Goodman & Swann, 2003; Harlen & James, 1997). These tests are often standardized, norm-referenced, and outcomes-based (Brindley, 2001; Harlen & James, 1997). McLaughlin and Vogt (1996) report that summative assessments, in the form of quizzes, reports, or tests are the most common form of educational evaluation. As a result of the ability to standardize and numerically report scores from summative assessments, they are frequently associated with “offering a number of advantages to key stakeholders in education programs, including transparency of reporting, and alignment of teaching and curriculum goals” (Brindley, 2001, p.394).

The scores or ratings from summative tests are “traditionally used to support decisions, partly because numerical ratings are implicitly assumed to be more easily defensible than other forms of assessment” (Delandshere & Petrosky, 1998, p.15). The frequent assumption that higher test scores equal increased ability and understanding of information, is also what has encouraged the use of summative assessments as a way of representing teaching ability and student progress. Despite the ability to report comparable numerical scores, Knight (2002) and other researchers (see Black, Harrison, Hodgen, Marshall, Serret, 2010, 2011; Campbell-Barr, Lavelle, & Wickett, 2012; Harlen & James, 1997; Moya & O’Malley, 1994 for more information) argue that summative assessment practices are in disarray and should be reconsidered.

Since the late 1970s and early 1980s, there have been concerns about summative and standardized assessment practices in the United States (McLaughlin & Vogt, 1996). The rationalization behind the use of these tests was that they were assumed to produce evidence of individual learning and cognitive processes (Leung, 2004), however, recently they have “often been falling short of providing useful representations and analyses of actual performances” (Delandshere & Pretrosky, 1998, p.16). This is disconcerting, especially when summative and standardized assessments are continually used as the sole sources of information about student progress and teacher ability. Knight (2002), in agreement, stated that when it becomes clear that summative assessments are unable to accurately report information about performance, then issues of accountability, legitimacy, reliability, and validity are all compromised.

The inability of summative and standardized-assessments to provide teachers with constant feedback about students’ learning and needs, is what has led

to the use of formative assessments in classrooms (Boston, 2002). Formative assessment is the on-going evaluation of a student in the form of “teacher observation, classroom discussion, and analysis of student work, including homework and tests” (Boston, 2002, p.1). It can occur “informally, and in the absence of a formalized assessment task” (Yorke, 2001, p.118) and can aid in academic integration, especially when teachers are “analyzing and evaluating students’ situated performances” (Leung, 2004, p.29) prior to moving them onto the next academic level.

Formative, or on-going, assessment is beneficial for students and teachers because it provides teachers with more information to help them make more accurate pedagogical decisions about upcoming lessons of instruction. Additionally, it helps students become actively involved in their assessment and learning and thus become more in-tune with their strengths and weaknesses (Black & Wiliam, 2001; Boston, 2002; Leung, 2004). As a result of the information formative assessment can provide, and how it can influence future teaching, it has been considered “assessment *for* learning” (Fox, 2013, p.4), as opposed to summative assessment’s “assessment *of* learning”.

Renewed interest in formative assessment has been sparked in areas around the world in places such as Australia, Hong Kong, England, Canada, and the U.S. (Leung, 2004), due to the flexibility of how information is presented and assessed. The use of formative assessment, rather than summative assessment, has been seen as more desirable because it enables teachers to give daily feedback that caters to the needs and abilities of each student. This continuous feedback has, in turn, empowered students to take the appropriate action to engage in improved future learning or revise what they have previously learned (Leung, 2004; Leung & Mohan,

2004). Boston (2002) has attributed feedback, as a result of formative assessment, to students' increased awareness of gaps between "desired goals and current knowledge, understanding, or skill" (p.1). Furthermore, she states that, as a result of the self-evaluation often used in formative assessment, students have become better able to obtain their goals with the guidance provided from the assessment. In agreement, Black and Wiliam (2001) found that when students are able to discuss their understanding with the teacher through formative assessment, it encourages future interaction that aids in learning and can help re-focus the student's learning.

Formative assessment is highly adaptable and, as a result, can be used to assess learning development, evaluate educational requirements, and determine if learning standards are being met. It is frequently used with portfolio-based assessments because formative assessment encourages on-going assessment that is catered to the learner and involves the learner in the assessment process. Fox and Hartwick (2011) explain that portfolios are a central resource of formative assessment because they can "provide important evidence of learning development" (p.47).

Much of formative assessment includes alternative methods of assessment, such as portfolio-based assessment. Using atypical or unique methods in formative assessment can help teachers better address each learner's strengths and weaknesses. In addition to the meaning of portfolios and portfolio-based assessment, the various types and uses of alternative assessments is discussed further in the next Section.

### **3.2 Outcomes-based Assessment vs. Alternative Assessment**

As was the case of using summative assessment methods prior to the implementation of formative assessment methods, outcomes-based assessments had been the most favored type of assessment (Brindley, 2001) before the identification of alternative assessment. In this Section, I will discuss the differences between outcomes-based assessments and alternative assessments. I will also present some of the issues associated with outcomes-based assessments, which have resulted in the incorporation of alternative assessment methods in outcomes-based assessment curriculums. Finally, I will identify the most commonly used form of alternative assessment, which is the focus of the research in this thesis.

Outcomes-based assessments, are “single event, discrete-point, multiple-choice tests that result in numerical scores and the ranking of individuals” (Fox, 2008, p.97). They represent completion and are meant to give insight into the adequacy of learning (Hargreaves et al., 2002). These insights are a result of the assumption that the numerical scores produced from the outcomes-based assessments are a valid and reliable representation of learners’ levels of achievement. This assumption is what has allowed assessment objectives and learning outcomes to be linked (Kampambwe, 2005).

Due to the numerically measureable scores that can be reported from outcomes-based assessments, they have also been an attractive form of assessment by both policy makers and stakeholders. As a result of their ability to report “measureable improvements” (Brindley, 2001, p.398), Brindley (2001) reports that it is unrealistic to expect any major shift away from this form of assessment. Despite policy makers’, stakeholders’, and others’ positive attitudes towards outcomes-

based assessments, the sole use of these assessments as a form of proof of performance and understanding is riddled with issues.

Problems, such as lack of teacher preparedness to develop test items, lowered generalizability and fairness of scores between schools, increase of teachers teaching-to-the-test, inability to accurately report students' overall progress, and misuse of reported scores are just some of the problems associated with the design and application of outcomes-based assessments (Black, Harrison, Hodgen, Marshall, & Serret, 2010, 2011; Brindley, 2001; Campbell-Barr, Lavelle, & Wickett, 2012; Goodman & Swann, 2003; Hargreaves et al., 2002; Harlen & James, 1997; Knight, 2002; Moya & O'Malley, 1994). In addition to the previously listed problems, the two top issues associated with outcomes-based assessments are the emphasis on and use of the numerical scores produced as a result of these tests (Brindley, 2001; Hargreaves et al., 2002).

Marks have become more important than seeing where improvement is necessary, and have directed expectations of students towards grades received, rather than what was (or was not) learned (Baek & Kim, 2003; Black & Wiliam, 2001). Additionally, assessment scores have been used by policy makers to "determine [school and district] needs and to allocate resources (e.g. whether or not to provide funding support to learner groups who are identified as failing to meet standards, or to discontinue funding to schools which do not meet specified attainment targets)" (Brindley, 2001, p.395).

The pressures placed on teachers from administrators, parents, policy makers, and other stakeholders to have high assessment scores, have resulted in teachers deserting teaching methods that focus on the needs of their students, and replacing them with "rote test preparation" (Hargreaves et al., 2002, p.84). When

rote memorization becomes the primary teaching method, Miller and Legg (1993) say that content and skills are narrowed and classroom learning is reduced as a result.

The overwhelming number of issues associated with outcomes-based assessments has led them to be a source of apprehension, rather than “an attractive strategy for policy makers who wish to demonstrate they are making a difference” (Brindley, 2001, p.398). Similar to the combined use of formative assessments with summative assessments, alternative assessment methods have become more commonly used in combination with outcomes-based assessments (Boston, 2002).

Shohamy (as cited in Fox, 2008) notes, it is “impossible for a single test to measure the complex phenomena of knowledge, and thus there is a need for multiple assessment procedures” (p.98). Additionally, Hargreaves et al. (2002) say multicultural settings, media integration, and differing family structures have changed how students respond to lessons, and thus lessons should be altered accordingly. Combining formative and summative assessment practices can help teachers to genuinely assess students’ learning and address their learning needs, while still producing the numerical outcomes that are favored by stakeholders and policy makers (Brindley, 2001; Harlen & James, 1997).

Rea-Dickins (2001) states that good assessment motivates learners to become engaged in learning and enables the development of skills and reflection. Alternative assessment is “good assessment” because it uses multiple authentic assessment methods, adapted to the student’s individual learning styles, and involves the student in his/her learning and development (Fox, 2008; Katz & Gottlieb 2012; Miller & Legg, 1993; Rea-Dickins, 2001). Alternative forms of assessment have increasingly been incorporated into learning and testing programs



due to their high adaptability to students' needs, and abilities. The results of these tests are used to more accurately reflect students' learning development (Katz & Gottlieb, 2012; Miller & Legg, 1993). According to Fox (2008), alternative assessment is:

An umbrella term applied not only to performance testing, but also to other potential alternatives to traditional, discrete-point tests such as 'authentic' test tasks, portfolios, conferences, simulations, self- or peer-assessment, diaries, inquiry based learning, projects, etc. (p.97).

As previously mentioned, the move towards the use of alternative assessment methods is partially a result of teachers teaching to the test. Teaching to the test has often, unfortunately, been a result of teachers being put in positions to teach students an excess of material in a short amount of time for high-stakes outcomes-based tests, and having a limited knowledge about the material, or being uncertain how to teach the material that needs to be learned (Miller & Legg, 1993). The result of teachers teaching students material strictly for the purpose of these tests is not beneficial to the students or the teachers.

Using alternative assessment methods in place of (or concurrent with) high-stakes assessments has had a positive effect on teachers who teach to the test, however, because alternative assessments directly assess students' performances in unique real world situations or learning activities (Fox, 2008; Wiggins, 1990) and reflect the teaching and learning process (Miller & Legg, 1993). As a result, teaching to an alternatively-styled-assessment should not hinder the accurate depiction of learned material, rather, it will most likely result in a more accurate depiction of how able a student is to use the information he/she has learned. Furthermore, alternative assessment methods provide teachers with a variety of evaluation methods that can

be used for different purposes and address the various needs and learning styles of each student.

Tools and methods that allow for assessment in alternative ways are “observational checklists, journals, work samples, anecdotal records, day-to-day activities” (Fox, 2008, p.99), as well as “teacher questioning and probing, small-group interaction between learners and their teacher, interaction between an individual learner and teacher, and effective collaboration amongst learners themselves” (Rea-Dickins, 2001, p.434). These records of learned material can be collected and presented in the form of a portfolio. The teacher can then use this portfolio as method of alternative assessment to gauge the progress and learning of the student over time.

### **3.3 What is a Portfolio?**

One form of alternative assessment method is portfolio-based assessment (PBA). PBA can be used for summative or formative purposes and allows for learning to be shown in an alternative way: in a portfolio. PBA requires a teacher and/or student to develop a learning portfolio, which will later be used as a tool for assessment. In order to thoroughly understand how PBA is used, we must first discuss portfolios and how they have come to be used as assessment tools.

Portfolios have been used in various disciplines and professions to show completed work since the late 1970s and 1980s (Pettis, 2011). At first, the use of portfolios was focused in the field of fine arts (Moya & O’Malley, 1994) and has “been used as a method by architects, painters, photographers, and artists to show work” (Birgin & Baki, 2007, p.77).

Outside of the field of fine arts, portfolios have been adapted to be used for educational, medical, business, and personal-professional purposes. Lombardi (2008) states that portfolios became a fixture in higher education, across various disciplines, in the late 1980s and early 1990s. Purdue University, Miami University in Ohio, and the University of Michigan were among the first universities in the United States that implemented portfolio-based programs into their courses' requirements (Lombardi, 2008).

There is no one definition of what a portfolio is because it depends on who is using it and the purpose that the portfolio is serving for that person (Birgin & Baki, 2007). As a result of its adaptability, and various uses within different disciplines, portfolios have come to be defined in terms that relate to how the portfolio is used in a specific field of study.

For the purposes of this thesis, which is focusing on education-based research, the definition of a portfolio is related to how the portfolio is used or for what purpose. Herein, a portfolio is defined as a systematic and cumulative collection of work and learned material over time (a definition that is consistent with Fox, 2014; Savignon, 2002; Simon & Forgette-Giroux, 2000; Swicegood, 1994). The collection of materials, which can include "drafts to final productions, self-reflections, and progress reports" (Simon & Forgette-Giroux, 2000, p.88), are inserted into a binder, folder, or dossier (Fox, 2014). The collection of materials and development of a portfolio is used to represent, show evidence of, and encourage learner achievement (Fox, 2014; Savignon, 2002; Simon & Forgette-Giroux, 2000; Swicegood, 1994). Following the collection of materials to be put in a portfolio, they are used to assess students' depth and breadth of learning (Moya & O'Malley, 1994). The use of portfolios for assessment is further discussed in the next Section.

### **3.4 Portfolios Used *for* Assessment**

Blake, Backman, Frys, Holbert, Ivan, and Sellitto (1995) stated, “If portfolios are an effective tool for artists, photographers, models, and businesspeople to display their work, it can serve the same purpose for teachers who would like to profile what [students] have accomplished over a period of time” (p.45). In following with this statement, portfolios were adapted from the field of fine arts to be used for educational and assessment purposes in the early 1990s (Pettis, 2011). Prior to formative and portfolio-based assessment, the previous use of summative high-stakes tests as the sole assessment method often led students to “become obsessed about their grades rather than their learning” (Ascough, 2011, p.49) and often negatively influenced students’ and teachers’ opinions and behaviors of assessment (Wolfe & Miller, 1997). The implementation of portfolios as a method of assessment has provided “a means of linking classroom instruction and assessment to large-scale testing” (Wolfe & Miller, 1997, p.235), and has connected students and teachers to both the process and product of assessment and learning (Blake et. al, 1995).

In education, portfolios have been implemented in different programs and disciplines to be used by both teachers and students. Among the many functions that portfolios can serve, they are often used to demonstrate learning, describe learning events and experiences, display collections of work, show progress towards intended learning outcomes or goals, and help educators in assessing students’ learning progress (Chang & Tseng, 2009; Moya & O’Malley, 1994; Pettis, 2011; Simon & Forgette-Giroux, 2000; Swicegood, 1994). Portfolios have been

implemented in various educational disciplines in public and private schools, as well as in first language, second language, and special needs contexts (Blake et al., 1995; Chang & Tseng, 2009; Fox, 2014; Hamp-Lyons & Condon, 1993; Swicegood, 1994).

“The portfolio is something that is done by the person, not to the person and allows individuals to capitalize on their successes and strengths and then use this information to highlight individual accomplishments” (Blake et. al, 1995, p.39). In creating portfolio-based assessment programs, most systems are “bottom up” (Koretz et al., 1994, p.6); that is, smaller assessments or pieces of work are used to inform a larger form of assessment or final grade marking. This is beneficial to students’ learning development because it encourages teachers to engage in on-going development of instruction that is catered to the students’ needs and goals (Hamp-Lyons & Condon, 1993). Furthermore, a bottom up system emphasizes the continuous development of a portfolio to reach a learning goal, as well as motivates “teachers and students to collaborate and set learning goals, compile numerous examples of proficiency and learning in a variety of contexts over time, analyze the data, and reflect on progress” (Pettis, 2011, slide 8). The PBA model emphasizes interactive learning, which can allow students to connect with their learning and “reconcile, explain, modify, or integrate their new learning with their existing knowledge” (Ascough, 2001, p.13). Actively involving students in the cognitive and metacognitive process of learning and assessment could also inspire them to share responsibility of how and what they learn, self-reflect on the materials they have learned and produced, and motivate students’ self-determination to reach the intended learning outcomes or pre-determined learning goals (Blake et. al, 1995; Chang & Tseng, 2009; Fox, 2014; Moya & O’Malley, 1994; Pettis, 2011; Simon & Forgette-Giroux, 2000; Swicegood, 1994).

In addition to portfolios being used for students' assessment, they can also be used as professional development tools. Using portfolios in the professional world can have the same benefits as in education, and aid in promoting continued learning education. The functions of portfolios as professional development tools, post education, will be further discussed in the following Section.

### **3.5 Portfolios as Professional Development Tools**

Over the last decade, portfolios have been used as professional development tools in educational, business, and job certification programs to enhance learning and reflective growth (Tillema & Smith, 2003). Tillema and Smith (1998) affirm that portfolios are “being used to highlight progression in professional development, and to promote learning and reflection of a person” (p.193). Furthermore, participants in professional development programs have been using portfolios as a method to prove accreditation and certification (Carnell, Askew, & Klenowski, 2006; Tillema & Smith, 2003). According to Addison and VanDeWeghe (1999), the increased use of portfolios in professional development contexts can be attributed to programs' desire for its participants to connect learning with practice and pedagogy in the professional world.

When used in professional development settings, portfolios can serve as strong self-evaluation tools. Professionals can use the portfolio to monitor their own learning, reflect on insights into performance, and promote self-development (Tillema & Smith, 2003).

Hamp-Lyons (as cited in Addison & VanDeWeghe, 1999) asserts, “portfolios can aid in strengthening an already strong program by motivating [participants] to

reach consensus on important aspects of the courses a program offers” (p.18). This is done by actively involving participants in the portfolio development and assessment process. Additionally, several researchers (Addison & VanDeWeghe, 1999; Carnell et al., 2006) have suggested that when portfolios are used as professional development tools, they should be collaborative. Teamwork in creating a portfolio can allow developers to expand on their own ideas, increase understanding of what was learned, and provide feedback to other learners.

Tillema and Smith (2003) refer to a person who provides feedback about a portfolio in a non-threatening way as a “coach” (p.200). When forming collaborative portfolios, each developer can act as a “coach” and provide insightful feedback to their partner’s portfolio. This, in turn, can promote developers to take more responsibility for their learning, have an increased awareness of his/her capabilities, and provide a better perspective for methods of future development.

### **3.6 Types of Portfolios**

Though the creation of an educational and professional portfolio can relate, there are many ways in which the portfolios can be created to show information in different ways. Whether a portfolio serves a formative or summative purpose affects how it is developed. Furthermore, the way in which material is presented in a portfolio affects the type of portfolio that is eventually created.

In their extensive research about the uses of portfolios, Tillema and Smith (2001) found that portfolios have been adapted from being solely used as an alternative to traditional assessment, to being used to determine standards of performance or competency levels in educational and professional development

programs. The programs they found to be using portfolios most often were in teacher education, professional development, medical professions, and admissions programs. The various uses of portfolios within these programs provide further evidence of the flexibility that portfolios can have in different learning atmospheres. Tillema & Smith (2001) explain that, “each particular portfolio type requires varying processes for collection and determination of evidence, and as a consequence results in different uses” (p.627). Failure to identify the type of portfolio that is being/has been developed can result in a confusion of assessment tasks and/or distort the process of selection of evidence relevant to each specific type of portfolio.

