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Authentic Assessments and Their Impact on Engagement of Gifted Learners in Washington County Public Schools: An Action Research Study

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AUTHENTIC ASSESSMENTS AND THEIR IMPACT ON ENGAGEMENT OF
GIFTED LEARNERS IN WASHINGTON COUNTY PUBLIC SCHOOLS: AN
ACTION RESEARCH STUDY

by

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DEDICATION

In memory of Linda Gail Lowman, 1954-2020

I would like to dedicate this work to my dad and my daughter. To the former, who always insisted that many things can be taken from one's life, but an education lasts forever, and to the latter, who I hope understands that a woman can be many things concurrently… mother, friend, wife, daughter, professional, student…in the pursuit of a full, beautiful life.

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I sincerely thank my family and friends. Madeline, my daughter, has witnessed my being a student through three graduate school programs. It is with grace and fire that she understands the importance of education and how a love of learning leads to a lovely, fulfilling life. Frankie, my dad, has never ceased to push me to my intellectual limits. To this day, he is my champion and cheerleader in all of my academic pursuits. My husband, Scott, has helped raise our brilliant child and has bestowed unlimited patience on my multiple trips through graduate programs. Mary, my person, has been my never-ending source of "you can do it," no matter what comes my way. My work family, the "girls on the third floor," have constantly reminded me that my work is always for our kids.

To the teachers and students of Washington County, I will leave this doctoral program knowing that all I have learned and all I continue to learn will be for the students I am privileged to serve.

ABSTRACT

This mixed-methods, action research project focused on how gifted learners perceived their levels of engagement when presented with differing assessment types. The project, which took place in Washington County Virginia Public Schools, investigated how middle and high school gifted learners' engagement differed when completing authentic assessments versus multiple choice assessments. A purposeful sample was chosen with participants then completing Likert-type surveys and semi-structured interviews. Classroom observations were conducted at both the middle and high school levels. Data and findings were triangulated to complete the research process.

Keywords: authentic assessments, student engagement, gifted education, action research

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CHAPTER 1: INTRODUCTION

Cara and Bonnie were seventh grade students identified as intellectually gifted. Both girls took accelerated math and language classes but continued to express boredom during the school day. As part of a community service project, they stumbled upon a topic that captured their interest and fires their imagination. Cara and Bonnie enthusiastically researched the tropical disease that seized their attention, paying particular detail to the disease's biological make-up, how it is spread, how it could be treated, and future innovations that may inhibit its impact on societies. When given the opportunity to tie this seemingly random interest to their current classwork, Cara and Bonnie jumped at the opportunity. Both girls designed multimedia presentations, filmed informational videos, and arranged service-learning experiences to show what they had learned and how it tied to their classwork. The girls' teachers stood in awe of the amount of effort dedicated to this project, as well as the vast amount of multidisciplinary knowledge gleaned over the course of a few weeks.

As children progress through school, they grow physically, emotionally, and cognitively. Educators long to prepare their students for the world outside of the school building walls; however, with the implementation of high-stakes testing, teachers have focused primarily on training students to successfully answer multiple-choice questions.

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As trends in education change, and with the recently adopted Profile of a Graduate (Virginia Department of Education, 2018), teachers must now prepare students for cooperative learning and authentic ways in which their academic growth and acquisition of knowledge can be assessed.

Beginning in the 2017-2018 school year, some gifted students in Washington County began to complete individualized, authentic products related to a chosen unit of self-study, doing so in addition to all other regular assessments. However, a requirement for using authentic assessments for all students in certain subject areas has now been outlined by the Virginia Department of Education within the Standards of Accreditation (Virginia Department of Education, 2018). Teachers have had to start incorporating authentic assignments into existing methods of assessing students' learning and growth. Such assessments are considered to be individual products that students create upon completing a unit of study, which often contains an element of self-directed research. Upon completion of these assessments, students are afforded the opportunity to share their work with members of the larger community to whom their work might be relevant.

Problem of Practice

Based on the current needs of the school division in which I work, this problem of practice addressed the incorporation of authentic products into existing curriculum, as "[it] takes more than one assessment tool to accurately gauge individual learning" (Chapman & King, 2012, p. 1). I sought to determine if authentic products, used in lieu of traditional multiple-choice tests, would increase student engagement among gifted learners as a precursor to increased student achievement.

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With increased student engagement, rising student achievement may follow. As teachers refocused their attention on assessments, students must become equally comfortable with tasks that gauge their academic knowledge, as well as their preferred methods for showing competency. As authentic assessments are often in the conversations and thoughts of educators in our division, the requirement for students to complete such assignments is swiftly approaching. Having become accustomed to classrooms where instruction focused heavily on preparing for Standards of Learning (SOL) assessments (Virginia Department of Education, 2018), students may experience a gap between how they have shown content mastery in the past and how they will now be required to demonstrate their competence. Students may soon be able to choose from seemingly endless lists of authentic products with which to demonstrate their understanding of subject matter. They may also be able to create original products that align with their preferred learning modality, making educational experiences all the more meaningful.

Gifted Education in Washington County

Washington County Public Schools is a Virginia public school division located in the southwest portion of the state. Each public school division in Virginia is required to complete a Local Plan for the Education of the Gifted (Virginia Department of Education, 2018). Each division is responsible for determining in which areas of giftedness, which include General Intellectual Aptitude, Specific Academic Aptitude, Visual and Performing Arts, and Career and Technical Aptitude, they will identify students and how gifted services will be provided. Individual school divisions in Virginia have different

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requirements for identifying and serving gifted learners; thus, the process followed in Washington County is unique to its schools.

At the time of this research project, students could be identified as gifted in any of the four areas served through an extensive evaluation process. Students may have been referred for an evaluation by a teacher, parent, peer or self, or may have been identified for evaluation through universal screenings that are conducted at the elementary level each spring. Students who scored at or above the ninety-fifth percentile on national normed ability tests and had supporting evidence via normed rating scales and/or a portfolio of work may have been found eligible for gifted education services within Washington County Public Schools. Once eligibility was determined and parent/guardian permission was received, students began to receive gifted education services in the classroom as defined by their individual gifted education plan, as well as participated in regular enrichment and extension activities with their intellectual peers outside of their regular classwork.

Theoretical Framework

The use of authentic assessments with gifted learners readily aligned with progressivism and constructivist theories. Students identified as gifted need both cognitive and affective domains addressed through learning and assessment, as well as the opportunity to construct meaning by creating authentic products. Constructivist theory, which emphasized the importance of student ability to construct meaning through interactions and personal experiences (Wilson & Zoellner, 2016), aligned with the creation of authentic products as means of assessing student knowledge and understanding of content. Lee and Hannafin (2016) stressed through constructivist theory

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how students find learning more purposeful when allowed to invest in projects and products that provide personal meaning. Moreover, Wilson and Zoellner (2016) emphasized how "constructivist-based practices, which tend to focus on broader definitions of learning, have received less attention in favor of more standards-based and standardized pedagogical techniques" (p. 77) within current routines of instruction and assessment. As assessment practices evolve within the school division, constructivist-based inquiry and authentic assessment will likely become more prevalent.

Progressivism, which is tied closely to John Dewey, encouraged "education that [is] adapted to the capacities of students at particular stages of intellectual and social growth" (Labaree, 2005, p. 283). Authentic assessments, which may include work within "interdisciplinary studies, thematic units and the project method" (Labaree, 2005, p. 281) connected easily to progressivism theory as students are allowed to demonstrate mastery of content in a manner consistent with individual growth stages. Dewey's work also promoted "more freedom for children, of greater attention to individual growth and development, of a new unity between education and life, [and] a more meaningful school curriculum" (Cremin, 1959, p. 162). Authentic assessments, which often incorporate student choice of product, as well as curricular inquiry, also bolstered the aforementioned tenets of progressivism.

Purpose of Study

Throughout the course of this action research study, I desired to investigate how student-selected, authentic products used in gifted education curriculum affected student engagement. By looking at students through the lens of varied learning styles, as well as varied interest and ability levels, I hoped to document how authentic assessments

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impacted student engagement. Renzulli and Smith (1984) emphasized that "learners' attitudes toward instructional style can affect their openness and responsiveness to content being taught" (p. 47). This may also be applied to assessing learners' understanding of content, as well. Students may find themselves drawn to certain methods of assessment over others, based on their preferred learning style, as they ponder the choices available to them. Matsko and Thomas (2014) stated that "when given the freedom to design their own learning experiences, students will make connections to events, experiences, and memories of deep significance to them" (p. 164). Student designed products could foster these connections to content, and it is through the use of authentic assessments that students may demonstrate their synthesis of curricular information.

Furthermore, considering constructivist theory throughout the study "[offered] an underpinning epistemology about how learners negotiate their learning to construct meaning, particularly with regard to the role of scaffolding to facilitate learning. Constructivists noted that "students invest affectively in personally meaningful projects that involve design, development, and presentation of artifacts relevant for authentic audiences" (Lee & Hannafin, 2016, p. 712). The use of authentic assessments in lieu of traditional test formats may allow students to make deeper, more meaningful connections to content, as well as provide for better demonstration of understanding.

