HIGH SCHOOL GENERAL EDUCATION AND SPECIAL EDUCATION TEACHERS' USE OF PORTFOLIOS FOR STUDENTS WITH LEARNING DISABILITIES

Doctoral Dissertation Research

Submitted to the
Faculty of Argosy University, Chicago Campus
College of Education

In Partial Fulfillment of
the Requirements for the Degree of

Doctor of Education

by

Marcella Harris Winters

August, 2014

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ABSTRACT

This study was designed to investigate (a) the factors that influence the development of portfolios among students with learning disabilities, (b) the type of support, accommodations, and modifications students with learning disabilities receive while creating portfolios, and (c) the characteristics of portfolios developed by students with learning disabilities. Using a multiple case study approach, the researcher collected data through individual interviews with 14 general education and special education teachers regarding their use of portfolios with their students with learning disabilities. Additional data were obtained from document analysis of the students' IEPs, completed portfolios, as well as archival data of grades students obtained on their portfolios. Analysis of the data showed that teachers used accommodations and modifications listed in Individual Education Plans (IEPs) to provide adequate support to their students with learning disabilities while creating portfolios. The teachers also used additional strategies and techniques to ensure that their students were successful in their portfolio projects. Analysis of the portfolios and grades revealed that these students produced portfolios that met their teachers' expectations. The researcher recommended that, in order to meet the learning needs of the students with LD who are involved in portfolio development, teachers should not only use accommodations and modifications listed in the IEPs but also add more techniques found to be beneficial for their students with LD. However, those portfolios will not be effective if they do not meet their teachers' expectations and meet established deadlines. The researcher also recommends replicating the study to include diverse settings.

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Completing this dissertation and my doctorate was possible thanks to the contribution of many people who had faith in me and whom I wish to thank and acknowledge.

First of all, I would like to give salute to all the teachers who participated in this research. This study would not have been possible without your willingness to share your ideas with me. Your professionalism, enthusiasm, motivation, and dedication to educate children with special needs make a difference in their lives. Thanks also go to Dr. Winifred W. French, my principal and friend, who told me I had the drive to do it.

I would also like to express my gratitude to my committee members, Dr. Marsha Bundt and Dr. Debra Hill, for their input, guidance, and encouragement through the challenges of completing this dissertation. In addition, I would like to thank Dr. Florine Robinson and Professor Craig S. Hulfachor for their accommodations when I was preparing my son's funeral at the same time that final projects in their courses were due.

I would also like to express my heartfelt appreciation to my 91-year-old mother, the lovely Vera Mae Cooper, who, despite her illness, always reminded me to step away from caring for her and "go do your school work." I pray that your wisdom, self-determination, and self-reliance will be passed on to younger generations. To my daughter, Rocell J. Winters Cyrus, thanks for understanding the times I could not be with you and your family because I had to finish my degree. May you continue to reinvent yourself, and never give up in your journey through life. To my grandchildren and great grandchildren, let's follow the inspiration that my aunt, Classie Mae Crump, set for us by going back to school at the age of 66 and earning her GED.

DEDICATION

This work is dedicated to my son, Sidney Cornell Winters (Mansa), who earned his rite of passage on Thursday July 30, 2009, after I had just started my doctoral studies. You will always remain in my heart, mind, and soul.

Sidney was an entrepreneur with many successful business ventures that he launched with little money and a lot determination, discipline, and tact. Some of his businesses include Yo D.J. Records, Maat Media Daywalker Films, Night Walker Motion Pictures, and C.L.A.S.S. Motion Pictures. He was the pioneer during the Chicago House Music generation and elevated his peers to fame. As a teenager, he liked experimenting and inventing products, thus winning several awards. Some of his inventions were entered in the science fair at the Museum of Science and Industry. An exemplary Man of God**,** he had a deep respect for his elders. He had also studied the Kemetic and African history, principles, and philosophies. At the time of his death, his goal was to open an independently owned charter school centered on those principles.

TABLE OF CONTENTS

Page

TABLE OF TABLES

Table **Page**

CHAPTER ONE: INTRODUCTION

Assessment is an integral part of teaching. Many types of assessment are used in the educational system, each with its own advantages and disadvantages. Portfolios are one type of assessment that has enjoyed growing popularity. Students with learning disabilities are often required to develop portfolios, similar to their general education counterparts (Donovan, Larson, Stechschulte, & Taft, 2002). However, the characteristic difficulties of students with learning disabilities with strategic learning and their metacognitive deficits suggest that students with learning disabilities require extra support for the successful implementation of portfolio assessment (Cole & Struyk, 1997). Given the diverse nature of today's students, including students who grow up in poverty, students whose first or home language is not English, students with different types of disabilities, and students who are at risk of school failure, it is imperative that teachers and staff provide effective support and even instruction in the compilation of portfolios (Donovan et al., 2002).

Background of the Study

Assessment is an important part of schooling. Many educators are concerned with high-stakes tests and have called for reform and use of forms of assessment that do not rely on one single test to show student achievement, can sample the whole spectrum of the curriculum, and give students the opportunity to show what they can do rather than what they have memorized (Kellough, 2007). Important decisions that affect a student's future should not rest on one test that the student completes in five hours or less; rather, those decisions should rest on several sources of data that are gathered over a long period of time, sample a larger spectrum of the curriculum, and are a valid representation of the

student's performance. The use of portfolios has been suggested as a more valid alternative to high-stakes standardized testing (Kellough & Carjuzaa, 2009).

Because of federal regulations, students with special needs must be educated in the least restrictive environment (Braun, 2010), which means that the special education student is separated from nondisabled peers, family, and community members as little as possible. The implications of the least restrictive environment are that the student's life should be as typical as possible, and his/her placement and services should be consistent with his needs and not interfere with his freedom no more than is absolutely necessary (Hallahan, Kauffman, & Pullen, 2012). Therefore, general classroom teachers need to know ways to support these students' learning and actively involve them in all classroom proceedings, including assessment (Jensen & Klonicke, 1999). Given the learning needs of special education students, their characteristics, and the schools' need to show these students' achievement, it seems that portfolio assessment is an assessment strategy that can well serve both the students and their schools (Donovan et al., 2002).

In every classroom today one might find visual, auditory, and tactile-kinesthetic learners. One might find gifted learners, typical and average learners, slow learners, and students with different types of disabilities (Kellough, 2007). As much as teachers should adapt their instruction to meet the learning preferences, needs, and abilities represented in their classrooms, they also ought to do the same with assessment (Kellough & Carjuzaa, 2009). Students should be given the opportunity to be assessed through techniques that deemphasize competition and encourage social-interactive learning while building on students' learning styles, capacities, and modalities (Kellough,

2007). This way of assessing students can be best achieved through portfolio assessment thanks to its flexibility (Cole & Struyk, 1997).

One group of learners that receives much attention in the literature is students with disabilities (Braun, 2010). A child who has a disability that interferes with typical learning receives special education services. To the extent possible, these children must be educated in the least restrictive environment, which is, most of the time, with their non-disabled peers (Jensen & Klonicke, 1999). Therefore, general education classroom teachers have to know ways to support these students' learning and actively involve them in all classroom proceedings, including assessment (Donovan et al., 2002). Given the learning needs of special education students, their characteristics, and the schools' need to show these students' achievement and growth, it seems that portfolio assessment is an assessment strategy that can well serve both the students and their schools (Donovan et al., 2002).

Portfolios are used as a form of alternative assessment of student learning. Arter and Spandel (1992) define a portfolio as a purposeful collection of student work that showcases the student's effort, growth, and achievement in a specific area. "This collection must include student participation in selection of portfolio content, the guidelines for selection, the criteria for judging merit, and evidence of student self-reflection" (Arter & Spandel, 1992, p. 36). Teachers in many schools around the country often use portfolios to assess their student learning. Research has been conducted on the effectiveness of portfolios as a learning and assessment tool (Adeyemi, 2008; Kellough, 2007; Orlich, Harder, Callahan, & Gibson, 2001), and students' perceptions of portfolio assessment (Davis, Ponnamperuma, & Ker, 2009; Segers, Gijbels, & Thurlings, 2008).

Other researchers such as Kampfer, Horvath, Kleinert, and Kearns (2001) have examined teachers' perceptions of portfolio assessment. However, there is a lack of literature on the use of portfolios with students with learning disabilities. Since these students may lack some of the skills required to put a portfolio together, although they may be heavily involved in the portfolio process from creation to reflection, it is necessary for researchers to investigate students' issues with this type of assessment.

Problem Statement

Students with learning disabilities in high school are often required to create portfolios as a form of learning assessment. The process of creating and developing a portfolio requires that students possess a number of skills. According to the Laurent Clerc National Deaf Education Center (Gallaudet University, 2013), some students experience difficulty with working through challenges and finding their solutions; in addition, putting a portfolio together requires time management skills so that the students can meet deadlines by using class time and time out of the classroom effectively. Students need organizational and record keeping skills to be able to compile the necessary artifacts, to arrange them as required by the teacher or following certain criteria. Students also need decision making skills as they collect and select documents and other items to demonstrate their learning (Coleman, Rogers, & King, 2002). Through time management skills, independent and self-regulated learning, students are able to use their time wisely, apply their metacognitive knowledge of themselves as learners, and complete their portfolios by the deadlines established by the teacher. Students who have developed independence take responsibility for completing their portfolios on time; they remain motivated and focused on the tasks at hand (Gallaudet

University, 2013). Another skills set necessary for portfolio development is problem solving and critical thinking as students are likely to encounter difficulties during the process and to be engaged in activities that require them to analyze and synthesize information. In addition, a complete portfolio includes self-reflection, a process during which students revisit their experience, self-evaluate, and extract principles they can use in the future.

All these skills imply that students are actively engaged in their learning and are responsible and in control of their own learning (Arter & Spandel, 1992). However, students with learning disabilities may have difficulty with the skills discussed, and their experiences with portfolio assessment have not yet been fully investigated. The factors that affect the development of portfolios among students with learning disabilities, the type of support that they require, and the end product of this process have not been fully explored.

Need for the Study

Research has been conducted on the effectiveness of portfolios as a learning and assessment tool (Adeyemi, 2008; Kellough, 2007; Orlich et al., 2001), and students' perceptions of portfolio assessment (Davis et al., 2009; Segers et al., 2008). Other researchers such as Kampfer et al. (2001) have examined teachers' perceptions of portfolio assessment. However, there is a lack of literature on the use of portfolios with students with learning disabilities. It is not known what process students with learning disabilities go through to put their portfolios together, the type of support needed or provided by teachers, the challenges faced by these students and how they solve them, their understanding of the grades they obtain after teachers have evaluated their

portfolios, and their overall perceptions of portfolio assessment (Kampfer et al., 2001). Since students with learning disabilities may lack some of the skills required to put a portfolio together, although they may be heavily involved in the portfolio process from creation to reflection, it is necessary for researchers to investigate the use of portfolios for students with learning disabilities.

Theoretical Framework

Learning is an active process. Students must be actively involved in their own learning and assessment (Kellough & Carjuzaa, 2009). For learning to be long lasting, students need to be engaged in independent work activities in which they use most of their senses and that requires skills such as reading, writing, thinking, and out of class work (Kampfer et al., 2001). This type of learning can only be achieved when teachers use the access mode of instruction, which allows students to learn content in more depth (Kellough, 2007). Students also make important decisions about their own learning and have more control over its pacing, and they develop a deeper sense of self-worth (Kellough & Carjuzaa, 2009). Proponents of active learning, such as Drew and Mackie (2011) contend that active learning encourages participation, builds students' enthusiasm, inventiveness and creativity, promotes creative thinking, and encourages problem-solving. Active learning requires the learner to construct knowledge and understanding more so than learning that the students receives passively. Graeff (2010) echoes the same idea when he states that teachers can increase student involvement, attention, and motivation by adopting the teaching philosophy that learning happens best when students are doing. "Students learn when they actively work toward a goal instead of passively listening to a lecture" (p. 265).

Active learning encompasses three different elements: behavioral, cognitive, and social dimensions (Drew & Mackie, 2011). Behavioral dimensions refer to the active development and use of resources; cognitive dimensions occur when the learners actively think about the experiences and construct knowledge. The social dimension of active learning refers to the learners' active interaction on a collaborative basis or as a resource. Active learning can happen regardless of factors such as time and class size. It can take place during class or after school; students can be given time during class to work not only actively, but also in interaction and collaboration with the teachers as well as their peers (Graeff, 2010). Contrary to the traditional view of teaching where the teacher is a "sage on the stage," the alternative model of teaching assigns the students the roles of integrators and co-discovers of knowledge, while the teacher's role becomes that of a "guide on the side" (Graeff, 2010, p. 266).

Active learning also requires learners to make decisions and in order to derive meaning from their experiences, students need to reflect on those experiences or they may be easily forgotten and their learning value lost. This type of learning promotes autonomous or independent learning as teachers set open ended learning tasks which require the students to be responsible for their own learning and adopt an active, rather than passive, view of learning (Drew & Mackie, 2011). The task of implementing active learning in the classroom becomes easier if teachers first identify the students' academic and professional goals, their life goals, as well as the skills, knowledge and dispositions necessary to achieve those goals. Then while planning, teachers connect the content of their lessons to the academic, professional, and life goals of the students. Teachers should identify what the students will learn from their classes that will be useful to them

and help them accomplish activities that will be required of them during their future careers.

Learning occurs when the students are able to build and reconceptualize mental structures while they are interacting with their environment; it also involves the representation, storage, and retrieval of information from a student's mind when needed (Swiderski, 2011). Teachers can facilitate those processes by using teaching strategies such as "activating prior knowledge, chunking, elaborating, and invoking schema" that promote active learning (Swiderski, 2011, p. 240). Teachers who wish to implement active learning in their classes can do so by incorporating the four teaching strategies above both in their instruction and in their assignments.

Educators believe that the instructional value of portfolios comes from the process that students experience while assembling and maintaining a portfolio, a process during which students are expected to think critically about what they are learning or what they have learned and to take responsibility for their own learning (Kampfer et al., 2001). That responsibility entails autonomous learning, a behavior that can be challenging for students with learning disabilities to develop (Cole & Struyk, 1997). Through the process of developing portfolios, students have the opportunity to examine their work, reflect on it, and design plans to improve their academic achievement (Dotson & Henderson, 2009). Through self-evaluation and reflection, students become more responsible and take ownership of their learning. They apply metacognitive learning strategies by identifying their learning goals as well as monitoring and recording their progress towards those goals (Dotson & Henderson, 2009).

Portfolios allow teachers to become aware of individual students' needs and progress. Because of the individualized interaction between teachers and students during portfolio, the former are able not only to monitor and document student progress, but also to remediate and create mini lessons tailored to each student needs as observed in their portfolios. Teachers can also find out students' needs through the interactions between teacher and students. In addition, these interactions arm the students with a heightened awareness of their strengths and weaknesses (Dotson & Henderson, 2009). These authors, after studying two classrooms where teachers used portfolios to teach reading, concluded that portfolios impacted student learning by showing their progress over a period of time, involving them in the evaluation of their own learning, showing not just the outcome but also the process that led to it, building student self-confidence, demonstrating the connection between knowledge and skills, revealing areas where additional instruction is needed, and promoting collaboration and trust between teachers and students (Dotson & Henderson, 2009) .

Significance of the Study

Due to federal mandates, students with learning disabilities are often placed in general education environments (Braun, 2010). Thus, the education of these students is shared by the special education and the general classroom teachers (Ornstein, Levine, & Gutek, 2011). This study may shed some light on the use of portfolios for students with learning disabilities who are engaged in portfolio development and assessment, whether these portfolios are assigned by the general education classroom or the special education teacher. Educators may understand any difficulties these students face and the type of instruction and support these students may require for a well-designed and complete

portfolio. The study also added to the existing body of knowledge regarding portfolio assessment.

Definitions of Terms

The fields of special education and assessment are associated with several terms. The following section provides definitions of some of those terms used in this study.

Accommodations: In the context of teaching and assessing students with disabilities, accommodations are described as changes in instruction or changes in the way the test is administered (Elliot & McKevitt, 2000). These changes do not significantly change the content or difficulty level of the concept being taught. Accommodations are designed to provide support and ensure equitable access to learning and assessment for students with disabilities (Hallahan et al., 2012).

Assessment: The process of finding out what students have learned as a result of instruction (Carjuzaa & Kellough, 2013).

Alternative Assessment: A wide variety of terms that include performance assessment, authentic assessment, portfolio assessment, and dynamic assessment. These terms have been used by educators to label assessment methods not associated with formal, standardized, or traditional forms of testing (Garcia & Pearson, 1994). The terms alternative assessment and authentic assessment are often used interchangeably in the literature (Bagley, 2010). Alternative assessment is often discussed in contrast with traditional forms of assessment which include items such as multiple choice questions, true or false questions, matching, recall of information, filling in the blanks, and cloze tests (Kellough & Carjuzaa, 2009).

Authentic Assessment: Evaluation that makes use of real life tasks rather than contrived test items (Jardine, 1996).

Individualized Education Program (*IEP):* According to the U.S. Department of Education (2004), it is a statement for each child with a disability that is created and reviewed in a meeting with the child's education and service providers and includes the child's current academic achievement, how the disability affects his functioning in the general education curriculum, and a statement of annual measurable goals, when they will be attained, and how they will be measured. In addition, a statement that describes the services that child will receive is included as well as any modifications that the child will receive in order to reach those annual goals.

Learning Disabilities: According to the National Joint Committee on Learning Disabilities (2006, para. 1), "a set of heterogeneous disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities." These disorders are presumed to be neurological or due to central nervous system dysfunction and may occur over the individual's whole life.

Least Restrictive Environment: The placement of children with disabilities, to the maximum extent appropriate, with children who do not have disabilities (Braun, 2010).

Modifications: In the context of teaching and assessing students with disabilities, modifications are changes made to the content of the learning material, the content of the test, or the performance level expected from the special needs students (Elliot & McKevitt, 2000). They differ from changes in instructional strategies (Hallahan et al., 2012). The most typical modifications involve quantity (such as reducing the number of test items a student is required to complete), output (how a student demonstrates what he

knows, such as giving a student a forced choice test rather than asking him to write an essay), and alternate learning goals (such as when a student is only required to complete work on part of a learning standard (Gervais, 2007).