Using information from Fox (2014), Pettis (2011), Lombardi (2008), and Tillema and Smith (2001; 2003), I have compiled a list of commonly used types of portfolios:

- 1) *Showcase, Presentation, or Dossier Portfolio*- displays evidence of learning at a particular point in time, as well as marked achievements and evaluations of performance. Tillema and Smith (2001; 2003) state that the key feature of this portfolio is the “collecting of prototypical performance evidence in fixed formats” (p.184). Collected pieces include end-of-unit work or course achievements. Typically, they are used for summative assessment (Fox, 2014) or for employment purposes (Pettis, 2011).
- 2) *Working or Reflective Portfolio*- evidence of learning development over time is shown through collections of work that are/were in progress and working towards a specific goal or need. The collections of work are purposefully and personally collected to be used to document professional development and include changing thoughts and



developments, as influenced by personal and learning goals. These portfolios are used for formative assessment purposes (Fox, 2014; Pettis, 2011, Tillema & Smith, 2001; 2003).

- 3) *Course-Related Learning Portfolio*- is a collection of pre-specified documentation that allows for meaningful assessment by the teacher. Additionally, it provides a representative sample of the student's work, which can provide information for future learning development about the student for the teacher (Tillema & Smith, 2001; 2003). These portfolios can be used for formative and summative purposes, however they should be used as formative assessment when providing information for future learning development to the teacher about the student.
- 4) *Personal Development Portfolio*- is a portfolio that accounts for individual professional or educational growth over a long period of time. This portfolio is used solely for self-evaluation and self-reflection purposes and can serve summative or formative purposes (Tillema & Smith, 2001; 2003)
- 5) *ePortfolio*- is a collection of student's work captured on a Web site, CD-ROM, or DVD (Lombardi, 2008, p.8). Any of the above portfolio methods can be made into ePortfolios, as they simply affect *where* the portfolio will be created, not *how*.

### 3.7 PBA Benefits

The benefits of using portfolio-based assessment in educational settings are dependent upon the effective use and implementation of the portfolio, as well as with which the tasks and performances that are used (Fox, 2014). Fox (2014) explains that since the tasks evaluated with PBA are unique to the learning environments within which they occur, this makes the tasks “subject to differing teaching conditions and constraints” (p.70). When used effectively and efficiently, however, portfolio-based assessment has been considered the most authentic form of assessment (Blake et. al, 1995; Swicegood, 1994).

Orland-Barak (2007) views portfolios as useful for “uncovering of students’ strengths and weaknesses, development of competence awareness, evidence of achievement in learning, promoting reflective practice, and for representing the chaotic ‘narrative’ of teaching” (p.28). In addition to its authenticity, portfolio-based assessment has become a popular form of assessing student outcomes (Wolfe & Miller, 1997) because it can involve students in the process of development, self-assessment, and curriculum design, while also enriching the educator’s development of teaching and curriculum (Chang & Tseng, 2009; Fox, 2014; Hamp-Lyons & Condon, 1993; Swicegood, 1994).

The numerous other pedagogical benefits of using portfolio-based assessment can be separated into two categories: immediate and long-term benefits. Immediate benefits refers to benefits that are dependent upon students and teachers making notable changes in their teaching and learning processes and interactions. These changes can be seen more instantly than long-term benefits, though they typically influence the long-term benefits. Some immediate benefits that have been identified by researchers, Blake et al. (1995), Chang and Tseng

(2009), Fox (2014), Hamp-Lyons and Condon (1993), Moya and O'Malley (1994), Swicegood (1994), and Wolfe and Miller (1997) are:

- Promotes discussion of criteria and what goes on in the classroom between student and teacher
- Encourages student-teacher collaboration
- Increases focus on planning and structuring lessons
- Improves work quality of students and teachers
- Encourages adaptation of assessment materials to coincide with developmental capabilities
- Allows for emphasis on formative assessment
- Encourages development of self-reflection and self-assessment abilities

Long-term benefits of the implementation of PBA affect students and teachers extensively over a long period of time. As well, they can impact the curriculum and program development as a whole. These benefits are often the result of a change or modification to the PBA method and/or the teacher's use of PBA. The long-term benefits have been identified by researchers such as, Blake et al. (1995), Chang and Tseng (2009), Moya and O'Malley (1994), Simon and Forgette-Giroux (2000), Swicegood (1994), and Wolfe and Miller (1997), and are listed below:

- Makes assessment more equitable
- Promotes higher-order, cross-curriculum competencies
- Shows knowledge acquisition and understanding, which can be shown to all stakeholders involved
- Fosters development of cognitive skills
- Provides evidence of autonomy and goal setting ability

- Reflects depth and breadth of students' capabilities
- Encourages future development and growth in learning process and outcomes
- Documents changes in the instructional environment, methods, materials, and instructional strategies that optimize learning

Educators, students, and stakeholders in education are beginning to see and experience the exemplary benefits of portfolio-based assessment, which is why it has gained popularity in recent years (Wolfe & Miller, 1997). The benefits, however, have too often been overshadowed by the implications that hinder its success. These implications will be further discussed below.

### **3.8 PBA Issues**

Portfolio-based assessment is not without weaknesses. According to participant responses in research done by Carnell et al. (2006), Little (2005), Orland-Barak (2007), and Tillema and Smith (2001), the effectiveness, likeability, and overall success of portfolio use hinges on several key factors: *requirement, time, cost, reliability and validity, and training*.

In this Section, I discuss five key issues related to PBA use in greater detail than the benefits listed in Section 3.7 above. This is not because the issues associated with PBA outweigh the benefits. On the contrary, the benefits, as previously identified, far outweigh the issues. However, I explain the issues associated with PBA in more detail, because these issues motivated the development and design of my case study. Furthermore, as it is an aim of this study to identify

ways to improve PBA (see research questions in Chapter 1), I felt it necessary to discuss each of the five key issues related to PBA use, as background.

### **3.8.1 Requirement**

When portfolios are implemented into school curriculums they are often presented as required additional forms of assessment for all teachers. The introduction of this drastically different form of assessment is frequently met with a “general reluctance to change” (Wolfe & Miller, 1997, p.237; more examples in Fox 2014; Pettis, 2011). Since standardized assessments have played such a dominant role in classrooms, teachers have become overwhelmed by the change to alternative methods of assessment, such as PBA, and have been equally met with a lack of support, despite the requirement to use the PBA methods.

Absence of support and resources during the implementation of PBA, as a result of visible positive results are not being immediately available has been detrimental to PBA as whole, which, in turn, has increased the likelihood of teachers to revert to their more familiar standardized assessment practices (Hargreaves et al., 2002). In Hargreaves et al.’s (2002) research, for example, they found that the dominance of standardized tests in school systems and the weight they have over alternative methods of assessment, like PBA, all too often “led teachers to abandon teaching practices that inclusively addressed the varying needs of all their students in favor of rote test preparation” (p.84).

In addition to difficulty of finding support and valuable resources to implement PBA, pressure to succeed in using PBA methods is often high and can result in added stress for teachers (Wolfe & Miller, 1997). Stress in the form of 1)

allocating time to attend training sessions, 2) implement the portfolio use into lessons, and 3) then complete the assessment of the portfolios can be sources of stress for teachers using PBA methods. In agreement, Koretz et al.'s (1994) research into PBA use reported that teachers in their study also often found PBA to be stressful. Added stress, as a result of PBA implementation, combined with an unfortunate lack of support, which was previously mentioned, has increasingly led teachers to abandon PBA practices (Wolfe & Miller, 1997). Additionally, as will be discussed more in the following Section, committing to use PBA may be considered time consuming and, sometimes, require additional work to be done outside of school hours. Wolfe and Miller (1997), in accordance, reported that, "a strong commitment on the part of individual teachers to the ideals on which portfolio assessments are based on was seen as one of the most important facilitators of the implementation process" (p.238). Furthermore, the requirement to attend training sessions and take time to develop and assess portfolios has been identified as another reason why stakeholders have difficulty supporting the use of PBA (Hargreaves et al., 2002).

The requirement of explaining why PBA is beneficial to stakeholders, though numerical outcomes are not produced, has been an additional challenge for teachers to overcome. Even when PBA was used in combination with standardized assessments, teachers have reported being uncomfortable with explaining their alternative assessment criteria (Wolfe & Miller, 1997) because it was constantly being compared to the standardized criteria of formal assessments. Requiring teachers to explain why PBA is beneficial has become standard in order for teachers and schools to get funding from stakeholders for schools and education programs (Hargreaves et al., 2002).

In order to accommodate stakeholders' assessment standards, PBA has been used in combination with standardized assessments. While beneficial, this added assessment obligation habitually resulted in teachers being behind with their marking, which made them feel guilty and at a loss of ideas for how to support students' active involvement in the assessment process (Fox, 2014; Hargreaves et al., 2002). This, in turn, has brought about issues of time when using alternative methods of assessment, such as PBA.

### **3.8.2 Time**

Developing and incorporating a portfolio-based assessment system into any curriculum can be time consuming, which requires the teachers, students, school systems, and other stakeholders to be patient, encouraging, and dedicated to assessment reform (Wolfe & Miller, 1997). Unfortunately, "the amount of time required for planning portfolio implementation, the amount of class time required to prepare portfolios for external review, and the amount of class time required to help students understand the logistics and concepts necessary for using portfolios" (Wolfe & Miller, 1997, p.249) have been cited as some of the biggest potential barriers to portfolio implementation and use.

Many PBA programs are added to teachers' already required curriculum and standardized methods of assessment. This has become an issue when teachers need to balance how much time to spend on each topic. For example, Tillema and Smith's (2001) research participants stated that they had difficulty determining how much time to invest in specific portfolio types in addition to their other teaching responsibilities. They continued by saying that developing materials, understanding

what was required of them, receiving necessary guidance, and combatting any difficulties encountered when collecting evidence all added to the additional time required to develop a portfolio system.

Beyond the time needed for portfolio development, teachers have indicated that scoring portfolios is time consuming, labor intensive (Hamp-Lyons & Condon, 1993; Koretz et. al., 1994; Wolfe & Miller, 1997) and, sometimes, comes at the cost of lesson preparation and instruction (Hargreaves et. al., 2002). In research done by Hargreaves et al. (2002), one participant wrote that he “quickly found himself in ‘portfolio prison’— a prisoner of time” (p.75) because of the time he would spend evaluating each portfolio, on top of the time spent developing the portfolio program for his class.

Wolfe and Miller (1997) assert that ample planning time is necessary for teachers to be able to prepare a structure for the portfolio system. The extra time needed to develop and use PBA has, however, been a large hurdle in its implementation. Lombardi (2008), for example, reported that one participant in his study disliked the amount of time needed to develop a school-required portfolio so much, that it is what ultimately resulted in her resigning from her position. In response to her experience with portfolios, the participants summed up the experience as “overkill” (p.7).

### **3.8.3 Cost**

In addition to the increase in time necessary to implement and use PBA, the financial cost to implement PBA into schools has been viewed as high and, often, an unnecessary added expense (Koretz et al., 1994; Miller & Legg, 1993). Koretz et al.



(1994), for example, found that the cost of implementation, training, resources, etc. is often “larger than some optimistic reports have projected” (p.13). Since funding for schools typically comes from the government, school boards, and parents, teachers have had a hard time finding financial support to implement PBA programs because the results of these alternative assessments are subjective, qualitative, and often difficult to articulate to others (Wolfe & Miller, 1997). As a result of the increase in “monetary costs” (Miller & Legg, 1993, p.12), support for the PBA success of programs has been skeptical.

It is imperative for schools to have the resources and new materials needed to create fairness across institutions that vary in race/ethnicity, gender, and economic status (Miller & Legg, 1993). The need for an increased amount of money, time, and resources, however, has often led policy makers to view alternative assessment as being problematic (Fox, 2008; Hargreaves et al., 2002; Savignon, 2002). Furthermore, the added costs associated with developing and implementing an alternative assessment method, such as PBA, have resulted in stakeholders questioning the test’s practicality, validity, and reliability (Koretz et al., 1994; Moya & O’Malley, 1994). Unfortunately, providing proof, in the form of a test analysis, that a PBA method is practical, valid, and reliable can be even more costly and time consuming (Moya & O’Malley, 1994).

#### **3.8.4 Reliability and Validity**

In addition to the added costs associated with PBA, the reliability and validity of PBA methods is often questioned and, as a result, is considered an issue (Wolfe & Miller, 1997). Reliability and validity are co-dependent (Harlen, 2005), which is why

they are considered a “package-deal” concern of PBA (Hargreaves et. al., 2002).

Before considering the issues with reliability and validity in PBA, each must first be defined:

Bachman and Palmer (1996) state that a reliable test must be “consistent across different characteristics of the testing situation” (p.19). In other words, if an assessment were to be repeated, would the results be the same? For example, can a demonstration of a student’s ability to solve math equations using a pen and pencil be recreated in various learning environments? Most likely, yes. Additionally, when considering validity, Harlen (2005) urges the researcher to ask if the assessment is measuring what it is meant to measure. For example, when assessing a student’s vocabulary knowledge, asking the student to use the words in a sentence is a better representation of his or her knowledge, than simply requiring the student to spell the vocabulary words.

As previously mentioned, implementing PBA into a curriculum requires additional amount of resources and new materials be provided (Wolfe & Miller, 1997). This brings into question the reliability of PBA results because schools with fewer resources and materials, as a result of lower funding, cannot compete with schools that receive higher funding. Additionally, the subjectivity of how PBA is assessed has resulted in further reliability questions of the method. Wolfe and Miller (1997) argue that “teacher bias [in PBA] can affect students’ performance” (p.2), which in turn affects the overall results of the assessment. Judgments of students’ work in a portfolio are primarily subjective, which has led to a great deal of variability of assessment criteria and reliability of outcomes between institutions (Brindley, 1998; Brindley 2001). Since teachers have found it hard to specify a precise criteria for judging student work (Wolfe & Miller, 1997), the reliability of the

measurement criteria used within assessment methods is an issue of concern, particularly when using portfolio-based assessment (Wolfe & Miller, 1997).

The Vermont PBA is the most often used example of unreliability of PBA scores, especially since its statewide implementation has been deemed unsuccessful. Koretz et al., (1994) reported that, “the unreliability of scoring [the Vermont PBA] distorted the distribution of scores, biasing estimates of the proportions of students scoring at each level” (p.10). The validation of the Vermont PBA was also a concern because the relationships shown by the scores offered no evidence of validity” (p.11). Furthermore, efforts to examine the validity of the Vermont PBA “beyond reliability, were hindered by both conceptual and empirical obstacles” (p.7).

As a result of the teacher-generated criteria for PBA, they have been considered potentially invalid (Brindley, 2008). Moya and O’Malley (1994), suggest that in order for PBA to be considered valid, there must be “multiple judges, careful planning, proper training of raters, and triangulation of objective and subjective sources of information” (p.25). Utilizing these tools and resources to validate PBA requires an increased amount of time, funding, and training for each PBA program. Since these are already issues of PBA implementation, the validation of PBA has been considered an added burden.

### **3.8.5 Training**

In order for PBA to be used and created properly, teachers, administrators, and students must receive training on how to create and implement them, as well as how to measure and self-assess outcomes (Black & Wiliam, 2001). This training can take time away from curriculum preparation and classroom instruction, which could

potentially lessen overall learning and progress within the current curriculum. Without training, however, Fox (2008) says teachers, administrators, and students would be “underprepared to carryout assessment agendas” (p.106).

The need for training prior to PBA implementation has been considered a barrier because of several previously mentioned issues: requirement, time, and cost. The requirement for training has placed an extra burden on both schools and teachers. The burden of finding trainers and creating training sessions for teachers is an added task for school officials, on top of their other duties. Hargreaves et al., (2002) argue that it is hard for teachers to create assessments if they do not have training and experience. As a result, training for teachers should be necessary, however the training is often seen as a burden because, like the school officials, it is an extra task on top of their other job requirements. Several researchers (Hamp-Lyons & Condon, 1993; Pettis, 2011; Simon & Forgette-Giroux, 2000; and Wolfe & Miller, 1997) state that if PBA is introduced without training and maintained by ongoing support, it is likely to fail and/or become an unsuccessful form of assessment.

Training requires time. Time to develop the actual sessions, attend the training, and carry out what was taught. Wolfe and Miller (1997) found that “teachers with more exposure to portfolio assessment tended to perceive barriers as less severe than teachers with less experience” (p.244). This finding ascertains that ongoing training for teachers should also be a requirement. Ongoing training, however, requires teachers to set aside more time for workshops and professional development sessions. Rather than set aside extra time for training sessions, teachers feel that they should be given release time so the training can take place

within their scheduled working hours, not in addition to the scheduled hours (Wolfe & Miller, 1997).

“Schools should provide resource persons who can help teachers develop scoring criteria and explain the use of scoring rubrics to students” (Wolfe & Miller, 1997, p.250). Creating and executing training sessions for PBA can be costly. Finding PBA trainers, providing materials for said training, and compensating teachers for attending all comes at a cost. Furthermore, cutting corners for any of these could be detrimental to the implementation of PBA, which is also why they should be considered a requirement. Arguably, the positive outcome of providing teachers with these resources and PBA development and use training sessions could be considered a priceless learning tool.

### **3.9 Assessment in Tutorial Settings**

Tutorial sessions are often seen as a way to improve student’s progress because the one-on-one nature allows the tutor to cater the instruction to the student. In agreement, Herppich, Wittwer, Nückles, and Renkl (2013) point out that adapting instruction to the needs of the learner is a widely acknowledged and accepted method of instruction. Formal assessment methods are often not used in tutorial settings, however, because much of the student’s learning progress and improvement is still gauged by the student’s progress in the classroom by the classroom teacher, not the tutor (Herppich et al., 2013). When assessments are used in tutorial settings, researchers (Chi, 2006; Herppich, et al., 2013; Putnam, 1987) have conflicting opinions about whether or not the tutors are able to accurately assess and interpret the students’ knowledge and abilities. Though there are few

studies proving (and disproving) these opinions, this Section will discuss the limited research findings about tutors' abilities to assess students.

Private tutoring instructors can have varying backgrounds; for example, licensed educators, university students, and/or high-achieving young adults can all be tutors. Since tutoring is often an informal side-job, it is not always a requirement for tutors to have received a formal higher-education or training in how to instruct and assess students. As a result, several studies (McArthur, Stasz, & Zmuidzinas, 1990; Putnam, 1987; Snow & Swanson, 1992) have found that, though the tutors may in fact help a student increase his or her understanding of a subject, they are often unable to "collect diagnostically relevant information" (Herppich et al., 2013, p.243), which would inform the tutor about the student's weaknesses and/or progress. Furthermore, Snow and Swanson (as cited in Herppich et al., 2013) found that though tutors are able to "normally accumulate individual information about a tutee and use this information to assess a tutee's understanding more accurately" (p.247), this does not mean that the collected, or accumulated, information is processed properly to create an accurate assessment of the student's progress.

Focusing on tutors who have received additional education in their subject and may be considered "experts" when compared to their students, Chi (as cited in Herppich et al., 2013) argues that these experts have a weakness in assessing the understanding of people with less expertise, the "people with less expertise" being the students. Despite statements that tutors are unable to properly assess their students, Herppich et al. (2013) assert that "no previous study has directly examined the ability to accurately assess a tutee's understanding as a function of a tutor's level of expertise in teaching" (p.243).

Herppich et al.'s (2013) research about the assessment accuracy of classroom teacher-tutors and university student-tutors found that, despite a tutor's level of expertise in teaching, misjudgments about a student's understanding were still made. However, they also found that tutors who were more experienced in teaching and expressed confidence in the accuracy of their assessments, made fewer mistakes and had more precise assessments.

As they have published the sole research study on tutors' ability to accurately assess students, Herppich et al. (2013) make strong suggestions as to how the results of their study should influence future research, as well as the training of future tutors. Two of their five suggestions, "all tutors need to be trained in applying innovative forms of assessments, such as the use of drawings, to get a more complete picture of a tutee's understanding" (p.257) and "university students need to receive more intensive training than classroom teachers" (p.257) strongly influenced the implementation of training sessions into the design of the case study for this thesis research.