Research Questions

Incorporating authentic products as assessments in gifted education may be beneficial for several reasons. First, instructional and assessment mandates from the state and division levels required teachers to utilize authentic assessments beginning in the 2018-

2019 school year (Virginia Department of Education, 2018). Teachers had to modify instructional and assessment practices to accommodate these requirements. In addition to new state mandates, authentic assessments in gifted education may allow students to show mastery of content in ways that connect to student learning preferences. Based on these observations, I formulated the following research questions:

1. Does the use of authentic assessments in lieu of traditional multiple-choice assessments increase student engagement among identified gifted learners?

2. How do students perceive authentic assessments as an alternative to traditional assessments?

As I worked through the action research process, I hoped to determine if creating original products encouraged gifted students to better engage in the learning process and curricular content.

Rationale and Significance

As Virginia has transitioned from using standardized assessments in some classes, teachers will now need to incorporate authentic assessments, in which students complete individualized products to show understanding of content, into their classrooms (Virginia Department of Education, 2018). During the past few school years, I have started working with some students and teachers within the gifted education program to implement authentic products in select classes and grade levels by school. As we continued to build upon this process, I hoped to determine if the use of authentic assessments provided gains in student engagement for those identified as gifted learners. If student engagement did, in fact, increase, one could then determine how rising student engagement affects levels of achievement in the gifted population and beyond to the

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entire student population. If student engagement did not increase, one could determine how to provide support to instructional staff to better implement authentic assessments.

Also, gifted students often fear failure, which may be compounded by their struggle with perfectionist traits. As students age, they may step away from situations in which they are truly challenged, as disengaging from demanding course content may seem easier than facing failure (Galbraith & Delisle, 2015). Gifted learners could likely demonstrate characteristics of frustration or defeat when faced with difficulty completing a rigorous product, at which time teachers provide intervention, clarification, and support for students (Chapman & King, 2012). Authentic assessments within the gifted education curriculum may allow students to explore small setbacks in a safe environment where they can grow with the guidance of gifted education teachers.

Authentic assessments provide an opportunity for students to demonstrate their knowledge and understanding of curricular content in a manner that aligns with their interests and preferred learning modality. Authentic assessments may also foster increased student engagement as students create authentic products and perform tasks that mimic those of practicing professionals (Renzulli, Gentry, & Reis, 2007). Increased student engagement, especially among those students who are identified as gifted, may impact student achievement, satisfaction with the learning process, and the type of work produced in the educational process.

Researcher Positionality

Currently, I am the coordinator of Gifted Education programs in my school division. As an instructional supervisor, I am in a unique position as I may be seen as an outsider to some teachers with whom I work. Within the organizational structure of the

school division, those who work in the division office are sometimes treated with hesitance from classroom teachers. It was my hope to further build relationships with teachers during the current school year, as we began to experiment with incorporating authentic assessments into curriculum. Ultimately, I was an organizational insider who collaborates with other insiders to study instructional and assessment practices within our division (Herr & Anderson, 2015).

As an educator who has been employed in the division for nineteen years, I have served in many different roles, from classroom teacher, to building administrator, to division-level instructional supervisor, through which I maintained a keen understanding of the different layers of thoughts and perceptions within our organization. Also, as a native southwest Virginian who identified with the characteristics of gifted learners from our region, I had an understanding of student frustrations, as well as their backgrounds. I feel this gave me the ability to precisely define my position within the research.

Also, as an educator in southwest Virginia, I saw a group of gifted students who may or may not have support at home to cultivate their gifts and talents. The largest area of diversity is readily seen in socioeconomic levels; thus, some students will have vastly different life experiences and values (Galbraith & Delisle, 2015). I believed we must level this playing field by giving all gifted learners the opportunity to research, explore, and create while learning curricular concepts. Introducing gifted learners to authentic assessments, in a way in which they have access to numerous resources, may pave the way to incorporate such learning experiences into the larger curriculum.

When analyzing my positionality in relation to the research I conduct, the largest factor I had to consider is my professional position. Some teachers with whom I work

seemed to be quite comfortable with me and my presence in their classrooms. In those instances, I was seen as a collaborator or co-teacher. I feel that these situations were beneficial, as we had a positive working relationship. The students in these classes saw me as another teacher, as well; thus, their performance was likely not influenced by having someone different or new in their class. On the other hand, some teachers viewed me as a supervisor and became less open or willing to collaborate when I was in their classroom. These teachers may have clung to patterns of familiarity and have been hesitant to implementing change in assessments (Evans, 1996). Because of these ideas, as well as the more formal relationship that exists, I believed that these teachers were less inclined to allow me to co-teach and assess their students. Building relationships with these teachers, and encouraging more open interactions, was crucial to successfully implementing authentic assessments in their classes and will continue to be so going forward. The students in these classes may also have been more hesitant to take risks or ask questions throughout this process, as they did not want to convey confusion or become embarrassed in front of their peers.

I innately believed that all students have the ability to master content knowledge when material is presented in a manner that directly aligned with their preferred learning modality. I also believed that all students learn best when they have a genuine relationship with educators and know that teachers truly have student interests as their focus. As I serve in an administrative role, I had to account for the fact that I do not typically interact with all students in the study population on a daily basis; thus, I may not have had a significant, supportive relationship with participating students. I had to rely on preexisting relationships that occurred between teachers and students, while striving to

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promote a supportive environment in which students could create authentic products. As I knew of teachers' strengths and weaknesses in both instruction and student relationships, I also accounted for bias that I may have toward teachers who I felt did not connect with students on a personal level. I also accounted for bias toward those teachers who have expressed disinterest or difficulty in understanding or implementing authentic assessments in their classrooms.

In order for this study is to be successful and provide information for how to implement authentic assessments on a larger scale, or lead to assessing student achievement, I had to balance my desire to implement authentic assessments quickly with the needs of teachers and students. I recognized any bias I may have regarding teacher personalities and abilities, as to not allow such biases to influence or affect the results of the study.

Research Design

As I conducted a mixed-methods, participatory action research study, data were collected using three specific methods. I used Likert-type surveys, semi-structured interviews, and classroom observations during the course of my study to determine if authentic assessments increased engagement for students who are identified as gifted learners. As I work in a relatively small school division, we serve a little over seven hundred identified gifted students. I worked primarily with middle and high school students; thus, the sample was purposeful.

At the beginning of this mixed methods study, a two-part Likert-type survey (Efron & Ravid, 2013) was administered to students to determine how engaged students were with current multiple-choice assessment practices, as well as authentic assessments.

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Clear instructions for completion accompanied the questions. Surveys had predetermined questions that gauged students' interest levels, amount of effort applied, amount of content retained after assessments, and overall satisfaction with both multiple choice tests and authentic assessments.

I also conducted semi-structured interviews (Efron & Ravid, 2013). Predetermined questions were asked of all participants; however, students were allowed to elaborate on any question that prompted further thought or comment. I also conducted classroom observations (Efron & Ravid, 2013) as teachers implemented and students completed authentic assessments. I took field notes that detailed student behaviors, whether on or off task, as well as any other pertinent, observable details.

Data Collection and Analysis

As I reviewed both quantitative and qualitative methods, I gave equal weight to all sources of data. The results of each method were presented separately; however, the collective findings were triangulated to provide cohesiveness (Efron & Ravid, 2013). A t-test (Efron & Ravid, 2013) compared the mean of both sections of the survey to determine if there was a difference in the results. Interview transcripts and observation data were coded, grouped into categories, and analyzed to determine student engagement patterns (Efron & Ravid, 2013).

In order to ensure trustworthiness and validity of data, I obtained permission not only from my school division to conduct the research, but also individual permission from all participants or their parent/guardian if they were minor students. Participants were provided descriptions of the study's purpose and proposed timeline. They also had an ongoing opportunity to withdraw from the study at any time, should they choose. All

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study data were kept in a secure location. Overall, utilizing multiple methods of data collection and analysis allowed me to truly understand the benefits of implementing authentic assessments, as well as the challenges found in correctly implementing such assessments into existing curriculum.

Limitations of Study

This study contained several limitations. Foremost, I worked exclusively with students identified as gifted learners. In order to apply any findings to different student populations, this study would need to be replicated with students of varying cognitive abilities. Also, school divisions in Virginia create local plans for gifted education that apply only to their school system (Virginia Department of Education, 2018). Each division may select which types of giftedness are identified and served, the methods used for identification, and how identified students receive gifted education services (Virginia Department of Education, 2018); thus, gifted populations in each school division throughout the state may vary. Furthermore, this study involved students from a small, rural school division. Students from other settings, such as larger, metropolitan divisions, may have differing experiences with the use of authentic assessments. Some school divisions in Virginia may have had significantly more experience in utilizing inquiry and authentic products, while other divisions may not have begun the planning process of implementing such assessments. Depending on student experience with authentic assessments, I believed that levels of student engagement would vary. It was my belief that school divisions with similar student and division demographics, as well as similar instructional practices, may be able to glean valuable information from the results of this research. Finally, this study took place near the beginning of school closures during the

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Covid-19 pandemic. Because some students were unable to complete face-to-face interviews, the number of active participants was lower than had been expected.

Definition of Key Terms

Throughout this research, the following terms were used extensively; thus, the following explanations are provided.