Portfolio: According to Paulson, Paulson, and Meyer (1991), "A *portfolio* is a purposeful collection of student work that exhibits the student's efforts, progress, and achievements in one or more areas. The collection must include student participation in selecting contents, the criteria for selection, the criteria for judging merit, and evidence of student reflection" (p. 60).

Students with Disabilities: Also referred to as students with special needs or students with exceptionalities and include those with impairments in one or more of the following conditions: developmental delay, intellectual disability, visual and hearing impairment, emotional disturbance, orthopedic impairment, autism, traumatic brain injury, other health impairments or specific learning disabilities. A child who has a disability that interferes with typical learning receives special education services (Braun, 2010; Ornstein et al, 2011).

Purpose of the Study

This study examined the use of portfolios as a form of assessment for students with learning disabilities in high school. Knowledge of these experiences may shed some light on the type of support, accommodations, and modifications that should be provided by teachers to students with learning disabilities engaged in portfolio development, so they may accomplish this learning and assessment task successfully. The purpose of this study was to investigate the use of portfolios for students with learning disabilities by general education and special education teachers in high school.

Research Questions

This qualitative study was designed to answer the following research questions:

1. What factors influence the development of portfolios among students with learning disabilities?
2. What are the accommodations and modifications provided to students with LD while creating portfolios?
3. What are the characteristics of portfolios developed by students with learning disabilities?

Limitations

First, what the participants revealed in the data might not be the whole truth; they might have exaggerated stories or underestimated what they do. Second, there was also a concern regarding participant mortality or attrition. Teachers may drop out of the study because they left the school; they may also be absent when data are being collected. The first concern was minimized through the process of triangulation. The researcher obtained data from different sources and using different methods, which also allowed her to cross reference the data and confirm or disconfirm information gathered from the various sources. For teachers who could not be present at their scheduled interviews, the researcher solved that problem by scheduling a different interview for them.

Delimitations

This study was conducted with general education and special education high school teachers from a large school district located in an inner city of a large Midwestern city. The majority of the students are African Americans. They are also from a low socioeconomic background because the majority of the student body is approved for a free lunch program (Illinois State Board of Education, 2012). In addition, the data were

collected during one academic year and was a snapshot of that particular group of teachers. Finally, the lack of random selection is another delimitation of this study. Because of these issues, the results of this proposed study may not be generalizable or applicable to other populations in other sites or in different time periods.

Summary

In this introductory chapter, the background of the study, the statement of the problem, the need for the study, and the theoretical framework were discussed. This study added to the existing body of knowledge regarding portfolio use with special education students and may provide additional understanding of the use of portfolios with students identified with learning disabilities. Teachers and other educators may understand the type of instruction and support needed for these students. This chapter also provided definitions of important terms. The purpose of the study was discussed. The research questions, which focus on the use of portfolios by general education and special education teachers who teach special education students, were also reviewed. Finally, the limitations and delimitations of the study were given. Chapter Two is a discussion and review of literature related to the topic.

CHAPTER TWO: LITERATURE REVIEW

The purpose of this study was to examine the use of portfolios to assess the learning of students with learning disabilities in high school in a Midwestern urban school district. Chapter Two is a review of literature and prior research related to assessment in general, portfolio assessment, and the use of portfolio assessment among students with learning disabilities.

Assessment

A difference exists between the construct of measurement and that of assessment. Measurement is quantifiable data about specific behaviors, an objective process free from human value judgments (Kellough & Carjuzaa, 2009). For example, standardized tests are measurements of student learning, and their results are presented in the form of a number or a score. On the other hand, assessment involves both objective information resulting from measurement and other information, some of which may be subjective, such as anecdotal records, student characteristics, and teacher observations. For example, the Illinois Standard Achievement Test (ISAT) is considered a measurement of student learning as it produces quantifiable, objective data on students' performance in reading and mathematics (Illinois State Board of Education, 2013).

To fulfill its purpose, a test or measuring instrument must be valid. Test validity refers to the extent to which a test measures what it purports to measure (Dimitrov, 2009). It must cover all the intended content and relate to the instructional objectives. A test or measuring instrument should also be reliable. Reliability is the extent to which a test is "accurate, consistent, and replicable" (Dimitrov, 2009, p. 23). That way, the

results of that test can be trusted. Using assessment procedures that are aligned with the course objectives is known as authentic assessment.

Purposes and Principles of Assessment

Assessment of student learning is conducted for several reasons. The first one is for teachers to identify areas where improvement is needed and to assist students to bridge those gaps in learning. For the classroom teacher, the purpose of identifying students' incomplete learning and assisting them is the most important. Other purposes of assessment are to identify students' strengths and weaknesses, to assess instructional effectiveness or that of curricular programs, to assess and improve teaching effectiveness, to provide data to assist in the decision making process regarding students' future, and to provide data to be accountable to education stakeholders (Kellough & Carjuzaa, 2009). Students spend a large amount of time taking assessments created by their teachers as well as those mandated by external agencies such as state boards of education or state departments of education. These externally mandated tests are high stakes testing and attract a lot of attention from stakeholders, the media, and policy makers (Miller, Linn, & Gronlund, 2013).

Standardized and Achievement Tests

A large number of published achievement tests exist, and they play an important role in schools' curricula. States often contract with testing companies whose task is to align the test to the state's content or standards (Miller et al., 2013). In many cases, the achievement tests provide for both a criterion-referenced (whether or not preset standards were met) and a norm-referenced (ranking or comparing results) interpretation of results.

According to Miller et al. (2013), there are certain features that characterize standardized tests: they contain a fixed number of items that measures a specific content; the test designers also issue specific directions for administering and scoring the test, and comparisons are made between students' scores and those of a representative group of similar students. A carefully constructed standardized achievement test is characterized by the following:

- Test items are developed by education and test specialists**,** tried out during pretesting, and carefully selected. Therefore, they are of a high technical quality.
- Testing and scoring procedures are uniform or standard for all users because directions for administering and scoring are very precisely stated in the test directions for administrators.
- Descriptive statistics and ranks based on samples of students in the same grade as the test takers are computed and provided.
- Standardized tests are characterized by high reliability, often between 0.80 and 0.95.
- Test proctors and scorers use a test manual and other accessories created by the tests designers to assist with interpreting the results (Miller et al., 2013). For example, the results of the reading portion of the Illinois Standard Achievement Test provide a lexile, which guides teachers and parents in choosing reading materials at the child's readability level (Illinois State Board of Education, 2013).

Teachers often play a minimal or no role in the selection of test items or construction of the test although they are responsible for teaching the content and are affected, in one way or another, by their students' performance on these tests. As the most important

element in any classroom (Darling-Hammond, 2007b), teachers are held accountable for the success of their students as measured on standardized tests.

Problems Associated with Standardized Tests

Assessment is an important part of schooling. There is concern over high-stakes assessment, which carry important consequences such as student promotion, retention, or graduation from high school (Kellough & Carjuzaa, 2009). Many educators are concerned because of the consequences caused by high-stakes tests and recommend more comprehensive forms of assessment that do not use on one single test to as evidence of student achievement (Kellough, 2007). These tests carry life altering consequences which negatively affect students who are not able to achieve satisfactory scores. For example, McNeil, Coppola, Radigan, and Heilig (2008) found that 135,000 students drop out of Texas high schools every year as a result of the high stakes tests that the state uses as part of the accountability system. They advocate for tests that can sample the whole spectrum of the curriculum and give students the opportunity to show what they can do rather than what they have memorized (Kellough, 2007, Darling-Hammond, 2007b, Darling-Hammond, 2007c). Urrieta (2004) goes further in this opposition to high stakes testing and calls this accountability system "an assistencialist model, derived from the deficit thinking paradigms (p. 211). He contends that this model, similarly to the No Child Left Behind Act, punishes low performance with serious and negative consequences for students and their educators.

Important decisions that chart the course of a student's future should not be dictated by one form of assessment that the student completes in a few hours or less; such decisions should rest on the sum of several sources of information that are obtained over

a long period of time, sample a larger content of the curriculum, and are a valid representation of the student knows and can do (Kellough & Carjuzaa, 2009; Tevis & McBride 2008). According to Hassaskhah and Sharifi (2011), administering a single test at the end of the course is still a popular practice. However, no single test seems capable of measuring all the skills, knowledge, processes, and strategies that combine to make up student progress (Hassaskhah & Sharifi, 2011). These high-stakes, standardized tests do not accurately measure students' ability in skills such as writing, performing, speaking, listening, acting, drawing, constructing, repairing, working in a team, and other skills students need to succeed not only in school but also outside of school and throughout life (Donovan et al., 2002). Urrieta (2004) recommends a different accountability model that includes cultural immersion and integrates three elements: "classroom culture, local community culture, and trans/cultural or transnational exposure" (p. 211). The use of portfolios has been suggested as a more valid alternative to high-stakes standardized testing (Hassaskhah & Sharifi, 2011).

Forms of Assessment

Kellough and Carjuzaa (2009) state that assessment of student learning can be conducted through three avenues: what the student says, what the student does, and what the student writes. All three venues can best be demonstrated by a compilation of a student's portfolio. To assess what students say or do, teachers maintain anecdotal records; they also create a list of desirable behaviors for a certain activity and check that list against instructional objectives. They need to record their observations as soon as possible to avoid lapses in memory. To assess what students write, teachers use worksheets, written homework, papers, student journals, written projects, portfolios, and

tests. To assess what students write, Kellough and Carjuzaa (2009) state that the written assignment should be criterion-referenced and related to specific instructional objectives. When grading the assignment, the same authors recommend that teachers read everything the students wrote and provide written or verbal, but positive, comments about students' written work. The following section is a summary of the descriptions, advantages, disadvantages, and guidelines for using the 12 most common types of assessment items. Portfolio assessment, being at the center of this project, will be discussed in a larger section. The types of questions asked on tests fall into two large categories, forced-choice and open-ended questions. Heyborne, Clarke, and Perrett (2011) found that student performance varied depending on the type of question, and that substituting one form of assessment for another can have significant consequences related to student performance and learning in a course.

Arrangement

Students are asked to arrange terms or real objects in a specific order following some criteria. This type of assessment item tests for knowledge of sequence and order and can be used for reviewing, starting discussions, or performance assessment. However, scoring of this type of item can be difficult; putting one term or item in the wrong place in the sequence is likely to throw the whole structure out of order (Kellough & Carjuzaa, 2009).

Completion Drawing

Students are given an incomplete drawing and their task is to finish it. Completion drawing requires less time than essay items, and its grading is easy.

However, similar to most assessment items, instructions need to be clear to the students, so the assignment is not misinterpreted.

Completion Statement

This type of assessment item is often called fill-in-the blanks. It is easy to construct, take, and grade. It is useful for pre-assessment and review. However, it emphasizes memorization and measures procedural, low order knowledge. When measuring conceptual knowledge or higher levels of cognition, it becomes more difficult for the teacher to prepare this type of item (Indiana University, 2013). Kellough and Carjuzaa (2009) recommend providing a word bank may be useful especially for English Language Learners and students with learning disabilities because these learners, due to their language impairment and difficulty with learning, may require some modifications. Test takers may also find help by paying attention to the contextual, semantic, grammatical, and other clues (Montante, 2003).

Correction

This type of item is similar to the completion statement, except that the statements are complete, and a portion of the sentence or paragraph is identified by the teacher (by underlining it or italicizing it) as containing an error, and the students have to change it to make the statement correct. To make it more challenging, teachers do not identify the errors but rather ask that students identify and correct them (Kellough & Carjuzaa, 2009).

Essay

Students are given a prompt and they are expected to respond by composing several paragraphs of prose, using their own words and ideas. Essay questions require students to use high mental processes such as synthesizing ideas and expressing them in a

clear and well organized manner, using clear and precise language. Scouller (1998) found that students use deep learning practices when preparing responses to essay questions, which they perceived to be testing higher order thinking. This type of question is useful to students because it provides practice in written expression and can be used as a form of performance assessment. However, essay questions take a lot of time for the teacher to read and grade. They can be problematic for students who write slowly and English Language Learners (Scouller, 1998).

Grouping

In a grouping question, the students are presented with several items, and they are supposed to select and categorize together those that are related according to the criterion provided by the teacher. This type of question can be used to measure conceptual knowledge and sometimes requires higher level of cognition than simple recall of information. Teachers should acknowledge responses from students who might have different but valid reasons for their grouping. To add more challenge to grouping questions, Kellogh and Carjuzaa (2009) suggest requiring students to provide a short explanation for their answers.

Identification

With this type of assessment question, students are given a list of items and asked to identify them by name or another criterion. Identification can be used for measuring higher level learning, but it can also be used to measure procedural knowledge. It easily lends itself very well to performance assessment. However, this type of question takes time to prepare. Items or specimens must be clear; for example, fuzzy pictures or faded photocopies may be confusing to students, so it is very important that the teacher checks

that every specimen is clearly visible and identifiable (Kellogh & Carjuzaa, 2009).

Matching

Looking at a list of questions and a list of answers, students have to make associations between, articles, objects or even words that are related in some way. Matching questions allow the teacher to measure students' ability to recognize or judge relationships between items in the two lists. Matching assessment questions are easy to score and can be used to test a large amount of content. Teachers can reduce guessing by making one column longer than the other. However, matching questions are not useful for measuring higher order thinking or problem solving (Indiana University, 2013).

Multiple Choice Questions

When answering multiple choice questions, students are presented with a statement, sometimes in incomplete form, and they have to choose the best response from several options, one being the correct answer and the rest distracters. These questions can be quick for the students to take and for the teacher to grade. A large amount of material can be tested in a short time. However, there is a tendency to prepare items measuring only low levels of learning, and it takes a lot of time and care to write multiple choice questions that measure higher order thinking. Scouller (1998) found that the study participants were more likely to practice surface level learning while taking examinations with multiple choice items than with essay questions, whereas students who did not perform well on the multiple choice examinations were found to have used deep level learning approaches. In addition, Douglas, Wilson, and Ennis (2012) reported that multiple choice questions improved students' scores because this type of item supported students' learning of basic concepts; they also built students' self-esteem and confidence.

The authors suggest using multiple choice questions in conjunction with other types of items.

Kellough and Carjuzaa (2009) recommend other guidelines for using multiple choice questions. If the choices are of different lengths, they should be arranged from the shortest to the longest. Arrangement of the choices should be consistent throughout the test and listed in vertical rather than horizontal arrangement. Distracters should be plausible and related to the same concept as the correct choice. Funny choices or distracters that do not make sense only increase the students' likelihood of guessing the correct answer and thus should be avoided. The use of terms such as a "never" and "always" should be avoided. The person writing a multiple choice test should make sure that the correct responses are evenly distributed rather than being the same choice (such as C) for all or the majority of the questions.

Performance

Performance assessment integrates both process and product. It requires students to produce various kinds of products depending on their audience (Teaching Today, 2000). It is task-based and measures what students can do with what they know. For instance, students may be asked to retell a story and design drawings that go along with it. In a physics class, they could be given popsicle sticks, measuring instruments, a protractor, and weights and be asked to build a bridge strong enough to withstand a certain weight. The English teacher can ask students to write a speech about a topic and deliver it to the class or another audience. Depending on the grade level, students may be asked by a teacher to build a shoe rack or a stool, to generate hypotheses, or perform a communication act in a foreign language.

Performance test questions are advantageous because they are closer to authentic assessment than any other type of assessment because students perform or do what they are being tested for. However, this type of assessment can be difficult to administer to a group of students. One can imagine how much time it would take for a class of 25 to deliver 25 speeches (i.e., one per student). If some materials are required, maintaining an adequate supply may be problematic, especially in schools with small budgets. In addition, scoring of performance items can be subjective; despite the use of checklists or rubrics, two individuals can score the same performance differently (Kellough & Carjuzaa, 2009), as is often seen in sports such as ice skating, dance, and diving where one performer is given different scores by different judges.

Short Explanation

These types of questions are similar to essay questions but require a shorter answer. For example, students can be asked to explain how they arrived to an answer in a math word problem. In a chemistry class, they may be asked to explain why the temperature has to be maintained at a certain level for a chemical reaction to occur. With short explanation questions, more content can be covered than with essay questions. They provide good practice for students to express their ideas in writing. However, there are students who experience difficulty expressing their ideas in a paragraph or less, and they will need more guidance and practice. However, Leiva, Rios, and Martinez (2006) found poor interrater reliability for this type of questions.

True or False Questions

Students are given a statement and their task is to decide whether it is accurate or not. For example, -er is a derivational morpheme. T or F? With this type of question, a

large amount of content can be covered; scoring is quick and easy. They can be used as a for summative assessment purposes, for pre-assessment, or for review. However, it can be difficult to write statements that are totally true or false. According to Tasdemir (2010), many educators' opinion is that true-or-false questions are only used for the recall of factual information, but they can be used to present complex problems.

This section was a discussion of assessment as well as its purposes and principles. Different forms of questions or prompts that are commonly used to assess student learning were listed. Standardized assessment was also discussed with reference to criticisms that have been levied against it in the literature. Assessment is of paramount importance for students, teachers, and other stakeholders. However, it does not serve students well when it results in negative consequences for them and their teachers.

Portfolio Assessment

Definition

Portfolios are a form of alternative assessment, which refers to a wide variety of terms – including performance assessment, authentic assessment, portfolio assessment, and dynamic assessment (Kellough & Carjuzaa, 2009). These terms have been used by educators to label assessment methods not associated with formal, standardized, or traditional forms of testing (Garcia & Pearson, 1994). Alternative assessment is often discussed in contrast with traditional forms of assessment which include items such as multiple choice questions, true or false questions, matching, recall of information, filling in the blanks, and cloze tests (Miller et al., 2013).

A portfolio is defined as a collection of students' work. According to Paulson et al., (1991, p. 60):

> A *portfolio* is a purposeful collection of student work that exhibits the student's efforts, progress, and achievements in one or more areas. The collection must include student participation in selecting contents, the criteria for selection, the criteria for judging merit, and evidence of student reflection.