More information about the design and method of training for this case study will be discussed in the Professional Development and Training Section of Chapter 4. Additionally, as a result of the lack of information in support of assessments in tutorial settings, the results of the case study for this thesis will also discuss how assessment in tutorial settings can be beneficial and should be encouraged. These results will be presented in the Discussion in Chapter 7.

### 3.10 Research Gap

As mentioned in the previous Section, there is a limited amount of information about assessment in tutorial settings. While Herppich et al. (2013) identify some ways that assessment has been used, they fail to explain the purpose behind the types of assessments used in tutorial settings and if they are valuable resources for assessment. Their research concluded that tutors do need to receive more intensive training about how to use assessment, and further suggested that tutors should be trained to use alternative methods of assessment, such as portfolio-based assessments. Their suggestions, however, do not recommend ways to conduct training that could help to better introduce and implement assessment methods into tutorial settings. This lack of research about how to train tutors to use assessment in tutorial settings is in following with the absence of information about effective training methods that could be used to better implement portfolio-based assessment.

Though outlines have been presented about how PBA practices can be incorporated into curriculum designs by Moya and O'Malley (1994), Pettis (2011), and Swicegood (1994), these outlines fail to address how teacher training should be used in different learning environments, such as tutorial settings, as well as how to solve problems that arise while teachers are implementing and using PBA methods. This lack of research has created a hindrance on the successful introduction and implementation of PBA practices in any learning environment (Wolfe & Miller, 1997). Fox (2008) argues that, in order for PBA to be used effectively, the implementation and use of its assessment methods must include additional training for teachers, however there is no research that explains how the training for teachers and tutors should be effectively conducted.



As a result of the research gaps about assessment in tutorial settings and PBA in tutorial settings, as well as effective methods of training that could be used to encourage successful introduction and implementation of PBA, the following case study was conducted. The findings of this case study, which are presented in Chapter 6, also speculate about the usefulness of portfolios as resources for assessment, identify perceived influences to the overall success and failure of PBA practices in tutorial settings, and postulate improvements that can be made to the implementation of PBA practices. In the following Chapter, I will explain the method used to conduct this research.

## Chapter 4- Method

In order to answer my research questions and explain the phenomena of portfolio-based assessment use and training in a tutorial setting, I developed a case study. Several researchers (e.g., Duff, 2008; Yin, 2003) define case studies in different ways, however each recognizes them as the study of phenomena in real-life situations. For the purposes of this research's case study design, I have chosen to use Yin's (2003) definition:

A case study is an empirical inquiry that, (1) investigates a contemporary phenomenon within its real-life context, especially when (2) the boundaries between phenomenon and context are not clearly evident (p.13).

This PBA case study was conducted over a five-month period. The case study included four participants who were employed as tutors at a tutorial company. Throughout their participation in the study, each participant was interviewed during three separate phases, and participated in three training sessions. The overarching themes of all the interviews were to determine what the participants perceived as affecting the success and/or failure of PBA practices in tutorial settings and how the implementation of PBA practices could be better improved. The training sessions were guided by the feedback given by the participants, and used as a tool to provide personalized training and discipline specific curricular support.

### 4.1 Participants- Overview

The participants of this study were four tutors from the same tutorial company. The small tutorial company is based in Kanata, Ontario and was

established one year prior to the study. I was invited to do my research at this company so that I could help build the strength of the developing company and train teachers to utilize new teaching methods. Additionally, as the owner was intrigued by the potential benefits of the research, he appreciated the professional development and training sessions that would be provided to the tutoring instructors throughout the study.

All employees of the company were invited and encouraged to participate in my research; however, the owner and I were explicit that an employee's decision to not participate in the study would not affect his/her job. Additionally, employees were assured that any information divulged throughout the research would be kept confidential and would not be released to their boss at any time. Furthermore, an employee's decision to participate in this case study would not negatively impact their employment.

In order to ensure the anonymity of each participant, all names have been changed.

#### **4.1.1 Participant 1- Ben**

Ben is a doctoral student in Engineering who tutors Math and Science for the tutorial company. He has had one and a half years experience teaching and no experience using portfolio-based assessment methods. In addition to his teaching experience, he has worked with youth in community service groups and at camps. He believes that his familiarity of working with students of all ages has helped him to actively address students' needs and encourage their motivation to learn. Throughout the study, Ben used the portfolio with two students.

#### **4.1.2 Participant 2- Catherine**

Catherine is a student in the Bachelor's of Education program at a local university. She is the newest tutor at the tutorial company, however she has extensive teacher training as a result of her practicum for her degree, and she is a supply teacher with the local school board. She is primarily a French and Math tutor, however since her students attend full immersion programs, she teaches other subjects, but uses only French to convey information. Catherine was unfamiliar with PBA prior to her participation in the study, and typically assessed students using visual- or memory-based methods. In her teaching practicum, she also only experienced standardized testing methods being used. Throughout the study, Catherine used the portfolio with two students.

#### **4.1.3 Participant 3- George**

George is an undergraduate student in Health Sciences. He has been a Science and Math tutor with the tutorial company for one year, and this is his only experience teaching. Prior to his participation in the study, he had no formal training of PBA, however the method of evaluation he typically used was similar to PBA. Additionally, in order to assess his students' strengths and weaknesses, he liked to administer diagnostic assessments when he began working with them. Throughout the study, George created a portfolio for one student.

#### **4.1.4 Participant 4- Stephanie (researcher)**

Stephanie is a M.A. student in Applied Linguistics and Discourse Studies student. She has more than five years experience teaching English reading and writing, and has been employed by the tutorial company for less than one year. Stephanie has not formally used PBA in previous teaching experiences, however as the project researcher, she has an advanced understanding of portfolios and how portfolios can be used as assessment tools. Furthermore, since she provided the training for the other participants, she was able to identify methods that had and had not worked in other programs before introducing the methods to the other participants. She developed a portfolio for one student for this study.

#### **4.2 Materials**

During the first professional development and training session, participants were given the majority of the materials needed to develop their students' portfolios. Participants who had more than one student were also given extra materials. Additionally, all documents provided in the portfolio, including written PBA background information and copies of signed consent forms, were given to each participant electronically. As will be discussed in Portfolio Design- Improving the Portfolio Process, supplying the participants with all the needed materials at the beginning and throughout the case study was meant to help eliminate added costs imposed on the participants while developing the portfolios. The following Sections provide more information about the materials given to the participants and their use in the development of the portfolios.

#### 4.2.1 Portfolio Structure

The design of this PBA method places the focus on the students and the students' learning; however, it is unique in that the participants are developing the portfolio for the students. The idea behind this design was that, through portfolio development, the participants could include and reflect on the students' work after each tutorial session and evaluate the students' learning over time. In addition, the participants would have the physical evidence necessary to evaluate how their teaching methods impacted the students' progress, and thus identify areas of success and improvement in teaching and learning.

In order to utilize this design, each participant was given a binder, with the same materials inside, to use as their portfolio. The initial materials included were consent forms, "Invitation to Participate in Research", list of expectations of participants, two questionnaires entitled "Educator's Portfolio-based Assessment Experience Questionnaire" (see Appendix G) and "Teacher's Reflection About Learning and Goals" (see Appendix H), and "Post-session Journal" (see Appendix I) sheets.

As participants, the tutors were expected to fill-out the two questionnaires at the beginning of the research project and keep them in the portfolio. These questionnaires were used later in the study by the participants, when they reviewed and assessed the students' goals and progress. After each tutorial session, participants were also asked to fill out a Post-session Journal, which required them to reflect on the session, the progress of the student, and teaching methods used while answering 10 prompt questions. Additionally, participants were instructed to include any relevant information and completed work into the portfolio, and were given laminate sleeves so that no materials would be damaged.

Following discussions and concerns expressed during the first interview sessions regarding the assessment procedures of the portfolios and impracticality of the single-page journals, participants were given a newly designed Post-session Journal (see Appendix J) sheets and a Half-way Goal Check-up (see Appendix K) sheet to add to their portfolios. The format of the new Post-session Journal and Half-way Goal Check-up will be explained in Phase 2 of the Professional Development and Training Section.

At the end of the study, participants were also given an assessment sheet entitled “Learning Progress Assessment” (see Appendix L). This assessment questionnaire was to be used as a final assessment of the student’s learning and tutor’s teaching methods over the six months that the case study took place. Participants were informed that they would be given this questionnaire at the end of the study, however in order to ensure the authenticity of the portfolio development and consistency of each tutor’s teaching methods, participants were not informed about what the specific questions were going to be until the end of the study. More information about the Learning Progress Assessment is discussed in a later Section, entitled Open-ended and Criteria-based Assessment Rubrics.

#### **4.2.2 Journals**

Each participant was instructed to complete a Post-session Journal after every tutorial lesson. The journal was to be used as a tool for reflection on the lesson and, over the six months using the portfolio, as a reflection on all the lessons and the student’s progress. Though the style of the journal was changed after the start of the case study, both journals asked questions about successes and

difficulties of methods used and events that occurred during the lesson, as well as any post-session work that was given to the student, and notes for future lessons. Following the completion of each Post-session Journal, participants were instructed to include them in the portfolio, as they were used to help with future reflections and considerations, and proved to be a useful tool when assessing the student.

### **4.3 Procedures**

In order to gauge the perceived usefulness, successes and failures, and participants' likes and dislikes over time, which would in turn help to answer the research questions of this thesis, this longitudinal study was performed in three phases over a period of six months. At the beginning of the case study, participants were informed that participation in the study meant they were consenting to a minimum of three interviews and three professional development and training sessions. A timeline of the phases of this case study are shown in Figure 1:



Month/ Task	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Training	↔		↔		↔	
Assessment				↔		↔
Interview		↔		↔		↔
PBA Use	→					

Figure 1- Case Study Timeline- The month in which each task was performed is identified by the arrows; the phases are separated according to color: blue is Phase 1, yellow is Phase 2, and red is Phase 3

Phase 1 (Fig. 1) was the introduction phase; Phase 2 was the interim evaluation phase; and Phase 3 was the final evaluation phase. The training sessions were spaced eight weeks apart and began at week 1, and interviews were seven weeks apart and started during week 7. The first assessment, named the Half-way Goal Check-up, was conducted at week 14, and the final assessment, or Learning Progress Assessment, was administered nine weeks later in week 23. The events of each phase will be discussed Sections 4.3.1 and 4.3.2, which are separated by professional development and training sessions and interviews, respectively. Additionally, the design and purposes of the assessments will be explained in Section 4.4.3.3- Open-ended and Criteria-based Assessment Rubrics.

Each participant was given the same professional development training and asked open-ended semi-structured interview questions, which were influenced by

the theme for each phase in the study. The professional development and training sessions focused on giving the participants more information about how to use the portfolios successfully. Additionally, the training aimed at making portfolio use effective, enjoyable, and efficient. The information given and discussed in each training session was determined by questions and concerns expressed during the interviews that had previously taken place. Though there were several standard questions asked during every interview session, many questions differed because of the semi-structured design of the interviews and each catered to the responses about successes and difficulties each participant was experiencing. An example of the questions asked during the interviews for each phase can be seen in Appendix C.

Creating themes for each Section helped separate the information discussed in each phase, however, since the questions the participants were asked required them to reflect on past experiences, it also created a verbal link between each phase of the case study and the interviews. For example, during each interview, participants were reminded of their previous opinions or statements and asked if they still felt the same way. They were also always asked questions regarding their experiences with the portfolio and likes and dislikes about using it. Additionally, in order to develop the future training sessions and cater to the needs of the participants and their specific disciplines, I encouraged the participants to point out any flaws they saw in the portfolio method, training sessions, and overall design. In order for each participant to “make it their own”, as the title of this thesis suggests, I also urged them to make any improvements or changes they felt should be made on their own. These questions were asked in the beginning of the interviews, prior to the phase-specific inquiries.

All interviews took place via Skype, an internet-based phone system, and were recorded using an iPhone application called “QuickVoice”. Using “ExpressScribe”, I transcribed the interviews by slowing down and speeding up the speech of the participant.

#### **4.3.1 Professional Development and Training**

As previously stated, all participants took part in three professional development and training sessions throughout the research study. The sessions took place during company meetings<sup>2</sup>, which were held in a private room at a local university. Each training session lasted 45 minutes to 1 hour and was catered to the needs and inquiries of the participants, as was discussed in their interviews prior to training.

##### **4.3.1.1 Phase 1, Introduction: Week 1**

The first training session was an introduction to portfolio-based assessment, and how the portfolios for this case study were designed to be used. It took place during the first month of the study, before the students’ school semesters had begun.

During this session, participants received basic information about the history of PBA, which included its uses, benefits, and shortcomings. They were also informed about why this research is necessary and what their involvement in the case study would mean. All of the information discussed with the participants was also presented in written form, so they could refer back to it at a later date.

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<sup>2</sup> As company policy, all tutors were compensated for attendance at meetings, which included the professional development and training sessions. This was not a design of the study, however, so motivational factors behind this compensation were not analyzed.

After the history of PBA was discussed, participants were given their portfolio “shells”, and each document inside was explained. The portfolio “shell” was a semi-filled binder that participants would use to collect students’ information and work. For their teaching and assessment use, the portfolio “shell” contained 1 “Student’s Personal Reflection about Learning and Goals” sheet, 1 “Teacher’s Reflection about Learning and Goals” sheet, 15 “Post-session Journal” sheets, 10 assignment sleeves for student’s work, and about 25 sheets of loose leaf paper for free writing or any other use they saw fit. Each material’s purpose was explained, however participants were also encouraged to use the materials in whatever way they felt best suited the needs of the student, his or her teaching methods, or their method of assessment.

Before the end of the training session, the participants were given time to look over all of the materials and encouraged to ask questions or express any concerns they had about using the portfolio. During this time, the participants and I, as the researcher, also presented ideas about the varying ways the materials could be used for different school subjects.

#### ***4.3.1.2 Phase 2, Interim Evaluation: Week 9***

The second professional development training session was one month after the first session, and one week after each participant had been interviewed. The design of this professional development training session was based off of concerns and questions that participants had expressed during their first interviews. Additionally, the goal of this session was to provide the participants with a better

understanding of how portfolio-based assessment could be used as an assessment tool in *their* tutorial sessions.

As a result of the participants' concerns about how to tie the portfolio together and use it as an assessment tool, as well as their desire to change the format of the journal, this session focused on how the portfolios could be used for assessment, which led to the introduction of the Half-way Goal Check-up sheet, and their newly formatted Post-session Journal.

The Half-way Goal Check-up provided the participants with a tool to assess each student's progress and their (the participant's) portfolio progress by using a five-point Likert Scale to answer 10 assessment questions half-way through the semester. The sheet also had 5 open-ended questions about the student's progress, which gave the participants space to expand on any ideas, issues, or new goals they may have encountered. In order to complete the Half-way Goal Check-up effectively, the participants were instructed to review all of their Post-session Journals and any of the student's included work. This review would help the participants make an accurate assessment about the student's progress, as well as their own teaching methods, thus far.

The new Post-session Journal was created in response to the participants disliking the full-page format of the previous Post-session Journal. The new multi-session, one-page format spreadsheet allowed the participants to look at previous lessons without having to flip through many pages. This format was designed to encourage the participants to look back at previous lessons more frequently, and review the successes and difficulties of specific methods or teaching styles and recall material that was already taught. The design of the new Post-session Journal was

also created with the guidance and suggestions of two of the participants, Ben and George.

#### **4.3.1.3 Phase 3, Final Evaluation: Week 17**

The third, and final, professional development training session was two months after the previous session and one week after the participants' second interviews. Prior to attending this training session, participants completed the previously mentioned Half-way Check-up.

The third training session aimed at identifying the different types of learners each student is, helping the participants set mini-goals for each lesson, and addressing the moods and behaviors of the students and themselves during each session.

Each participant was given a learning personality quiz, and instructed to answer the questions, to the best of their ability, as if they were the student. Based on the results of the quiz, participants speculated if each student was a visual, visual reading, auditory, or kinesthetic learner. We then discussed ways to teach each type of learner, how to show the student's work in the portfolio in a way that represented his or her learning, and how to use it to assess the student based on their presumed learning style. This exercise was a result of many of the participants saying they were unsure about how to represent their student's learning if the majority of the lesson was spent reading a textbook, discussing vocabulary words, or playing on-line educational games. Furthermore, several of the participants had expressed difficulty in finding ways to motivate their students to *want* to learn.

Bloom's Domains and Hierarchy of Learning (Sabra, 2014) was introduced to the participants as a way to set mini-goals. Each participant was given a chart of verbs that were separated into three domains of learning: cognitive, psychomotor, and affective. These verbs were provided to help the participants identify what the mini-goal would be for each session. Many of the participants expressed concern that their initial overall goals were too broad or vague, which is what prompted this training. Setting mini-goals, or goals for each session, would help the participants specify what they wanted to happen as a result of each session. Their overall goals could still stay the same, but the mini-goals would help the participants and the students work up to the overall goal without feeling overwhelmed or lost. A mini-goal section was added to the journals, so the participants could reflect on this before or after each session.

Several participants recognized that the student's and their moods and/or behaviors had a strong affect on how the lesson was carried out. Furthermore, one participant noted that his mood while filling out the journal sometimes impacted how he reflected on the lesson. This prompted another change in the journals, and a "Mood and Behavior" question was added. We discussed the importance of recognizing a less-than-favorable mood or shy behavior, and the impact it could have on the lesson.

At the end of the training session, participants were instructed to use only the new journals for the remainder of the study. They were also reminded to identify a mini-goal for each session, and reflect on the moods of the students and themselves. As this was the last training session of the study, participants were reminded that

they could still make their own adjustments to the portfolio and how they use the portfolio, but these would be the last formal changes.

#### **4.3.2 Interviews**

The semi-structured interviews were conducted in three phases throughout the research: one month after the initial training, two months after the second training, and two months after the third training. My semi-structured questions (see Appendix C), the participants' experiences, and the overarching research questions of this thesis (see Chapter 1) guided all of the interviews.

Each interview was conducted over the phone and recorded for transcription, coding, and analysis. The discussions typically lasted a maximum of 1 hour and were designed to encourage tangent research-related discussions, questions, suggestions, and comments, so as to gather more personal responses from the participants. With the exception of the first training session, which was introductory, I used information given by the participants in the interviews to develop the training sessions that followed.

Though I was a participant, I was also the researcher, so I did not contribute to the interviews as a participant. As mentioned in Chapter 1, in lieu of interviewing myself or having a third party interview me, I kept a journal throughout my participation, in which I reflected upon the successes and difficulties I experienced as a PBA user. Additionally, in my reflections, I considered the semi-structured questions that I had planned to ask the participants, and included responses to the questions in my journal writings. In the following Sections, I focus solely on the



interviews of the other three participants. My journal reflections will only be discussed in Chapters 5 and 6, when I present the findings of this case study.

#### ***4.3.2.1 Phase 1, Initial Experiences [Introduction]: Weeks 7-8***

The first interview sessions focused on the participants' initial reactions to and experiences with the portfolio. Participants were asked questions such as, "Have you noticed any positive or negative affects of using the portfolio?" and "How long does it take you to complete the Post-session Journals?" Additionally, they were asked if they had any questions about certain aspects of the portfolio, as well as if they had any suggestions for how the portfolios could be changed or improved.

As an introductory interview, I wanted to encourage the participants to share as much information as possible about their initial successes and difficulties while using and developing their students' portfolio. Since the participants attended a training session prior to this interview, they knew some information about how to use the portfolio, as well as several of the issues behind PBA implementation and use that prompted the development of this case study. They had, however, been left on their own to use and develop the portfolio prior to this interview, and this interview was the first time they were able to ask any questions regarding their use of the portfolio and suggest any they wanted to be made.