Authentic assessments were viewed as differentiated products that students can complete to show mastery of curricular content. These are a "meaningful performance task a learner applies to demonstrate knowledge, skill, strengths, and needs in a realistic authentic manner" (Chapman & King, 2012, p. 3).

Differentiated products allowed students to demonstrate their understanding of curricular content in ways that are creative and align with their preferred learning modality. Differentiated products "[provide] the learner with assessment selection options. This powerful technique immediately differentiates and empowers learners" (Chapman & King, 2012, p. 3).

Gifted learners are those students "who demonstrate high levels of accomplishment or who show the potential for higher levels of accomplishment when compared to others of the same age, experience, or environment. Their aptitudes and potential for accomplishment are so outstanding that they require special programs to meet their educational needs" (Virginia Department of Education, 2018). These children have been identified by their school division as having superior aptitude or potential for superior aptitude in general intellectual pursuits, specific academic areas, visual and performing arts, and/or career and technical aptitude (Virginia Department of Education, 2018).

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Student engagement is the level at which students were attuned to curricular content and demonstrate knowledge gleaned. Students who were engaged express contentment with a process that aligns with their preferred learning style and can synthesize new information.

Organization of Remaining Chapters

Throughout this dissertation, I analyzed related literature to determine relevance of this study, as well as gaps in current research. Following, I presented the methodology used throughout the action research study. I then presented the findings and how they related to student engagement and authentic assessments. Finally, I analyzed the findings and present how they lead to future research.

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CHAPTER 2: LITERATURE REVIEW

Assessments play a vital role in the realm of gifted education. Not only do assessments help identify which students qualify for gifted education programming, they also give teachers an understanding of what students have learned, as well as the connections students have made between content and their lives. When teachers employ assessment methods that align with students' preferred learning modality, students may feel an increased sense of engagement (Renzulli & Smith, 1984). Authentic assessments, which allow for students to demonstrate their conceptual knowledge and understanding in a manner of their choice, may affect student engagement with the material in which they are learning (Abbott, 2017; Brown 2015). In this chapter, the background and use of authentic assessments, as well as how assessments of multiple kinds are traditionally used in gifted education, are discussed.

Underlying Causes

The Virginia Department of Education implemented Standards of Learning (SOL) in the early nineteen eighties and corresponding assessments in 1998 (Virginia Department of Education, 2019). Over the past twenty-one years, teachers have become accustomed to measuring student progress and mastery with multiple choice tests. High requirements for pass percentages on SOL tests prompted teachers to formulate instruction and assessment strategies that aligned with state assessments.

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This likely led to a decrease in critical thinking, problem-solving, and engagement with assessments (Abbott, 2017; Bourgeois & Boberg, 2016). Students who were identified as gifted likely experienced boredom and feelings of disconnect with instruction that focused mostly on passing high stakes state assessments (Bourgeois & Boberg, 2016; Schmitt & Goebel, 2015; VanTassel-Baska, 2013).

Research Questions

This chapter focused on literature that supports the following research questions:

1. Does the use of authentic assessments in lieu of traditional multiple-choice assessments increase student engagement among identified gifted learners?

2. How do students perceive authentic assessments as an alternative to traditional assessments?

Organization of the Chapter

The remaining sections of this chapter focused on the purpose of the literature review, the theoretical framework behind authentic assessments and gifted education, historical perspectives of authentic assessment and gifted education, as well as related research that supports the problem of practice.

<div align="center">Purpose of the Literature Review</div>

The purpose of this literature review was to determine current research that pertained to authentic assessments and how they impacted student engagement among students identified as gifted. As I reviewed pertinent articles by others who have similar research interests, I found supporting evidence for my problem of practice. As I was ableto build a "written argument that supports a thesis position by building a case from credible evidence obtained from previous research" (Machi & McEvoy, 2016, p. 5), I not

only furthered my understanding of the selected topic, but developed how I proceed in looking at collected data, as well.

Literature Review Strategies

Throughout my search for information pertaining to authentic assessments and gifted education, I utilized different databases and search engines. Foremost, I utilized ERIC to search for peer reviewed journal articles with the keywords "gifted education" and "authentic assessment." I also used academic textbooks pertaining to gifted education topics. Additionally, I reviewed many publications from the National Association for the Gifted (NAGC) of which I am a member. The NAGC peer reviewed journal, Gifted Child Quarterly, proved to be a valuable resource in this process.

<div align="center">

Theoretical Understandings of Authentic Assessments

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Authentic assessments, in which students create personalized products or complete performance tasks to show mastery of content, may "allow gifted learners to reveal their considerable intellectual capacity and energy" (VanTassel-Baska, 2013, p. 41). Such assessments defy a traditional approach to surveying student knowledge and understanding. In the following sections, I addressed how authentic assessments align with progressivism and constructivist theory.

How Authentic Assessments Connect to Progressivism

Authentic assessments provide the opportunity for students to align their work and curricular understandings to those of practicing professionals (Renzulli, Gentry, & Reis, 2007), often exploring concepts in ways that transcend the depths of traditional schoolwork. In progressivism, educators believed "that each individual has uniquely creative potentialities, and that a school in which children are encouraged freely to

develop these potentialities is the best guarantee of a larger society truly devoted to human worth and excellence" (Cremin, 1959, p. 164).

In a progressive educational environment, an observer was likely to see instruction aligned with students' interests and developmental levels, which remained opposite of twentieth century educational reforms (Labaree, 2005). Authentic assessments, aside from their primary purpose of being a vehicle through which a student demonstrates knowledge, were methods that provide for tailored evaluation that corresponds with students' preferred learning modalities (Renzulli & Smith, 1984) and developmental stages.

John Dewey strongly believed that schools should closely coordinate with community life and "send into society people able to understand it, to live intelligently as part of it, and to change it to suit their visions of the better life" (Cremin, 1959, p. 168). Dewey (2014) argued that through education, "little has actually been done in our schools to render science and technology active agencies in creating the attitudes and dispositions and in securing the kinds of knowledge that are capable of coping with the problems of men and women today" (p. 789). Progressivism, as viewed through Dewey (2014), emphasized how education should be "presented in connection with the ways in which it actually enters into every aspect and phase of present human life" (p. 790), in addition to teaching students ways in which they can better serve their communities with their knowledge. A crucial element of authentic assessments was the audience to which the final work is presented. Ideally, this audience should be members of the community from which the central subject or idea is related (Lee & Hannafin, 2016).

How Authentic Assessments Tie to Constructivist Theory

Ertmer and Newby (2013) defined constructivism as "a theory that equates learning with creating meaning from experience" (p. 55). In a constructivist classroom setting, students actively construct or create knowledge and understanding in lieu of passively receiving information from a teacher. Harasim (2012) also described constructivism as a learning process in which "knowledge is constructed through our interactions with one another, the community and the environment, and that knowledge is not something absolute" (p. 12). Vygotsky (2004) asserted that learning also often takes place through what children experience as play. A child's play is "a creative reworking of the impressions he has acquired. He combines them and uses them to construct a new reality, one that conforms to his own needs and desires" (Vygotsky, 2004, p. 11-12). Such reworking of learned content and patterns of behavior were a basis of constructivist education.

In relation to authentic assessments, "constructivist position assumes that transfer can be facilitate by involvement in authentic tasks anchored in meaningful contexts" (Ertmer & Newby, 2013, p. 56). Piaget (2011) stated education "has no value unless it answers to a need, and it cannot answer to a need unless the knowledge it imparts connects with facts that have been actually experienced by the child" (p. 74). Authentic learning occurred when students constructed meaning of content through real-life experiences. As authentic assessments are tasks that not only evaluate student knowledge and understanding, but also connect to real-world application of content, they readily aligned with constructivist theory. Furthermore, authentic assessments allowed students to work within multiple disciplines at the same time. Constructivist views included the

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belief that knowledge is concrete; however, students construct individual meaning from information as it connects with their real-world experiences (Ertmer & Newby, 2013; Fosnot & Perry, 2005), most of which naturally contained an interdisciplinary base and focus. The process of constructing knowledge during the course of an authentic assessment is not passive, as students remain active in discovering content and correlations, as well as form connections with their environment and other individuals throughout the process (Lee & Hannafin, 2016).

Historical Practices and Perspectives in Gifted Education

Throughout the past century, the field of gifted education has evolved from a curiosity of high ability individuals to a recognition of giftedness as an intellectual and academic need to be met in students. Lo and Porath (2017) identified the first historical phase of gifted education, in the nineteenth and early twentieth centuries, as one in which superior intellectual ability was demystified. It was during this time that early intelligence tests were used to identify individuals with superior ability (Lo & Porath, 2017). Following this time, educators and psychologists in the nineteen thirties and beyond began to connect the results of intelligence tests to the type of instruction one received in the classroom (Lo & Porath, 2017). However, currently, "with greater consideration of diversity and democratization in understanding giftedness, most educators and researchers in the field see giftedness as much more than an IQ cutoff" (Lo & Porath, 2017, p. 350).