For Pierce and O'Malley (1992, p. 2):

> A portfolio is a form of alternative assessment that uses a record of student's work over time and in a variety of modes to show the depth, breadth, and development of the student's abilities; it is the purposeful and systematic collection of student work that represents accomplishment relative to specific instructional goals.

Purpose and Guidelines for Using Portfolios

Student portfolios can be used for a variety of purposes. In a selected-works portfolio, students maintain samples of their work as instructed by the teacher (Kellough & Carjuzaa, 2009). The longitudinal or growth portfolio is driven by outcomes or goals and includes samples of students' work from the beginning to the end of a certain period, such as a term (Kellough & Carjuzaa, 2009). The passport or career portfolio contains samples of student work that will allow him/her to move forward, such as from one grade to another or from high school to work (Kellough & Carjuzaa, 2009).

Kellough (2007) has listed general guidelines for using portfolios to assess student learning. First, the portfolio should not be graded or compared with those of other students. For grading purposes, he recommends that teachers simply note whether or not or required items were included. Second, teachers should determine what items must be included in the portfolios and clearly inform students when, how, and by what criteria the portfolios will be judged. Third, the contents of the portfolio should be consistent with course and grade level goals, learning standards, and course objectives. Fourth, every item included in the portfolio should be dated by the student. Fifth, students should assume the responsibility of maintaining the portfolios, which should never leave the classroom unless they have been evaluated by the teacher. Last, students

should be encouraged to personalize their portfolios through the use of color, decorations, pictures, etc. (Kellough, 2007).

Variations occur in the ways in which portfolios are developed, but most share certain characteristics. According to Salvia and Ysseldyke (1995), a portfolio should (a) focus on valued outcomes, processes, and strategies; (b) reflect real world work or issues; (c) involve collaboration among students and between teachers and students; (d) use multiple dimensions for evaluating students' work; and (e) incorporate student reflection.

Student populations are growing more diverse than they have ever been, resulting in the need for educators to address the challenges presented by student differences in designing and presenting content (Cole & Struyk, 1997). Educators at all grade levels are confronted with the demands related to the Individuals with Disabilities Education Act (IDEA) which mandates that students with learning disabilities be placed in the general education classroom whenever appropriate (Will, 1986). In addition to finding ways to modify the curriculum and accommodate students with learning disabilities, IEP teams report difficulty with determining the most appropriate assessment tools and have expressed the need for more precise forms of assessment that would provide an accurate and holistic representation of the students' learning (Layton & Lock, 2007). The use of classroom portfolios can solve this problem because they can not only display a student's growth from beginning to proficiency or mastery but also areas where targets were not reached, thus requiring re-teaching or other forms of assistance. Having this information collected in a portfolio is useful for IEP teams when it's time for both formative and summative assessments when the IEP team meets for a progress review and for summative assessment at the end of a term or a longer period.

Advantages and Disadvantages of Portfolio Assessment

One of the advantages of portfolio assessment is that it can be the solution to these and other criticisms, such as validity, levied against standardized testing (Carpenter & Ray, 1995) by allowing students to create authentic products rather than simply selecting a response on a forced choice test. Portfolio assessment increases student motivation (Miller & Richarde, 1991) especially since portfolios provide students with the opportunity to make choices (Dweck, 1985). Through the development of portfolios, students become responsible for their own learning; they also become active participants in their learning, thus increasing their self-efficacy, self-esteem, and the potential of becoming lifelong learners. A well designed portfolio provides a good indication of students' higher order skills, such as problem-solving, and can be used to increase student-teacher communication as students and teachers discuss and reflect on the portfolio (Cole & Struyk, 1997). Portfolios also allow student self-assessment and reflection (Carpenter & Ray, 1995).

Although there certainly are reasons in favor of portfolio assessment, there still are questions and limitations regarding its implementation. One of the problems is its flexibility and nonstandard format (Kellough & Carjuzaa, 2009). Establishing standards for portfolio assessment has proven challenging, and teachers have expressed the need for training in the use and scoring of portfolios (Flowers, Algrim-Delzell, Browder, & Spooner, 2005). This concern has to do with their reliability and validity, especially if they are used to make educational decisions such as graduation or student placement (Cole & Struyk, 1997). For an assessment tool to be a true measure of student learning, it must be both valid and reliable. Despite the use of checklists and rubrics to score

portfolios, the subjective nature of portfolios cannot be easily circumvented. Next, developing a portfolio is time consuming for students (and for teachers to grade), which makes its use impractical for many teachers (Kellough, 2007).

Teachers who participated in Maruszczak (2008) reported that using portfolios was time consuming for both teachers and students; moreover, Flowers et al. (2005) found that teachers had to spend some of their personal time on portfolio work. In addition, since portfolios are a collection of several kinds of artifacts, they can be messy (Carpenter & Ray, 1995). Without a clear purpose, set standards or criteria, they can turn into a mere collection of miscellaneous documents or artifacts (Frye, 1991). Last, portfolio assessment is not always practical for all teachers. One has to consider the number of students, the requirements of the portfolio (thus the size), and storage. Teachers who teach large numbers of students (such as art teachers of whom there is usually one or two in a school) and whose classrooms lack sufficient space to store a large number of binders and other class materials may find the use of portfolios impractical (Kellough & Carjuzaa, 2009).

Conditions for Successful Portfolio Assessment Implementation

For students to show what they know and can do, and for teachers to obtain the information they need to make determinations regarding students' achievement through portfolio assessment, extensive planning, resources, and leadership are prerequisites. Teachers need to collaborate regarding portfolio assessment and closely examine their students' portfolios to determine the extent to which their targeted learning standards are met. In addition, student reflection ought to be an ongoing activity rather than a task that is carried out at the end (Maruszczak, 2008). To implement portfolio assessment

successfully, teachers require adequate training and professional development in aligning their portfolios with their schools' curricula and their state's core academic standards. Teachers also need to command a profound understanding of the rigor and depth that development of portfolios entails. The tasks required of students should be rigorous, fair, and equitable. They should also be authentic, clear, and user-friendly so much so that the student has no difficulties fulfilling those tasks in the absence of the teacher [such as after school] (Niguidula, 2002). Therefore, it is necessary for teachers to have the necessary leadership and support, resources, and curriculum development as well as training in portfolio assessment.

The Role of Student Reflection in Portfolio Assessment

Reflection is an important element in the portfolio development process. It should be ongoing as formative assessment, rather than a separate activity quickly put together by the student at the end. Without the reflection, the portfolio is merely a collection of artifacts (Maruszczak, 2008). With a good reflection, it becomes a powerful narrative guided by specific questions and guiding students to think about their choices and the rationale behind them. An effective reflection promotes the author's ownership of the portfolio; it also strengthens the learning process that was involved in its creation and development (Stevenson, 2006). Reflection is important because it makes students aware of themselves as learners, the cognitive processes they employ to access and store information, and the problems they encounter and how they solve them. Through reflection, students think back about their choices and the rationale for those choices. This metacognitive knowledge is important because this awareness allows the student to

replicate not only behaviors and conditions in which one learns best, but also the same quality of work (Grusko, 1998).

Students' reflection about their work is influenced by a conversation (written or oral) with their teachers and allows both parties to carefully think about and understand the portfolio process. Through discussions regarding specific requirements or learning experiences with the teacher, the student develops the habit and understands the importance of thinking about the experiences for himself (Maruszczak, 2008). This dialogue is most beneficial to the student if it occurs from the beginning of the portfolio process till its conclusion.

Students' reflection is closely related to formative and summative assessment and should include what Schon (1987, p. 57) called "reflection-in-action" and "reflection-on-action." Similarly to formative assessment, reflection-in-action occurs during the process of portfolio building and should not be graded. It is through reflection-in-action that students reflect on what they are doing, how they are doing it, and how it will contribute to the end product. This type of reflection can be the result of students' own thoughts as well as the result of peer reviews and consultation with their teachers (Maruszczak, 2008).

Reflection-on-action is for students to think back on what they have learned, explain how they learned it, and what they could have done differently for better results. Maruszczak (2008) continues to say that reflection does not come easily to most students; thus, it is necessary to guide their reflection with prompts such as: What did you learn through this project? What can you use from this experience or project to help you improve next year? What problems did you encounter? How did you solve them? What

could you have done to have better results? Student participants in Chitpin and Simon's (2009) study asserted that reflection was an overwhelming process, but it allowed them to focus and think deeply about processes they usually took for granted. They also acknowledged that the portfolio process had trained them to reflect more critically and to view reflection not as one-shot activity but as an on-going process.

Portfolio Assessment of Students with Learning Disabilities

Portfolio assessment has implications specific to students with learning disabilities. Due to federal mandates, students with disabilities are often placed in general education environments (Boerum, 2000). Thus, the education of these students is shared by the special education and the general classroom teacher. Special education students are often required to develop portfolios as a form of assessment of their learning and require appropriate support and resources (Boerum, 2000).

Regarding the use of portfolios with students with learning disabilities, Cole and Struyk (1997) believe that portfolio assessment offers an effective and continuous measure of student performance and progress which can be adjusted to individual needs and can be a source of additional information regarding that student's school achievement. Carpenter and Ray (1995) concur and contend that portfolios can be useful in documenting eligibility, planning instruction, monitoring progress towards the goals and objectives in the IEP, and communicating student's strengths and weaknesses. Since they measure student growth over time, portfolios are excellent instruments to document the progress of special education students towards annual goals and short term objectives (Carpenter & Ray, 1995). However, the characteristic difficulties of these students with strategic learning and their metacognitive deficits suggest that students with learning

disabilities require extra support for the successful implementation of portfolio assessment (Cole & Struyk, 1997).

Layton and Locke (2007) state that IEP teams often report difficulty with determining the right form of assessment for their students with special needs. They argue that authentic assessment provides the appropriate framework to make these decisions on an individualized basis. In addition, by using authentic assessment, IEP teams follow the policies of the No Child Left Behind (NCLB) mandates and those of the Individuals with Disabilities Education Improvement Act of 2004 "which require assessment practices that yield specific, individual results about student achievement that are easily translated into daily instructional practices" (p. 170). The authors list 20 ways to validate and document the mandates of NCLB and IDEA; three of those suggestions are directly connected to the use of portfolios. The first recommendation is to collect daily work samples to show the student's progress towards the learning goals. The IEP team can then use these samples to determine whether or not the student is performing at or below grade level. They recommend using portfolios to create a direct connection between instruction and the general education classroom. As such, these portfolios will become a convenient way of tracking and documenting a student's growth over time, which can result in easier decisions regarding future student placement.

Layton and Locke (2007) refer to Losardo and Notari-Syverson (2001), who list four aspects of portfolios that they believe empower IEP teams with detailed information they can use during their decision-making process: (1) portfolios allow for continuous assessment regardless of environments, (2) they can be passed from teacher to teacher or from grade to grade to ease the transition of the special needs student, (3) they offer

multiple ways of assessing a student's learning from a variety of angles, and (4) portfolios improve self-advocacy by the students by involving them in the selection of artifacts and discussions regarding their work. Another important recommendation by Layton and Locke (2007) is to maintain classroom portfolios to create a detailed documentation of the special needs student over time.

The Impact of Portfolio Assessment on Students' and Teachers' Work

Purposes and Processes of Portfolio Use with Students with Learning Disabilities

Curran (1997) investigated the use of portfolios in written language instruction and assessment with general education students and students with mild disabilities in a middle school. The study's participants were middle school general and special education teachers who taught writing or language arts in a southwestern school district. Data was collected through a questionnaire that focused on different scales designed to measure writing portfolio use, purposes, contents, evaluation procedures, concerns about portfolio assessment, potential benefits, other forms of assessment used, and demographic information. A total of 14 middle school sites participated in the study with 101 teachers completing the survey. Data obtained were analyzed through descriptive statistics and correlations among the scales.

The results showed that 41.6% of the respondents had not used portfolios; 35.6% were using them at the time of the study, and 22.8% had used them in the past. Of those using writing portfolios at the time of the study, 61.1% were general education teachers, and the rest were special education teachers. Those who had used them in the past and had discontinued the practice did so because, according to them, portfolios were time consuming; they did not provide the assessment information needed; training for teachers

was inadequate; the schools provided inadequate support; portfolios took a lot of time to plan; and there was not sufficient parental support.

Regarding the purposes of using portfolios, general education teachers had slightly higher scores on instructional purposes, while special education teachers scored higher on assessment purposes, with the largest difference found on the purpose of using portfolios for documenting IEP goals. A section of the questionnaire asked questions regarding contents of the writing portfolios. The results showed that teachers liked that they had writing samples. The participants also rated student involvement, self-evaluation, and reflection highly. General education teachers rated portfolio contents higher than special education teachers. Regarding the evaluation of portfolios, special education teachers scored the criterion of progress towards IEP goals higher than general education teachers. The concerns rated highest by both groups of teachers were lack of adequate training and support as well as student lack of skills for self-evaluation and reflection.

A number of Pearson correlations were computed between the items on the scale. Relationships were found between many scales on the questionnaire, with the highest positive correlation existing between student-related purposes and student reflections. A strong positive relationship was also found between assessing achievement and documenting progress. Representativeness of portfolio contents also highly correlated with reliability of portfolios.

Benefits of Using Portfolios with Students with Learning Disabilities

Poel (1998) sought to understand the purpose and process of developing a portfolio, its strengths and weaknesses when used as an assessment tool for middle school

students identified with learning disabilities. She also investigated the perceptions of the staff as well as ways the portfolio can be used to develop, support, and enhance the student's IEP. The participants of the study were four case managers and eight special education students. Using a qualitative research design, she collected data through interviews with the students' case managers and the students themselves. She also conducted participant observations in classrooms in which the participants were included in general education classes as well as in self-contained classrooms. Other observations of the students were conducted off campus. In addition, classroom sessions were videotaped. Data thus obtained were analyzed by looking for emerging themes and conclusions generated.

The results showed that the development of the portfolio increased the case managers' awareness of the needs and personalities of their students. The students also gained metacognitive awareness, which helped them understand their strengths and weaknesses. This awareness for both the case managers and students was heightened by the amount of time they spent together while the students were developing their portfolios, and the case managers were guiding them.

The case managers also reported using the portfolios to measure or understand the academic achievement, and the students could view their academic progress and were able to discuss it with their case managers. The case managers also used the student portfolios as documentation of student performance, especially for those students whose parents, psychologists, pathologists, therapists, administrators, and law enforcement officials check on regularly. Through the process of portfolio development and discussions, students knew their IEP goals and could talk about their academic progress.

During the process of developing the portfolios, each student was actively engaged, with different levels of assistance from the case managers. Regarding the perceptions and attitudes of individuals involved in portfolio development, the results showed four major themes emerging: practical applications, attitudes, relationships, and concerns.

Both students and case managers thought that developing a portfolio was not very different from their other learning activities. Portfolios kept students organized. Case managers were able to adapt curricular objectives based on the portfolios and use time efficiently. It was also reported that students were more motivated to work and expend the most effort on activities that they knew would be included in their portfolios. They were proud of their portfolio work. The case managers also felt that the students learned responsibility through the portfolio development process; they collected work samples, scheduled portfolio time, and shared their work with each other.

Both the case managers and the students had concerns related to developing a portfolio. They thought that the process was time consuming, and students often had to miss other activities or stay after school to work on their portfolios. They also expressed difficulty with collecting work samples. The last concern was related to students being absent from school for various reasons, which negatively affected their progress on their portfolio work and its completion by the teachers' deadlines.

Finally, Poel (1998) investigated how the portfolio is used to develop, support, and enhance the IEP. It was found that the portfolio contained a lot of information necessary to develop an IEP or revise it; it was a tool of communication among all parties concerned, and it was user friendly for students and teachers / case managers.

Another research study that explored the use of portfolios with students identified with learning disabilities is one by Swartz (1999). The second research question focused on the teachers' beliefs and assumptions regarding the implementation of portfolios with students with learning disabilities in the general education classroom. The researcher used a qualitative research approach, case study methodology and interviewed three general education teachers who had students with learning disabilities included in their classes from second to fourth grade in two different school districts. The researcher also conducted observations. After data were collected and analyzed, it was revealed that writing portfolios had been a solution for these teachers to address the challenge of teaching and assessing students with learning disabilities. One teacher began using portfolios because she believed they were a better way of teaching the targeted concepts. Participants shared that using portfolios and using a rubric to grade them gave them information that they could not obtain from the standardized forms of assessment the school was using, such as the Iowa Test of Basic Skills or the Missouri Mastery Achievement Test. The portfolios gave them more accurate and usable information regarding the performance of their students with learning disabilities. Another theme that emerged was a stronger sense of community that existed in their classroom as students worked with one another and the teacher to develop their portfolios. The last emergent theme was the increased ability to learn independently that many students developed as a result of their work with portfolios.

Portfolios allow student self-assessment and reflection (Carpenter & Ray, 1995). Chan (2000) designed a study to investigate whether students who participated in self-reflection activities performed better on their portfolios than students who had not. Chan

also sought to know whether participating in portfolio activities is associated with positive change in the students' perceptions towards class work. Fifty-eight students with learning disabilities were recruited in an elementary school and were further divided in three groups. The first group participated in portfolio development and self-reflection. The second group was involved in portfolio development activities only, and the third group did not participate in any portfolio related activity. The data to answer the questions came from scores students obtained on their portfolios as well as a pre and post test of students' perceptions of class assignments. A t-test was computed between the reflective and the non-reflective groups on the scores obtained on their portfolios. Although the mean scores of these two groups favored the reflective group, the t value of 0.903 (N = 40) failed to reach statistical significance at p = .372. In addition, an analysis of variance was computed on the pre and post test scores of the three groups on their perceptions of class assignments. The results showed no statistical significance among the groups, leading Chan (2000) to conclude that participation in portfolio and reflection activities, even after a period of 10 weeks, did not significantly and positively change students' perceptions of class work.

Teachers' Perceptions of Portfolio Assessment

Teachers implement portfolio assessment if they believe that it makes a difference in the quality and quantity of student learning. Maruszczak (2008) designed a research study to investigate whether teachers perceived that portfolio assessment had impacted their practice and whether they perceived that portfolio assessment had improved student learning. Data were collected from 112 high school teachers from three different schools (one urban, one suburban, and one rural). The data collection instruments were analysis

of documents, a teacher Likert scale survey, and interviews. Data were analyzed through qualitative means by organizing data into themes and emerging categories, and through statistical analysis with descriptive statistics, a t-test, and analysis of variance.