#### ***4.3.2.2 Phase 2, Interim Evaluation: Weeks 15-16***

The theme of the second interview sessions was assessment. Prior to this interview, participants were asked to assess the students, themselves, and the actual portfolio using the Half-way Goal Check-up. The participants gave insight into how

the Half-way Goal Check-up influenced their assessment of their students, and if any other methods of assessment were used to evaluate progress. Questions such as, “Did the Half-way Goal Check-up help you identify methods that were and were not helpful in your sessions?” and “Did the assessment serve as a useful tool in your portfolio development?” were asked.

In the first interview, most of the participants had expressed a desire to change the format of the Post-session Journals, and this change was presented to them during the second training session. As a result, participants were asked questions regarding their use of the new Post-session Journal and if any additional changes should be made to it. These questions helped me to determine if the previous changes were in line with what the participants had hoped. Finally, at the end of the interview, the participants were prompted to express any other likes or dislikes they had about the portfolio and to suggest future changes or information they would like to receive.

#### ***4.3.2.3 Phase 3, Final Evaluation: Weeks 23-24***

The final interview session focused on the participants’ opinions of the development and use of the portfolio overall. In addition to PBA experience questions, they were asked follow-up questions about using the portfolio since the last interview and training session, as well as about the final assessment method, entitled “Learning Progress Assessment”. Finally, to perform member checks (see Section 4.5.2 for more information) and in order to confirm my interpretations of their shared experiences with the portfolio, I also asked questions that were explicitly related to my initial research questions.

The follow-up questions provided brief insight into how they have been using the portfolio as an assessment tool and how they have continued to develop their students' portfolios. The purpose of these questions was to encourage feedback about the previous training session and previously altered material, which was the addition of the mini-goals and mood assessment into the journals and introductory training about how to gauge each student's learning personality.

Questions about the Learning Progress Assessment were asked in order to determine if the participants found the final assessment method useful. Though the Learning Progress Assessment was formatted similarly to the Half-way Goal Check-up, my intention was to create a new assessment rubric that would evaluate the students' learning over the previous six months. In order to determine if this additional assessment piece was necessary and useful, I encouraged the participants to give me feedback about their experiences using it, as well as their opinions about the usefulness of it.

As previously mentioned, the majority of the interview focused on the participants' whole experience using and developing the portfolio, which included questions that were directly related to my initial research questions. These questions prompted responses that discussed likes, dislikes, and hopeful changes for the future use of PBA. Opinions about the training sessions, portfolio development, curricular support, and usefulness of the portfolio as an assessment tool were also asked. Additionally, based on the previously identified common difficulties related to PBA implementation and use, the participants were asked to give insight about how these difficulties affected their experiences while using and developing their students' portfolios. Finally, the interview concluded with the participants sharing

the ways that their perceptions of PBA had changed, positively or negatively, since they had begun participating in this case study.

#### **4.4 Portfolio Design- Improving the Portfolio Process**

The design of this portfolio was altered from Moya and O'Malley's (1994) Portfolio Assessment Model (see Appendix B). Adjustments made to the design and uses of the portfolio were made to improve requirement, cost, reliability and validity, and training, which have been identified as five weaknesses within PBA implementation and use. These weaknesses, which were identified in Chapter 3, are requirement, time, cost, reliability and validity, and training. Additionally, the incorporation of formal training for the participants was meant to improve upon this weakness, as well as strengthen the reliability and validity of this PBA design. As a result of its connection to reliability and validity, it will be discussed within the Reliability and Validity Section below.

##### **4.4.1 Requirement**

Though it was not directly funded by this research, the owner of the tutorial company chose to compensate all of the participants for any extra time spent developing their portfolios. Additionally, all participants were further compensated for their attendance at the professional development and training sessions.

Compensation was \$7.50 per lesson spent developing the portfolio (ex: filling out journal and assessment sheets) and \$15 per professional development and training session. Though the development of the portfolio was not checked until the end of the case study, the owner of the tutorial company trusted the participants to

accurately report time spent working on the portfolio. In addition, attendance at each professional development and training session was taken to ensure appropriate compensation. The owner's intention behind adding the compensation to portfolio development and training was to create incentive and motivation for the participants to be actively involved in using and learning how to use the PBA. Involving compensation for work done to learn about and develop PBA is in line with Wolfe and Miller's (1997) opinion that additional funding and compensation is necessary in the successful implementation of PBA. The additional payments for teachers whom are involved in PBA should motivate work and facilitate work with others.

#### **4.4.2 Cost**

Added costs in the development of PBA can build on the feeling that PBA is a burden (Koretz et al., 1994). In order to decrease this negative feeling associated with PBA development, I funded all material<sup>3</sup> and training costs associated with this portfolio-based assessment method. By paying for all materials used in the portfolio development, I hoped create a more convenient design for the participants.

Additionally, in order to motivate the participants to complete the Post-session Journals, the tutorial company provided additional compensation to the participants for their extra work.

As a result of the internal (my own) and external (the tutorial company) funding, the use of this assessment required the participants to not pay for any materials used, and to be compensated for all time spent associated with this PBA

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<sup>3</sup> I would like to thank the School of Linguistics and Language Studies (SLaLS) for providing me with a research bursary to support this research.

method. The results of removing the costs from the participants and having the costs absorbed elsewhere are discussed further in Chapter 6.

#### **4.4.3 Reliability and Validity**

As previously mentioned, reliability and validity are of great concern when using portfolio-based assessments to evaluate students. Stakeholders are often concerned that since alternative assessments are not grounded in psychometrics (Moss, 2004) the results are merely subjective opinions and can be inaccurate judgments of students' learned knowledge. Despite portfolio-based assessment being grounded in hermeneutics (as defined by Moss, 2004), I believe the reliability and validity can still be relatively high and consistent when alternative assessment methods are being used.

Harlen (2005) suggests that the four components which could help increase the reliability of alternative assessments are, increased training, outlined assessment criteria, knowledge of potential bias, and continued support from advisors and colleagues. Furthermore, Koretz et al. (1994) recommend a "greater standardization of tasks, revision rules, preparation, and the like will lessen threats to validity and will probably increase scoring reliability" (p.14). Utilizing these suggestions when developing and implementing a PBA program may help to improve its reliability and validity. For example, if an assessment rubric or guideline is aligned with a portfolio's intended learning outcomes, then the test creator and evaluator can show if the assessment is measuring what it is meant to, thus proving its validity.

In order to improve the reliability and validity of the portfolio-based assessment methods used in this case study, components such as training, outlined learning goals, open-ended and standardized assessment rubrics, and ongoing support were provided.

#### ***4.4.3.1 Training***

Harlen (2005), Naizer (1997), and Moss (1992) state that training is necessary for the improvement of reliability and validity within alternative assessments. The on-going training provided in this case study helped the participants become more comfortable with portfolio-based assessment development and evaluation. In Naizer's (1997) study about teachers using performance-portfolio assessment, he found that through on-going training and practice, raters' grade-agreement increased. Although the participants in this study are not rating each other's students, the portfolio-based assessment methods taught in the training is believed to have helped the participants align their assessment techniques so that if they were to evaluate each other's students, the "grade" would be similar, if not the same. The uniform methods taught to the participants in the professional-development training sessions most likely helped increase the reliability of this case study's PBA because all the participants were taught develop the portfolio and assess the students in the same way.

#### ***4.4.3.2 Ongoing Support***

Interviews and training sessions throughout the case study provided the participants with ongoing support. During these sessions, participants were

encouraged to ask questions, express difficulties, and suggest changes about the PBA method being used. When difficulties arose, I offered varied ways for the participant to deal with his/her challenge and also engaged in problem-solving discussions about how the portfolio's design could be improved. Ongoing support in this PBA case study helped increase the reliability because any suggested and created changes to the portfolio impacted all participants' portfolios, which created consistency of evaluation tools (ex: Post-session Journals, Half-way Goal Check-up, and Learning Progress Assessment rubrics) given to each participant.

#### **4.4.3.3 Outlined Learning Goals**

Rowe and Hill (as cited in Harlen, 2005) suggested that creating "subject profiles" (p.258) might help teachers make consistent assessments of students' achievements and improve reliability. In following with this recommendation, the Teacher's Reflection About Learning Goals was created so the participants could outline intended goals for their students. The Teacher's Reflection About Learning Goals required the participant to evaluate the student's strengths and weaknesses, and set goals for improving the weaknesses, while utilizing the student's strengths, throughout each lesson. By outlining the overall goals for each student at the beginning of the semester (and research study), participants provided themselves with the clarity about what they expect for the student to improve upon, as well as how they intended to help the student achieve said improvements.

Following changes to the Post-session Journal during the Phase 3 of the case study, participants were also required to create mini-goals for each tutorial session. As previously discussed this Chapter, in the Section entitled Phase 3- Considering



Mood and Personality, participants received training about how to create mini-goals using Bloom's domains and hierarchy of learning (Sabra, 2014). In this training, participants were given a list of action verbs that addressed surface learning and deeper learning. Using this list, the participants were to choose an action verb for the mini-goal of the lesson. The purpose of developing mini-goals was to help the participants to align each session to the overall intended learning goal, which was determined at the beginning of the case study on the Teacher's Reflection About Learning Goals sheet. Moreover, the mini-goals were intended to provide the participants with a constant assessment of the students' achievements and learning progress following each tutorial session.

The requirement of participants to clearly outline goals for the students was in following with Harlen's (2005) research finding that, "increased clarity about goals of student's work, resulted in more consistent assessment criteria" (p.259). As a result of the outlined overall goals and mini-goals, I hoped that the participants would have been able to better assess the students in the Half-way Goal Check-up and Learning Progress Assessment. The purposes of these assessments are explained in the following Section.

#### ***4.4.3.4 Open-ended and Criteria-based Assessment Rubrics***

Though the standardization of test assessment "runs contrary to many of the basic goals of portfolios and other embedded assessment approaches" (Koretz et al., 1994, p.14), the use of structured questions on the Half-way Goal Check-up and Learning Progress Assessment were implemented into this PBA program to create uniform assessment procedures for each participant, which was meant to help

improve the reliability and validity of this PBA method. Both assessment formats were, however, not completely standardized and allowed the participants to provide more personal accounts of each student. Although allowing subjective evaluations could prompt concerns about the reliability of this assessment, they were included to allow the participant to provide insight about each student's progress as a result of the personal interactions in the tutorial sessions. These results may have not been identified in a completely objective or outcomes-based evaluation. The inclusion of subjective evaluations is in line with Rea-Dickins' (2001) belief that subjective assessments are necessary in order to fully gauge the understanding and learning progress of the student. She stated, "skill in observation and interpretation is crucial in informing the teacher about how much the learners as a group, and how much individuals within that group, have understood about what has been learned or still needs learning" (p.457).

Utilizing on-going assessment throughout the development of the portfolio encouraged formative assessment of the participants' students. Since formative assessment is believed to be critical for student learning (Yorke, 2001), I felt that encouraging formative assessment throughout this study would prove to be the most effective and helpful way for the participants to evaluate their students' progress, as well as their methods used while teaching the students. Boston (2002) identified the goal of formative assessment as the ability to "gain an understanding of what students know (and do not know) in order to make responsive changes in teaching and learning techniques, such as teacher observation and discussion" (p.1). Keeping in agreement with this statement, the formative assessments used in the development of this PBA method were also used to help the participants cater their

lessons accordingly to their students' needs, which were identified as a result of completing the on-going assessments.

#### 4.4.3.4.1 Half-way Goal Check-up

Participants completed the Half-way Goal Check-up (see Appendix K) three months after the start of the case study. It included ten statements and five open-ended prompts about the student and teacher. Statements and prompts about the student included evaluating the progress of the student since the tutorial sessions began, identifying if the student has employed new problem solving techniques and learning methods taught to him/her, and other factors that may have influenced the student's current progress. Statements and prompts about the teacher were about the methods of instruction used, identifying a goal for the student to work towards, successful and unsuccessful techniques used, overall portfolio development, and plans for future lessons and improvements.

The ten statements were accompanied by a five-point Likert Scale, which required the participants to agree or disagree to the statement provided. On this scale, one meant, "strongly disagree" and five meant, "strongly agree". The final five open-ended prompts allowed the participants to expand on their previous answers by identifying successful and unsuccessful teaching methods, as well as present ideas for strategies and teaching methods to use in future lessons that would help the student to make further progress. Prior to completing the Half-way Goal Check-up, it was strongly suggested that the participants review any completed journals and materials included in the portfolio to help them give the most accurate response possible.

#### 4.4.3.4.2 Learning Progress Assessment

The final assessment, named the Learning Progress Assessment (see Appendix L), was formatted similarly to the Half-way Goal Check-up, however it was used to evaluate the students' progress since the beginning of the tutorial sessions, or a period of six months, and the participants' teaching methods and portfolio use. It was to be considered a final assessment of the student and the participant, and how their interactions with each other affected the structure of the lessons, the students' progress, and the development of the portfolio.

The Learning Progress Assessment included sixteen statements, which were to be answered using the same Likert Scale that was used in the Half-way Goal Check-up. Though most of the participants would be continuing their tutorial lessons with their students after the completion of this case study, the Learning Progress Assessment was designed without the open-ended questions that were given in the previous assessment because, for the purposes of this case study, it was used to signify completion and was a final assessment. Were this form of assessment to be used over a longer period of time, it may have been more appropriate to use at the end of a semester or at the completion of a school year.

As previously mentioned, the sixteen statements prompted insight about the student and the participant over the six-month period of this case study. Statements about the student required the participant to consider how the student has progressed and his/her current ability when compared to the grade-level expectations. Additionally, participants evaluated the student's overall behavior towards learning and how this influenced the work completed and goal attainment.

Finally, the student was evaluated on the work developed as a result of the lessons, and how they compared to the student's previous work. Statements that required the teacher to evaluate himself/herself were about overall teaching methods utilized that addressed the student's learning needs and styles, openness to address and make improvements to teaching methods, utilization of outlined goals in lessons, and overall portfolio development and use as an assessment tool. Similar to the Half-way Goal Check-up, participants were strongly encouraged to review all material included in the portfolio since the beginning of the case study prior to completing the Learning Progress Assessment. The review of all the included material from the past six months was encouraged so the participants would have a refreshed look at how the student has progressed and to consider how the participant's teaching methods have influenced this progress.

As the participants engaged in using the portfolios for assessment, they were interviewed at three phases during the study. As was mentioned in Section 4.3.2, the interviews discussed the participants' opinions about developing and using the portfolios. Additionally, they were asked about any successes or difficulties they were experiencing. Finally, participants were given opportunity to make any suggestions about changes they felt could be made to improve the portfolio's design. The recordings of each interview were transcribed, coded, and analyzed using several steps. This process is explained in the next Section.

#### **4.5 Analysis**

The data from the transcribed interviews were examined using two steps: 1) Time-series analysis, and 2) Triangulation. Each step was performed to focus and

increase the reliability of the previous analysis. Additionally, re-examining the data throughout various stages in the case study, by myself and with outside participants, helped to re-address identified issues and confirm my interpretations.

Each method of analysis used a different form of coding. These coding methods followed Saldaña's (2013) guidelines for coding, as outlined in "The Coding Manual for Qualitative Researchers." In the following Sections, I will discuss the steps of analysis and explain how each was beneficial in determining the results after each phase. I will also talk about the method of coding used, which, in combination, helped to determine the results after each phase, and the overall outcomes of the case study.

#### **4.5.1 Time-series Analysis**

At the completion of each phase— Week 8 for Phase 1, Week 16 for Phase 2, and Week 24 for Phase 3— I analyzed the data using a time-series analysis (Yin, 2003) (see Appendix D for a sample of the coding). This form of analysis allowed me to identify what transpired across the three phases of the study, as well as to identify significant trends, rival trends, and trends based on specific occurrences within the case study. As the portfolio materials were changing throughout each phase, participants' reactions to the modifications and uses were identified through their narrative accounts in each interview. According to Yin (2003), using this type of analysis may have helped improve the validity of my research and lower the risk of any threats to internal validity. The results of this analysis will be discussed in Chapter 5.

Though the data was analyzed using two distinct steps— time-series analysis and triangulation— several rounds of coding occurred within each step. For example, in the first round of coding, which occurred during the time-series analysis, I applied descriptive, *in vivo*, and structural coding (Saldaña, 2013) when analyzing the interview transcripts. This means that, while coding the transcribed interviews, I summarized large portions of text using one word or a short phrase, which may have included direct quotes from the text, to relate data to my initial research questions. In addition to utilizing descriptive, *in vivo*, and structural coding throughout the time-series analysis, focused coding (Saldaña, 2013) was used following each phase of the time-series analysis. Focused coding allows the researcher to summarize recurrent patterns in the data by matching, constantly comparing, and prioritizing patterns in order to identify categories that summarize the data. In the second round of coding, I sought confirmation of my first round of coding through an inter-rater (coder) reliability analysis, and triangulation of my findings (see 4.5.2 below). Finally, in the third round of coding, I used focused coding again (Saldaña, 2013) to connect the results of the data to my research questions and to the benefits and issues identified in the empirical research (see Chapter 3). Summarizing the responses using focused coding helped me to focus and identify the overall results of this case study. Furthermore, recognizing frequent patterns of discussion helped me to determine areas within the design of the portfolio that were successful and unsuccessful (the results of which are discussed in Chapters 6 and 7).

#### **4.5.2 Triangulation, inter-rater (i.e. inter-coder) reliability, and member checks**

My interpretations of the data are inevitably influenced by my roles as researcher, PBA trainer, and participant in this study. As mentioned in the previous Section, in order to determine if my understandings were accurate and reliable, individuals not directly participating in the case study completed the second round of coding. Involving outside participants to code my interviews allowed for triangulation (Duff, 2008) of the data. This allowed me to compare their analysis with mine for validity and reliability. This comparison of codes and analysis is called triangulation (Duff, 2008).

Triangulation is important to any case study because it allows for perspective regarding a phenomenon from both insiders (researchers) and outsiders (participants, experienced professionals, etc.) (Duff, 2008). Additionally, triangulating the data helped me attend to any issues of construct validity (Yin, 2003) and internal validity (Duff, 2008), and assess inter-rater reliability in the coding of the transcripts. In order to help increase validity and corroborate the results of this research study, I involved several external participants in triangulating the interpreted results of the data. The external participants were two doctoral students who were experienced in qualitative coding of discourse. Using triangulation in this study, allowed for “investigation of the research problem from different perspectives in order to provide possibly more complex and ideally more valid insights into observed or tacit linguistic behavior and knowledge” (Duff, 2008, p.144).

Involving the two doctoral students in the analysis of my data helped me to validate my judgments of the transcribed interviews. Since there were few participants in this case study, involving perspectives from outsiders allowed for “a



very thorough analysis of the case” (Duff, 2008, p.43), which helped in considering corroborating or counter-examples of interpretations.

In order to eliminate (as much as possible) outside influences on the doctoral students’ coding of the interviews, their analysis was undertaken using a grounded theory approach (Charmaz, 2006; Saldaña, 2013), in which each coder had limited knowledge about the case study and issues associated with PBA.

Following their coding of the interviews, the doctoral students and I engaged in a discussion about themes that developed within the interviews regarding participants’ opinions about using PBA. My participation in the case study, as well as my working relationship with the other participants may have influenced my coding, thus creating limitations in my analysis (see Chapter 7 for a full discussion of the limitations of this research study). Since the doctoral students did not have a vested interest in the outcome of this case study, it was important to discuss their interpretations of the interviews. Again, involving outsiders in the analysis of the data was useful because they were able to notice and assign further meaning to the participants’ responses. I analyzed their coding in comparison with my own and computed inter-rater reliability at .82, which is a satisfactory level of agreement (see Appendix F for details regarding the coding used to calculate inter-rater reliability agreement).