Currently, scholars in the field of gifted education strive to create curriculum that serves gifted students not only academically, but also in their areas of interest and at varying levels of ability. VanTassel-Baska and Wood (2010) believed pedagogy that

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reached a vast swath of learners may benefit not only those identified as gifted, but others who may not meet traditional identification requirements. Often, for students whose first language is not English, as well as those who live in poverty or have a learning disability, traditional ability tests do not identify their giftedness (Naglieri, Brulles, & Landsdowne, 2008). Furthermore, Renzulli and Reis (2014) advocated for gifted education curriculum that is applied throughout an entire school or class. By encouraging enjoyment, engagement, and enthusiasm in learning, Renzulli and Reis (2014) argued that achievement for gifted learners, as well as those not traditionally identified, may increase. As educators of gifted students reflect on practices of the past, as well as current pedagogical methods, one may discern that teaching those who are gifted requires a balancing act of identifying and accommodating a wide variety of academic, social, and emotional needs.

Common Practices

Within the field of gifted education, there are several common practices that take place. Some school divisions follow VanTassel-Baska's (2010) Integrated Curriculum Model or Renzulli and Reis' (2014) Schoolwide Enrichment Model. The Integrated Curriculum Model provided teachers of gifted learners with curricular units that were based on overarching concepts and contain material from multiple disciplines (VanTassel-Baska, 2010). The Schoolwide Enrichment Model engaged a process in which large groups of students, whether or not they are formally identified as gifted, participated in academic enrichment (Renzulli & Reis, 2014). However, more often, school divisions created curriculum that meet the needs of their identified gifted learners. When created at the division level, Chandler (2015) suggested that curriculum for gifted

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learners include higher-level thinking skills, creative thinking, active learning, interdisciplinary research, and among others, authentic assessments. Chandler (2015) also emphasized the importance of maintaining a consistent approach when implementing gifted education curriculum, as well as documenting what works well for students and what needs to be changed for the future.

Olszewski-Kubilius, Makel, Plucker, and Subotnik (2017) emphasized how common educational practices should be modified for use with gifted learners. Olszewski-Kubilius et al. (2017) stressed that teachers of gifted students should encourage setting goals that lead to outstanding content mastery, as this "requires intense engagement and effort, which is difficult to exhibit without some degree of mastery orientation" (p. 273).

Also, within curricular practices for gifted learners, scholars recommended three ways in which curriculum can be modified for engaging students in the classroom. By modifying content, process, or product, teachers of the gifted can tailor curriculum to individual needs.

Modification and Acceleration of Content. During the latter half of the twentieth century, educators began to see the need for content acceleration for students. Content acceleration, in which students bypass curricular units if they are able to demonstrate mastery on preassessments, should not to be confused with grade-level acceleration. VanTassel-Baska (2018) noted the importance of providing accelerated content opportunities for gifted learners, as well as the impact content-level acceleration may have on the affective domain. VanTassel-Baska (2018) stated that "academic acceleration produces small-to-moderate social-emotional gains for [gifted] students" (p.

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102) in addition to academic gains made in the classroom. Suldo, Shaunessy-Dedrick, Ferron, and Dedrick (2018) also noted that Advanced Placement (AP) and International Baccalaureate (IB) programs were "among the most prevalent accelerated curricular options for [gifted] high school students" (p. 351). By participating in such programs of courses at the middle and high school levels, students may have received instruction not only at an accelerated pace, but at times earlier than their age peers.

Another method in which content may be modified is through curriculum compacting. Renzulli, Smith, and Reis (1982) effectively described and advocated for the process in which teachers of gifted learners pre-assess all areas of the curriculum and if a student demonstrated mastery of curricular content in certain areas, that student was allowed to bypass what they knew in order to work with different content. In order to effectively compact curriculum, teachers must demonstrate the ability to provide "(1) careful diagnosis and (2) a thorough knowledge of the content and objectives of a unit of instruction" (Renzulli, Smith, & Reis, 1982, p. 188). Gifted learners may compact only the sections of curriculum in which they showed early mastery, leading them to work consistently with content that is within their zone of proximal development (ZPD) (Wilson & Zoellner, 2016).

Modification of Process. In gifted education, the process by which students learn new content and demonstrate their understandings may be modified to account for the unique needs of gifted and talented learners. One manner in which the educational process can be modified for gifted learners is through the use of enrichment clusters. Renzulli, Gentry, and Reis (2007) defined enrichment clusters as "vehicles through which students can increase their knowledge base and expand their creative and critical thinking

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skills, cooperative group work skills, and task commitment by applying their time and energy to self-selected problems or areas of study" (p. 40). In lieu of participating in traditional classroom instruction, students for whom process had been modified "assume roles as first-hand investigators, writers, artists, or other types of practicing professionals" (Renzulli, Gentry, & Reis, 2007, p. 40). The active inquiry required of enrichment clusters differed from traditional classes that focus on lecture, reading, note taking, and the like. Through process modification, students created authentic products that allowed them to connect curricular content to their lives and communities. Renzulli, Gentry, and Reis (2007) noted the importance of forging community relationships when modifying process, as such connections can provide an outlet for students as they research information, as well as a place to display or present their findings.

In addition to creating enrichment clusters, gifted educators may utilize whole-school enrichment models to modify the process by which students learn. VanTassel-Baska and Wood (2010) proposed differentiated instruction within a heterogeneous classroom setting for gifted students. Curriculum was scaffolded for students, allowing them to work through appropriate content at the pace that best suits their needs (VanTassel-Baska & Wood, 2010). Additionally, Renzulli and Reis (2014) fostered through the Schoolwide Enrichment Model a form of education that employed enjoyment, engagement, and enthusiasm for all students. When focused into a whole group setting, all students, including those who were gifted, benefited from experiencing an educational process that incorporates enrichment activities throughout the curriculum (Renzulli & Reis, 2014).

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Modification of Product. Modification of the products gifted students create to demonstrate mastery of content allows students to venture away from traditional multiple choice or short answer tests. VanTassel-Baska (2013) advocated for the use of performance-based, authentic assessments with gifted learners by explaining that solid curriculum for gifted students often aligned with the criteria for creating authentic assessments. VanTassel-Baska (2013) noted that authentic assessments often incorporated open-ended tasks or questions which promote collaboration, problem solving, and higher-level thinking skills. In addition to authentic assessments serving traditionally identified gifted learners, "research evidence [suggested] that economically disadvantaged and minority learners perform better on tasks that emphasize fluid over crystallized intelligence [Mills and Tissot, 1995], spatial reasoning over verbal and mathematical [Naglieri, 1999]" (VanTassel-Baska, 2013, p. 43).

Brown (2015) suggested that gifted learners "undertaking meaningful and relevant assessments tend to be more fully engaged in learning and hence tend to achieve more highly because they see the sense of what they are doing" (p. 3). As teachers of the gifted modified the products by which they assess students, students may, in turn, experience increased engagement, especially if the product choice aligned with their preferred learning modality (Renzulli & Smith, 1984). The use of authentic assessments as a modification of product allowed gifted learners the opportunity to further immerse themselves in curricular content in a manner that aligned with their personal interests.

Related Research

Research related to gifted education practices, authentic assessments, and student engagement was readily available through the use of a search for peer-reviewed

scholarship. While some information pertained to one topic of gifted education or a specific grade range, connections between the topics of interest can be readily made. Especially among middle and high school gifted learners, the possible impact of authentic assessments on student engagement exists within current curricular practices.

Gifted Education Practices in the Middle Grades

In the middle grades, gifted education practices often focused on transitioning students from the elementary years, where teachers strongly guided students throughout the learning process, to self-directed learning, problem solving, and the creation of original products.

Matsko and Thomas (2014) highlighted the effects of allowing gifted middle school students the opportunity to create original products in mathematics classes. Within this practice, "students were asked to generate original mathematics problems in their area of interest" (Matsko & Thomas, 2014, p. 157) in addition to regular class content and assessments. The purpose of this practice was to determine whether or not student engagement, motivation, and metacognition were impacted. Matsko and Thomas (2014) found that student engagement often increased when given the opportunity to generate original problems, as well as an enhanced sense of metacognition among the student participants. The self-directed learning described by Matsko and Thomas (2014) is one type of instructional strategy that connects to authentic assessments and may be used with gifted learners in the middle grades.

Newman, Dantzler, and Coleman (2015) explored the aspect of service-learning projects for gifted students in the middle grades. In investigating how service learning would impact student learning, Newman, Dantzler, and Coleman (2015) found that

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academic achievement, student engagement, civic responsibility, and resiliency all increased among gifted learners. Student participation in class, as well as motivation, increased with the use of service learning, which ultimately led to "a significant increase in students being genuinely excited about [content], which ultimately transferred to higher grades" (Newman, Dantzler, & Coleman, 2015, p. 52). Additionally, increasing student interest in civic involvement during the middle school years may lead to an understanding of how students can impact their communities in positive ways (Newman, Dantzler, & Coleman, 2015). One important facet of authentic assessments was the connection of the student to an authentic community audience (Brown, 2015). Service-learning projects that are incorporated into curricular content may provide middle school gifted students the opportunity to increase classroom engagement and community connections.

Gifted Education Practices in the Secondary Grades

During the high school years, gifted education practices evolved slightly from those used in middle schools. Galloway (2019) described a process in which teachers can serve gifted students during their high school years. Central to this process was differentiation that provided for the completion of independent assignments should students score above eighty percent on pretests that measured content mastery (Galloway, 2019). Furthermore, gifted students may work collaboratively to complete "a project-based learning project, and [host] the community at events in the fall and spring to showcase their work" (Galloway, 2019, p. 14).