The results showed that teachers believed that portfolio implementation had impacted their practice. For example, it had helped them incorporate rubrics in their other types of assessment. Teachers also stated that they created and revised tasks with portfolios in mind; they also spoke about revising certain tasks to make them more rigorous. Teachers also believed that, since the implementation of school-wide portfolios, they had used common assessments to a larger degree and collaborated to create those assessments. Teachers also shared that they had started incorporating student reflection and self-assessment in their practice. The majority of teachers (59%) also felt that student reflection had increased in other tasks as a result of portfolio assessment, and 65% thought that the quality of student reflection had improved over time. As many as 78% of the respondents agreed that portfolio assessment meant more work for them; however, only 51% agreed that it had improved their practice.

Survey items related to portfolios improving student learning received a low rate from the participants. Only 65% of the respondents agreed that with portfolio assessment, students make decisions about their work. Only 59% agreed that their students understood the goals of the portfolio review, and an even smaller 36% thought that portfolios motivated their students.

Special Education Teachers' Issues with Portfolio Assessment

Teachers complain about the amount of paperwork required to develop a portfolio (Flowers et al., 2005). The purpose of Flowers et al.'s (2005) study was to investigate

teachers' perceptions of alternative assessment. Using the Alternative Assessment Teacher Survey that they designed as a Likert scale questionnaire composed of 65 items, these researchers collected data from 983 special education teachers from five states. These teachers had administered at least one alternative assessment in the previous two years. Teachers from three states had administered portfolio assessment; others had used performance-based assessment and checklists. The first 39 items addressed the impact of alternative assessment on students, teachers, parents, and the education system in general. The remaining 26 items were presented as influencing the outcome of alternative assessment, and the participants were asked to indicate the degree to which they believed that influence occurred.

Data analysis was conducted through descriptive statistics and a one way analysis of variance (ANOVA) to look for differences among alternative assessment approaches. The results showed that the teachers agreed that all students should be involved in alternative assessment based on high state standards, but a larger number thought that alternative assessment took away time from teaching and trying to meet individual students' needs. They indicated that the amount of paperwork required for alternative assessment was often a burden, especially for teachers using portfolios. In addition, these teachers reported that working on portfolios took away from their personal time because they spent an average of 58.1 hours on portfolio work, while teachers using performance assessment spent 3.7 hours and those using a checklist 2.9 hours. Flowers et al. (2005) recommend identifying practices in which teachers using alternative assessment with special needs students could be more effective without investing large amounts of time to working and scoring portfolios.

The recommendation for states to find efficient ways to implement alternative assessment practices was also expressed by Kim, Angell, O'Brian, Strand, Fulk, and Watts (2006). They surveyed 234 special education teachers who had a minimum of two years' experience developing portfolio assessment for the special needs students to meet the requirements of the Illinois Alternative Assessment system (IAA). The purpose of this study was multifold: it was designed to describe first, the special education teachers' perspectives, their instructional practices, and their concerns regarding implementation of the IAA; second, the perceptions of these teachers regarding the benefits of the IAA; third, the relationship between the teachers' demographics and their perceptions of the concerns and benefits of IAA; and fourth, their suggestions for improving this alternative assessment system.

Kim et al.'s (2006) instrument of data collection consisted of a survey with Likert scale items and open-ended questions. The data obtained from the Likert scale items were analyzed by computing the mean and the standard deviation for each perspective and instructional practice. Data from the open-ended questions were analyzed using content analysis techniques. The most highly rated item stated that the IAA did not assess students' educational needs ($M = 4.09$, $SD = 1.27$). The second most highly rated item stated that the teacher training associated with the IAA had increased the teachers' knowledge in implementing IAA ($M = 3.36$, $SD = 1.19$). The two items with the lowest ranking were one concerning the teachers' belief that the students' participation in IAA will enhance achievement of their goals ($M = 1.64$, $SD = .90$) and one concerning the teachers' belief that their participation in IAA positively affected their instruction ($M = 1.84$, $SD = 1.09$).

The means for the self-reported instructional practices ranged from 1.65 to 4.63, and the highest ranked items were (a) the one that asked the special education teachers if completing portfolios for the IAA took away time from their teaching (M=4.63, SD=.93), (b) the one that stated that it was difficult for the special education students to be involved in the development of their portfolios (M = 4.27, SD = 1.09), and (c) that the students' parents were not involved in the portfolio process (M = 3.52, SD = 1.16). The two lowest ranked items asked whether students had been able to access more of the general education curriculum as a result of their inclusion in testing and accountability (M = 1.65, SD = .87) as well as the item that the alternative assessment system had helped teachers communicate with their students regarding the latter's progress (M = 1.79, SD = 1.05).

Regarding the benefits of the portfolio assessment for the IAA, the themes that were identified after the content analysis were (a) no benefits, (b) no information, and (c) IAA helped teachers incorporate more general education curriculum into the special education students' IEPs. Some teachers stated that the system provided for progress monitoring; it had made of them better data collectors, and helped them become better organized. Content analysis of the data regarding the special education teachers' concerns about IAA revealed a few themes: the IAA system did not relate to the students' educational goals; it was time consuming; it assessed more the teacher than it did the students; it was difficult to score; it represented extra work for teachers; and it did not represent the students adequately. Kim et al. (2006) had also asked teachers for their suggestions for improving the IAA system, and they offered a few, such as using the IEP rather than the IAA, discontinuing, shortening, or redesigning the IAA to better assess

children's progress, and developing standards and goals related to the IAA. Briefly, it appears that the special education teachers who participated in this study had a negative perception of the Illinois Alternative Assessment, specifically the portfolios required to assess the learning of students with significant and multiple learning disabilities according to the state standards. These teachers suggested that the program be either discontinued or revised for improvement.

The Link between Portfolio Assessment and Curriculum and Instruction

Students' difficulties with portfolios may be solved, at least partially, by strategy instruction, which leads to development of self-regulated learning, a skill that is necessary for students for the successful completion of portfolios. That was the finding of Cooney (2008) who used a mixed methods research approach to investigate the impact of strategy instruction and portfolio work on self-regulated learning. Forty middle school students enrolled in a health education course in a suburban school in the Northeast were recruited. Cooney collected quantitative data by administering a questionnaire as well as a pre and a post test to student participants. Qualitative data was collected by conducting interviews with teachers and observations. Quantitative data was analyzed using a one-sample t test and qualitative data by identifying emerging themes. The research showed that the use of portfolios and strategy instruction were associated with the participants' acquisition of self-regulated learning skills and self-management.

Orrelana (2010) investigated how the alternate assessment portfolio in Tennessee impacted curriculum and instruction and how the results were used. She also investigated relationships between teacher training, perceptions, and student achievement. Orrelana administered a survey to 169 special teachers across the state. The data were analyzed

through descriptive and inferential statistics. The results showed that the special education teachers believed that the alternate assessment portfolio was a factor in the curriculum and instruction of students with special needs. It was also found that portfolio assessment affected how decisions were made during IEP development. Orrelana strongly recommends further research comparing all types of alternate assessment in order to determine which one(s) is most beneficial to students with disabilities and would help educators meet student needs the best.

In her dissertation, Keiley (2011) used a case study methodology to investigate whether or not using literacy assessment portfolios would provide useful information regarding the literacy development of three students identified with learning disabilities in a cross-categorical special education classroom. She also sought to know whether the information obtained would affect the teacher's instructional decisions, as well as the parents' understanding of their children's abilities. The results of this study showed that use of literacy assessment portfolios was associated with improved reading skills among the three participants. Students also displayed a better attitude toward academic reading, higher confidence and the ability to evaluate their own progress. In addition, the participants' parents wanted more involvement in their children's learning, and their expectations for their children's learning also increased. The use of literacy assessment portfolios also helped the teacher understand her students and how they learned best, and it showed her the importance of reflection and dialogue with students.

Summary

The purpose of this study was to investigate the experiences of students with learning disabilities in high school who are required to create portfolios as a form of

assessment of their learning. The literature reviewed lacks scientific basis to make judgments regarding the experiences of students with learning disabilities with portfolio assessment. It also lacks evidence of the type of support, accommodations, and modifications afforded special education students engaged in portfolio development. However, the literature reviewed provides accounts of teachers who stopped using portfolios because they did not provide the information the teachers needed; others were not trained in portfolio assessment. The findings on parental support are mixed. On the other hand, other teachers and school personnel gained a better awareness of their students and their needs, and they used that information to make decisions and write IEPs. Two themes that are recurrent in the literature are the large amount of paperwork and time that developing portfolios require from both teachers and students. Chapter Three is a discussion of the methodology of the proposed study.

CHAPTER THREE: METHODOLOGY

This study investigated the use of portfolios by general education and special education teachers as a form of assessment for students with learning disabilities (LD) in high school. Knowledge generated from this study may be used by general as well as special education teachers to assist their students with learning disabilities more while the latter are creating portfolios. Because of federal mandates, students with special needs must be educated in the least restrictive environment (Braun, 2008). Therefore, general education teachers need to know ways to support these students' learning and actively involve them in all classroom proceedings, including assessment (Jensen & Klonicke, 1999). The problem is that little evidence is available about the issues students with learning disabilities may face while compiling their portfolios, as well as evidence about the support they need to be successful at this task.

Research Design

The purpose of this study was to investigate the use of portfolios as a form of assessment by general education and special education teachers with students with learning disabilities in high school. To answer the research questions, the researcher used a qualitative study approach to investigate the use of portfolios by general education and special education teachers for high school students with learning disabilities. The research questions that the researcher attempted to answer were:

1. What factors influence the development of portfolios among students with learning disabilities?
2. What are the accommodations and modifications provided to students with LD while creating portfolios?

3. What are the characteristics of portfolios developed by students with learning disabilities?

Data to answer these research questions were collected through individual interviews with general education and special education teachers. Data obtained from these interviews were used to answer the first and second research questions partially. Second, through review of documents as well as well as well as archival data of grades obtained by students on their portfolios, the researcher obtained the data necessary to answer the third research question. This strategy of collecting data from multiple sources and multiple instruments allowed for triangulation, thus providing the researcher with a more complete picture of the phenomenon being investigated and cross-checking information (Gay, Mills, & Airasian, 2009).

Specifically, the researcher used the collective or multiple case study approach. Creswell (2007, p. 74) states, "In a collective case study (or multiple case study) the one issue or concern is again selected, but the inquirer selects several programs from several research sites or multiple programs within a single site." According to the same author, researchers who use the multiple case study design use replication of the procedures in each case.

In this study, the multiple cases were general education and special education teachers in several high schools, and the issue was that they required their students with learning disabilities to develop portfolios.

Population and Sampling Procedures

For this study, only teachers who used portfolios with their students with learning disabilities were included. According to the Illinois State Board of Education (2011), in

the state where the study was conducted, 82.4% of teachers were white, 6.1% were black, and 5% were Hispanic, and 1.2% was Asian. Regarding gender, 23.1% of the teaching force were male, and 76.9% were female. The average number of years of teaching experience was 13.2. This state contains a large urban school district with teacher demographic data that seemed to be different from those of the whole state. In this urban school district, 42.4% of the teachers were white, 19.5% were black; 14.2% were Hispanic, 3.3% were Asians, and as many as 18.6% were of unknown racial backgrounds. In terms of gender, the state is similar to the large city, with 23.7% of the teachers in the city being black, and the remaining 76.3% being white. The teachers in the city had an average number of years of teaching experience of 13.7. The student population of this state was diverse, with 51.4% being white, 18.3% are black, 23% Hispanic, 4.1% Asian, and 2.8% with two or more races. As many as 41.8% came from low-income families, and 8.8% had limited proficiency in English. A total of 14% had IEPs (Individualized Education Programs). In the large urban school district, the student population was 8.5% white, 42.9% black, 43.7% Hispanic, 3.2% Asian, and 1.2% of two or more races. As many as 86% of the city students came from low socioeconomic status; 15.8% had limited proficiency in English, and 13.1% had IEPs.

Using the snowball effect and through word of mouth, the researcher recruited nine general education and five special education teachers who taught students with learning disabilities in several public high school located in a Midwestern state. The primary condition for inclusion in the study was that these teachers required their students with learning disabilities to develop portfolios as a form of assessment of their learning. To increase the likelihood of reaching the desired sample size of general

education and special education teachers, the researcher used contacts that she had collected during her several years of work as a high school teacher to recruit participants. Before recruiting participants, the researcher first sought approval to conduct the study from the Institutional Review Board (IRB) of Argosy University/Chicago. The IRB of Argosy University at Chicago has a form that the researcher completed to request approval for a research study. This form must be submitted accompanied by the Informed Consent Document for the protection of human subjects. An informed consent document was submitted for teachers who decided to participate in the study to give their consent to the researcher to use information collected from them in a research study. The teachers were invited to meet with the researcher in a neutral, public location where the data collection occurred. The first step was to explain the study to the participants and obtain their consent. Then, the process of data collection started.

Instrumentation

Data were collected through two instruments. To obtain the first set of data, the researcher used individual interviews with general education and special education teachers who required the students with learning disabilities to develop portfolios. These individual interviews were based on an interview protocol, made of 14 initial questions that the researcher created. These interviews were tape recorded. The second set of data was obtained through document analysis. The researcher obtained some students' IEPs, some graded portfolios, as well as the grades obtained by students on those portfolio assignments.

In an effort to increase the validity of the interview protocol, the researcher run the interview protocol through a Beta test by submitting it to three professors or

researchers and requesting their feedback. The comments, suggestions, and changes that they made to the interview protocol were taken into consideration to design the final version of the instrument. In addition, to increase the trustworthiness of the data collected from the teacher interview, the researcher continuously conducted checks with the interviewees to ascertain their assertions. The practice of triangulation of the data obtained from teachers and document analysis was also useful in increasing the validity of the qualitative data thus obtained (Gay, Mills, & Airasian, 2009).

Procedures

After the project had been approved by the Institutional Review Board of Argosy University, the researcher contacted teachers to invite them to an initial meeting during which the investigator would explain the study in details. After the study had been explained and any questions answered, the teachers were given two copies of the informed consent document (see Appendix A). The investigator read it word for word and answered any questions the teachers had. Then the teachers were asked to voluntarily indicate their willingness to participate in the study by signing one copy of the informed consent document, return it to the researcher right away, and keep the other copy for their own records. After the teachers' signed consent forms had been collected, the researcher thanked them for coming to the meeting and volunteering to participate in the study and scheduled the individual interviews depending on the teachers' availability.

Based on the qualitative method and using an interview protocol (see Appendix B), the researcher interviewed teachers individually regarding the portfolio process as well as the support and accommodations they provide to their students with learning disabilities engaged in portfolio development. The individual interviews lasted an

average of 35 minutes and took place after school or on weekends to avoid taking time away from the teachers' professional duties. The interviews were held in a neutral and public location. At the beginning of the interview, the researcher thanked the participants for coming and told them that any information they shared during the interview would be kept in total confidentiality and would not be heard or seen by anybody else other than the researcher, except that the results of the study would be published in a dissertation in an aggregate format without identifying respondents. Items on the teacher interview protocol are provided in Appendix B. This interview was tape recorded to be transcribed later for further analysis. Recording the interview also allowed the researcher to focus more attention on the teachers and their responses with the ability to ask probing questions or clarification.

The teacher interview described above were individual, face-to-face interviews because, as Fraenkel, Wallen, and Hyun (2011) explain, the personal interview is the most effective method for obtaining the cooperation of participants. They also state that the researcher can establish rapport with the respondents, clarify questions or ask for clarification of answers, as well as follow up on unclear or incomplete answers. Personal interviews do not require any reading or writing skills on the respondents' part, and they allow the researcher to spend more time with the respondents when necessary (Fraenkel et al, 2011).

The next type of data collection method was document analysis. According to Gall, Gall, and Borg (2005), case study researchers often study written documents. Official records and personal documents are widely used in qualitative research. The researcher reviewed the students' portfolios after they had been presented and after

teachers had removed all identifying information such as names, thus keeping students anonymous. Both the physical appearance and the contents were examined. Regarding physical appearance, the investigator looked at the material used to hold the portfolio (binder, folder, or loose paper), the choice of color, decorations, and other physical features. Regarding contents, the investigator checked if there was a checklist to be used and if the students had included all the artifacts on the checklist. The researcher looked at the organization of the artifacts and their contents. Another document that was examined was the rubric (if one exists) that the teachers used to assess the portfolios.

In addition, the researcher asked the teachers to remove the students' names from their IEPs and submit them (without the names) to the principal investigator so she could analyze them. Removing students' names from their IEPs before the researcher could analyze them was done to ensure that students remained anonymous. Then the researcher analyzed them to cross reference them with what the teachers had said in the interviews regarding accommodations and modifications afforded students with learning disabilities. Finally, the researcher will asked teachers to share with her archival data in the form of grades obtained by students on their portfolios, without revealing the students' names. These grades represented the overall assessment of the portfolio by one or several teachers. The number of students who obtained each letter grade was counted.

To answer the three research questions, data from the individual interviews with teachers and document analysis were used. Data obtained from the interviews were coded, summarized, and organized into themes. To answer the first research question (What factors influence the development of portfolios among students with learning disabilities?), the researcher used data from the individual interviews and the review of

portfolios and IEPs. To answer the second research question (What are the accommodations and modifications provided to students with learning disabilities who are creating portfolios?) the researcher used data obtained from the individual interviews with teachers as well the analysis of IEPs.