Throughout our discussion, we communicated where our coding overlapped, as well as where and why we may have disagreed. Despite sometimes arriving at opposing perspectives, Duff (2008) stated that, “such disjunctions themselves can be important findings” (p.144). The benefits of triangulation were particularly evident in coding for emotions. I asked the doctoral students to focus on the perceived emotions of the participants while coding. Because they were using transcripts, they

did not actually hear the tones of the participants' voices. The doctoral students' coding for perceived emotions provided me with beneficial clarification about the positive and negative feelings that the participants had conveyed regarding PBA use and its implementation.

As previously stated, the doctoral students also used focused coding while deciphering the transcribed interviews. Throughout our conversation, the doctoral students and I identified some of the agreed upon themes in the participants' responses.

In order to ensure that the interpreted reactions and opinions of the participants were accurate, an additional form of triangulation was used to "verify perspectives and interpretations" (Duff, 2008, p.171) was used. Though it does not allow for further analysis or coding of the transcribed interviews, using member checks (Duff, 2008) helped me to "check for accuracy and completeness" (Gall et al., as cited in Duff, 2008, p.171), by aligning my interpretations with the intended opinions and beliefs of the participants.

Following the completion of the case study, participants were asked to review and give feedback on the results of the analyzed data. The purpose of this process— referred to as *member checking*— was to "enrich analysis, help ensure the authenticity or credibility of [my] interpretations, or shed new light on the analyses" (Duff, 2008, p.171). Gall et al. (as cited in Duff, 2008) stated that member checking helps qualitative researchers "report for accuracy and completeness" (p.171). As a result, by allowing participants of this case study to review and respond to the analyzed data, my hope was to confirm any perceived theories that were used to answer the previously outlined research questions.

Following final analysis of all the data and written interpretation of the results, each participant was given an electronic copy of the perceived results. The discussion of the results addressed interpretations of the participants' responses about usefulness of PBA, opinions regarding PBA implementation, and recommended improvements to the use and implementation of PBA. In order to align their opinions and beliefs with my interpretations, participants were given a list of the six research questions and five identified issues associated with PBA, and asked to consider how their opinions aligned with the interpreted results of the case study. They were also informed that the results were developed as a result of interpretations of their interviews.

Following review, participants were instructed to give feedback about their agreement or disagreement with the results. Though the member checks were far less formal or extensive than the triangulation, the participants' responses helped to confirm my explanations. Additionally, any misinterpretations or confusions identified were further discussed and a concluding result, which was agreed upon by the participants and myself, contributed to the discussion of the results in Chapter 5 and Chapter 6. These Chapters discuss the results from each analytical approach in relation to the changes made to the PBA design throughout the study and how they relate to the overall research questions. In the following Chapter, I provide a narrative account of the results of each phase.

## **Chapter 5- Results and Discussion: Narrative Account**

In Chapter 5, I provide a narrative account of the progression of the study across the three phases. Discussing the results following each phase is necessary because, as the portfolio was undergoing changes throughout, the end of each phase produced distinct results that related to the changes previously made. Thus, the results of the study overall, which are presented in Chapter 6, were directly impacted by the changes made throughout the study.

In this Chapter, the description of what transpired is supported by the actual comments and responses of the participants. The following narrative reflects upon the results of each phase in the case study, which was produced as a result of the time-series analysis (Yin, 2003), which employed multiple methods of coding, including focused coding (Saldaña, 2013). After the conclusions of each phase are explained, a discussion of the overall results of the case study will be explained in the next Chapter.

### **5.1 Phase 1, Introduction: Weeks 1-8**

Following the first training session (refer to Section 4.3.1.1 for more information about the first training session), each participant used the portfolio in his/her tutoring sessions for one month before they were interviewed about their reactions, difficulties, and suggestions for changes. During the first training session, it seemed that two of the participants were apprehensive about adding the portfolio to their teaching practices. One stated, "I'll definitely participate, if I have time." However, in the end, they were all willing to take on the extra work. In the first

interview, all participants were pleased with the portfolios, and thought using a portfolio was helpful to track the student's learning and encouraged reflection about their tutoring sessions. George agreed, "I think it is useful because we have to put the time down to really just think about the student." Additionally, Ben found it helpful to "systematize everything and track their [the students'] learning." He continued, "It's good in the sense that I'm able to review after each session how things are going and actually write it down."

In order to get the most out of using the PBA method, the participants were encouraged "make it their own." That is, they were strongly advised to use the portfolios in ways that allowed them to best reflect on their teaching methods and assess their students' progress. Despite the participants being able to modify their portfolio use, there were several topics of concern that were frequently mentioned throughout the interviews: time, effective use for assessment, and journal format.

### **5.1.1 Time**

All of the participants stated that completing the Post-session Journals took about 5 to 10 minutes. The questions on the "Post-session Journals" were "straight forward and doable," George said. They were unconcerned about how to answer the questions and what information should or should not be included. Despite the Post-session Journals taking little time to complete, timing still remained an issue when the participants had to actually set aside time to complete the journals. Several participants voiced concerns over always finding time, post-session, to complete the journals so that they could properly reflect on what was taught and learned, rather than answer the questions haphazardly immediately following the session. For

example, when asked if he found completing any part of the portfolio time consuming, George responded, “Yea, sometimes. Just getting my thoughts together and putting it down can be [time consuming].” He later admitted, however, that “doing the extra 10 minutes thing...that’s really not that bad.” In my own experience as a tutor, I also found this difficult. I realized that once I left the student’s home, I was thinking about what I needed to do next in my day, and was not always motivated to immediately reflect on what had just transpired.

### **5.1.2 Effective Use of the Portfolio for Assessment**

Three of the participants also expressed confusion about how to tie the week-by-week material, which they included in the portfolios, to an overall assessment. In response to this difficulty, Ben requested that he would like “some training on just how to bring all of that learning together and how to improve the curriculum or worksheets that you’re doing in terms of a tutor.”

Additionally, in terms of developing the portfolio, the Math tutors, Ben and George, were unsure if the material they included in the portfolios would reflect progress, since much of the instruction was verbal, or if it would just show that work was done during that session. George admitted during the discussion portion of the Phase 2 professional development and training session, which was one week after his interview, that he had not been collecting his student’s work because he did not think it reflected how the student completed his work, nor did it show struggles he was able to overcome. Additionally, the participants were unsure about how to use the journals to make accurate assessments about each student’s progress. Confused, George said, “I find that it’s not structured enough to kind of see any kind of

progress.” In agreement, Ben said he thought additional training about “how to best use all of the daily sheets [journals] and making a portfolio-based approach that follows all of our goals, like how to best use those practically” would be beneficial to all of the participants.

### **5.1.3 Journal Format**

The most significant response from all participants was about the formatting of the journals. Each journal (see Appendices H and I for journal template) was made up of six questions, displayed on the back and front of one printed sheet. Though the participants appreciated the reflection part of the journals, they did not like that each session was on its own page. Frustrated by the one-page format, Catherine said, “I hate having a million pages.” The single page format of the journals required the participants to flip through each page when reviewing their reflections, which they did not like. For example, looking at the practicality of PBA, Ben predicted, “I can imagine, at the end of this semester, at the end of the year, I’d have so many sheets. I would like to say I would go through all of them, but I don’t know how realistic that is.” As a result, Ben suggested that the journal be reformatted into a smaller version, where several sessions’ responses could be on one page. He proposed, “Maybe there is a type of form or something that can be devised so that when learning is generated, it can be kept track of, like create your tool box kind of. And, like you can apply it to that student when that problem comes.”

## 5.2 Phase 2, Interim Evaluation: Weeks 9-16

The difficulties and questions expressed by the participants in the Phase 1 interviews were used to guide the second training session (see Section 4.3.1). During the second training session, participants were given the Half-way Goal Check-up (see Appendix K) and further trained to use the portfolio as an assessment tool. Additionally, participants were given the newly formatted journals, which were arranged like a spreadsheet and had spaces to reflect on multiple sessions on one page. As a result of these changes, the topics most often discussed during the Phase 2 interviews were about the Half-way Goal Check-up and newly formatted journals. As was the case in each phase of the interviews, however, participants were still asked about their likes and dislikes of using and developing the portfolio. This, unexpectedly, led to several of the participants making the same suggestion for a future change in the design of the portfolio, which will be explained in this Section.

When asked if the Half-way Goal Check-up was useful and necessary, all participants' responded with a resounding, "Definitely!" Several of the participants expressed the strong opinion that the Half-way Goal Check-up was more useful than the journal. Catherine stated that the Half-way Goal Check-up was better because it was more motivating since it identified progress more obviously than the Post-session Journals. Additionally, as a result of the Half-way Goal Check-up, Ben modified his portfolio use to include the Half-way Goal Check-up at the end of each month.

Though one part of the assessment allowed for a numerical outcome of the evaluation as a result of completing a Likert Scale, the participants mostly preferred the open-ended statements at the end. George and Catherine identified the "Plans/Tips for Future Lessons" as the most helpful part of the assessment because



it encouraged brainstorming about how to improve upon teaching methods.

Catherine also expressed appreciation that this portion allowed her to “actually write down things that could be improved for the lessons.”

As a participant in this case study, I also found that the Half-way Goal Check-up was very useful. As a result of completing it, I was able to better identify strengths and weaknesses of my student, and determine teaching methods that were useful or needed to be changed. All participants confirmed that completing the Half-way Goal Check-up did not take very much time, however, actually taking the time to complete it was not their first priority. For example, at the time of their interviews, George and Catherine had not yet completed the Half-way Goal Check-up. They each recognized that, while they saw the importance of completing it, setting aside the time to do it had not taken precedence at that moment. After completing the Half-way Goal Check-up, George and I found that, though reviewing previous materials required extra time, an in-depth review of the previous materials may not have been necessary since many of the questions could be recalled from memory. George confirmed, “I looked back to make sure I didn’t forget anything in the journals, but I think I mostly used what I remembered.” Ben and Catherine, though, did not express the same opinion. In response to how she filled out the Half-way Goal Check-up, Catherine said, “I was looking at the previous lessons and just seeing if I’d seen progress from the starting point to the end point.” Furthermore, she said that completing the Half-way Goal Check-up helped her to “actually write down things that I would improve for the lessons.”

Prior to discussing the participants’ opinions of the Half-way Goal Check-up, we discussed their overall portfolio use and development. Much of this discussion focused on the use of the new journal format, which was developed following the

Phase 1 interviews. Despite most participants expressing a strong interest in changing the format of the journal, likeability and use of the new journal was split: Ben and George preferred to use the first journal format, while Catherine and I preferred to use the new journal format. George said, "I just kind of stuck with the old one [original journal format]. I found it more, I don't know...it was easier to use." In contrast, Catherine said, "I prefer having everything on one page in small squares, and the questions are very simple and to the point." This result was especially interesting because Ben and George were initially the strongest advocates for the new journal format. When asked about why they preferred the original format, as opposed to the new journal format, both Ben and George stated that they felt they had been too hasty about their initial opinions of the original journal. George continued by saying that he needed more time to get used to the original journal, and once he was comfortable with it he did not want to change to a different format. Ben agreed that the original journal format eventually took him less time to complete, which was why he did not want to change. Ben maintained, "I think that's [the original journal format] still useful right after it happens. I think the questions are helpful." [At this point in the study, I wrote the following note about this opinion: *"The second part of this statement is somewhat confusing because both journal formats included the same questions"*. I have included copies of the journal formats in Appendices H and I.]

With regard to the time that it took for the participants to complete the Post-session Journals, despite which format was used, all participants stated the completion time was drastically lowered. Ben added, "I think it's definitely quicker." Several added, however, that setting aside time to do the Post-session Journal was still occasionally a problem. George expressed concern that, "I don't always have

time to fill it in right away...I write down what I remember most. Whatever I can.”

This issue was followed by suggestions that future use of the portfolio could include a decreased frequency in completing the journals, and possibly switching solely to the Half-way Goal Check-up as a reflection piece. Catherine confirmed, “I mostly preferred doing the Half-way Check-up than doing the daily journal...doing the Half-way Check, you can actually see improvement.”

The suggestions about future changes to the Post-session Journals led into further conversations about future changes that could be made to the portfolios. One suggested change was to add an evaluation of mood and behavior to the Post-session Journals. George explained, “One thing that I have noticed is that, like the way I write about the session itself varies a lot on the state of mind I have on that day. Sometimes, I guess, some days I’ll think that it went very badly and some days I’ll think it went well. But, I’m sure my own feelings come into play, and that it’s not always about the student.” The participants felt that considering the mood of both the student and themselves could help them to better reflect on the lesson. George thought that recording the perceived moods could help him consider them when reflecting on the journals. In accordance, Catherine suggested, “Maybe include a section that talks about the attitude of a student during a session or a lesson. I feel like that obviously sets the tone for your session and how the teaching went.”

The second suggested change was to develop a way to identify smaller goals that would help reach the overall goals. Several participants suspected that their overall goal may have been too vague, and wanted information about a way to focus their teaching methods, which would help them to work up to the overall goal. Confused about how to better use the goal she had created, Catherine said, “I guess

my objectives with the students were a bit too broad...it's hard to see if they've actually improved because they're [the goals] so vague."

Each of these suggested changes and opinions were considered when developing the final professional development and training session. The results of this were discussed in the third interview, and are discussed in the following Section, Phase 3.

### **5.3 Phase 3, Final Evaluation: Weeks 17-24**

The use of the portfolio following the final professional development and training session was discussed in the final interview. As previously stated, in the final professional development and training session the participants were given new Post-session Journals, which included space for them to assess mood and behavior following each tutorial session. Additionally, they were given training about how to use Bloom's domains and hierarchy of learning (Sabra, 2014) to create mini-goals for each lesson. Finally, participants were also given the final assessment rubric, entitled Learning Progress Assessment (see Appendix L). The results of these changes, additions, and assessment use are discussed in greater detail throughout this Section.

All participants greatly appreciated the mood and behavior assessment addition to the Post-session Journals. Catherine, in particular, stated since recording her students' moods and behaviors, she was able to change her teaching methods to address the students' attitudes. She stated, "I was able to actually see if one of my students was focused or not, or if they were motivated and how that impacted our lessons." She continued by saying that this change in her teaching has made a great

difference, which resulted in her noticing progress in students' behavior changes and openness to learning. In agreement, Ben and George found that including the mood evaluation positively impacted their lessons. Ben confirmed, "The mood thing you added was interesting. That was good because it's definitely a factor in the performance of the session, especially if the student is in a bad mood, so I definitely liked reflecting on that."

The addition of the mini-goals to the Post-session journals received mixed reactions. While all participants communicated an appreciation for learning about Bloom's domains and hierarchy of learning (Sabra, 2014), not all participants felt it was necessary to create a mini-goal for each tutorial session. For example, George and I felt that the mini-goals helped to focus the tutorial sessions and work up to the overall goals. He stated, "The mini-goals were most useful because it shows you the progress, and the overall goal is just kind of stating the problem of why they're in tutoring, or just the main challenges or underlying challenge. All the mini-goals are, I guess, trying to deal with that challenge." In accordance, Ben said that he liked that the mini-goals could help to work up to the overall goals, though it was not as useful as he had previously hoped. He said that though "it was a good think to add...I don't think I used it so much for planning the next session." Catherine, however, did not like the mini-goals. She explained by saying that the mini-goals were "too much" and often unrealistic. She said, "It didn't really affect my sessions. I was just able to write it down and notice it, but it didn't really affect the way I structured my lessons. That didn't change." Continuing, she found that she preferred the overall goals because they were more concrete and had a greater impact on the progress she was evaluating on the assessments.

In addition to the changed Post-session Journals, participants were also given the final assessment rubrics, or Learning Progress Assessment. As previously stated in Chapter 4, the Learning Progress Assessment required the participants to evaluate the students' progress, their own teaching methods, and overall portfolio use. Following completion, participants were asked their opinions about using the Learning Progress Assessment as an evaluation tool. The general standpoint about the Learning Progress Assessment was that it was not as useful as the Half-way Goal Check-up. Participants articulated a preference for the open-ended questions that were on the Half-way Goal Check-up, but were missing from the Learning Progress Assessment. Despite the Learning Progress Assessment's purpose of assessing progress over the six months that the case study occurred, participants felt that an accurate evaluation was not possible because a sufficient amount of time had not passed since they had completed the Half-way Goal Check-up. For example, Catherine said that since there was a holiday break between the time of the two assessments, "We got to kind of refresh everything after break, so it took me a while to get back into it. So, that's why the learning assessment didn't really change from the Half-way Check-up." Several participants suggested that the Learning Progress Assessment would have been more useful if it were given at the end of a school year, or upon finishing working with the student. In agreement, Ben stated, "If I ever teach people over a long period of time, I think I'd definitely use it."

In addition to the results of each phase of the case study, participants' voiced opinions about the overall use of PBA and the analysis of all the interviews has provided me with a compelling amount of information to determine overall results of this case study. Furthermore, the interpreted results of the combined phases, as confirmed through several rounds of coding, triangulation, and member checks,

have also provided me with answers to my initial research questions discussed in Chapter 1. In Chapter 6, I will discuss the findings of the focused coding, as confirmed by triangulation and member checks, which have helped me determine the overall results of this case study, as well as to answer my research questions.

## Chapter 6- Findings and Discussion: Focused Coding for Patterns Across the Participants' Responses

The results of this case study were determined through several rounds of coding, specifically focused coding (Saldaña, 2013), triangulation and member checks (Duff, 2008; Yin, 2003) (see Chapter 4, Section 4.5), as well as explicit answers from the participants regarding the research questions guiding the study, with particular focus on the five main issues in PBA use, discussed in Chapter 3, Section 3.8.

In this Chapter, I discuss the findings in relation to the research questions. Following the discussion, I present the overall results of the study. In Figure 2, below, I have connected each research question to the focused codes used to provide insight to each question. These codes are also used as the titles for each subsection.

Research Question	Codes
<i>Are portfolios valuable resources for assessment?</i>	<ul style="list-style-type: none"> <li>– reliability and validity</li> <li>– use of PBA</li> <li>– environment of PBA use</li> </ul>
<i>As perceived by instructors, what affects the success and/or failure of PBA practices in tutorial settings?</i>	<ul style="list-style-type: none"> <li>– design flexibility: make it their own</li> <li>– mini-goals and mood evaluation</li> <li>– journal and assessment use</li> <li>– on-going training and support</li> </ul>
<i>How can the implementation of PBA practices be improved?</i>	<ul style="list-style-type: none"> <li>– requirement</li> <li>– time</li> <li>– cost</li> <li>– training</li> </ul>

Figure 2- Research Questions and Focused Codes



## **6.1 Research Question 1: Are portfolios valuable resources for assessment?**

When asked this question half-way through the case study, all participants initially answered, “Yes.” However, as their portfolio use continued, their responses began to change to, “Yes, but...,” followed by a recommendation for adding or changing something in the portfolio that would help it be a more valuable resource for assessment. While many of these suggestions associated the assessment method’s reliability and validity to its usefulness, responses also addressed issues that could determine its merit: how it is used, the environment in which PBA is used, and who uses it (e.g., classroom teacher, tutorial instructor).