Additionally, it has been commonplace in gifted education to funnel secondary gifted learners into academic tracks that focus heavily on Advanced Placement (AP) and

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International Baccalaureate (IB) programs (Suldo, Shaunessy-Dedrick, Ferron, & Dedrick, 2018). Stillisano, Waxman, Hostrup, and Rollins (2011) detailed the use of the IB program at the high school level and its effect on gifted learners, such as "[empowering] students to take a different role in the classroom, becoming active learners rather than passive learners, [and] participating in their own learning" (p. 179). Furthermore, "teachers pointed to the IB program's emphasis on cultural awareness as particularly valuable to those students whose home lives rarely expose them to other cultures" (Stillisano et al, 2011, p. 179). Such rigorous coursework combined with social awareness may foster increased engagement in secondary students.

Also, secondary students often participated in enrichment and extension opportunities outside of the regular classroom. Wilson and Zoellner (2016) described the effectiveness of camp opportunities for gifted students. Throughout the camp program, students worked as part of a team that designed watershed plans to improve water quality or explore biomedical curriculum.

In their study, Wilson and Zoellner (2016) found that high school students who participated in summer science programs that have a constructivist base had higher levels of scientific knowledge and understanding. The findings of this research may lead gifted educators to consider providing opportunities for students to pursue active inquiry and problem-based learning outside of the regular school calendar.

Use of Assessments in Gifted Education

In gifted education, assessments are utilized for a multitude of purposes. When students are referred for undergoing a gifted education evaluation, educators often employed the data gained from ability tests, such as the Wechsler Intelligence Scale for

Children (WISC), the Cognitive Abilities Test (CogAT) and the Naglieri Nonverbal Ability Test (NNAT), and achievement tests to guide program placement decisions (Cao, Jung, & Lee, 2017). After student placement decisions are made, teachers must review ongoing assessment data to determine each child's present level of performance, which guides the process of creating each student's personalized gifted education plan. Additionally, certain assessments and rating scales, such as the Purdue Observation Form, the Classroom Practices Record, and Classroom Instructional Practices Scale, may be used to assess the quality of services that gifted learners received in the regular classroom and through differentiated instruction (Farah & Chandler, 2018). Assessments, both formative and summative, were also an essential component of determining student understanding of content, whether in gifted programming or within the regular classroom. The following sections will discuss in further detail the use of assessment in gifted education.

Assessments for the Purpose of Student Identification. In order to properly identify students for gifted education services, most educators relied on the administration of and data received from ability tests. Cao, Jung, and Lee (2017) defined ability tests as "standardized instruments that measure an individual's mental competence or potential to learn" (p. 166). Such assessments were administered to students individually or in groups depending on the assessment type and the requirements of each test.

Individual ability tests, such as the Stanford-Binet Intelligence Scale and the Wechsler Intelligence Scale for Children, and group ability tests, such as the Cognitive Abilities Test and the Naglieri Nonverbal Ability Test (Naglieri, Brulles, & Landsdowne,

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2008), were often used to determine cognitive ability in students compared to their age peers (Cao, Jung, & Lee, 2017). Such assessments utilized national normed data to determine the percentile rank that indicated how students compared to others the same age.

Within the realm of ability assessments, nonverbal ability tests, such as the Naglieri Nonverbal Ability Test (Naglieri, Brulles, & Landsdowne, 2008), were often utilized with students whose home language was not English, as well as those who may have an identified special need. Nonverbal ability tests "may reduce the potential influence of language on test outcomes" (Cao, Jung, & Lee, 2017, p. 173). Gifted educators often felt that nonverbal ability tests, as they minimize the effect that one's language ability can impact outcomes, provided a fair assessment of "those who are disadvantaged in terms of verbal skills or educational opportunities, and thus lead to a more equitable identification of gifted students from diverse backgrounds" (Cao, Jung, & Lee, 2017, p. 173).

In addition to assessments that reference national normed data, many gifted educators utilized rating scales to assist with identification of gifted learners. These scales, such as the Renzulli Scales (Renzulli et al., 2010) and the Scales for Identifying Gifted Students (SIGS) (Ryser & McConnell, 2004), allowed teachers and guardians to complete a Likert-type scale for statements that describe the characteristics of gifted students. The statements included on rating scales are often divided into subsections, such as Language Arts, Mathematics, Leadership, and Creativity, which allowed those completing the scale to consider whether or not students demonstrated gifted characteristics in subareas that are not typically identified through ability testing.

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Assessments for Determining Student Knowledge and Growth. Once students have been identified for a gifted education program, assessments began to have a different focus. Where assessments were initially used to determine a student's levels of cognitive and creative ability, as well as potential academic achievement, assessments within gifted education shifted to assist teachers as they determine what students know and have learned.

VanTassel-Baska (2013) advocated for the use of authentic tasks that challenge gifted learners, especially in gifted education programs that utilize problem and project-based learning. By administering authentic assessments, "teachers gain insights into a gifted student's true level of capacity in a domain of knowledge" (VanTassel-Baska, 2013, p. 41).

Brown (2015) also recommended the use of evaluations with gifted learners that utilized formative assessments as a process for students to better understand not only content, but the research and evaluation process, as well. Furthermore, Brown (2015) suggested that the assessment process contain opportunities for active learning and be "[truly] representative of student effort and achievement" (p. 7).

Shively, Stith, and Rubenstein (2018) noted the importance of assessing both critical and creative thinking among student identified as gifted. They argued that as "creative and critical thinking are both inherently important and represent the goals of gifted curriculum, then assessments must be designed to measure students' development of these process skills" (Shively, Stith, & Rubenstein, 2018, p. 150). Shively, Stith, and Rubenstein (2018) also stressed that educators should consider the end product created by

students and develop rubrics that can assess critical and creative thinking before assigning authentic assessments to gifted students.

Student Engagement with Assessments

As gifted students completed assessments within their classes, an opportunity to foster increased engagement presented itself to those who chose to allow students to produce authentic products. VanTassel-Baska (2013) stated that "challenging performance tasks allow gifted learners to reveal their considerable intellectual capacity and energy" (p. 41). Darling-Hammond and Adamson (2014) defined performance tasks as "a structured situation in which stimulus materials and a request for information or action are presented to an individual, who generates a response that can be rated for quality using explicit standards. The standards may apply to the final product or the process of creating it. A performance assessment is a collection of performance tasks" (p. 21). Darling-Hammond and Adamson (2014) also contended that traditional assessments, such as multiple-choice, true-false, and matching, are inauthentic, as they did not promote use of knowledge as is needed in real world situations.

Furthermore, open-ended questions, problem solving opportunities, and an understanding of one's thinking process were criteria for authentic assessments and were cornerstones for effective instructional practice for gifted learners (VanTassel-Baska, 2013). Performance based, authentic assessments fostered the advanced, higher-level thinking skills, problem solving skills, and challenging task demands that gifted learners needed to maintain engagement (VanTassel-Baska, 2013). Additionally, authentic assessments provided the opportunity for "economically disadvantaged and minority learners [to] perform better on tasks that emphasize fluid over crystallized intelligence"

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(VanTassel-Baska, 2013, p. 43). Authentic assessments are likely a tool that connects diverse students to and maintain engagement with a myriad of content areas.

Lee and Hannafin (2016) discussed student centered learning opportunities in which students dynamically constructed knowledge through an open-ended process. Lee and Hannafin (2016) also connected authentic assessment to constructivism as the use of such assessments "involves iterative processes of discovery as students use their own mind to obtain knowledge for themselves" (p. 713). As students discovered information, they determined how best to connect that knowledge to what they understand. Furthermore, as students created products that showcased their understandings, they were utilizing the "key constructs of engagement for [student centered learning]: autonomy, scaffolding, and audience" (Lee & Hannafin, 2016, p. 715). During the authentic assessment process, teachers can provide guiding questions, help students define applicable goals, and monitor student progress; however, gifted students should be held responsible for their learning and final product as scaffolding is removed throughout the course of completing the authentic assessment (Lee & Hannafin, 2016). Additionally, student engagement may be fostered with authentic assessments, as final products should be shared with authentic audiences. Lee & Hannafin (2016) stressed the importance of sharing the products created during authentic assessments with audiences for whom the artifact is relevant, as this provided an "authentic, lasting value beyond the teacher and the classroom" (p. 721).

Swan and Hofer (2013) detailed how student-created documentaries used as authentic assessments increased student engagement. As "students develop their knowledge relative to the content" (Swan & Hofer, 2013, p. 144) through the creation of

a documentary, they create hypotheses, analyze and synthesize information, and construct explanations (Swan & Hofer, 2013). Swan and Hofer (2013) found that while some students initially struggled with the communication requirements of making a documentary, "students remained engaged and teachers were able to better assess students learning in all its dimensions" (p. 165).