Data from the individual interviews were summarized and organized in themes. Creswell (1997) states that in qualitative research, "data analysis consists of preparing and organizing the data … for analysis, thus reducing the data into themes…." (p. 148). Stake (1995) adds, "The qualitative researcher concentrates on the instance, trying to pull it apart and put it back together again more meaningfully" (p. 75). The researcher formulates categories, revises them, reviews field notes, and collects more information until different perspectives emerge (Fitzpatrick, Sanders, & Worthen, 2004). Gay et al. (2009) suggest a step-by-step process of qualitative data analysis that this researcher followed to analyze data obtained from the interviews. The first step was to read the interview transcripts to get initial thoughts or a sense of the data. At this initial step, the researcher also started searching for recurring themes or commonalities in the data. The second step was describing, the goal of which was to provide a complete narrative picture of the setting or context, the participants, and the phenomenon being studied. This description was based on the data collected through the interviews. The third stage was classification. The researcher broke down the data into smaller units (or categorizing and coding), determined their importance, and decided on the connections among the units, thus identifying recurring themes. She identified themes by considering the themes that emerged in the literature review and mostly in the data collected, looking for patterns that emerged or ideas that were repeated in the interviews. Finally, the researcher coded the

qualitative data, which was the process of "marking or referencing units of text with codes and labels as a way to indicate patterns and meaning" (Gay et al., 2009, p. 451).

To answer the third research question (What are the characteristics of portfolios developed by students with learning disabilities?), the researcher used data from the analysis of students' portfolios and archival data of grades obtained by students on their portfolios. After students' portfolios had been collected, they were analyzed using content analysis, which is a type of analysis of data collected in textual form. Content analysis was used to "describe, analyze, and summarize the trends observed" in the portfolios (Fitzpatrick et al., 2004, p. 362). Content analysis is a systematic technique for coding words and collapsing them for easier classification. It is "useful for examining trends and patterns in documents" (Stemler, 2001, para.4). Finally, grades obtained on the portfolios were analyzed by tallying the number of students who obtained each letter grade (A, B, C, D, F), the number of students who obtained a passing grade, and those who obtained a failing grade. These grades were important because they represented the teachers' overall assessment of the portfolio submitted by each student. The teachers' feedback on the portfolios was also summarized.

Methodological Assumptions, Limitations, and Delimitations

The researcher made the following assumptions in conducting this study. First, the researcher assumed that the teachers participating in the study possessed the knowledge, ability, and willingness to answer the questions in the individual interviews and to provide to the researcher the documents and archival data necessary to conduct this study. Second, the researcher assumed that the interview protocol and the documents

and archival data collected were an adequate representation of the information needed to answer the research questions.

A few limitations of the study are worth mentioning. First, what the participants revealed in the data might not be the whole truth; they might have exaggerated stories or underestimated what they do. Second, there was also a concern regarding participant mortality or attrition. Teachers may drop out of the study because they left the school; they may also be absent when data are being collected. The first concern was minimized through the process of triangulation. The researcher obtained data from different sources and using different methods, which also allowed her to cross reference the data and confirm or disconfirm information gathered from the various sources. For teachers who could not be present at their scheduled interviews, the researcher solved that problem by scheduling a different interview for them.

In addition to these limitations, this study showed a few delimitations. It was conducted with general education and special education high school teachers from a large school district located in an inner city of a large Midwestern city. The majority of the students are African Americans. They are also from a low socioeconomic background because the majority of the student body is approved for a free lunch program (Illinois State Board of Education, 2012). In addition, the data were collected during one academic year and was a snapshot of that particular group of teachers. Finally, the lack of random selection is another delimitation of this study. Because of these issues, the results of this proposed study may not be generalizable or applicable to other populations in other sites or in different time periods.

This study investigated the use of portfolios by general education and special education teachers who taught students with learning disabilities in high school and require them to create portfolios as a form of assessment of their learning. Using a qualitative research approach and a multiple case study methodology, the researcher attempted to answer the following three research questions:

1. What factors influence the development of portfolios among students with learning disabilities?
2. What are the accommodations and modifications provided to students with LD who are creating portfolios?; and
3. What are the characteristics of portfolios developed by students with learning disabilities?

The researcher used a multiple case study methodology to answer the research questions. Data were collected through a focus group interview with general education and special education teachers and document analysis to examine the students' IEPs and completed portfolios after all identifying information had been removed from these two types of documents. Additional archival data were the students' grades provided by the teachers to the researcher without the student names or identification numbers. Data were analyzed through qualitative means by organizing, coding and identifying recurring themes in the data. Content analysis was used to analyze the data obtained from examining student portfolios and IEPs. Through this study, the researcher hoped to contribute recommendations for educators to make the portfolio process more successful for students with learning disabilities and to contribute to the body of existing knowledge regarding the use of portfolios with students with learning disabilities.

CHAPTER FOUR: DATA ANALYSIS AND RESULTS

Restatement of the Purpose

The purpose of this study was to investigate the use of portfolios by general education and special education teachers as a form of assessment for students with learning disabilities (LD) in high school. To answer the research questions, the researcher used a qualitative study approach to investigate the use of portfolios by high school general education and special education teachers who required their students with LD to develop portfolios as a form of assessment of their learning. The research questions at the center of this study were:

1. What factors influence the development of portfolios among students with LD?
2. What are the accommodations and modifications provided to students with LD while creating portfolios?
3. What are the characteristics of portfolios developed by students with learning disabilities?

Data were collected through individual interviews with high school general and special education teachers who required the development of portfolios from their students with LD. Data were also collected from document analysis of the students' Individualized Education Plans (IEPs) and portfolios. In this chapter, the researcher presents the participants' demographic information, the data analysis, and the findings as they relate to the three research questions.

Participants' Demographic Information

Fourteen general and special education teachers were interviewed to collect some of the data necessary to answer the research questions. In the following sections, the teachers' demographic information is summarized.

Teacher #1 was a female teacher who had been teaching for three years. She had used portfolios ever since she started teaching. She had a bachelor's degree and taught Spanish in an inner city high school in a low-income neighborhood. Teacher #2 was a female math teacher with more than 30 years of teaching experience. She had a bachelor's degree in special education, a master's degree in curriculum and instruction, and another master's degree in educational leadership with a principal certificate. She served as a school building principal for five years and then returned to the classroom and continued to teach special education in a city high school in a poor community. She had used portfolios for seven years. Teacher #3 was also a female teacher of mathematics in an inner city high school. She had a master's degree plus 30 additional graduate credit hours. She had been teaching for 20 years and using portfolios for six years. Teacher #4 was a male special education teacher with a master's degree and 20 years of teaching experience. He taught English in a therapeutic school for students with special needs in an inner city. In addition, he had several teaching endorsements. He had been using portfolios ever since he started teaching (20 years).

Teacher #5 was a female English teacher with 27 years of teaching experience and a master's degree. She taught in an inner city high school and had been using portfolios for the last 10 years. Teacher #6 was a female teacher who worked in an inner city high school located in a low-income neighborhood. She taught English, had been

teaching for 12 years, and used portfolios for the last five years. She had a master's degree in teaching and learning and had also achieved National Board Certification. Teacher #7 was a female business and work experience teacher. She had 20 years of teaching experience and had used portfolios for seven. She had a bachelor's degree and taught in an inner city high school located in a low-income neighborhood. Teacher #8 was a female English teacher with a master's degree and four years of teaching experience in an inner city high school. She had been using portfolios for two years.

Teacher #9 was a female special education teacher with a master's degree who worked in a magnet high school in a middle class, high-income neighborhood in a city. Her teaching duties included English, speech, computer education, and occupational preparation. She had been teaching for 17 years and had used portfolios for six. Teacher #10 was a male with a bachelor's degree and 10 years of teaching experience as an earth and space science teacher in an inner city high school in a low-income neighborhood. He had been using portfolios for the last three years. Teacher #11 was also a male teacher in an inner city low-income school. He taught math and had a master's degree, 14 years of teaching experience with six years using portfolios. Teacher #12 was female; she had a master's degree and taught social studies in an inner city high school in a predominantly poor community. This was her first year teaching; therefore, she had been using portfolios for six months.

Teacher #13 was a female special education teacher and case manager in a low-income high school in the inner city. She had a master's degree and 15 years of teaching experience. She had been using portfolios for 10 years. Teacher #14 was a female veteran teacher with 40 years of teaching experience at both the primary and secondary

education levels in city schools. She taught special education at the time of the research and had been using portfolios for 20 years.

Table 1 shows a graphic representation of the interviewees' demographic information. It shows that 11 of the respondents were female and three were male. Thirteen of them taught in city schools in low-income neighborhoods, and one taught in a magnet school in a middle class neighborhood. Eleven of the teachers had master's degrees, and the other three had bachelor's degrees. Five taught special education, and the remaining nine taught other various subjects. They averaged 15.9 years of teaching experience with seven and a half years of using portfolios. In Table 1, female is represented by F, and male is M. Degrees are represented by B for bachelors and M for masters, and Sped stands for special education.

Table 1

Teachers' Demographic Information

Participant number	Gender	School socioeconomics	Highest degree	Subjects	Years of teaching	Years using portfolios
1	F	Low income	B	Spanish	3	3
2	F	Low income	M (2)	Sped	30	7
3	F	Low income	M	Math	20	6
4	M	Low income	M	Sped	20	20
5	F	Low income	M	English	27	10
6	F	Low income	M	English	12	5
7	F	Low income	B	Business/career	20	7
8	F	Low income	M	English	4	2
9	F	Middle income	M	Sped	17	6
10	M	Low income	B	Science	10	3
11	M	Low income	M	Math	14	6
12	F	Low income	M	Social studies	1	6 months
13	F	Low income	M	Sped	15	10
14	F	Low income	M	Sped	40	20

During the introduction of the interviews, the researcher discussed with the participants the definition of a portfolio as used in this study, so both the teachers and the

researcher would have a common understanding of the topic. A portfolio is a "collection of student work with a common theme or purpose" (Damiani, 2004, p. 1). Portfolios were originally used in art and later expanded to the classroom as a partial solution to the criticisms leveled against traditional assessment, especially forced-choice questions. Portfolios can serve several goals such as assessment of learning, documenting students' growth over time, and serving as a discussion and communication tool between the students, the teacher, and the parents (Damiani, 2004).

Research Question One

The first research question is: What factors influence the development of portfolios among students with learning disabilities? Data to answer this research question were obtained from individual interviews conducted with 14 special education and general education teachers who require their students with learning disabilities to develop portfolios. These interviews were conducted in public libraries where the researcher had arranged for a meeting room. The interviews were tape recorded and later transcribed for analysis. The first step in the data analysis process was to read the interview transcripts to get an initial sense of the data. At that time, the researcher also started highlighting commonalities in the interviews. The second step was describing and providing a complete picture of the participants and the phenomenon being studied. This description was based on the data collected through the interviews. The third stage was classification. The researcher broke down the data into smaller units, determined their importance, and decided on the connections among the units, thus identifying recurring themes. The researcher identified themes by looking for patterns that emerged or ideas that were repeated in the interviews. For Question One, this process of data analysis

revealed four main themes as factors that influence the development of portfolios among students with LD: the teacher's role, expectations, support, and individualization of learning.

The Teacher's Role

The respondents viewed the teacher's role as essential; in fact, they expressed this concept as the most important factor in the successful completion of portfolios by students with learning disabilities. With this response, they join Chancer (2001) who found the teacher's role to be crucial in portfolio assessment. As she stated, "It is the teacher who sets in place the conditions and the structures for what will eventually become a portfolio culture" (p. 1). From planning to conferencing with students, Chancer discusses how the teacher's constant involvement, modeling, and guidance leads to portfolios with which teachers are satisfied and with which students are proud to have produced. To emphasize the importance of the teacher's role, she argues that portfolios are much more than checklists, sheets, and folders. Preparation for the portfolio assignment is more than a two-to-three-day process which begins the first day of school. Finally, she concludes that "this type of assessment belongs to the student, yet the teacher has never had a more important, active role in setting in motion the structures that support a portfolio classroom" (Chancer, 2001, p. 16).

Respondents in this research thought that teachers need to be prepared from the beginning of the first day of the semester or unit to present the portfolio assignment to the students, explain what it entails, and communicate the goals or the outcomes expected. During the planning stage, teachers need to prepare all handouts, rubrics, or checklists in order to be ready to give to students at the beginning of the unit. In addition, it is

important that teachers give both verbal and written instructions to students, including the due dates, so the students have a clear idea of what the project entails and what a successful portfolio looks like. Teacher #13 even suggested incorporating students' input during the preparation stage; by doing so, students will feel some ownership of the project and be more likely than not to persevere to reach their goals because they played a role in choosing them or selecting aspects of the portfolio project. Teacher #13 even incorporated students' input by asking them to set short term goals such as dates when certain benchmarks would be achieved or by allowing them to select a topic to research.

It was also helpful if teachers explained to students with LD ways in which they would benefit from working on portfolios. For instance, teacher #5 told his students that it was important for them to see how their work improved over time. Teacher #10 told students that they were going to learn new skills, such as working with a variety of people and improving previous skills. For example, students had already worked on the skills of staying focused and organized, or they had collected and arranged documents according to certain criteria. The teacher also reminded students that these were skills they would use "down the line in their everyday life" (teacher #10) such as college or work. If teachers told students how they would profit from developing portfolios, students visualized an accomplishment or a potential benefit and were more likely to stay motivated and focused, thus increasing their chances of achieving the outcomes.

Teachers who explained to their students with LD how they would benefit from developing portfolios were motivating students. Teacher #11 insisted that their students' portfolios would not be a document created and stored away once students completed them and received a grade. She told students that their portfolio was a document that

they will continue to use as "something to refer to for future assignments or work if confused or you need to check on something." Because a portfolio was a long term project, it was necessary for teachers to find ways to motivate the students with LD, keep a positive attitude, maintain the excitement, and encourage students who were frustrated. Several of the respondents felt that the independent nature of portfolios can be challenging for their students with LD, and "it is hard for them to be in control of what they are doing" (teacher #5). The Spanish teacher (teacher #1) added that her students with LD complained about the amount of writing involved with portfolios, but with encouragement, motivational strategies and support, they completed their portfolios on time with the general education students.

From the planning stage of the portfolio to the reflection and presentation, the teachers' role was that of a facilitator. They developed the portfolio project, ensured that the students understood it and had the needed resources, and monitored students' progress. They did not tell students exactly what to do but set the expectations and monitored and assisted as needed. For students with LD, as teacher #1 noted, portfolio projects were more effective if students could relate to the topic. Thus, it was necessary for the teacher to choose a topic relatable to students, and if it was a new concept, then the teacher would tap into their schema to create linkages between their background knowledge and the new learning.

In their role as facilitator of knowledge, teachers were physically and mentally available to students. In addition, they cooperated with other individuals in the building and in the community for student learning. For example, teacher #2 stated that for students with LD to be successful at portfolio development:

> The teacher needs not only to let the students know that she is available to help them and tell them when she is available, but also to cooperate with other stakeholders such as paraprofessionals, other teachers, the librarian, the computer teacher, the gym teacher, even the engineers and the lunchroom staff depending on the information the students need. It might be the alderman or a lawyer depending on what the student is trying to find or what he is interested in. Those are the people who may have the information the student needs or can point him in the right direction.

Teachers cooperate and reach out to other individuals in the school building or in the community who may provide the information students seek.

Expectations

Data from the teachers' individual interviews revealed that students with LD were likely to succeed at their portfolio projects if teachers set, communicated, and maintained high expectations for them. The participants strongly expressed the need for teachers to set the expectations and to communicate them to the students early in the process, such as the beginning of the year, semester, or unit. These expectations should be communicated to the students in writing such as rubrics, checklists, calendars, and other handouts. Many of the participants distributed such items to their students to keep them aware of the portfolio expectations in terms of content and deadlines.

The importance of teachers' expectations in portfolio assessment is not a new notion. Lockledge (1997) stated that students need clear guidelines that express general criteria for the evaluation of their portfolios. She added that from the beginning, the teacher must have a clear idea of the evidence students will include in their portfolios to show learning, and ensure that students will be able to obtain that evidence through class assignments and other learning experiences. Teachers communicate these expectations in writing using a sheet that lists all the areas in which proficiency will have to be

demonstrated (Lockledge, 1997). Other teachers use checklist and rubrics to make students aware of their expectations for the portfolio assignment.

A few of the teachers communicated their portfolio expectations to other individuals such as community members, other school employees, and parents, in addition to their students. Teacher #14, a special education teacher, went a step further by communicating the portfolio expectations to not only her students with LD but also to a larger audience which included parents, the school administrators, and a few community members during open house sessions. She did so because she believed that if the students knew that these other stakeholders were aware of the expectations, they would be accountable to not just the teacher, but to these other individuals as well. She also hoped that the parents would take an active role and have regular conversations about the portfolio project with their children with LD.

Another idea strongly expressed by the teachers was the need to trust the students with LD and believe that they are capable of learning and achieving goals as long as they are provided adequate support. For example, teacher #10 stated:

> I don't view special education students as less capable, just learning a different way. I give the same presentation guidelines to all my students regardless of cognitive level, and then I work individually with those who might need a little more help.

This sentiment was echoed by several teachers such as teachers #2, #4, and #14, who believed that students with LD should be challenged just like general education students; if they are challenged, they work harder to meet the expectations. Teacher #4 said that if they are not challenged, "They tend to lose focus or attention and do other things you don't want them to do." The participants felt that maintaining and communicating high

expectations to students with LD can mean the difference between a successful and a failing portfolio project. Teacher #2 emphatically stated:

> It depends what you have set up in their minds. If you set up that success is going to be ABC only, that's what they will work towards. If you tell them that success is going to be ABC and D, then they will add that D for you. It's all about the teacher's attitude.

This finding is in line with Flowers et al. (2005) whose participants agreed that all students should be involved in alternative assessment based on high state standards, although portfolio assessment required a lot of time investment on the teachers' part.

Support

The teachers also believed that while it was important to create and maintain high expectations for students with LD, it was equally important to provide them with adequate support to enable them to meet those expectations. All the teachers stated in one way or another that students with LD needed some type of support because of the challenges they commonly faced with learning. According to these teachers, the nature of portfolio work, which is mostly independent work, can be difficult for students with LD because some of them have a short attention span, lose focus, and spend less time on task than required. Other students experience challenges with organization and keeping track of documents, two important skills necessary for a successful portfolio.