### **6.1.1 Reliability and Validity**

The opinions about the reliability and validity of this PBA design varied among the participants. Though most participants felt that the evaluation used in the portfolio was subjective, they did not think it would differ too much from another person’s interpretations. Ben, for example, said “I did put a lot of my personal experience in my analysis, so in that way it is subjective, but someone else with the same experience could’ve made the same observations.” In contrast, however, George was unsure if another evaluator would see all of the same progress or changes. He continued, “I think that PBA is really good for the relationship between the student and teacher, but you can’t really transfer that out...I think it really depends on the [other] teacher.” Despite the participants being unsure if another evaluator would have made the same assumptions about each student’s progress, they did agree that the PBA method is subjective, which may not

necessarily be a bad thing. This is in following with Fox's (2014) statement that since the tasks occur in unique settings, "they are subject to differing teaching conditions and constraints" (p.69-70). The unique setting of tutorial sessions can also vary as a result of the relationship that the student has with the tutor, which can affect how the student is assessed and progression is viewed. Several participants suggested that if they were given training in how to assess students similarly, the results could be less subjective. Ben offered, "If everyone comes together and shares their ideas and their experiences, if you're consulting properly, eventually you'd get a standardized way of thinking that may develop over time. 'Cause even if you give someone a rubric, they're going to mark in the rubric differently. It needs to happen because then how else can you defend it, because it can be so subjective?" Since this modification also addresses influences to the success and/or failure of PBA practices in tutorial settings, I will discuss it further in Section 6.2.3. In addition to implementing training to improve and (somewhat) standardize PBA assessment methods, Catherine and Ben recommended involving parents in the assessment, in hopes that the parents could balance or reassure the tutor's subjective interpretations of the student's progress. When reflecting on whether or not one of her students' parents assesses the student's progress, Catherine said, "I don't know if they actually see progress, so maybe that'd be something to incorporate: like a check-up from the parents. Maybe not on paper, but do like a monthly check-up saying, 'Do you see any improvement with your kid?' just to get some monthly feedback."

The most strongly encouraged suggestion by all participants was to incorporate the use of a diagnostic test at the beginning of the tutorial sessions and again several months later. In her final interview, Catherine said, "It would be better

to do some kind of testing in the beginning and after to see if they're [the students] improving and to make sure that your subjective opinion is actually true." When asked about methods of assessment he typically used, George stated that he evaluated his students using a diagnostic assessment method at the commencement of working with his students; however, the diagnostic was not used again to assess the student's progress. When asked his opinion about using the diagnostic at several points throughout his portfolio use, he agreed with Catherine's suggestion by saying, "I think it would've been helpful."

Despite the subjective nature of the portfolio, all participants communicated that they felt their assessment results were valid, or acceptable. George confirmed, "Yep. You can definitely see things getting more complex as time goes by." They also mentioned that if another person were to have viewed each tutorial session in its natural environment, the evaluation of the students' progress would have been similar. Ben suggested that, though he believed his portfolio was a valid representation of his students' progress, the validity of this portfolio design and the assessment methods used could be further improved through training in assessment and a more in-depth assessment design. This was mentioned earlier when Ben speculated about differing assessment habits. He said, "Cause even if you give someone a rubric, they're going to mark in the rubric differently." As a possible solution, he suggested, "In the beginning of the year, you need to get [everyone] together to make sure that an answer for one thing is the same to another."

### 6.1.2 Use of PBA

How portfolios are used and knowing how to use them influences whether or not portfolios are deemed valuable resources for assessment.

In the design of this PBA, the focus of the portfolio was on the student, however, the tutors were the portfolio developers and users. Though the participants felt that creating the portfolio was sometimes time-consuming (further discussed in Section 6.3.2), they appreciated the additional reflection and evaluation that it provided. George agreed, "Having to look back at the session as a whole was the most helpful part in learning how to teach." Furthermore, all agreed that using the portfolio for reflection and evaluation of the students helped them to better consider the students' progress, and identify how their teaching methods may have been influencing students' comprehension. Catherine said, at the Half-way Goal Check-up point, "I was able to actually write down things that I would improve for the lessons." In their research, Moya and O'Malley (1994) also found that using PBA for students had an additional effect on teachers' increased focus on planning and structuring of lessons.

In accordance with Moya and O'Malley's (1994) research finding, all of the participants found that completing the journals and assessments helped them reflect on their successful and unsuccessful teaching methods, which in turn influenced their overall portfolio use and future lesson organization. As previously mentioned, Catherine found this to be the most helpful aspect of this PBA method. She confirmed, "It's helped me bring a better structure to my lessons." Furthermore, the assessments, especially the Half-way Goal Check-up, created opportunities for the participants to set teaching goals for future lessons and outline techniques that could be used again with the same students. Similar to Catherine's experience

observation George stated, "I thought it was good because it was a way to see how things were going before the end of the session and it made me reflect a bit about my teaching styles." Regarding the use of the portfolio for planning, he continued, "I wrote down a couple plans, like things I plan on doing."

Participants were encouraged to collect students' work to include in their portfolios to assist the participants in assessing their students' progress. However, all of the participants felt that this was not necessary. Ben said, "At the beginning, I tried to include what I used [developed in the session]." As the portfolio development continued, he said, "I didn't include [student work]...every time that we did a method...Just if there was something really important, then I would include that." Moreover, they said that including students' work did not increase or decrease the value of the portfolio as a resource for assessment. As Ben observed, "I mean, just reading the report [Post-session Journal] was enough of a refresher to remember what was going on." This can also be seen in the progression of the use of the portfolio through this case study's three phases: At the end of Phase 1, the majority of the participants had included work their students had done. However, throughout Phases 2 and 3, the participants stopped including their students' work because it did not help them to better assess student progress. This was confirmed in Ben's previous statement where he stated that "the report was enough of a refresher to remember what was going on." This was true for my portfolio development as well. I found that when I reflected on the student's progress, I used my journals more often than the included student's work. As a result, I also stopped collecting my student's work.

As a suggested method of use in the future, participants believed that balancing the progress identified in the portfolio with that of diagnostic and formal

assessment could help increase the consideration of portfolios as valuable resources for assessment. In addition, George proposed linking work done in the portfolio in tutorial sessions to work done in the student's classroom. He said he would have liked "if there was a way to track their grades along the way, maybe more precisely." Regarding balancing PBA with other forms of assessment, he suggested, "I think they should be used in combination, because I think that the standardized tests show us the differences between students when compared with the curriculum, and I think that portfolio assessments would be explaining more 'Why' by looking at it."

Knowing how to use portfolios for assessment is imperative to determine if they are valuable resources for assessment. In fact, most participants said that training portfolio users about how to use them for assessment could diminish variability between users dramatically, noting that, without training, PBA is useless. George noted, "I think the training was super necessary. I wouldn't have known what to do with it [PBA]." Ben agreed, "Continual training was beneficial for sure." The necessity to train teachers to use PBA is also addressed when answering the second and third research questions, as it was commonly identified as a strong component that influenced PBA use, implementation, and success.

In addition to how portfolios are used and knowing how to use them, the environment in which portfolios are utilized is important. Classrooms versus tutorials and creating portfolios for many students versus one or two students, for example, can influence whether or not the portfolios developed are valuable resources for assessment.

### 6.1.3 Environment of PBA Use

Along with improving reliability and validity and determining the appropriate use of PBA, the environment in which PBA is used was an identified concern for some of the participants, especially regarding the usefulness of portfolios as an assessment resource. For example, Catherine said, “I think it can be helpful for both [tutorial and classroom settings], just used differently. ‘Cause for a teacher, you have to set so many different subjects, and in a class setting there’s so many student[s], which can affect the way they’re [behaving and learning] in the class. With a tutor, the experience can be more intimate and it’s easier for someone to open up if you’re one-on-one. But, I think for both, assessing is really important.” In favor of using PBA in the classroom, George said, “I think that maybe for a tutoring setting, if you have very few students, it’s not the most essential thing. I think that if I had more students, it would be really cool to have a folder for everyone and actually use it all the time. And, in the classroom I wouldn’t really know, but I’m assuming it would be pretty useful, especially to be able to follow all of the students’ learning.”

As mentioned in the overview of the participants (see Chapter 4), portfolios were developed for 1-2 students per participant. While the participants agreed that completing the portfolios was “beneficial,” most said it would have been more useful if it were used with more students. For example, when discussing if he reviewed his journals prior to assessing his students, George said, “I looked back to make sure I didn’t forget anything in the journals, but I think I mostly used what I remembered.” He continued, “I just had two students at that point, so I wasn’t really getting confused by having multiple students, so it was mostly by memory.” Several participants said that, although using the portfolio in a tutorial environment was

helpful for reflection and development of lessons, using it in a classroom may have been more valuable because it would allow the teacher to have individual insight on each student in a class of ten or more. For example, Ben said, “I think they would [be helpful in classrooms]...I think for smaller classrooms, teachers may remember different problems that students are having, so I think it would benefit to actually bring in a form of assessment that takes advantage of that.” Though she ultimately decided that using PBA in a classroom environment with more students would be valuable, Catherine said she appreciated using PBA in tutorial settings because “If the [classroom teacher] teacher isn’t doing that [informally evaluating progress and modifying lessons accordingly] or doesn’t have time to teach to all of the students’ needs, then I can actually do that because I have one-on-one time with him, or her.”

Examining the participants’ suggestions about how to improve the reliability and validity of PBA, considering how portfolios are used and the importance of knowing how to use them effectively, and the environment in which PBAs are used, I believe that portfolios are valuable resources for assessment. As mentioned in this Section, there are some areas where the development and implementation of portfolio use could be improved; however, as long as portfolios are able to provide evidence of the students’ learning and encourage adaptation of teaching methods by the instructor— which should ultimately result in enhanced student learning— the format of the portfolio is irrelevant.

In answering the next research question, I will further discuss how simply encouraging teachers to modify and make the portfolios “their own” and providing on-going training, rather than requiring the development of fancy, standardized, expensive portfolios, can influence the success of PBA practices in tutorial settings.



## **6.2 Research Question 2: As perceived by instructors, what affects the success and/or failure of PBA practices in tutorial settings?**

As a result of this case study, two factors have been identified that influence the success of PBA practices in tutorial settings. These are: 1) design flexibility that encourages teachers to adapt, or “make it their own,” by modifying the portfolios to their needs and 2) on-going training and support which enables teachers to know how to use PBA effectively. As previously mentioned, the second factor also influences whether or not the portfolios developed are considered valuable for assessment.

### **6.2.1 Design Flexibility: Make It Their Own**

All participants liked that the portfolio’s design was not “set-in-stone” and could be changed throughout. Ben said, “I think it’s important to keep it slightly general...maybe it would be good to identify which things could be specific and which things could be general and then when they’re being applied, those specific things could be changed, kind of continuously as learning is generated and we learn how to apply PBA to different subjects.” The flexible design of this PBA was purposeful so participants could “make it their own.” Because the materials included in the portfolios could be (and were) changed over time, the participants became more comfortable with PBA. For example, when discussing the time it took to complete the Post-session Journal by the end of Phase 2, George said, “I would say it [the time to complete the journal] may be a little bit shorter, just because ...I know what I want to [write] more.” Ben agreed, “In the end, it didn’t really take that much time.” Due to the changes discussed below, the participants were able align goals

with teaching methods used and students' progress, evaluate their students' development, address successful and unsuccessful teaching methods, and identify outside influences to the outcome of each tutorial session (ex: mood). For example, Catherine said the addition of the mood evaluation allowed her to "actually see if one of my students was focused or not, or if they were motivated and how that impacted our lessons." Ben observed, "The mood thing you added was interesting. That was good because it's definitely a factor in the performance of the session, especially if the student is in a bad mood, so I definitely liked reflecting on that." Finally, later in this Section, I will also examine one change that did *not* have any affect on the success of PBA practices used in this case study, as perceived by the participants.

#### **6.2.2.2 Mini-goals and Mood Evaluation**

Two requested changes made to the Post-session Journals were the addition of a mini-goal and a section to evaluate the students' and teacher's mood during and after the sessions. Reformatting the journals to include the mini-goals received mixed reactions. Catherine, for example, did not like having to create a mini-goal because it was too repetitive. She preferred using the overall goal because she felt it tracked student progress better. In regards to the mini-goal, she said, "It didn't really affect my sessions. I was just able to write it down and notice it, but it didn't really affect the way I structured my lessons. That didn't change." Ben, George, and I, however, liked creating mini-goals because it helped us to work up to the overall goal. George explained, "I thought that it [the mini-goal] was pretty interesting

because it put a lot of emphasis on one thing for each session.” Ben confirmed that the mini-goals were “definitely useful.”

The participants’ reactions to the addition of the mood evaluations were different than those to the mini-goals: All the participants were in favor of including mood evaluations. Ben stated, “I like that that [the mood-evaluation] was included and I have been using that for sure because it’s good to take into account because when a student is in a bad mood it kind of ruins the entire session. It’s good to know how much that affects the session and the performance, so that was a really good idea.” This addition was made after one participant expressed concern over personal issues influencing how the journal reflections were written. Considering student behavior and mood was also added because one participant’s lessons focused on students improving their behavior and confidence, rather than academic level. This supplemental reflection question helped all of the participants gauge their student’s reactions to the lessons and consider their own mood, which may have influenced the lesson or completion of the Post-session Journal. George explained, “It was good because it is definitely a factor in the performance of the session, especially if the student is in a bad mood.” All participants agreed that it was very beneficial to add this to the Post-session Journals, and suggested that it should be included in future PBA development. George, for example, said “Well, the mood thing is always good because if I were to look back on it I’ll be able to gauge my mind set a little better.” Additionally, when asked if the addition of the mood evaluation positively or negatively impacted his lessons, George acknowledged, “I thought it was a good thing to add.”

The incorporation of mini-goals and mood evaluations into this PBA was done by making changes to the Post-session Journals. These, however, were not the

only changes made to the Post-session Journals. The purpose of making changes, as well as the use of the Post-session Journals, and two forms of assessment used in this PBA design are discussed in the following Section. In addition to how they were modified, the inclusion of these materials helped influence each participant's perceived success of using PBA in tutorial settings.

### **6.2.2.3 Journal and Assessment Use**

Though the format of the materials changed several times, the purpose of completing the Post-session Journals and the assessments stayed the same. In regards to the usefulness and frequency of completing the journals and assessments, each participant valued them differently.

Ben, for example, liked completing the full-page Post-session Journals after each tutorial session because it allowed him to write more about each lesson. He explained, "I think that the weekly ones [meaning: spreadsheet-format journals] are useful to look at to get an overall sense of what's going on, but I like having the space to write [in the other journals] as well." After completing the Half-way Goal Check-up, he also said he wanted to use it for each student at the end of each month so he could have a more frequent assessment of the student's progress, stating, "I wanted to do this one [Half-way Goal Check-up] every month...for October I did one for each of them and I did find that pretty useful." He, however, did not find the second spreadsheet-like format of the Post-session Journal to be helpful and thus did not use it at all. To support his decision, Ben stated, "The daily sheets [first journal format], I think, are descriptive enough to explain the whole story. I guess I just like to write more."

George also liked using the full-page Post-session Journals, but said he would have preferred using the Half-way Goal Check-up bimonthly because the frequency was not as essential. He said, "I mean, it's just another thing I can look at, but I don't think it was essential or extremely helpful." When asked if he could have assessed his student accurately and done without the Half-way Goal Check-up, he agreed without hesitation. He appreciated the review of his student and his lessons, which were created by filling out the journals and assessments, but did not like the inconvenience of how often they needed to be filled out, explaining, "It takes time."

Catherine strongly preferred the second spreadsheet-like format of the Post-session Journal because it was "organized, more efficient...very simple and to the point." Although she preferred a different journal format, Catherine agreed with George's preference that, though they were helpful to review the tutorial sessions and student's progress, the Post-session Journals could be completed less frequently, and the Half-way Goal Check-ups could be completed every four weeks. She explained, "Doing the Half-way Check-up, you can actually see the improvement...I would prefer the whole monthly thing than weekly thing."

Like Catherine, I favored the spreadsheet-like format of the Post-session Journals because they were more organized, and I also preferred to complete them less frequently. I agreed with Ben's preference, however, that the Half-way Goal Check-ups could be completed once a month, rather than every two months, because they give a more accurate overall evaluation of the student. Perhaps, in future PBA practices, tutors or teachers could be given both the journals and assessments and choose the frequency of completion. This would further instill the benefit of making it "their own."

All participants were in agreement that the Half-way Goal Check-up was much more useful than the Learning Progress Assessment because, in the Half-way Goal Check-up, they could explain more. Ben said, "I already knew, I guess, but it was helpful to see it. It was helpful to quantify it there [on the second page of the Half-way Goal Check-up]." Participants said they also liked being encouraged to write down plans for future lessons and improvements in their teaching methods. For example, Catherine said, "I think they're kind of the same, but I like the Half-way Check-up because it helped me better structure my tutoring lessons."

Despite the previously identified successful changes made to the portfolios, there was one change I presented to the participants as possible, that was deemed unnecessary. This change was the addition of subject-specific questions in the Post-session Journals and assessments, which will be discussed in the next Section.

#### **6.2.2.1 Subject-specific questions**

When developing the materials for the participants, I was concerned if the questions in the journals and assessments should be subject-specific. This was discussed with the participants during each interview but, throughout their use of the portfolio, the participants found that making the questions subject-specific would not influence their PBA practices. Ben asserted that the questions on the Post-session Journals and assessments "work well." He also felt that changing or adding to them would not make them more useful or helpful. In agreement, Catherine stated, "I don't think it has to link with the subject you're teaching, it just has to link with the students." Though I agreed with the participants' responses, when the case study was complete, I reviewed each of the participants' developed

portfolios. In this examination, I too found that subject-specific questions were not necessary. This was a result of the questions being vague-enough (see Appendices I, J, K and L), so they could be applied differently to each subject taught. Ben explained, “I think it’s important to keep it slightly general...for us, the observations could be specific to different fields, but the mood, material covered, successes and difficulties...those should stay standard.”

### **6.2.2 On-going Training and Support**

Though encouraging tutors to use PBA in their own way is beneficial, training the tutors how to develop and use the portfolios for assessment was also considered important regarding the successful use of PBA in tutorial settings.

As mentioned in Chapter 4, Section 4.3, the design of this PBA included on-going professional development and training sessions. In each session, information about how to develop and use the portfolios was given and participants were allotted time to discuss problems and questions with each other, as well as with me, who has advanced knowledge about PBA.

The majority of the participants felt that the professional development and training sessions were necessary, stating that they would not have known how to develop and use the portfolio effectively if continuous instruction was not provided. As previously mentioned, George said, “I think it was good because I wouldn’t have known what to do otherwise.” Later, when considering having on-going training versus only one training session, he said, “Just to talk to someone who knows what you’re supposed to be doing and can give you feedback. That’s good...I think with portfolio-assessment, it would be helpful to discuss it with other people doing it at

the same time too.” One participant stated that much of the training could have been done via e-mail, but felt the discussions encouraged in training were very useful. Clarifying her reasoning, Catherine said, “I think that you explained it all pretty well through e-mail, like we probably didn’t need a training session to understand.”

All participants felt that the discussion sessions that occurred during the professional development and training sessions were informative and extremely necessary. Ben asserted, “You need to have a network and a committee that you work with together to reflect on different methods about how to improve.” Additionally, several participants found that, during the discussions, they were able to work through any difficulties they were having by listening to the other participants’ suggestions. For example, though she would have preferred more training sessions via e-mail or on-line, Catherine admitted, “Once I was there, I found it interesting to hear what the other tutors were going through.”