Waters, Smeaton, and Burns (2004) also described how student engagement was impacted by authentic, differentiated assessments where students were given the opportunity to create "projects, presentations, and performances with the elements of choice, variety, and individualization of differentiated instruction" (p. 91). During this study, students "favored the concept of having a choice of assessment vehicles and the opportunity to choose between individual and small group work" (Waters, Smeaton, & Burns, 2004, p. 94), as well as demonstrated an increased preference to authentic assessments versus traditional multiple-choice assessments. Waters, Smeaton, and Burns (2004) attributed this increase to the opportunities for students to personalize products throughout the assessment process, which ultimately led students to believe they had an increase in learning.

Additionally, some gifted learners struggled with demonstrating high levels of competence when required to create authentic products. This may be attributed to their selective consumption of only content that provides intrigue and challenge (Galbraith & Delisle, 2015), along with their tendency to demonstrate knowledge in ways that are familiar. Once given specific guidance and challenging products to complete, these students rose to the occasion and showed high levels of interest and engagement. As described by Waters, Smeaton, and Burns (2004), students often more fully engage with

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assessments in which they have had a choice of format, as well as believe they have learned more during the process when given such options.

Matsko and Thomas (2014) "investigated [classes that] used an assessment in which students were asked to generate original mathematics problems in their area of interest" (p. 157). They utilized a Likert-type scale to determine students' perceptions of motivation, transfer of concepts, and metacognition. Upon reviewing their data, Matsko and Thomas (2014) found that the use of authentic mathematics assessments did not necessarily impact motivation in students; however, students did exhibit an increase in metacognition. The authors suggested that student directed problem creation is crucial in achieving similar results.

Student Engagement in Gifted Education

Engagement patterns among gifted students, like students of differing cognitive abilities, may vary. Educators of identified gifted students often saw a range of effort and engagement that could fluctuate between different grade levels and content areas. In the following sections, I discuss under engaged gifted learners and student engagement by academic levels.

High Ability, Under Engaged Students. Reis and Greene (2014) noted that gifted students were not immune to underachievement, which may "[stem] from serious physical, cognitive, or emotional issues, or a mismatch between the students and the school environment, or a personal characteristic" (para. 1). Gifted students often begin to experience underachievement during the elementary and middle years, likely due to a lack of challenge in the classroom (Bourgeois & Boberg, 2016; Reis & Greene, 2014). Students may also disengage from content or challenge teachers when the educators who

delivered instruction were perceived as not caring for students on a personal level (Neumeister & Hebert, 2003). Furthermore, Moore, Ford, and Milner (2010) noted that gifted students of color, which include African American, Hispanic American, and Native American students, were less likely to be recommended for gifted education services due to behaviors and characteristics that were prevalent in their home culture but not in the culture of the school community. Additionally, Fugate and Gentry (2016) argued that gifted females were often overlooked due to behaviors that were reinforced due to societal gender norms. As educators often unconsciously conveyed that males had innate ability, gifted females often felt that others believed their success comes only through hard work, leading them to doubt their natural intellectual abilities and become disengaged in academic work (Fugate & Gentry, 2016). Despite having the capability for high levels of intellectual and academic ability, gifted underachievers often needed intervention strategies in order to refocus and apply effort to academic work (Reis & Greene, 2014)

One method in which educators were able to re-engage students was through the application of self-regulation skills, such as those used when students completed authentic assessments. Reis and Greene (2014) suggested that as "teachers assume most of the responsibility for the learning process" (para. 18) which could lead gifted students to become disengaged, as they desire a classroom "that [enables] them to increase their control over their own behavior and environment" (para. 18). Reis and Greene (2014) also stated that students who utilized self-regulation skills became more aware of their academic performance, were able to determine which learning strategies work best for

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them, and removed their focus from their peers' work and concentrated on creating their own products.

In their qualitative study, Burgeois and Boberg (2016) analyzed multiple interviews of high ability underachieving gifted learners. Student participants expressed indifference toward enjoying their time in school, especially during courses that focused on language arts, while still enjoying some competitiveness with their classmates (Burgeois & Boberg, 2016). Burgeois and Boberg (2016) also noted the adverse effects that manifested when extrinsic rewards where offered as motivation to complete work in which students did not feel engaged. The authors advised teachers and parents to place less emphasis on grades students received and minimize reward systems while engaging in authentic work (Burgeois & Boberg, 2016). Based on these findings, one may ascertain that they type of work connected to authentic assessments would meet the needs of underachieving gifted students while minimizing the known factors that promote disengagement.

Engagement Patterns by Academic Level. As gifted students age, engagement patters may vary (Bourgeois & Boberg, 2016; Reis & Greene, 2014). By incorporating authentic assessments into gifted education curriculum, educators may encourage the skills and behaviors needed for students to remain engaged with content and experience the type of intellectual challenge they desire (Bourgeois and Boberg, 2016).

Student Engagement in Middle School. Middle school students are often in a period of discovering how they fit into their world and where "plans for higher education and career considerations begin to take shape, [and] planting seeds for future aspirations seems appropriate" (Abbott, 2017, p. 34). It is during the middle years that gifted students

may be better engaged in the school experience when exposed to civic engagement and service learning (Abbott, 2017). Through service learning, gifted students may "apply knowledge and skills they learn in the classroom to solve real-life community problems and develop real-world services that benefit mankind" (Newman, Dantzler, & Coleman, 2015, p. 49). Because authentic assessments often required a community connection through which students had a real-world audience (Lee & Hannafin, 2016), middle school gifted students were likely to experience increased engagement as they fostered relationships outside of school that still pertained to academic and civic content. Newman, Dantzler, and Coleman (2015) supported this notion, as they found that gifted students experienced greater engagement after one year of completing authentic assessments that maintained a focus in civic responsibility. For middle school students, authentic assessments "make use of real examples, contemporary themes, live contexts and current data" (Brown, 2015, p. 3), all of which challenge and engage gifted learners.

   Student Engagement in High School. As gifted learners progress from middle to high school, engagement patterns continue to align with instruction and assessments that challenge students cognitively (Brigandi, Weiner, Del Siegle, Gubbins, and Little, 2018). At the high school level, Brigandi et al. (2018) noted that student engagement increased when

> the teacher integrated rigorous cross-curricular learning methodologies into classroom instruction, including creative and critical thinking; advanced research skills; written, oral, and visual communication skills; and how-to-skills, such as reading, writing, interviewing, surveying, and analyzing and organizing data (p. 297).

Because authentic assessments often encompass the use of the aforementioned skills (Brown, 2015), student engagement may likely increase when such assessments are employed at the high school level.

High school students also described the importance of mentor support in relation to increased engagement in the classroom (Brigandi et al., 2018). One key element in the successful implementation of authentic assessments was the use of an authentic audience (Lee & Hannafin, 2016), which can foster community connections between gifted students and mentors. As students researched and created products as part of an authentic assessment, mentors provided academic and non-academic supports that foster relationships between the student and community (Brigandi et al., 2018).

Wilson and Zoellner (2016) stated that "secondary students have greater background knowledge and more advanced schema than students at earlier educational levels" (p. 79); thus, they may benefit from the constructivist-based methods used in authentic assessments (Ertmer & Newby, 2013). Wilson and Zoellner (2016) also argued that high school "gifted learners are better able to make connections between concepts and apply previously learned knowledge to new situations" (p. 80) as they work at higher levels within an interest area. Authentic assessments may allow students to make interdisciplinary connections that align multiple content areas with areas of interest (Renzulli & Smith, 1984).

Furthermore, high school students often preferred having a choice in what type of product they could complete, as well as whether or not they worked individually or in a group (Waters, Smeaton, & Burns, 2004). Waters et al (2004) found that when high school gifted learners engaged in the authentic assessments process, students had higher

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levels of satisfaction with learning due to the option of collaborating with classmates, should they choose, and the opportunity to express creativity, which led to increased enthusiasm in the classroom. Matsko and Thomas (2014) also noted that gifted learners' intrinsic motivation increased with the use of authentic assessments, likely because such assessments "[present] a challenging activity, which enhances self-efficacy and feelings of competence" (p. 155).

Deficiencies in Literature

While current literature provided a wealth of knowledge pertaining to authentic and performance-based assessments in general, information relating to how such assessments affect engagement among gifted learners was limited. Also, current gifted education research tends to focus on assessments used in the identification process instead of assessments used by classroom teachers to determine understanding and mastery of curricular content. While educators typically used standardized aptitude or ability assessments to help determine whether or not a student qualifies for gifted education services, such assessments did not measure a student's actual or possible engagement or achievement in the classroom. Despite having assessment scores that depicted a student's innate ability, teachers of gifted learners could still struggle to understand how a student actively engages with content in the classroom.

Connections to constructivist theory and progressivism can be made when reviewing literature focusing on authentic assessment practices; however, connections to such theory and assessments are limited in the realm of gifted education (Kettler & Bower, 2017). It was the task of the researcher to make these connections by piecing together common themes in current research.

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Final Connections and Conclusions

Authentic assessments provided opportunities for gifted learners to engage with curricular content in a manner that suited their interests and preferred learning modalities (Renzulli and Smith, 1984) as they constructed knowledge through the creating of an individualized product. As authentic assessments often included a menu of product choices from which students can select, as well as options of working alone or in a group, gifted learners experienced increased feelings of satisfaction and engagement in the classroom when given autonomy in demonstrating competency of content (Waters et al., 2004). Additionally, the use of authentic assessments bridged the classroom to the community, as students worked with mentors and presented their products to authentic audiences (Lee & Hannafin, 2016). Recent literature supports an increase in student engagement as gifted learners create products that facilitate connections between content, community, and areas of interest.