According to Lockledge (1997), the portfolio process can be overwhelming to students of all abilities because sorting, selecting, and organizing do not come easily for all students. Thus, some type of support is necessary, depending on the needs and skills of the student. Teachers #10 and 11 were the most vocal about organizational issues for students with LD as they had students with LD who had experienced problems with staying organized and had misplaced artifacts a number of times. Other problems

experienced by the participants' students with LD while engaged in portfolio projects were discouraged when they did not see progress or the expected results. In general, the teachers felt that many of their students with LD had difficulties with autonomous work, taking charge of their own learning, writing a reflection, using abstract language, and interpreting information.

According to the participants, the occurrence or severity of the challenges discussed did not mean that students with LD should be sheltered or excused from portfolios. What they needed was adequate support, so they could meet the expectations set by the teacher or those set by the students themselves. When that support was provided, students with LD improved their learning as well as their attitude about their portfolio assignments.

In addition, when adequate support was provided, students with LD seemed to show improvement in regards to their learning problems such as staying on task and monitoring their own work, although these problems were not totally solved. Teacher #14 stated, "The teacher has to monitor some students to assist them to stay on task." She also noted, "With portfolios, my students learned to take charge of their learning. As we did more portfolios, they became better at working on their own. It taught them to stay on task." The teachers also believed that with the support the students with LD received from them, other professionals in the classroom or building, and their peers, they became better organized and created better portfolios. Teacher #13 expressed this idea in these words:

> Initially it was hard for them to be in control of what they were supposed to be doing and keep track of everything. But I stayed with them as much as I could and had their classmates assist them as well. With the second portfolio, they were

> very comfortable; with the third one, they were even better and did not require as much help.

Teacher #8 also had the same idea, saying that her students with LD often submitted portfolios that were as good as or better than those of general education students because of the support they had been afforded. Asked about the source of support for students with LD engaged in portfolio development, the teachers mentioned themselves, teacher aides, fellow students, and other teachers and staff in the building. One teacher even listed the assistance of other stakeholders in the community. All the participants stated that they were their students' first line of support; they planned and implemented the accommodations and modifications from the students' IEPs; they monitored the students' work and offered encouragement and assistance. Four teachers stated that they met with students with disabilities during their preparation period, the students' lunch period, or after school. Teacher #9 had a teacher aide who helped to keep students with LD focused in the classroom. All teachers had peers assist each other; for example, teacher #14 "delegated an appropriate peer partner who works well with that particular student." Other teachers and staff members in the school building served as a source of information for the students with LD.

Additional benefits of supporting students with LD during the portfolio process were discussed. Teachers stated that once adequate support had been provided, students with LD were generally proud of their work and could articulate what they gained from the assignment; they could also explain how the work could be expanded in the future. The students enjoyed what they were doing, became more creative, and even looked forward to developing more portfolios because they came to appreciate the process and how they grew from it. As teacher #5 related, with adequate assistance, "The

nervousness and apprehension of the beginning can be replaced by success, pride, and joy." This finding is in line with Poel (1998) whose research showed that through portfolio development, students with LD gained metacognitive awareness, which helped them understand their strengths and weaknesses.

Individualization of Learning

The teacher participants recognized that their students with LD were diverse and required individualized assistance. All of the students with LD had IEPs, and the respondents stated that they used that document as a basis to decide what type of assistance the students with LD needed. Thus, the portfolio could be highly individualized depending not only on the cognitive level and needs of the students with LD but also on their interests. In that sense, as teacher #10 expressed it, "The portfolio shows an individual's ability rather than how students compare to classmates." Some teachers, such as participant #2, thought that the portfolio could be made into an individual project, so much so that a given student would be the only one to develop and use it. Thus, the expectations for its development and completion were based on the students' IEPs.

Teachers individualized the portfolio assignment based on a number of criteria. Some used student interests (such as sports, animals, health issues), and students with similar interests could work together and assist each other. The students also interacted with different individuals to provide them with needed information.

Another criterion that teachers used to individualize the portfolio was skill level. This criterion was also used to determine the type and amount of support needed by the students with LD, the type of modifications and accommodations, as well as the

presentation. For instance, teacher #6 based her portfolio assignment on the strengths of the students with LD, and she used the assignment to help work with their weaknesses. Teacher #8 used the portfolio "as a more private way to pass out supplemental information without embarrassment" on the students' part. Teachers were also able to individualize the portfolio based on its purpose. For example, teacher #7, a business and career education teacher, had the students create portfolios used to seek employment. They progressed at different rates and added documents as they obtained them at different times in the year. For example, every time a student obtained a job, he/she was to update his/her resume and insert a new one in the portfolio.

Data from the interviews showed that teachers individualized the portfolio process at different stages depending on the needs of their students with LD. For example, some students needed extra time to complete tasks; others could not handle large amounts of information at the same time and needed the information broken down into more manageable pieces. Some students also needed extra examples and visual clues. During the initial stage, the expectations can be different depending on the students' IEPs, their academic needs, and their skill levels. For instance, students whose IEPs mentioned extra time were given the opportunity to meet with teachers after school to work on their portfolios and finish them on time. Some students with LD received a checklist that was shorter than that of their general education peers because of the challenges they faced with learning.

During the portfolio development process, individualization was used by teachers depending on the nature and amount of assistance the students with LD required to make adequate progress on their portfolio project. For instance, teacher #14 walked around

the classroom, monitoring the work of all students but spending more time with the students with LD who needed assistance. She also held one-on-one discussions with students to review the work they had completed and what was still pending.

At the end, many teachers prepared their students to present their portfolios by having them practice and rehearse in front of the teacher, other students, or other teachers or staff members in the building. That preparation was based on the students' ability to speak in front of an audience and the nature of the audience, such as an audience of peers as opposed to a panel of teachers. One teacher mentioned that she had some of her students with LD present their portfolios to the school's Parent Teacher Association (PTA) and that required a lot of individual preparation. By individualizing the portfolio process, teachers were able to establish expectations for their students with LD; they were also able to differentiate the process and tailor it to different learners from the beginning to the end. Individualization of portfolio assessment is also supported by Marx (2001) because it allows for student-centered evaluation and can be highly individualized.

This section discussed factors that influence the development of portfolios among students with learning disabilities. Data to uncover these factors were obtained from individual interviews with high school general and special education teachers who require their students with LD to develop portfolios. Four main themes were identified as being key factors affecting the development of portfolios among students with LD. These factors were: the teacher's role, expectations, support, and individualization of learning. If these factors were present, students with LD were likely to succeed at their portfolio project. On the other hand, if these factors were lacking, the outcome of the

portfolio project might be undesirable. In the next section, the answer to the second research question is presented.

Research Question Two

The second research question was: What are the accommodations and modifications provided to students with LD while creating portfolios? Data to answer this second research question was obtained from the individual interviews with the general education and special education teachers as well as from the analysis of the students' IEPs. Fourteen teachers were interviewed; five were special education teachers and the other nine were general education teachers. The interviews were tape recorded and transcribed for analysis, and document analysis techniques were conducted on the IEPs of students with LD to identify the occurrence of certain features.

Accommodations and Modifications Provided to Students with LD

In this section, specific types of differentiation that students with LD received and assistance that teachers reported giving to their students with LD are summarized. When asked about the source of assistance for students with LD involved in portfolio development, all the teachers identified themselves as the primary source of assistance for these students. The words "me," "myself," or "the teacher" were used in each of the teachers' answers to this question. The teachers stated that the accommodations and modifications started from the beginning and continued throughout the portfolio process. All the teachers mentioned using the accommodations and modifications listed in the students' IEPs as well as other types of assistance that were not listed in the IEP. For instance, five teachers designed a modified rubric for their students with LD. Six others reported giving students extra time to work on their portfolios although that extra time

did not mean that the deadline was extended, but students were provided the opportunity to work one-on-one with their teachers during their lunch period or after school. Five teachers also provided weekly reminders and checked the progress of students with LD on their portfolios. Teacher #2 also mentioned that if the students with LD were at risk for falling behind or not completing their portfolios on time, they were given a schedule to meet one-on-one with the teacher after school. All 14 teachers reported using the accommodations and modifications listed in students' IEPs. Table 2 is a summary of the accommodations and modifications provided. It shows that the most used accommodation was working one-on-one with the teacher, followed by providing extra time, modified rubric, and weekly reminders, respectively.

Table 2

Accommodations and Modifications Provided to Students with LD

Accommodations / Modifications	Number of Teachers Using
Work one-on-one with teacher	7
Extra time	6
Modified rubric	5
Weekly reminders	5
Schedule to meet with teacher if at risk of falling behind	1
Read instructions to student	1
Ask students to repeat instructions to determine understanding	1

In addition to using the accommodations and modifications listed in the students' IEPs, teachers had additional practices they used to monitor the work and progress of students with LD to ensure that they were on track, focused, well-organized, and not falling behind schedule. Teacher #2 stated that she monitored students' progress "to avoid unwanted surprises." Teachers #4 and #14 mentioned walking around the room and periodically checking on the work of students with LD. Teacher #6 had designed a

calendar with specific check points at which she was to meet with the students with LD to determine if they had reached milestones they had agreed upon or if some modifications or assistance were necessary. Teacher #10 also allowed the students with LD to work on smaller sections of the portfolio and check with her before starting the next section. Students could also work on the portfolio in a different order from the general education students.

Another example of an accommodation that was afforded to students with LD related to seating. For example, teacher #3 assigned her students seats close to her desk, so she could easily monitor their learning activities and also to discourage off-task behaviors. Teacher #10 assigned them seats to which she had easy access when she was walking around the classroom monitoring all students' work, and teacher #7 assigned students with LD work stations with the least number of distractions.

Asked if there were any other times during the day when the teachers assisted their students with LD outside of class period, seven of the teachers mentioned that the students could come during their lunch period if it coincided with the teachers' preparation period. Another time mentioned several times was after school. The Spanish teacher's statement sums up the teachers' beliefs regarding their work with students with LD. She stated, "You know that you are their biggest resource, so you have to let them know that you are always available to help them."

Teachers also spent some time with their students with LD preparing them for the portfolio presentations. These students rehearsed their presentations in front of the teacher. Some teachers modeled the presentations. Others, such as teacher #13, prepared the whole class by teaching them how to behave during presentations and what

it means to be a good audience member and listener, thus creating a safe zone for the students with LD to present their portfolios to the class. She also had every student create at least one question during the presentations, so everyone was actively involved.

Other ways of accommodating students with LD during their presentations were to allow them to read from a script or to present to a staff member, such as a former teacher, with whom he or she felt very comfortable. Students with LD who were brave enough to present in front of the PTA or a panel of teachers and administrators were also given time to rehearse in front of the teacher and given feedback. Table 3 displays additional strategies teachers reported using to assist students with LD meet the teachers' expectations and to create successful portfolios.

Table 3

Additional Teaching Strategies Used to Support Students with LD

Strategy	Number of Teachers Using It
Meet after school	8
Meet during lunch period	7
Check periodically on their work	4
Use of calendar to meet with individual students	3
Seat away from distractions	3
Read from a script during presentations	3
Rehearse presentations	3
Prepare whole class to be good audience	2
Model presentations by teachers	2
Walk around the room (teacher)	2
Present to another staff member (students)	1
Seat close to the teacher	1

Peer Assistance

The second source of assistance for students with LD identified by many teachers was peers. The words "other students," "peers," "fellow students," "classmates," and "peer tutoring" were used by the participants nine times in their responses. Teacher #14 explained that she had academically strong students she trusted to work in proximity with

students with LD to assist them or to answer their questions. Another teacher arranged the classroom desks in clusters, thus creating family-like small groups where students cooperated and supported each other regardless of ability level. She changed the groups periodically. She stated that this type of arrangement was beneficial for the students with LD because in a group of their peers, they felt comfortable and asked questions without being nervous or without being afraid of asking the wrong question in front of everyone. She added that this type of peer assistance allowed her time to attend to more duties or student needs during class. For some teachers, other students became an audience for the students with LD to try out their presentations and receive feedback. This allowed them to improve their presentations before the final presentation where they would be assessed.

Assistance by School Professionals

The next group mentioned as providing help to students with LD engaged in portfolio development was that of other professionals in the school building. Three of the teachers had teacher aides in their classrooms and the latter assisted students with LD one-on-one, answered their questions, helped keep them focused and on-task, and prevented distractions. Other teachers and staff in the building, including administrators, assisted students not in a support or instructional capacity, but they provided students with the information needed depending on the nature of the portfolio project. For example, teacher #2 was very specific in how she harnessed the cooperation of other teachers and professionals in the building. She stated that she often asked the school librarian to pull some books for a student who was working on a certain topic; she also asked the librarian to create a classroom library for her on a number of topics. Additionally, she had sent her students to the gym teacher because they needed some

information on sports. She added that it did not matter what a person's job was in the school, she believed that everyone could have something to contribute to the learning of her students, especially those who required extra assistance.

IEP Accommodations and Modifications

The IEPs of students with learning disabilities involved in portfolio development were examined in order to understand the accommodations and modifications the IEP teams had designed for these students. The teacher participants removed the students' names and any identifying information from the IEP documents and brought them to the interviews. A total of 10 IEPs were examined, and document analysis techniques were applied to their contents.

The following accommodations and modifications were listed in the students' IEPs and can be applied while students are developing portfolios. The summary provided may not be representative of all the accommodations and modifications that were provided to students with LD when they were interacting with teachers and classmates during the portfolio process:

- Give verbal directions in clearly stated steps.
- Ask student to summarize information to check for understanding.
- Provide extra examples when teaching new vocabulary.
- Extend time on tasks for completion of class assignments by 25%.
- Reinforce assignments with verbal instructions.
- Explain directions and give concrete examples.
- Maintain frequent eye contact.
- Test one concept at a time.

- Provide visual cues and guides.
- Provide preferential seating near teacher away from distracting peers.

Although the teachers did not use the same terminology in their interviews as that used in the IEP accommodations and modifications, they reported using similar techniques to support their students with LD during the portfolio process. Teachers also used some support strategies, such as using the assistance of paraprofessionals, peer tutoring, one-on-one assistance after school or during the students' lunch periods, and rehearsals. These were not listed in the IEPs. Although required in the IEPs, extending time on task for completion of class assignments by 25% might not have been doable for these teachers and their students with LD. Twelve of the 14 teachers reported that completion of the portfolios had to coincide with the grading period, which implied that the students had to abide by the due dates, so they would obtain a grade every five weeks. Teachers stated that thanks to the additional ways they supported their students with LD, all of them were able to meet the deadlines.

The listed accommodations and modifications could be given by teachers during their interactions with students in class or when they met with them individually during the students' lunch periods, teachers' preparation periods, or after school: giving verbal directions in clearly stated steps; asking students to summarize information to check for understanding; providing extra examples when teaching new vocabulary; reinforcing assignments with verbal instructions; explaining directions and giving complete examples; and maintaining eye contact. Providing visual cues and guides was also done at the beginning when the portfolio assignment was introduced to students, and they received a rubric (modified or not) with the expectations of the assignment. Providing

motivation and verbal rewards on a daily basis was also implemented by teachers as they worked with their students with LD. During the individual interviews, several teachers said that they encouraged their students, kept high expectations and a positive attitude, and let the students know that the teachers were available to help them. In addition to these accommodations and modifications, the IEPs also showed modified grading criteria for students with LD.

Accommodations are changes in instruction or changes in the way the test is administered (Elliot & McKevitt, 2000). These changes do not significantly change the content or difficulty level of the concept being taught. Accommodations are designed to provide support and ensure equitable access to learning and assessment for students with disabilities (Hallahan et al., 2012). On the other hand, modifications are changes made to the content of the learning material, the content of the test, or the performance level expected from the special needs students (Elliot & McKevitt, 2000). They differ from changes in instructional strategies (Hallahan et al., 2012). The most typical modifications involve quantity (such as reducing the number of test items a student is required to complete), output (how a student demonstrates what he knows, such as giving a student a forced choice test rather than asking him to write an essay), and alternate learning goals [such as when a student is only required to complete work on part of a learning standard] (Gervais, 2007). Table 4 shows the accommodations and modifications noted in the 10 IEPs. It shows that in the students' IEPs, more accommodations than modifications were designed by IEP teams. In follow up phone calls, the teachers said that, depending on the students' needs and abilities, the IEP teams try as much as possible to maintain the same standards and expectations for students with LD as those of general education students,

and the teachers use many accommodations to help the students with LD meet those expectations.

Table 4

Accommodations and Modifications Noted in the IEPs

Accommodations
Give verbal directions in clearly stated steps
Provide extra examples when teaching new vocabulary
Ask student to summarize information to check for understanding
Extend time on tasks for completion of class assignments by 25 %.
Reinforce assignments with verbal instruction
Provide visual cues and guides
Maintain frequent eye contact
Provide preferential seating near teacher away from distracting peers
Test one concept at a time
Modifications
Fewer items in assignments, fewer documents in portfolios, word bank, forced choice test items
Modified grading criteria

Table 5 displays the modified grading criteria as they appeared in the IEPs, with letter grades and corresponding percentage ranges. For comparison purposes, non-modified grading criteria and corresponding letter grades for general education students for the district of the participants are also listed. These two sets of grading criteria show that students with LD are afforded flexibility. As a matter of fact, a student with LD being graded according to the modified grading criteria could pass a course with a percentage in the range of 65% to 67%, which corresponds to a low C grade or C-, whereas a general education student with the same percentage would obtain a failing grade or F. No grade of D was noted in the modified grading criteria for students with LD. Following the non-restrictive environment concept, students with LD would be able

to be graded according the modified grading criteria only if they need it; otherwise, they would use the non-modified ones similarly to their general education peers.

Table 5

Non-modified and Modified Grading Criteria

Non-Modified Grading Criteria for General Education Students		Modified Grading Criteria for Students with LD	
Letter Grade	Percentage Range	Letter Grade	Percentage Range
A	93 – 100%	A	89 –100%
		A-	85 – 88%
B	88 – 92%	B+	82 – 84%
		B	78 – 81%
C	78 – 87%	B-	75 – 77%
		C+	72 – 74%
D	70 – 77%	C	68 – 71%
		C-	65 – 67%
F	0 – 69%	F	0 – 64%

Research Question Three

Research question three asks: What are the characteristics of portfolios developed by students with learning disabilities? Data to answer this question were obtained from graded portfolios produced by students with LD. Teachers removed names and other identifying information from the portfolios of students with LD and brought them to the individual interviews. Twenty-one portfolios were shared by the teachers with the researcher and analyzed for content. The characteristics of portfolios created by students with LD are discussed.