All participants also acknowledged that having access to a person who has advanced knowledge about PBA was essential. Several participants concluded that, while they may have been able to develop the portfolio and use PBA on their own after one training session, they believed that a much more useful and comprehensive portfolio was developed as a result of having more guidance and support. For example, Ben said, having “consultative sessions where we’re reflecting with each other and the more formal training that you were giving, combined, was sufficient.” When considering how PBA could be implemented in schools, Ben said, “Maybe there should be a facilitator or coordinator that knows about this stuff and helps teachers with any barriers, if they have any. It’s helpful to have someone there to help eliminate certain things that just make it stressful.” Similarly, participants confirmed that, without the information provided by a person



who has advanced knowledge of PBA, they would have been less motivated to complete the portfolio and, most likely, would not have made alterations to the included materials. As previously mentioned, George said, “Just to talk to someone who knows like what you’re supposed to be doing and can give you feedback. That’s good.”

Allowing and encouraging teachers to “make it their own” by making changes to the portfolio, providing on-going training and support that enabled the participants to learn more about PBA practices and problem-solve with each other and including a resource person who has advanced knowledge about PBA, definitely contributed to the successful use of PBA practices in tutorial settings in this case study. The positive reactions of the participants, however, were after PBA was already implemented into their tutorial settings. In the following Section, I will answer my final research question, where I will discuss how the implementation of PBA practices can be improved.

### **6.3 Research Question 3: How can the implementation of PBA practices be improved?**

Although this was my final research question, it is possibly the most important. I believe this because, if the implementation of PBA practices fails to motivate the educators to use the method properly, then the educators could be more likely to cut corners, and cause the results of the assessments to be uninformative and/or useless.

That being said, this Section will address how improving the previously identified issues associated with PBA (see Chapter 3, Section 3.8) could improve the

implementation of PBA practices. With the exception of the issue of improving reliability and validity, which was addressed in Section 6.1, I will discuss how requirement, time, cost, and training affected the implementation of this PBA practice. Additionally, I will propose several improvements that could be made to reduce each topic from being considered a top issue in future PBA implementation.

### **6.3.1 Requirement**

Similar to some researchers findings (e.g., Koretz et al., 1994; Wolfe & Miller, 1997), participants in this case study also found that the requirement to complete the portfolio sometimes felt “like a chore.” However, the compensation provided by the owner of the tutorial company (see Chapter, Section 4.4) served as an excellent motivator. Several participants said that being paid for their time, helped encourage them to develop the portfolio. Catherine confessed, “Definitely knowing that I was being paid to do it, was motivating me to do it.” Additionally, after assessing the students at the end of Phase 2, participants stated that being able to see specific evidence of how the students were progressing helped them view the portfolio as less of a requirement, and more of an assessment tool. Catherine explained, “I need to plan differently for each of my students. So, that’s why assessing has helped me see that.”

After the case study was complete, and the participants were reflecting back on the portfolio development experience, 75% acknowledged that, though the portfolio was required, it was necessary and useful. Ben explained, “I do think it’s a necessary burden...and, in the end, it didn’t really that take much time.” The two other participants and I felt that if the requirement to use and create the portfolio

was not there, they/we would have been more likely to push the portfolio aside, and probably not come back to it. Catherine explained, “You were good for reminding me to do stuff. Being reminded to fill out things at certain points, those are things I wouldn’t have remembered to do.” The one participant who did not feel the portfolio was “necessary” stated, “I think it wasn’t as useful as I thought it would be. I’m sure if you had like a class or something, it would be really interesting to look back, but I didn’t find it extremely necessary [in my tutorial setting].”

### 6.3.2 Time

Another identified issue associated with PBA was time (e.g., Hamp-Lyons & Condon, 1993; Koretz et al., 1994; Tillema & Smith, 2001). Despite confirmation that the Post-session Journals only typically took about 5 minutes to complete, the participants felt that they did not always have “enough” time set aside in their day to properly reflect on the lesson and answer the journal’s questions. Aside from Catherine, all participants admitted that they often completed the journals two or three days after the lesson took place. Concerned about setting aside time to complete the Post-session Journals, George said, “Sometimes I would skip it for a day and then have to catch up the next day. It would happen a few times.” He later said, “It wasn’t really an issue to have to remember how things had gone the week before or whatever.” Given these two conflicting observations, it appears that for George completing the journals one or two days later may not have actually been a huge problem. I also found that, in retrospect, my portfolio development was not hampered if I postponed the post-session journals to a later day. The participants realized that by allowing more time to pass between the

lessons and filling out the journals some material may not have been reflected upon. Despite that realization, it was still very difficult for them/us to find time to complete the journal after the lesson was over. Several participants suggested that a possible solution to this problem could be to decrease the frequency of filling out the journals or to use monthly evaluations. Less-frequent evaluations were also discussed in the previous Section, where Catherine said, "Doing the Half-way Check-up, you can actually see the improvement...I would prefer the whole monthly thing than weekly thing." This solution was also mentioned earlier in this Chapter, in Section 6.2.2.1. Catherine suggested that a method to save time, would be to make the portfolio accessible on-line. I presented this change to George and he enthusiastically replied that he also thought it would be helpful. He explained, "Well, first of all you don't need to carry it with you. It's just more convenient. Most times, you have your laptop or something with you, so if you have free time you can fill it in." This is a possible solution that could help improve negative feelings about requirement and time that are associated with PBA, which I will discuss more in Chapter 7.

Time needed for training has also been identified as an issue. However, since most participants felt that the training was necessary, this was not a big issue. Ben explained that the professional development and training sessions were short, informative, and necessary, which is why they were not viewed as a chore. He explained, "I didn't feel like it was that frequent. It could've been a lot more frequent, compared to other things, so I think it's fine in terms of timing and how much time to take out to go to it. I don't think it should be much of a problem for teachers. I didn't find that it was that big of a deal." George agreed, "I never found it...like it wasn't very long and was pretty straight forward and to the point and I

think it was good because I wouldn't have known what to do otherwise. I don't think that was so much of a problem." Additionally, despite Catherine's belief that much of the training could have been done via e-mail, she appreciated the discussion and problem-solving parts of the professional development and training sessions, so that she eventually deemed them useful overall. Reiterating what she had said before, Catherine felt that "the discussion parts of the meetings were helpful because we could get new ideas and different perspectives on what was happening with our lessons."

### **6.3.3 Cost**

When PBA has been implemented into other education systems, the cost of materials and training has been viewed as a considerable burden. In order to eliminate the burden of the participants having to pay for materials and a professional PBA trainer, I absorbed the costs required to develop and implement this portfolio study. The cost of compensating the participants to complete the Post-session Journals, however, was an added expense for the tutorial company. The benefits and issues of how these costs were dealt with will be discussed in this Section.

As was mentioned in Chapter 4, participants were given journals, assessment forms, and portfolio shells to collect information for their portfolios. The cost of all the materials provided in this 6-month PBA design was \$101.60. This total included the cost of the portfolio shells, multiple copies of all journals and assessments, and copies of all consent forms and questionnaires (see Appendices G-L for examples of materials). Participants were also given electronic copies of all typed material, but I

still funded additional printing expenses for these materials. I did not view this as an exorbitant or impractical cost, however, in order for the implementation of PBA to be successful in a larger context, it should be researched further.

Regardless of the size of the context it is used in, these costs may be necessary because, in this study, all participants agreed that having the materials provided and paid for created further incentive for them to create the portfolio. For example, George said, "I think the requirement to have to go and get everything would've been more of an issue." Catherine agreed that cost would have been an issue if the materials were not provided "Because I think this could easily be done on the computer." Furthermore, the participants stated that, for future portfolio development to be successful, the school or program implementing the PBA method should fund the cost of all necessary materials.

In addition to the cost of materials, there was also an added cost for the work the participants did when completing the Post-session Journals. In Section 4.4.2, I discussed the purpose behind the tutorial company providing this compensation, which was to motivate the participants to use the materials (e.g., the Post-session Journals) in the portfolios. Following the completion of the study, the owner of the tutorial company reflected that, while necessary, he could see it becoming an issue. He said, since the compensation was only given for a short period of time (less than 6 months), it was feasible, however, in order for PBA to be used long-term and have the compensation be sustainable, the hourly rate for tutoring would need to increase from \$5-\$10 to cover the added costs. He considered this increase not problematic because the company's current hourly rates for tutorial sessions are "below industry standard." This implication will be discussed more in Chapter 7, however, since it affects the implementation of PBA practices, I have also discussed it here.

Since it was part of the design of my case study, I did not consider the cost of an outside PBA trainer. However, given the fact that there were only three professional development and training sessions, the additional cost for an outside PBA trainer probably would not have been cost-prohibitive. Although, since the majority of participants felt that the training was necessary, it is my hope that an education system implementing PBA practices into their curriculum would also view the training and the costs of the trainer as necessary.

#### **6.3.4 Training**

As was mentioned above in Sections 6.2.3 and 6.3.3, the majority of the participants felt that the professional development and training sessions were necessary in order to develop a useful portfolio that could be used for assessment. For example, George explicitly stated, "I think it was good because I wouldn't have known what to do otherwise." All participants felt that the discussions that took place during the professional development and training sessions were helpful when considering their portfolio development, assessment, and teaching methods. Regarding future PBA use, Ben explained, "You need to have a network and a committee that you work with together to accurately assess the students and reflect on different methods about how to improve. A support system really needs to be put in place if this form of assessment is going to be used properly." Though Ben appeared to be unaware of the term "community of practice" (Lave & Wenger, 1991), as was discussed in Chapter 2, this is an excellent example of CoP in use.

As previously mentioned, Ben and George acknowledged that, without any training or on-going training, they may have not known how to use PBA effectively,

and thus may not have wanted to use the assessment method at all. For example, Ben said, “Those consultative sessions where we’re reflecting with each other and the more formal training that you were giving, combined, was [sic] sufficient. One without the other may not have been enough, but I thought both together was [sic] good.” Reflecting on the on-going training, he said, “Yea, definitely continual training was beneficial for sure. I think it’s good to continually refresh.” Addressing her issues of not always wanting to set aside time to attend training, Catherine suggested that, since the training was informative, but did not necessarily need to be in-person, future PBA training could be done via e-mail or online. She explained, “I think that you explained it all pretty well through e-mail, like we probably didn’t need a training session to understand.”

Though requirement and time were still viewed as an issue in this PBA use, offering compensation for time spent developing the portfolios and/or changing the design of the portfolio to be all on-line, via an ePortfolio (see definition in Chapter 3), could help improve the implementation of PBA practices. Additionally, taking into consideration how cost and training were addressed and appreciated by the participants in this PBA method could help improve future PBA design and development.

In this Chapter, I addressed how the design of this PBA method helped it to be considered a valuable resource for assessment, influenced its (mostly) successful use in tutorial settings, and improved the overall implementation. The results of this case study provide implications for further PBA use and implementation, which will be discussed in Chapter 7. Additionally, in the final chapter I will present some of the limitations of my study, as well as possibilities for future research.



## Chapter 7- Conclusion

The aim of this thesis and subsequent case study was to address the lack of information about assessment in tutorial settings, as well as to help determine effective methods of training, which could help improve the introduction and implementation of PBA methods. In order to respond to these issues, I developed the previously discussed case study (see Chapter 4), which responded to my three research questions (see Chapter 1). Following analysis of the information from the case study, I determined the results of each phase (see Chapter 5) and the case study as a whole (see Chapter 6). The combined results of the case study helped me to respond to the research gap identified in Chapter 3, as well as to answer my research questions.

In this chapter, I will discuss how the implications of this case study could impact future assessment use in tutorial settings and PBA use. I will also explain how the changes made to the design of this PBA method, which helped it to succeed, can be implemented in future PBA uses. Following the discussion of the implications, I will present some limitations of my case study. Although I believe the results of my thesis can be influential in the future use of assessment in tutorial settings and PBA use overall, I realize there are some aspects of this study that cannot be replicated. Finally, I will conclude this thesis by identifying areas of possible future research in regards to assessment in tutorial settings and PBA implementation and use.

## **7.1 Implications**

The results of this case study, as were discussed in Chapters 5 and 6, suggest several implications for the future implementation and use of PBA. These implications have been determined as a result of identified positives and negatives related to this case study, as well as through the voiced opinions of the participants about the implementation and use of PBA in tutorial settings. While some of these consequences may only impact PBA use in tutorial settings, others may impact the future use of PBA in school settings.

### **7.1.1 On-going Training and Support**

For the future success of PBA implementation and use to be successful, it is imperative that PBA users receive on-going training and support. Incorporating these aspects will allow them to understand how and why PBA is used and how it can be most effective. Conducting training sessions in groups also encourages PBA users to problem-solve any issues they are having while using this alternative assessment method with other PBA users. This enables them to have a sense of community and support throughout their portfolio development and provides opportunities for the users to share successful techniques with each other. Furthermore, supporting PBA users with a trainer who has advanced knowledge of PBA use and implementation allows for PBA users to ask questions and to clarify confusions that a non-experienced PBA user may not be able to answer.

This implication influences future PBA use in both tutorial settings and classroom settings. The conclusion that PBA users should have training is in accordance with other researchers' findings, such as Black and Wiliam (2001), who

suggest that, in order for PBA to be used and created properly, teachers, administrators, and students must receive training on how to create and implement them (portfolios), as well as how to measure and self-assess outcomes. The additional conclusion that *on-going* training and support be incorporated in all PBA use and implementation is the direct result of participants in this study stating that this influenced how they conducted and used the portfolio for assessment (see Chapter 6, Sections 6.2 and 6.3, for clarification of results related to training and support).

### **7.1.2 Time is an Issue, but Can Be Lowered**

Time is precious, and often, people do not want to spend more time doing something than they feel is necessary. Additionally, many people do not want to spend time doing something they do not view as necessary. In Chapter 3, I identified time as an issue related to PBA use and implementation. As a result of this case study, however, I have concluded that the issue of timing can be addressed in several ways; each of which will be discussed in this Section and the following two Sections.

Clichéd but true, “Time is money” and it is a consideration for PBA use as well. If PBA is adding time to the hours of work, teachers will have less incentive to use PBA and/or comply with its requirements unless additional compensation or workload consideration is included. Not unlike other professions, additional compensation or workload consideration is offered for value-added services when extended hours are required.

Though the conclusion that time expended should be time paid may be viewed as an opinion, I would counter-argue that, as identified by the participants in

this study, compensation often causes motivation. That is, providing pay for the extra work required to complete PBA helps encourage the actual completion of the PBA. This, in turn, allows for a more in depth evaluation of each student's progress, and a teacher who is more likely (and probably happier) to use the in-depth PBA method. The encouragement to compensate PBA users may be viewed as an added expense; however, it can be feasible and sustainable, which I will explain further in the following Section.

### **7.1.3 Cost of Use is Feasible and Sustainable**

Because of the added materials and time necessary to effectively use PBA, non-PBA users often associate it with additional costs. Even with my conclusion that PBA users should be compensated for their time, PBA implementation still does not need to be expensive. Additionally, it does not (and should not) need to cost any money for the PBA users.

Though compensating PBA users for their time is an added cost, it does not need to be exorbitant. For example, as was done in this study, PBA users can be given a flat rate for time spent completing PBA. Furthermore, the compensation rates can be sustained by slightly raising the costs of provided services. Although more research is necessary to determine how these costs can be feasible and sustainable in a large-scale context, it is my conclusion that, since this compensation motivates participation and use of PBA, it should not be overlooked.

Another factor influencing the motivation and desire for teachers to use PBA is whether or not the materials are provided for them. As I discussed in Chapter 4 and Chapter 6, all materials for this 6-month PBA method were given to the

participants. These materials also only cost a little more than \$100 (see Chapter 6). Though I did not view this as excessive, this cost could also be eliminated by having the portfolio completely done online, via an ePortfolio. This will be discussed more in the Future Research Section of this Chapter, however, as it is a method that can make the cost of PBA use more feasible, I have presented it here as well.

#### **7.1.4 Have Users “Make It Their Own”**

The design of the portfolio impacts its use. If the guidelines are too rigid and inadaptable, teachers may be less likely to see how it can be translated into their various settings and disciplines. Furthermore, the use of a portfolio in one setting or discipline may require more or less time and attention than its use in different setting or discipline. This is why it is important for PBA users to be encouraged to “make it their own”. While all participants in this case study did deem it important to implement a diagnostic assessment at multiple points throughout their PBA use, as well as create a goal for the student and evaluate the mood of the student and the teacher, their opinions varied about how often the journals should be completed, which journal format was the “best”, and how often assessments should be conducted. Because there are different preferences for reflection and evaluation, PBA users should be given various tools and/or ideas to include in their PBA; however, each PBA user should be allowed and encouraged to adapt their PBA method in a way that best suits their setting and discipline.

While the implications of this case study can have an impact on future PBA use, these implications are based on the results of only one case study, and additional studies are definitely warranted. While I believe some of the results of

this one study may affect PBA use in the future, there are limitations to this study that also need to be considered. These limitations will be presented in the following Section.

## **7.2 Limitations**

No research study is without limitations, and although I attempted to confine the limitations in this study as much as possible, there are still some issues related to the case study design, researcher bias, participant bias, and my direct involvement as a participant in the case study. While some of these limitations may have been out of my control, there were several that were within my control and should be addressed in future research studies. In this Section, I will discuss the limitations of my case study and consider how they may have impacted my results.

The number of participants involved may have impacted the overall positive results I received in my PBA design, versus that of a larger PBA use study. Involving a limited number of participants also meant that a limited number of portfolios were actually developed, which may have impacted the findings and results.

The length of time the portfolios were used was another limitation of this case study. This was an issue because if, for example, the portfolios had been used for a longer duration of time, I may have been able to evaluate how motivation of PBA use over a longer period of time is affected, as well as make and test further alterations necessary to the portfolio.

The design of how each participant was interviewed regarding his or her PBA use may have affected my results. Since I was a tutor at the company, I had a working relationship with each participant. As such, when interviewing the

participants, they may have exaggerated or altered their reactions so as to please me. Additionally, since each interview took place over the phone, I was unable to gauge the facial reactions of the participants and ensure I had their undivided attention during the interview.

Though the participants each had one year or less of formal teaching experience, several seemed to have assessment bias. That is, when PBA had been introduced to them, they already used, or had experience using, a preferred method of assessment (usually standardized assessment). This assessment preference may have created a bias, which could have influenced the participants' willingness to accept other alternative methods of assessment.

The final limitation assumed in this case study was researcher bias. As the researcher, case study developer, PBA trainer, and PBA user, I had a vested interest in each part of this study. Moreover, my desire for this study to be successful and to show positive results regarding PBA use, may have influenced my interpretations of some of the data. Though I tried to combat this bias by being an objective analyzer and conducting triangulation and member checks, there still may have been some researcher-related bias.

The limitations of this study, in combination with its results and implications, should be considered when conducting future research regarding assessment in tutorial settings and PBA implementation. As a result, in the final Section of this thesis, I will present areas that should be examined for future research.

### 7.3 Future Research

The results of this research have taken a step further in analyzing how PBA can be better implemented in learning situations. Additionally, through this research, I have identified how PBA use can positively impact assessment in tutorial settings. Though it is not without its limitations, as was previously discussed, it gives light to future research necessary in regards to PBA use and implementation, as well as assessment in tutorial settings. Based on suggestions for future PBA use made by the participants in this study, as well as through my own evaluation of this study, I have determined several areas for future research, which will be discussed in this Section.

Compensation for work completed by the participants in this study had a large impact on their motivation to develop their portfolios. As a result, it would be important to evaluate how compensation influences other PBA users as well as influences companies and schools to consider using PBA programs. Additionally, a PBA motivation study could be conducted to evaluate how much remuneration does in fact impact PBA use.

Involving more teachers and tutors, and thus more students and students' parents in PBA use could further shape how PBA is used in the future. Having a larger sample of PBA users could provide a more varied reaction to this method of PBA use and implementation. Additionally, involving students and parents in future studies could help gain perspective on their views of PBA. As well, the involvement of students and parents in the PBA method could help in assessing how their involvement helps and/or hinders the process.