CHAPTER 3: RESEARCH METHODS

Gifted learners often long for educational experiences that not only increase their understanding of curricular content but allow for meaningful connections to be made between that content and the student's understanding of their lives and communities. As gifted students are apt to question the importance of classroom material and the relevance of such information in their day-to-day existence, the use of authentic assessment practices was needed to provide ways in which teachers could engage learners through the assessment process. The use of authentic assessments may increase engagement among gifted learners, which may then lead to a number of positive outcomes, some of which may be increased achievement, fostered community connections, and gains in self-efficacy, among others. The goal of this research was to evaluate the first piece of this puzzle and determine whether or not student engagement does, in fact, increase with the use of authentic assessment opportunities in the classroom.

Purpose of the Study

The purpose of this study was to determine how gifted learners perceived authentic assessments in relation to engagement in the classroom. Authentic assessments may affect students' desire to demonstrate knowledge of subject matter when allowed to complete original products that aligned not only with their interests, but abilities and learning styles, as well.

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As teachers began to refocus their attention on differentiated assessments, students needed to become equally comfortable with tasks that gauge their academic knowledge, as well as their preferred methods for showing competency.

Significance

The significance of this study was cemented in the information gathered and utilized for current and future gifted learners and the teachers with whom they will work. Students were newly required to complete some authentic assessments as part of state assessment practices; however, guidance from the Department of Education (Virginia Department of Education, 2018) remained vague in some areas and teacher training in authentic assessments varied between divisions, grade levels, and courses. Students had become accustomed to assessment practices of the past, most of which reflected standardized, multiple-choice tests. Gifted students, especially, demonstrated boredom with these assessments and often became disengaged in class. As students began to choose assessment products that aligned with their preferred learning modality, as well as their content area, they could engage with information in ways different than what we have seen in the past two decades. By administering Likert-type surveys and conducting semi-structured interviews and classroom observations, I had the opportunity to obtain data that may then guide teachers as they strive to create assessments that not only solicit conceptual information from students but engage them throughout the assessment process.

Furthermore, theoretical connections were readily made to the study's problem of practice. Both constructivism and progressivism were reflected, as main tenets of each theory aligned with the conceptual basis of authentic assessments. As gifted learners

expressed their understanding of curricular content by creating and sharing original products, they were able to fully experience knowledge instead of methodically process information (Lee & Hannafin, 2016). Students identified as gifted required activation of both cognitive and affective domains through learning and assessment, which was also addressed when given the opportunity to construct meaning by creating authentic products (Wilson & Zoellner, 2016).

Ethical Considerations

This study was approved by the IRB, as well as the participating school division, before any part of the research process took place. Research participants included children who were identified as gifted. Those children and their parents may have felt that if they declined to participate in the study, their gifted education services in the school might be affected. This was addressed in the purpose and participation information given to participants and their legal guardians. Due to the mixed-methods nature of the study, including the use of survey responses and semi-structured interviews, all participants' identities were protected. Student identifying information, such as names, were removed and numerical identifiers assigned. Children in the study needed parental consent or assent depending on their age. With this being said, recruiting participants for the study took place earlier than usually planned in order to reach all participants, parents, and/or guardians.

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Research Questions

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For the purpose of this study, the following research questions were used to guide inquiry and data analysis:

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1. Does the use of authentic assessments in lieu of traditional multiple-choice assessments increase student engagement among identified gifted learners?

2. How do students perceive authentic assessments as an alternative to traditional assessments?

Research Design

The mixed-methods, action research conducted reflected grounded theory (Creswell & Creswell, 2018), as intent of this study was to discover how gifted students perceive levels of engagement in relation to authentic assessments. Action research was likely the most appropriate method, as the desired end results should directly benefit students. Herr and Anderson (2015) described the action research cycle as one in which the researcher plans to improve current practices, acts on said plan, observes the actions, and reflects on findings in a way that may foster additional actions. Whereas traditional research intended to strengthen an existing body of knowledge pertaining to topics and trends, action research created meaningful change for those who currently practice and participate in education.

Furthermore, this study utilized a mixed-methods approach in which both quantitative and qualitative instruments were used to gather multiple forms of data. Creswell (2014) stated that "all methods [have] bias and weaknesses, and the collection of both quantitative and qualitative data [neutralizes] the weaknesses of each form of data" (p. 43). By collecting quantitative data through Likert-type surveys, I obtained information that lead to specific understandings of student engagement; however, semi-structured interviews and observation notes provided deeper knowledge of why student engagement was impacted with the use of authentic assessments. The explanatory

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sequential mixed methods (Creswell, 2014) structure of this study allowed for the qualitative data to further support or explain quantitative data mined from survey results.

As I studied student engagement with authentic assessments, I may be further able to assist classroom teachers in the future as they implement assessment strategies that are vastly different from the state standardized tests of prior years. As students become more engaged with content as a result of creating authentic products, they may also demonstrate more thorough content mastery. As this cycle exhibited constructive results, students received and will continue to receive the positive benefits of the action research.

Rationale for Selected Methodology

Throughout this study, both qualitative and quantitative methods best allowed for the collection of data from the use of authentic assessments with gifted learners. Students who constructed and demonstrated meaning by creating individualized products were able to share why authentic assessments impact how engaged they were with the learning process. Using Likert-type surveys, I was able to quantify how students felt when completing traditional and authentic assessments. Additionally, interviews and observations allowed me to construct a narrative that described how gifted learners' engagement was impacted by assessments in the classroom. This narrative may prove beneficial as I work with teachers in the future as they continue to further implement authentic assessments in their classes.

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Context and Setting of the Study

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This research project took place in Washington County, Virginia, which contains the town of Abingdon, areas adjacent to the City of Bristol, and surrounding rural areas. Currently, Washington County Virginia Public Schools serves just over seven thousand

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students in grades pre-kindergarten through twelve. About seven hundred thirty identified gifted students were served in Washington County during the 2019-2020 school year, as the target population was contained in a relatively small school division. The majority of student and teacher demographics reflected the overall county population, which is mostly Caucasian, and socio-economic diversity was more prevalent than racial diversity (United States Census Bureau, 2018). The student population of the study consisted of middle and high school students who attended Washington County Virginia Public Schools and were identified as gifted learners. Students in the randomly selected pool received invitations as the study began during the second half of the fall semester of the 2019-2020 school year. Data collection began during the second semester of the 2019-2020 school year. Those who were selected to participate in the research consisted of identified gifted middle and high school students; thus, the sample for this study was purposeful.

Student Participants and Demographics

During the 2019-2020 school year, five hundred seventy-three students in grades six through twelve were identified as gifted. From that population, fifty students were initially selected using a random number generator (Random.org, 2019). A second selection of fifteen students was made following a limited response to initial invitations to participate in the study. Overall, sixteen out of sixty-five students indicated that they wished to participate in the research project.

Of the seventeen students who initially agreed to participate, eight completed Likert-type surveys and five completed semi-structured interviews. Shortly after students responded to the initial agreement, public schools in Virginia were closed for the

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remainder of the 2019-2020 academic year due to the Covid-19 pandemic. While surveys had always been planned for administration via the Google Education platform, student interviews had to transition from in-person to virtual, as well. Interview questions were listed in a Google form, where participants had the opportunity to complete long-answer narratives for each. Due to many of our students having limited internet service, appropriate bandwidth for streaming services, and/or available devices, the number of final participants dwindled. The final group of five students who participated came from various home environments and socio-economic backgrounds. One student was also flagged as disadvantaged for state reporting in the student information system. The demographic profiles of the five final participants are listed in Table One. This group of participants and their demographics was a fair representation of the overall population of gifted learners in Washington County.

Table 3.1: *Student Participant Profiles*

Student	Age	Grade Level	Gender	Race	VA Disadvantaged Flag
1	14 years	8th	Female	Caucasian	No
2	16 years	10th	Female	Hispanic	No
3	12 years	6th	Male	Caucasian	No
4	12 years	6th	Female	Caucasian	Yes
5	17 years	11th	Female	Caucasian	No

Role of the Researcher

As an educator who has been employed in the division for nineteen years, I have served our students and teachers in both instructional and administrative roles. Currently, I serve as the coordinator of Gifted Education programs in my school division. I am in a unique position as I am based out of a central office that serves sixteen schools, each with

its own unique climate. Depending on the school and the relationships that I have formed with teachers and students, I may have been viewed an outsider in one school and an insider in another (Herr & Anderson, 2015). Furthermore, I may have been seen as an insider by students, but an outsider by teachers, or vice versa. Additionally, some students may have felt more comfortable around me due to my working with them during summer enrichment programs for our division's gifted learners. Ultimately, I was an organizational insider who collaborates with other insiders to study instructional and assessment practices within our division (Herr & Anderson, 2015).