The majority of the students (17) used loose leaf paper held together by staples or paper clips to hold the contents of their portfolios. In fact, only three portfolios were in binders, and one teacher required students to have their portfolios spiral bound. Another teacher specifically required her students not to use a binder. There were no decorations or any markings on the three binders. The first page of the portfolio was a cover page for

all the portfolios. The second page was either a checklist or rubric with corresponding grades for each item on the checklist. For 10 of the 21 rubrics or checklists, the teachers had also indicated the due dates of the portfolios (sometimes in large and bold print) as well as the penalty for submitting their portfolios late (not accepted or loss of points for each day the portfolio was late). One of the English teachers required a table of contents. The business and career teacher also required the parents' signature on the checklist. Teachers who required students to present their portfolios also indicated on the checklist either the date of the presentations or when students would be assigned a presentation date (such as three days before the presentation, teacher #14).

Analysis of the rest the documents and artifacts contained in the portfolios showed that the majority of students followed the checklists or rubrics to organize their portfolios, and those who assembled their artifacts in a binder also used dividers to organize and separate sections according to what was indicated on the checklist. None of the checklists indicated a reflection.

Looking at the contents of the portfolios, the researcher noticed that 19 of the 21 portfolios submitted by students with LD had all the contents required. Only one student had organizational problems that the teacher mentioned in the feedback. All but one portfolio had been submitted on time, and that author had lost six points because of the three-day delay in submission. The contents of the portfolios were printed on white paper and typed in black ink, and no other color was used.

Regarding the quality of the contents, there was little variety except for the business/career teacher and the English teachers. Portfolios produced by business/career students were highly individualized as they reflected job searches, job applications, and

résumés which were updated every time the students found a new job or learned a new skill. One of the English teachers also had portfolios that were varied because they were a collection of different types of poems, and some of the texts had interesting shapes that matched the title or theme of the poem. For example, one female student wrote a poem entitled "Shoes," and the text of her poem had the shape of a high-heel shoe. Another student wrote a poem about love (without a title), and the text of the poem was in the shape of a heart instead of the usual rectangular shape. The rest of the portfolios showed little creativity on the part of the students, and they just created and inserted documents according to the checklists or rubrics. The business/career education students had been given a template to write their resumes, and they were not allowed to use any other templates.

For the most part, the students with LD followed their teachers' directives and included most of the required artifacts, although they did so at different degrees of completion or complexity. The researcher sensed that some of the projects were rushed. For example, some book summaries seemed to be too short and did not convey the main idea or plot of the book, as did some character analyses. A few language mistakes such as fragments, run-on sentences, spelling, and punctuation mistakes were also noticed. Some of these language mistakes had been highlighted and corrected by teachers; others had not been changed.

Some teachers had written feedback next to the grades assigned to the portfolios. The feedback was written to congratulate or praise the students for a good portfolio or to bring attention to what should be done to improve it. Examples of feedback that teachers wrote while grading the portfolios were:

- OK
- 3 days late
- Great job
- You forgot table of contents
- You must work on organizing your portfolio. Many items are missing.
- I think you rushed through this, could have been better.
- Great!

The English teachers who required presentations of the portfolios had written the following comments on the rubric used to score the presentations:

- Soft speaking.
- Legs crossed, no gestures.
- You made me feel that piece.
- Looking on paper too much.
- A bit of fidgeting.
- Eye contact could be improved.
- A bit too fast, but pretty good overall.

Table 6

Grade Distribution for the 21 Portfolios Based on Modified Grading Criteria

Letter Grade	Number of Students
A	3
A-	4
B+	2
B	4
B-	3
C+	2
C	2
C-	1
Total	21

The grades noted in Table 6 indicate that all the students with LD developed their portfolios according to their teachers' requirements (at different levels) and obtained a passing grade or better using the modified grading system.

None of the portfolios analyzed had a reflection as it was not required on the checklists or rubrics. This absence of a reflection in the students' finished portfolios is

contrary to the recommendations of Stevenson (2006) who noted that an effective reflection promotes the author's ownership of the portfolio; it also strengthens the learning process involved in its creation and development. Maruszczak (2008) added that without the reflection, the portfolio is merely a collection of artifacts. Furthermore, Chitpin and Simon (2009) found that although the reflection was an overwhelming process, it allows students to focus and think deeply about processes they usually took for granted. They also acknowledged that the portfolio process had trained them to reflect more critically and to view reflection not as one-shot activity but as an on-going process.

Teachers involved in this research seem to have positive thoughts regarding the involvement of their students with LD with portfolio assessment. This feeling is contrary to the findings of Kim et al. (2006) where the special education teachers who participated in the study had a negative perception of the Illinois Alternative Assessment, specifically the portfolios required to assess the learning of students with significant and multiple learning disabilities according to the state standards. This difference between the findings of Kim et al. (2006) could be the result of differences in students as well as participants.

Limitations

A few limitations became apparent to the researcher during the research. First, what the participants revealed in the data might not be the whole truth; they might have shared mostly their positive experiences using portfolios with students with LD and downplayed negative ones. Second, there is also a concern regarding participant mortality or attrition. The concern was minimized through the process of triangulation (Gay et al., 2009). The researcher collected data from interviews and document analysis,

which allowed her to triangulate the data and confirm or disconfirm information gathered from the various sources.

Second, teacher #12 had been using portfolios for six months only, and she might not have had enough experience using portfolios with LD students to share with the researcher as much as the other participants. The researcher attempted to minimize this limitation by asking her probing and clarifying questions.

Third, asking teachers to bring the IEPs and portfolios to the interview location in the public library became problematic for the teachers. Some of them thought that these documents would be a heavy load to carry. Others were uncomfortable sharing their students' documents, especially IEPs, because these are confidential and sensitive documents. The researcher attempted to minimize the problem by reiterating that the teachers would remove names and any identifying information from these documents before bringing them to her. She also reminded the participants of the total confidentiality with which the documents would be handled by the researcher. Despite this reassurance, only 10 IEPs and 21 portfolios were shared with the researcher. One wonders whether the teachers brought only well done portfolios and those with failing grades or negative comments were left behind.

The purpose of this research was to investigate the use of portfolios as a form of assessment by general education and special education teachers with students with learning disabilities in high school. Specifically, the researcher sought to uncover the key factors that influenced the development of portfolios among high school students with learning disabilities, the accommodations and modifications afforded to them, and the characteristics of the portfolios created by these high school students.

Analysis of the qualitative data obtained from individual interviews with high school general education and special education teachers, and the analysis of the students' IEPs and portfolios showed four key factors that emerged to influence the development of portfolios among students with LD: the teachers' role, expectations, support, and individualization of learning. The accommodations and modifications afforded students with LD were discussed by the teachers and were also summarized through analysis of the students' portfolios. It was found that teachers used accommodations and modifications listed in the students' IEPs such as providing extended time, using modified assignments and rubrics, monitoring students' progress, using preferential seating, and others. In addition, teachers used other teaching practices that, although not written in the IEPs, were believed by the teachers to support the students' progress on their portfolio assignments. Teachers provided that support or arranged for the students with LD to obtain it from peers and other professionals in the school. Analysis of the 21 portfolios showed that students with LD had produced portfolios that met their teachers' expectations according to the modified grading system written in the students' IEPs, and all of them had received a passing score. Finally, the researcher described the characteristics of portfolios developed by high school students with learning disabilities. They were also found to have been developed according to the teachers' expectations.

CHAPTER FIVE: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This study was designed to investigate the use of portfolios by general education and special education teachers as a form of assessment for students with learning disabilities (LD) in high school settings. In this chapter, the researcher summarizes the research study, presents conclusions, discusses implications for practice and research, and offers recommendations.

Discussion

The purpose of this study was to investigate the use of portfolios by general education and special education teachers as a form of assessment for students identified with LD in high school settings. The researcher sought to answer three research questions:

1. What factors influence the development of portfolios among students with LD?
2. What are the accommodations and modifications provided to students with LD while creating portfolios?
3. What are the characteristics of portfolios developed by students with learning disabilities?

The participants of this study were 14 high school teachers, of whom five were special education teachers and nine were general education teachers.

To answer the first research question, on what factors influence the development of portfolios among students with LD, the researcher collected data through individual interviews with 14 general education and special education teachers. These structured individual interviews were recorded and later transcribed for analysis. These teachers required their students with LD to develop portfolios as a form of assessment of their

learning. Analysis of this qualitative data reveals four major factors that influence the development of portfolios among high school students with LD. These factors are: the teachers' role, expectations, support, and individualization of learning. The presence of these factors is likely to lead to success for students with LD when developing portfolios, and their absence may result in lack of success or the production of portfolios that do not meet the teachers' requirements.

Data to answer the second research question regarding the accommodations and modifications provided to students with LD while creating portfolios were collected through the individual interviews with the teachers as well as analysis of the students' IEPs. A total of 10 IEPs were collected and analyzed. Analysis of the data showed that teachers provided the accommodations and modifications listed in the students' IEPs, but they also added their own, even using additional teaching strategies and techniques to provide the extra support the students with LD needed to be successful while developing their portfolios.

The most commonly used modifications and accommodations are the use of modified rubrics for students with LD, extra time (teachers met with their LD students during their preparation period or after school), frequent reminders, and reading instructions to students with LD and asking them to repeat the instructions to make sure they understood the tasks. Some additional practices to provide support to the students with LD consisted of teachers walking around the room and periodically checking students' work, providing them with special seating away from distractions, seating the students close to the teacher or by a peer who could assist them, allowing students time to rehearse presentations or to read from a script, or presenting to another staff member with

whom the student with LD feels comfortable. Analysis of the 10 IEPs revealed similar accommodations and modifications such as giving verbal directions in clearly stated steps, providing extra examples, extending time to complete assignments by 25%, maintaining frequent eye contact, testing one concept at a time, providing visual cues, providing preferential seating, and using modified grading criteria. In addition to accommodations and modifications, it was found that teachers also use other practices such as peer assistance or the support from another school professional in order to foster progress and success among students with LD who develop portfolios.

To answer the third research question regarding the characteristics of portfolios developed by students with learning disabilities, the researcher collected data from portfolios developed by students with LD after their teachers had graded them and provided feedback. The grades obtained by the students with LD on their portfolio projects were also collected. A total of 21 portfolios were shared by the teachers with the researcher. It is important to note that teachers had removed the names and any other identifying information from the IEPs and portfolios before submitting them to the researcher. This practice was requested by the researcher in order to protect the students' privacy.

Analysis of the portfolios revealed that the majority of students used loose leaf paper to hold the contents of their portfolios. All the portfolios had a cover page followed by either a rubric or a checklist. The portfolio contents were word-processed with black ink on white paper, and there were no decorations on the portfolios. The majority of the students with LD followed the rubric or checklist to organize artifacts in their portfolios; in addition, 90.5% of the students with LD (19 out of 21) had all the

items required by the teachers. A few words or phrases had also been written by the teachers as feedback to congratulate the students with LD for compiling a good portfolio or to bring their attention to ways they could improve. Regarding the grades obtained by students with LD on their portfolio projects, 16 students out of 21 received a grade of B- or higher, while the remaining five obtained a ranging from C- to C+. These portfolios were graded according to modified grading criteria. These grades showed that all the students with LD received a passing grade on their portfolio projects.

Conclusions

In this section, the researcher discusses the conclusions as they pertain to each research question.

Research Question One

The first research question asks: What factors influence the development of portfolios among students with LD? From data collected in this research, the most important factor that influences the development of portfolios among students with LD is the teacher. As Darling-Hammond (2000a) revealed in her nationwide study of teacher quality and student achievement, the quality of teachers is related to the academic performance of their students. As the participants of this study showed in their responses, students with LD are not very different from general education students in their need for a teacher who is qualified and effective in delivering instruction and in managing the learning environment in such a way that all students can learn and grow despite their differences.

Qualified and effective teachers are professional educators who know the different types of accommodations and modifications, but most importantly, they can

apply them in the classroom when serving students with LD. Developing a portfolio is a time consuming project that requires much effort, organization, and self-management. It takes a teacher who is available to provide the extra assistance needed for these students to succeed at their portfolio project. Teachers need to take advantage of every opportunity they have to interact with their students with LD to check and monitor their progress, whether it is during class as students work on the portfolio projects, during the students' lunch period and teachers' preparation period, or after school.

Teachers need to let their students with LD know that they are always available to help, especially for high school students who sometimes would sometimes prefer to save face than ask for help in front of their peers. Teachers should present themselves as approachable to their students with LD and be prepared from the first day to introduce the portfolio assignment in ways that the students with LD can understand, have the modified rubrics or checklists ready, communicate their expectations clearly, check that the students with LD understand these expectations, and determine how the students will know that they are progressing towards the expectations.

It is equally important to motivate students with LD by helping them understand how they will benefit from producing a portfolio. The investment of time and energy required for portfolio development may be discouraging for students with LD; therefore, teachers can periodically motivate and encourage students to work diligently, maintain a positive attitude, and seek assistance when feeling overwhelmed, frustrated, or just needing to check if they are on the right track. Teachers also ought to remind their students with LD that they can take the first step or initiative to come to the teacher with questions or requests for assistance.

Teachers can motivate students with LD through several motivational strategies, but they can also primarily motivate them through intangible rewards, such as praise and expressions of appreciation of a job well done. The intangible rewards are more likely to strengthen their intrinsic motivation. This conclusion is consistent with that of Poonan (1996) who found that among students with LD, intrinsic motivation is associated with academic achievement. When these students are intrinsically motivated, they display a higher sense of locus of control and self-esteem, thus attributing their academic performance to their own efforts instead of other external factors such as luck (Poonan, 1996).

To maximize the assistance from classmates in the schools, teachers can create a noncompetitive community of learners in the classroom where students collaborate, support, and cooperate with each other and the teacher to achieve learning goals. In such a classroom, students trust one another, and students with LD are able to learn from others in a family-like, nonthreatening environment. For portfolio projects, one way in which teachers can create an environment of cooperation is to arrange students' desks in clusters of peers who are able to support each other. Teachers can also emphasize to all students the importance of collaboration, learning from each other, and assisting classmates.

Students with LD are more likely to develop portfolios that meet their teachers' requirements if they know what they are expected to do. All students must be constantly aware of teachers' expectations in terms of learning and behavior. Similar to general education students, students with LD must be challenged, although sometimes differently. Their expectations for portfolio tasks should be communicated to them from

the beginning. These expectations should also be writing such as rubrics, checklists, and a schedule with checkpoints at which the students with LD should reach certain milestones in their portfolio projects. Their learning tasks ought to be within their zone of proximal development, not below or above. The notion of zone of proximal development was created by Vygotsky (1978). He defined it as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p.86). In their experimental research, Rutland and Campbell (1996) also concluded that the zone of proximal development is very relevant in the instruction and assessment of students with intellectual disabilities, and that teachers should teach within that zone for the purpose of carrying their students, through scaffolding, to independence. The goal of scaffolding, according to Benko (2012), is to support students in completing a challenging task while considering the intellectual work required for successful completion of the task.

Teachers of students with LD should believe that these students are capable of learning, set high but achievable expectations, and provide the necessary support for the students to reach those expectations. Without adequate support, chances of reaching the expectations can be slim for students with LD. This support can be obtained from the teacher, other students, or other professionals in the school building. If portfolios are kept at school, it will not be easy for parents to be involved and support their children with LD with their portfolio project, although they may be able to discuss it with their children or provide them with needed supplies. Therefore, it is necessary for teachers to decide whether to allow students with LD to take their portfolios at home to work and

thus benefit from parental support in families where it is available. The decision to keep the portfolios at school or to allow students to take them home should be based on the benefits of possible parental involvement balanced against the possibility that portfolios may be lost or forgotten at home on a day when students were expected to be working on them (Kellough, 2007). Another concern raised by Herman and Winters (1994) is the authenticity of the work submitted. When students receive assistance from outside the classroom, it is not always possible to ascertain whose work it is and to determine what the student can do individually.

Students with LD are likely to succeed at their portfolio project if it is individualized according to their learning needs, skill levels, and interests. The type of modifications and accommodations that these students need are spelled out in their IEPs; however, by using knowledge of the students and the nature of the task at hand, teachers can add other modifications, accommodations, practices, and teaching strategies they believe benefit the students with LD. One such practice is using the school community as a resource and support for the student with LD in the form of peer assistance with portfolio projects during class, a teacher aide keeping students more focused or explaining concepts, another school employee providing materials or information for the student, or someone who is willing to listen to the student's presentation.

With the teacher's guidance, these students can choose a topic to research, decide how they will research it, and determine how they will present their findings to an audience. Thus, individualizing the portfolio assignment may mean that students produce somewhat different portfolios. By being involved in the project from planning to completion and having choices or options for topics, materials, color, design, or

presentation options, the students with LD feel ownership of the project, work hard on it, seek assistance or feedback, and complete the portfolio project by the teacher's deadline.

Research Question Two

The second research question asks: What are the accommodations and modifications provided to students with LD while creating portfolios? From the data obtained for this research, it is concluded that several accommodations and modifications are necessary to make the portfolio project a successful undertaking for students with LD. Even when these students are included with the general education students, the complexity or nature of their work can be different.

The modifications can start at the beginning with a modified rubric or checklist. A teacher can change, if necessary, the rubric used for general education students and adapt it to the needs and skill levels of students with LD. The number of objectives in the rubric can be different as well as the performance indicators. A modified rubric or checklist implies that students with LD are not expected to master the same content or demonstrate the same knowledge as their general education peers. These changes to instruction or assessment should not be permanent; instead, they should be revisited regularly to determine their appropriateness or if the student with LD really needs them (Great Schools, 2014).

While the project is being explained to the students with LD, teachers need to make sure students understand the assignment by reading the instructions to them, giving verbal instructions in clearly stated steps, and/or asking them to repeat the instructions so the teacher knows whether or not they understood. Asking students with LD to summarize information is an effective strategy to check for understanding, and if they do

not understand, the use of concrete examples can be helpful. A more effective strategy to check if students understand verbal instructions given to them would be to ask them open-ended questions about the same instructions (National Joint Committee on Learning Disabilities, 2006).