Changing the design of the portfolio could also influence how it is used and its usefulness is viewed. For example, the portfolio design used in this case study could



be transferred into an ePortfolio and its likes, dislikes, and ease of use could be examined. Additionally, following the suggestion of the participants in this study, a diagnostic assessment could be incorporated into the design of PBA and used to evaluate student progress and teaching effectiveness.

An additional area for future research is in increasing the reliability and validity of PBA. Though, since it is a rather subjective form of assessment, it is likely that it will never be fully reliable or consistently valid, it is still important to consider ways that these areas can be improved, as such factors strongly impact how seriously the results of PBA are taken.

Finally, continued research needs to be conducted on how assessment is used in tutorial settings, classrooms, and schools. Throughout this thesis, and especially in Chapter 3, I have identified areas of weakness in the methods of assessment currently being used (and not used) in various learning situations. For example, I have addressed a grave absence of research related to any method of assessment that is used in tutorial settings, which should definitely be addressed in future research. Additionally, as I mentioned in Chapter 1, the sole use of standardized and summative-style tests can gravely impact how a student's learning is represented; after all, it had an impact on my education and greatly motivated this research. As such, continued research about how PBA can be used effectively and better implemented in classrooms and schools is, I believe, imperative for the future of all education.

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## Appendices

### Appendix A- Ethics Clearance



Carleton University Research Office  
Research Ethics Board  
1325 Dunton Tower  
1125 Colonel By Drive  
Ottawa, ON K1S 5B6 Canada  
Tel: 613-520-2517  
ethics@carleton.ca

#### Ethics Clearance Form – New Clearance

This is to certify that the Carleton University Research Ethics Board has examined the application for ethical clearance. The REB found the research project to meet appropriate ethical standards as outlined in the Tri-Council Policy Statement: *Ethical Conduct for Research Involving Human*, 2nd edition, and the Carleton University Policies and Procedures for the Ethical Conduct of Research.

**Date of Clearance:** August 18, 2014

**Researcher:** Stephanie Mauk (Student Research: Master's Student)

**Department:** Faculty of Arts and Social Sciences/Linguistics and Applied Language Studies (School of)

**University:** Carleton University

**Research Supervisor (if applicable):** Prof. Jenna Dorothy Fox

**Project Number:** 101600

**Alternate File Number (if applicable):**

**Project Title:** Training and Curriculum Support in the Implementation of Alternative Assessment

**Methods:** A Case Study on Portfolio-based Assessment in a Tutorial Setting

**Clearance Expires:** May 31, 2015

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All researchers are governed by the following conditions:

**Annual Status Report:** You are required to submit an Annual Status Report to either renew clearance or close the file. Failure to submit the Annual Status Report will result in the immediate suspension of the project. Funded projects will have accounts suspended until the report is submitted and approved.

**Changes to the project:** Any changes to the project must be submitted to the Carleton University Research Ethics Board for approval. All changes must be approved prior to the continuance of the research.

**Adverse events:** Should a participant suffer adversely from their participation in the project you are required to report the matter to the Carleton University Research Ethics Board. You must submit a written record of the event and indicate what steps you have taken to resolve the situation.

**Suspension or termination of clearance:** Failure to conduct the research in accordance with the principles of the Tri-Council Policy Statement: *Ethical Conduct for Research Involving Humans*, 2nd edition and the Carleton University Policies and Procedures for the Ethical Conduct of Research may result in the suspension or termination of the research project.

**Andy Adler**  
Chair, Carleton University Research Ethics Board

**Louise Heslop**  
Vice-Chair, Carleton University Research Ethics Board

## **Appendix B- Moya and O'Malley's (1994) Portfolio Assessment Model**

Identify purpose and focus of portfolio <ol style="list-style-type: none"><li>1. Establish a portfolio committee.</li><li>2. Focus the portfolio.</li></ol>
Plan portfolio contents <ol style="list-style-type: none"><li>3. Select assessment procedures.</li><li>4. Specify portfolio contents.</li><li>5. Determine frequency of assessment.</li></ol>
Design portfolio analysis <ol style="list-style-type: none"><li>6. Set standards and criteria.</li><li>7. Determine procedure to integrate information.</li><li>8. Schedule staff responsibilities for analysis.</li></ol>
Prepare for instruction <ol style="list-style-type: none"><li>9. Plan for instructional use.</li><li>10. Plan feedback to students and parents.</li></ol>
Plan verification of procedures <ol style="list-style-type: none"><li>11. Establish a system to check reliability.</li><li>12. Establish a system to validate decisions.</li></ol>
Implement the model

## Appendix C- Interview Questions

*Interviews were conducted in a semi-structured format. Therefore, the following questions were suggestions only.*

### Phase 1

1. What types of assessment methods have you had experience with in the past?
2. What is your understanding of portfolio-based assessment?
3. Have you had any experience with portfolio-based assessment?
  - a. If yes, please explain your experiences.
4. What do you believe could be some of the benefits of using portfolio-based assessment?
  - a. Issues?
5. How was your use of portfolio-based assessment affected how you keep track of your students' progress?
6. Are there any difficulties you have experienced while using and developing the portfolio?
7. Are there any changes you would like to be made to the portfolio?

### Phase 2

1. Since the last interview, have there been any changes in the way you have been using the portfolio in your lessons?
2. Have you been adding materials to the portfolio after each session?
3. Have you been completing a journal after each session (either one)?
4. What are your feelings about the time it takes to complete the portfolio?
5. What are your feelings about the usefulness of the portfolio?
6. Do you have any questions about the portfolio that have arisen since we last spoke?
7. When compared to the one-page "Post-session Journal" do you find the new journal form more or less helpful?
8. Have you used the portfolio at all to go back and check on the student's progress since September?

9. Has incorporating the portfolio into your lessons affected the way you plan for and reflect on lessons?
10. Have you noticed any recent positive or negative results of working with the portfolio?
  - a. Could you share some of these experiences?
11. How do you view working with the portfolio?
12. Have you made any personalized adaptations to how you use and include information in the portfolio?
13. Could you tell me about how you assessed yourself, your student, and your portfolio use when doing the Half-way Goal Check-up?
14. Was completing the “Half-way Goal Check-up” helpful in assessing both you and the student?
  - a. Why?
  - b. Why not?
  - c. Do you have any suggestions about how this form could be improved?
15. Were there questions that were more helpful than others on the “Half-way Goal Check-up”?
  - a. Were there any questions you think could have been omitted?
16. Did completing the “Half-way Goal Check-up” help you identify the student’s learning progress?
17. Are there any comments or suggestions you have about how the portfolio can be improved?
18. Are there any comments or suggestions you have about how the training can be improved?
19. Are there any subject-specific questions you have about using the portfolio?
20. Is there any information you would like to know about how to develop your portfolio more in a subject-specific manner?

### **Phase 3**

1. Since the last interview in November and training session in December, how has your experience been with the portfolio?
2. Did the information provided in the December training session (evaluating students’ learning styles, creating mini-goals, and considering your students’ and your moods) affect your portfolio use?
3. Did the addition of the mini-goals and mood assessment positively or negatively (or not at all) affect your tutorial sessions?

4. Aside from the provided changes, were there any other changes you made to your portfolio use?
5. What is your opinion of the “Learning Progress Assessment” as an assessment tool?
6. Did filling out the “Learning Progress Assessment” help you better assess the level of your student at this time?
7. Did you find there were many changes (in the student or teacher) since the “Half-way Goal Check-up”?
8. What kinds of materials and assignments did you include in the portfolio?
9. Do you believe the portfolio you developed is a valid representation of your students learning and abilities?
10. Was creating a goal and mini-goal for your students useful?
11. Were the assessments provided helpful in gauging your students’ progress and/or learning abilities?
12. What did you think was most helpful in the training and use of the portfolio?
13. What did you think was least helpful in the training and use of the portfolio?
14. Is there anything that you would have changed (added or eliminated) from the portfolio development, training, and assessment?
15. Some issues to PBA use are requirement, training, cost, reliability and validity, and time. Did you perceive any of these to be an issue to your use?
16. Do you believe that the assessment methods you used were reliable?
17. Over the last 5 months, how has your perception of using portfolios as a form of assessment changed (or stayed the same)?
18. Do you believe portfolios are a valuable resource for assessment (in classrooms and tutorial settings)?
19. For whom and in what setting?
20. What do you think affected your successes and/or difficulties while developing a portfolio?
21. How do you think the implementation of PBA practices can be improved?

22. Did you think the training you received was beneficial to your portfolio use, or should there have been more information and/or guidance provided?
23. Did you think the on-going training (versus only introductory training) affected your portfolio use?
24. Do you believe you received ample curricular support in your PBA training?
25. How do you think curricular support in PBA training could be improved?
26. Now that you are experienced in PBA use, would you use it again as a form of assessment for your students?

## Appendix D- Sample of Coding

The following is an example of the coding used throughout. "B" denotes the participant, Ben; "S" denotes me, the researcher, Stephanie.

Interview 1- Ben 2

B- Like, I can track much easier from lesson to lesson and maybe, yea, I can go back in a week, I could probably go and see "ok they were struggling with this, or this method worked" and I could try it in the next lesson, or if they were having a similar problem, I could have a similar solution. So, I can do that, but it's not, not random, but you know once you've done 20 sessions, things can get lost. Learning can get lost. Like if a certain method works for a certain type of problem, but that problem doesn't come up for, you know, a few weeks, I have to remember that I used something that worked, and go back, once I get to that point. You know what I mean?

-going back is too much (-)  
-things can get lost

S- mmmmm

B- So, like, maybe there is a type of form or something that can be devised so that when learning is generated, it can be kept track of, like, create your tool box kind of. And, like you can apply it to that student when that problem comes.

-suggestion of new form for learning/teaching  
-ok

B- So that's one thing. I mean, there hasn't been too many sessions now, so it's not really a big issue, and I only have two student, so I could just go back and look, but it might be better. Now, that's just one thing I was thinking of. It's really good that you reflect after each session. It helps you see what works and what didn't, but I'm just not sure how much I'm going to remember, you know, whatever, a month or two from now.

-reflection is good  
-form needed to help remember

S- So, you're saying if you're not going to remember to review stuff from before, have you been keeping track of any of the stuff? Like, you said maybe certain methods that you've used, have you been keeping track of it all, or most of the stuff you've been keeping track of is the stuff that is the students work, but that maybe you weren't sure of what you told them?

B- No, no. In the post session sheets, I do keep track of what methods I use, but I what I would need to do as well is have some kind of— like I can do this myself, I just haven't done it yet— is have a separate sheet that compiles continuously, all of these tools. So, like, I can go back through the sheets and try to find what method I've used.

-sheet for compiling tools

S- Ok. So it's just going through all of it you mean? Like if it was all sort of listed?

B- Yea. Like, I can imagine, at the end of this semester, at the end of the year, I'd have so many sheets. I would like to say I would go through all of them, but I don't know how realistic that is.

-too many sheets!

S- Because it's time consuming or because you don't think it would be helpful? Or what's keeping you from doing it?

B- I think personally, and in this situation because I only have two students, I would probably remember all of these methods. But in a more complex situation, like for me personally, I just think it would just be too time consuming. I don't know how long it would take because I haven't had to do it yet, but I would foresee it being a problem. Then, let's say you have to do that every single time a problem comes up, it's just one of my thoughts on the program in general. I think I am, just to make it easier for me, I'm going to make a review sheet for me to keep track of the methods that I'm using. But for me, it would just be for pure convenience and it would probably be more effective.

-going through sheets is time consuming  
-convenience > time



## Appendix E- Sample of Focused Coding

Second Interview: All Participants

- ✓ 2 old journal / 2 new journal
  - mostly only journals in portfolio
  - NO parent involvement
  - ↓ time to complete<sup>(+)</sup>; lack of time to complete<sup>(-)</sup>
  - 2 → mood & behavior should be considered
  - 2 → goals too broad → small goals needed
  - journals used for prep & reflection (3)
  - ✓ Half-way Goal Check → very positive!!
    - ↳ better than journals
    - ↳ showed tr. progress & useful methods
  - helped plan for future ↳ lesson planning!
  - more progress than journals
    - ↳ could replace journals?
  - 2 reviewed before completing / 2 from memory
- ③ ✓ port. development
  - ③ ✓ journals
  - ③ ✓ time
  - ④ ✓ future changes
  - ① ✓ HWGC

## Appendix F- Sample of Triangulation

<b>PHASE 1</b>		
<b>My Codes</b>	<b>Triangulation</b>	<b>Codes identified by other raters (did not match my coding)</b>
<b>Ben</b>	* = code was repeated more than 2x	
tracks learning	I	
reviews with form	I	
unsure how to bring together	I	
positive response to use	I	
going back is too much (negative)	I	
"things can get lost"	I	
suggestion of new form for learning tracking	I	
reflection is good	I	
form needed to help remember past reflections	I	
too many sheets to go through	II	
many sheets = time consuming	II*	
increase convenience = increase in time efficiency	I	
<b>Reliability = .75</b>		

C1 (descriptive): remember; trigger memory; progress; learning toolbox; 2 students = no need.  
 C1 (emotions): hopeful, positive; concern for students' learning; wants to improve; concern for feasibility; adapt to suit preferences/needs.  
 C2 (descriptive): effectiveness and challenges of using a portfolio; effectiveness of using a portfolio in the case of limited number of students; using a more effective tool.  
 C2 (emotions): confident -> hesitant.

PHASE- 2		
My Codes	Triangulation	Codes identified by other raters (did not match my coding)
<b>Ben</b>		
first version of journal preferred	II * = code was repeated more than twice	
new journal = good for review	II	
no time to do both journal types		
journal completion time is much quicker	II	
All journals are necessary	II	
full-page journal is most essential	II	
week-by-week ("new") journal is best for review	II*	
Process: daily sheets -> weekly sheets -> half-way goal check-up	II	
journals = no laziness		
journals help with mental prep and continuity	II	
training + worksheets + explanations = helpful	II	
must have time to workout process on own	II	
journal questions good for science	II	
journal + math = a lot of writing needed (maybe not so useful?)	II	
positive experience overall	II*	
likes learning about process/PBA	I	
Reliability = .88		
		C1 (descriptive): review as needed; reflection; methods, success and failure; keep track of myself; no big pos./neg. C1 (emission): somewhat helpful; adapted to preferences/needs; positive = see progress. C2 (descriptive): journals are used as a reflection on one's own teaching style; journals may include the same information. C2 (emotion): stressful

## Appendix G- Educator's Portfolio-based Assessment Experience Questionnaire

### Educator's Portfolio-based Assessment Experience Questionnaire

Educator's Name \_\_\_\_\_

1. How long have you been a teacher/tutor/educator?
2. What subject(s) do you teach?
3. How do you currently (or mostly) assess students' progress?
4. As it has been explained to you, what is your understanding of Portfolio-based assessment (PBA)?
5. Have you used PBA before? If yes, please provide details of how you used it (include personal and professional usage).
6. How do you think PBA will positively influence your teaching and assessment?
7. How do you think PBA will negatively influence your teaching and assessment?
8. Is there anything you would like to know more about PBA (i.e. concerns, comments, questions)?



**Appendix I- Post-session Journal (first format)****Post-session Journal**

Date of session \_\_\_\_\_

Student's name \_\_\_\_\_

Subject(s) taught \_\_\_\_\_

The mood and/or behavior was:

Student-

Teacher (during lesson and now)-

What was covered during the session?

How did it go (ex: difficulties, break-throughs, etc.)?

What was the learning outcome(s) of this lesson (refer to "Bloom's Domains of Learning" for possible verbs to use)?

Was there any work given to the student to do in between sessions?  
If yes, please list.

What was the intended learning outcome of the homework (refer to  
"Bloom's Domains of Learning" for possible verbs to use)?

Were there any notable observations (positive and negative) during  
the session that you'd like to mention (ex: methods that did/didn't  
work, behavior changes, learning styles observed, reminders for  
future sessions)?

**Appendix J- Post-session Journal (second format)**

Student Name _____		Tutor Name _____				
Monthly Goal _____						
Date	Mood	Material covered	Successes and Difficulties	Observations (ie. +/-, methods, behavior, learning habits, comments for tutor)	Learning Outcome of Lesson	HW given? Intended learning outcome?



## Appendix K- Half-way Goal Check-up

### Half-way Goal Check-up

The "Half-way Goal Check-up" is used to assess the student's progress thus far, as well as your methods and teachings that have helped the student work towards his/her goal.

**Directions:** Review all of the materials that you (and your student) have included in the portfolio. With these items in mind, fill out the "Learning Progress Assessment" rubric. Make notes about what has and has not worked, what could be done in the future, and any notable progress made. Include this form in the portfolio to use when doing your final assessment.

Half-way Goal Check-up Rubric					
	Strongly Disagree				Strongly Agree
Student is on-level with grade-level expectations (prior to tutoring)	1	2	3	4	5
Student is on-level with grade-level expectations (following tutoring)	1	2	3	4	5
A goal for the tutoring sessions has been clearly defined	1	2	3	4	5
Student's weaknesses have been addressed	1	2	3	4	5
New methods of teaching are effective and help student grasp new materials	1	2	3	4	5
Student successfully applies new methods taught to him/her	1	2	3	4	5
Student's work is organized and clear	1	2	3	4	5
Student completes all homework expected of him/her	1	2	3	4	5
The portfolio accurately displays student's work/progress	1	2	3	4	5
Student's goal has been reached	1	2	3	4	5

Successful teaching methods:

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Unsuccessful teaching methods:

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Areas for improvement:

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Plans/tips for future lessons:

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Future goals (if previous goals have changed/been altered):

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## Appendix L- Learning Progress Assessment

### Learning Progress Assessment

The "Learning Progress Assessment" is used to assess the student's overall progress since September, as well as your methods and teachings that have helped the student work towards his/her goal.

**Directions:** Review all of the materials that you (and your student) have included in the portfolio. This includes all Post-session Journals, "Half-way Goal Check-up", outlined goals, and included materials. With these items in mind, fill out the "Learning Progress Assessment" rubric. Include this completed form in your student's final portfolio.

Learning Progress Assessment				
	Strongly Agree			Strongly Disagree
1. Student is on-level with grade level expectations (prior to tutoring).	1	2	3	4 5
2. Student is on-level with grade level expectations (presently).	1	2	3	4 5
3. Student has shown progress since beginning tutoring sessions.	1	2	3	4 5
4. Student shows an eagerness to learn and improve his/her knowledge and skills.	1	2	3	4 5
5. Student successfully uses new methods taught to him/her.	1	2	3	4 5
6. Student's work has been clear and organized.	1	2	3	4 5
7. Student completed all homework expected of him/her.	1	2	3	4 5
8. Student has reached the outlined mini-goals.	1	2	3	4 5
9. Student has reached the outlined overall goal.	1	2	3	4 5
10. Student's identified weakness is no longer an issue.	1	2	3	4 5

The following questions are a self-check of your teaching methods and portfolio use.

Learning Progress Assessment (Teaching methods and portfolio use)					
	Strongly Agree				Strongly Disagree
1. The portfolio accurately displays student's work and progress.	1	2	3	4	5
2. Teaching methods used were effective and helpful for student's learning.	1	2	3	4	5
3. Teaching methods used considered the student's predicted learning personality.	1	2	3	4	5
4. Outlined intended learning outcomes were attainable (even if not completely reached).	1	2	3	4	5
5. Tutorial sessions addressed the student's identified weakness(es).	1	2	3	4	5
6. Goals, plans, and tips for future lessons were considered while teaching.	1	2	3	4	5