During the time the students with LD are developing their portfolios, it is very helpful that teachers monitor their work, note potential signs of distraction, assign easily distracted students preferential seating away from distractions and close to the teacher. In this way, the students are not often distracted and lose focus, and they are in a good location for the teacher to maintain frequent eye contact. According to the U.S. Department of Education (2008), preferential seating is one of the changes made to the physical environment in the classroom to determine where a student with LD will seat. Three seating arrangements are recommended for students with LD, especially those who are easily distracted or lose focus. The first seating arrangement is to seat the student with LD near the teacher. Proximity to the teacher allows the latter to easily monitor the student's work and reinforce his/her on-task behavior. The second type of seat assignment for students with LD is to assign them a seat close to a peer role model. This way, students can cooperate and learn together or from each other. The third type of preferential seating is to provide work areas with few distractions if the classroom space allows it. This space can be used by students with LD to work quietly or for test taking (U.S. Department of Education, 2008).

While monitoring student work and progress, teachers ought to provide as many visual cues, guides, and extra examples as possible and allow the students with LD to work on one section of the project at a time to avoid confusion and frustration on the

students' part. The U.S. Department of Education (2008) recommends using a variety of audiovisual materials to support students with LD while they are learning content. Furthermore, the Learning Disabilities Association of America (2014) lists a number of intervention strategies among such as the use of graphics, diagrams, and pictures to emphasize what students see in words. Some other strategies listed are breaking learning and testing into small units and modeling the steps or practices the teacher wants students to follow.

School administrators should support their general education and special education teachers by hiring teacher aides, if needed. These paraprofessionals support the teachers' work so the latter have time to provide individual attention to students who may need it such as some students with LD. Communication and collaboration of teachers and paraprofessionals are essential for the success of students with LD. With the help of paraprofessionals in the classroom, teachers have time to monitor the students' progress and see if the students are on track or in danger of falling behind and not completing their portfolios on time. To avoid the latter case, teachers can create a calendar with specific dates or deadlines for each student with LD to reach certain milestones. That calendar must be shared and explained to the students. Teachers should also issue frequent reminders of deadlines or upcoming dates.

If students with LD are behind schedule, teachers need to find ways to help them catch up by first meeting with them to develop a new plan. With teachers' busy schedules, it may not be easy to find a time that is convenient, but the participants of this study mentioned that they met with their students with LD during their preparation period if it coincided with the student's lunch period; others met with the students after school.

These meetings can also serve to provide extra time to the students to work on their portfolio project, a common strategy to accommodate the learning needs of students with LD. Teachers in this study were not able to extend the portfolio project past the due date for the general education students; this is why they used their preparation period and after school as extra time for the students with LD. The portfolios had to be ready and graded before the end of the marking period.

As seen from this current research, the IEP is not the only source of accommodations and modifications for students with LD in the process of developing portfolios. Teachers should also use their professional knowledge, knowledge of the student, and the nature of the assignment to determine which additional accommodations, modifications, and teaching techniques will assist the students to meet their teachers' expectations.

Research Question Three

The third research question asks: What are the characteristics of portfolios developed by students with learning disabilities? The portfolios analyzed during this study were simple in appearance with the contents held together by a paper clip or a staple. They were written in black ink on white paper, and no other color was used. It is important to students with LD to have the option of personalizing their portfolios through colors and decorations as this could increase their motivation, engagement, and satisfaction with the process. This practice would also add creativity to the final products. When asked why they accepted or expected simple portfolios without color or decorations, many of the teachers replied that adding different colors and decorating the portfolios would take more time, equipment, resources, and supplies for their students,

which may not be available in the classroom or in the students' homes. Two of the teachers added that decorating portfolios might result in distractions for students, and some students would spend more time decorating than creating and organizing documents.

Teachers should require that their students with LD keep the contents or documents of their portfolios in a binder. That way, the risk of losing documents is minimized. Students would also have the ability to add dividers to separate different sections of the portfolio, thus either learning, practicing, or strengthening their organizational skills. Students can also use different color paper for different sections of the portfolio. The use of color ink, color paper, decorations, and dividers would result in more personalized and attractive portfolios as well as more self-pride for the students with LD.

Regarding the quality of the contents, there was little variety except for the business/career teacher and the English teachers. Some language mistakes were also noticed; some of which had been corrected by the teachers while others had not been corrected. Most of the portfolios showed little creativity and choice on the part of the students as they had to follow checklists or rubrics of an inflexible nature. Being creative and allowing students some choice in the portfolio design is an effective way to increase student motivation and engagement during the portfolio process (Dweck, 1985; Miller & Richarde, 1991, Paulson, Paulson, & Meyer, 1991). With the computer technology available today, students can be guided to personalize their portfolios in many ways, so these documents portray the whole spectrum of the students' skills and talents.

Teacher feedback is also important for students with LD who are required to develop portfolios. This feedback is provided at different periods during the process. When teachers monitor the progress of students with LD or meet with them periodically, it is a form of formative assessment, during which teachers give feedback to indicate to the students that they are either progressing well or need to improve their work. This gives them further instructions and support to improve their portfolio project. After portfolios are submitted, teachers ought to grade them according to the modified grading rubric only if the student meets the criteria, or according to the student's IEP, based on the least restrictive environment principle. Phrases or sentences should be written as a form of feedback to the students with LD, telling them what made their portfolio a good project or what they can do to improve future portfolios.

Implications for Practice

This study shows that students with LD are able to develop portfolios that meet their teachers' expectations, despite concerns that such learners experience challenges with self-directed, autonomous, or independent learning (Rutland & Campbell, 1996). Therefore, teachers should not shy away from assigning portfolio projects to these students **(**Flowers et al., 2005). Similar to the general education students, they should believe that their students with LD are capable of developing a collection of their best work, set challenging expectations for them and provide them with the appropriate accommodations, modifications, and other types of support to meet those expectations. When these conditions are fulfilled, students with LD will be successful. Their locus of control progressively shifts from an external to an internal orientation (Ezell & Klein, 2003). Locus of control is a person's perception of control over events in his/her life or

environment (Greer, 1991). Some individuals can have an internal locus of control, and such individuals credit their successes and failures to their own ability and work or effort. Other individuals have an external locus of control, and they attribute their successes and failures to external factors such as fate and luck (Greer, 1991). Ezell and Klein (2003) found that the use of portfolios increased the internal locus of control of students with disabilities.

This study also showed that for students with LD to be successful, teachers need to be committed, available, flexible, and willing to give of their time and energy for student learning. Such teachers communicate very well with their students with LD, so the latter not only are constantly aware of expectations for learning and behavior but also trust the teachers and come to them for questions or further assistance whenever necessary. That trust is earned by teachers who display genuine care and concern for the students' academic, social, and emotional growth.

The caring and concerned teachers also know their students and use their professional knowledge to create an environment conducive to learning for the benefits of students. That environment exists both inside and outside of their classrooms. Inside their classrooms, teachers organize learning and manage learning tasks to use all the time available productively. They also manage time and space in ways that allow students to support and learn from each other (Wong & Wong, 2009). Thus, students with LD can receive support from their peers. Effective teachers know to cooperate with teacher aides, so they can spend more time and attention where they are the most needed.

Outside of their classrooms, effective and committed teachers know to cooperate with other professionals in the school building for the benefit of student learning,

especially students with LD who may require extra help on long term projects such as compiling portfolios. These teachers use other professionals as resources for the students with LD to obtain needed information, feedback, or another trusted individual with whom to talk. These other professionals must also cooperate with the teacher and be receptive to requests made by the students with LD or the teachers on their behalf, despite other professional demands they have as educators.

Implications for Research

This research project investigated the use of portfolios by high school general education and special education teachers who require their students with LD to create portfolios to demonstrate learning. Data were collected from individual interviews with the teachers as well as analysis of students' IEPs and portfolios. All the participants, except one, taught in minority schools located in low-income neighborhoods in a large urban school district. Future research should seek to include teachers who work in diverse environments, such as middle and upper class neighborhoods, suburban and rural schools, as well as teachers of students from different racial backgrounds.

Future research should also seek to triangulate information received from teachers by observing students as they work on their portfolios in the classroom and during their presentations. With a pencil and pad in hand, the researcher would be a non-participant observer (Creswell, 2007) and take notes of the modifications, accommodations, and other assistance she or he observes students with LD receiving from their teachers. The researcher would also take note of the nature, quality, and quantity of interactions she or he observes between the teachers and their students with LD on one hand and between students with LD and their classmates on the other. It would be necessary for the

researcher to design a strategy that would help her or him to avoid passing judgment on those interactions. Such a project would require the researcher to obtain approval of the research by the school district and building principal as well as that of his or her institution.

Further research would also reveal useful information by including students with disabilities in the research by either interviewing them or administering a survey about their perceptions of portfolio assignments. Such a research project would also need to be approved by several stakeholders and would require consent from the parents of the students with LD, approval of the school district, the building principal, and the researcher's institution.

Recommendations

Portfolio assessment is not an easy task for students and teachers (Curran, 1997; Poel, 1998). To be able to implement portfolio assessment successfully, it is necessary for teachers to be trained in the planning, implementation, and assessment of portfolio projects. Therefore, teacher training institutions should make sure that prospective teachers graduate and start teaching students with LD equipped with these skills. In addition to knowledge about portfolio implementation, teacher training institutions should equip all of their future teachers with the knowledge to meet the needs of students with LD; this recommendation applies even to general education teachers.

Furthermore, professional development should be conducted regularly, not only to refresh teachers in their knowledge of implementation of portfolios with students with LD but also to provide them with new knowledge resulting from current research regarding portfolios and their successful implementation, especially for students with LD.

These professional development opportunities can be obtained by teachers through their own initiative and research, or they can be arranged by a supportive school administration that understands the educational benefits of portfolios (Poel, 1998) and how to implement them in an effective manner for students with LD.

One of the accommodations that the participants of this study used with their students with LD was extra time. This type of accommodation was also listed in the IEPs by requesting teachers to give their students with LD 25% extra time. This 25% additional time may be standard in the school district as it appeared in every IEP in which extra time was listed as one of the accommodations. However, because portfolio grading needed to coincide with the end of the grading quarter and this assignment was included in that quarter's grade, the teachers were not able to extend the project past the grading period. This is why the teachers met with their students with LD during their lunch period or after school. This strategy may not be practical for all students as they have to leave the cafeteria and travel to the classroom while their peers are in the lunchroom. Meeting after school can be problematic too because students may have to arrange for alternative transportation to go home after school. This problem may be solved by having the students with LD start on their projects early to give them a head start or by watching the due dates.

There were additional strategies that several teachers mentioned using to support their students with LD, although those strategies were not listed in any of the IEPs analyzed. For instance, meeting after school was mentioned and used by eight out of 14 teachers, meeting during the students' lunch period by seven (half of the participants), and checking periodically on students' work was mentioned and used by four students.

Therefore, the researcher recommends that IEP teams incorporate these strategies among the accommodations they design for their students with LD who have portfolio assignments.

Finally, none of the portfolios analyzed included a reflection. Therefore, this researcher strongly recommends that teachers teach and require all their students with LD to add a reflection as part of their portfolios. Student reflection is highly suggested because of the rationale or purpose of the documents or displays included in the portfolio. Students need to analyze their work and what it demonstrates (Arter & Spandel, 1992). In addition, as noted in the literature (Chitpin & Simon, 2009; Fernsten, 2009; Grusko, 1998; Maruszczak, 2008; Schon, 1987; Stevenson, 2006), the reflection is an important component of the portfolio in which students think about the work accomplished, how they accomplished it, the difficulties encountered, and how they solved them as well as what they learned and gained from the project. Through the reflection, students become aware of their metacognition and ways to improve their portfolios should they have a similar project in the future. In case students do not know how to reflect on their portfolios as this process does not come easily to everyone, then teachers should guide them and train them on the reflection process. In Hassaskhah and Sharifi (2011), participants reported that portfolios had enhanced their reflective skills and their sense of responsibility for their own academic growth. These authors explain these students' responses as the result of the guidance, support, and feedback they had received from their teachers during the portfolio process. Without that support and guidance on the use of portfolios and reflection, student reflection is likely to remain shallow, and critical thinking skills will not develop significantly (Hassaskhah & Sharifi, 2011)

This qualitative study was designed to investigate the use of portfolios as a form of assessment by general education and special education teachers in high school who teach students with LD. With this study, the researcher attempted to answer three research questions:

1. What factors influence the development of portfolios among students with LD?
2. What are the accommodations and modifications provided to students with LD while creating portfolios?
3. What are the characteristics of portfolios developed by students with LD?

Literature related to the topic of portfolios and students with LD was reviewed. The research methodology was also discussed. To answer the research questions, data were gathered through individual interviews with the teachers and analysis of IEPs and graded portfolios. Data thus obtained were analyzed by identifying recurring themes in interviews, conducting content analysis on the IEPs and portfolios as well as tallying the letter grades obtained by the students with LD who had compiled the analyzed portfolios.

The results showed that in order to meet the learning needs of the students with LD who are involved in portfolio development, teachers use accommodations and modifications listed in the IEPs but also add others as well as more techniques found to be beneficial for their students with LD, so the students can develop portfolios that meet their teachers' expectations and finish them by the established deadlines. Chapter Five provided the conclusions, implications for practice and research, recommendations, as well as a summary of the research.

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APPENDICES

APPENDIX A

Consent Form for Teachers

APPENDIX A

CONSENT FORM FOR TEACHERS

I have been asked to participate in a dissertation research being conducted by Marcella H. Winters. The study is in partial fulfillment of a doctoral degree in Educational Administration. I have been asked to be a possible participant because I teach students with learning disabilities who are required to develop portfolios as a form of assessment of their learning. The purpose of this research is to understand the curriculum, instruction, support, modifications and accommodations provided to students with learning disabilities in high school who are involved in the development of portfolios. Using individual interviews and document analysis, the researcher will collect the necessary information for the purpose stated above. The benefits of this study are that the researcher will provide valuable information to teachers, parents, and school administrators regarding how students with learning disabilities should be supported while being assessed through portfolios.

If I agree to participate in this study, I will be asked to participate in an individual interview, which will also be replicated with other high school teachers of students with learning disabilities. During the interviews, participants will be asked questions that are pertinent to the research problem. This interview will take about 40 minutes to an hour to complete. The risks associated with this study may include the fact that a participant may experience anxiety during the course of their participation. A participant may also experience mental stress that might hinder his or her participation. However, the benefits of participation are that it will provide additional knowledge about the issues surrounding portfolio assessment among students with learning disabilities in high school.

If I experience any anxiety or mental stress at any stage, I can choose to discontinue my participation and all records and personal information pertaining to my participation will be removed. All personal information associated with this study will be kept private and confidential. After three years, this information will be discarded by the researcher. There is no monetary compensation for participation in this study. No words linking me to the study will be included in any sort of report that might be published. Research records will be stored securely and only the researcher (Marcella H. Winters) and her dissertation committee members will have access to the records. I have the right to get a summary of the results of this research if I would like to have them. The information will be made available to me in composite totals only, and I can request a copy by emailing Marcella H. Winters at marcella.winters@att.net. If during this research study, I become aware of any illegal activities such as child abuse, etc., I will need to report this to the proper legal authorities and to the IRB committee of Argosy University at Chicago.

I understand that my participation is strictly voluntary. My decision regarding my participation will not affect my current or future relations with Argosy University or SCA High School. If I decide to participate, I am free to refuse to answer any questions that may make me uncomfortable. I can withdraw at any time without my relations with the university and high school, job, benefits, etc., being affected. I can contact the researcher, Marcella H. Winters, at 3562 S. King Drive, Chicago, IL 60653-1110, phone: 773 535-3200, and e-mail address at: marcella.winters@att.net and her dissertation Chairman at: Dr. Bundt, Argosy University/Chicago Campus, 225 N. Michigan Ave.,

Chicago, IL 60601, (312)777-7600 and email address at: mbundt@argosy.edu with any questions about this study.

I understand that this research has been reviewed and certified by the Institutional Review Board, Argosy University – Chicago Campus. For research related problems or questions regarding participants' rights, I can contact the Institutional Board through the IRB Chair at Dr. Penelope Asay, 225 N. Michigan, Chicago, IL 60601, (312) 777-7713 and e-mail address at: pasay@argosy.edu.

I have read and understand the explanation provided to me. I have all my questions answered to my satisfaction, and I voluntarily agree to participate in this study. I have been given a copy of this consent form. By signing this document, I consent to participate in the study (please include a checkmark below)

- □ I consent/I do agree/I wish to participate in this study
- □ I do not agree/I do not consent/I do not wish to participate in this study

Teacher's name (printed) _____

Signature: _____ Date: _____

Signature of Principal Investigator: _____ Date: _____

Code Number: [ ]

APPENDIX B

Sample Questions for the Teachers' Individual Interviews

APPENDIX B

SAMPLE QUESTIONS FOR THE TEACHERS' INDIVIDUAL INTERVIEWS

1. Can you share with me how you introduce your portfolio assignment to your students with learning disabilities?
2. How does the portfolio assignment relate to the students' IEP?
3. What are the accommodations or modifications that you provide to your students with learning disabilities during the portfolio development process?
4. What seems to be difficult for your students with learning disabilities while engaged in portfolio development?
5. What is easy for them?
6. How long does it take them to complete one portfolio?
7. Where do they get help for their portfolios if they need it?
8. What are the benefits for students with learning disabilities to be involved in portfolio development?
9. How do you assess the portfolios?
10. What have you heard students with learning disabilities say about portfolios?
11. What would you say about the quality of portfolios produced by students with learning disabilities?
12. Do you have your students present their portfolios to an audience or one-on-one with you?
13. How do you prepare special education students for the presentations?
14. Can you share with me what happens during the presentations?

a. How do the special education students feel about and during the presentations?

15. What concerns do you have regarding portfolios and students with learning disabilities?
16. Is there anything else you would like to add?

Thank you so much for your participation in this interview.