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Data Collection Instruments and Methods

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Quantitative: Likert-type Surveys

During this action research project, participating students answered a two-part, Likert-type survey (Efron & Ravid, 2013). The purpose of this survey was to gauge how engaged students felt when completing traditional multiple-choice assessments, as well as determine student engagement when participating in authentic assessments. The first part of the survey, which addressed multiple-choice tests, measured student impressions of such assessments. The second portion of the survey focused on how students are engaged when participating in performance-based, authentic assessments. The survey questions are contained in the table below.

Table 3.2: *Likert-type survey statements*

Multiple Choice Assessments	Authentic Assessments
Multiple choice assessments allow me to show everything I have learned about a topic.	Authentic assessments allow me to show everything I have learned about a topic.
Multiple choice assessments allow me to be creative.	Authentic assessments allow me to be creative.

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Multiple choice assessments are interesting to me.	Authentic assessments are interesting to me.
Multiple choice assessments make me want to learn more about a topic.	Authentic assessments make me want to learn more about a topic.
Multiple choice assessments are the best way for me to show what I have learned.	Authentic assessments are the best way for me to show what I have learned.
Multiple choice assessments are easy for me to complete.	Authentic assessments are easy for me to complete.
I often remember the material on multiple choice assessments long after I have taken a test.	I often remember the material on authentic assessments long after I have taken a test.
Multiple choice assessments will prepare me to use information in the real world.	Authentic assessments will prepare me to use information in the real world.
Multiple choice assessments help me further understand the topics I study.	Authentic assessments help me further understand the topics I study.
Multiple choice assessments are challenging for me.	Authentic assessments are challenging for me.

At the beginning of the study, a two-part Likert-type survey (Efron & Ravid, 2013) was administered to students via Google Forms. Within the school division, students had access to personal Chromebooks through a One-to-One technology initiative (Washington County Public Schools, 2016). The use of the Google Education suite throughout the school system allowed for easy creation, dissemination, and submission of survey data without incurring additional costs. The initial portion of the survey determined baseline data regarding how engaged students were with current assessment practices. These practices consisted mostly of multiple-choice assessments. Clear instructions for completion accompanied the questions. Surveys had predetermined questions that gauged interest level in assessments, amount of effort applied during

completion of assessments, amount of content retained after assessments, and overall satisfaction with both multiple choice tests and the creation of original products through the authentic assessment process.

At the time of the survey, some students had begun to participate in authentic assessments. All selected students began or continued to demonstrate content mastery through the use of authentic assessments over the course of the nine-week time frame during which the study was conducted. The use of a survey was preferable in this situation as it provided an understanding of how different assessment practices impact student engagement, especially within a nine-week grading period. The grading period was a relatively short time in which an expeditious collection of data could benefit teachers as they then plan for subsequent curriculum units (Creswell & Creswell, 2018). Should the study have shown a marked increase in student engagement, I could be better equipped to guide teachers as they incorporate additional authentic assessment opportunities for students going forward.

Quantitative Instrumentation. The surveys completed by all participants were distributed via Google Forms, as all students in Washington County had access to a division provided secure Google Education email account, as well as the full Google suite (Washington County Public Schools, 2016). The student submission of the forms was kept completely confidential; however, overall results were tabulated based on each submission.

Instrument Validity. The use of Google Forms may not be ideal for some research, yet this tool was available to all students and teachers in the division where research was conducted. All survey results and corresponding data were automatically

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saved on my Washington County Public Schools Google account, which can be accessed only through my personal secure sign-on. Paper copies of all results were also kept in a locked file cabinet in the Washington County Public Schools' Central Offices.

Instrument Reliability. The Google suite used by Washington County Public Schools was administered through the division's technology department. When students used their Washington County Public Schools email and Google account, the information collected through each survey form was secure. Surveys were sent from the researcher's Washington County Public Schools Google email account to approved, division-administered student email addresses. All results were compiled through Google Sheets, which were only visible to the researcher through the division Google account. An Excel spreadsheet version of the Google Sheet was also saved on an external drive and stored in a secure location. When using the division administered Google Education Suite, all survey information and data were found to be reliable.

Qualitative: Interviews

Throughout this study, semi-structured interviews were used. Interviews were conducted after the administration of the survey and after students had begun to participate in the authentic assessment process. Predetermined questions were asked of all participants in virtual interviews via open ended Google form questions due to school closings for COVID-19; however, students were allowed to elaborate on any question that prompted further thought or comment. The questions were created as a mean to elicit feedback pertaining to authentic assessments.

Interview questions asked of students focused on gathering information about what types of assessment activities were most interesting for each individual. Students

were asked to provide their thoughts about multiple-choice assessments versus authentic assessments. Students were also asked about how they best like to learn, how much effort they placed on preparing for various kinds of assessments, and how different types of assessments helped or hindered their ability to show mastery of curricular concepts. Interviews were also a preferable method of data collection, as the transcripts from each interview provided better understanding of and reflection on student opinions related to authentic assessments. Overall, student interview questions gauged perceptions of engagement as they are tied to assessments.

Qualitative: Observations

Classroom observations were conducted (Efron & Ravid, 2013; Creswell & Creswell, 2018) as teachers implemented and students completed authentic assessments. A middle school English Language Arts classroom, a middle school science classroom, and a high school English Language Arts classroom were observed for a combined total of four visits. Field notes that detailed student behaviors, as well as any other pertinent, observable details, were recorded. I made note of how I perceived student engagement with different assessment models and looked for changes in such behaviors as students completed authentic assessments.

While the focus of my classroom observations was on gifted students, the overall classroom climate was noted. The class period, time of day, teacher behaviors, classroom set-up, and established classroom procedures were all likely to have impacted behaviors in each class and may have affected how some students displayed their interests in assessments.

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Variables in the Study

Throughout the course of the study, two parts of a survey were used. The first section of the survey assessed student engagement pertaining to multiple choice assessments, while the second survey section measured student engagement pertaining to authentic assessments, in which students created authentic products as means of demonstrating content mastery. The dependent variable was the levels of student engagement, while the independent variable was the type of assessment practice used in the classroom.

Research Procedures

Before beginning the distribution of surveys or conducting observations or interviews, IRB approval, as well as the approval of the Washington County Virginia Public Schools local school board, was obtained. All students and parents/guardians of students selected to participate received a detailed description of the intent of the research, as well as written assurance that participation or refusal to participate in the study will not affect a student's gifted education services. Parents/guardians provided written permission for their child to participate in all interviews. Students also provided signed assent. All participants had an ongoing opportunity to withdraw from the study at any time, should they choose.

This research utilized Likert-type surveys, semi-structured interviews, and classroom observations during the course of the study to determine if authentic assessments increased engagement for students who are identified as gifted learners. Students completed an initial survey to gauge engagement levels pertaining to assessment practices. Classroom observations were then conducted as teachers utilized varied

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assessment practices, notably during the implementation of authentic assessments. Once authentic assessments had been completed by students and evaluated by their teachers, I conducted student interviews in order to glean an understanding of students' perceptions of how authentic assessments affected their engagement in class. Interview transcripts and observation data were coded, grouped into categories, and analyzed to determine student engagement patterns (Efron & Ravid, 2013).

Data Analysis

As this study utilized a mixed-methods approach, analysis of all quantitative and qualitative data sources were conducted separately, while triangulation took place to connect the sources of essential knowledge mined from the overall findings. The following sections will describe data analysis for each type of instrumentation.

Quantitative Data Analysis and Interpretation

Likert-type Surveys. From the fifty students randomly selected as participants, the number of completed surveys submitted were reported, along with overall percentages of respondents (Creswell & Creswell, 2018). Once survey results were compiled, a t-test (Efron & Ravid, 2013) compared the mean of both sections of the survey to determine if there was a difference in the results. Should survey results have indicated that student engagement increased with the use of authentic assessments, teacher practice would likely have been affected for subsequent grading periods.

Qualitative Data Analysis and Interpretation

Semi-structured Interviews. Semi-structured interviews were recorded through Google forms. As I reviewed each interview, notes were made pertaining to each interview transcript in order to connect interview material to larger themes. Key words

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were utilized as initial themes emerged and appearances of key words were tallied to maintain a running record of theme emergence. Member checks were incorporated at the end of each interview form submission to ensure that the notes accurately detailed the information meant to have been conveyed by each student participant. In addition to researcher notes, transcript data were analyzed with the qualitative analysis software QDA Miner Lite (Provalis Research, 2019). Pertinent themes were mined from interview transcripts and displayed in a tree-like graph that allowed for dissemination of student beliefs regarding authentic assessments and how such assessments impacted their engagement with course content.

Classroom Observations. As I conducted classroom observations, detailed field notes were collected. I then uploaded field notes into QDA Miner Lite (Provalis Research, 2019) in order to identify and classify common themes that became evident. Observation notes were used to reinforce and substantiate any findings that emerged from survey data and/or interview transcripts. Classroom observations also allowed me to pinpoint any anomalies that may have taken place during instruction that could have impacted the results found in survey answers or interview transcripts.

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Conclusion

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In order to understand not only what students felt about certain types of assessments, but how such assessments may impact student engagement, a mixed-methods study provided valuable insight to these issues. Students answered a Likert-type survey via Google Forms using their secure Washington County Public Schools Google Education account. Students also participated in semi-structured interviews, in which they were able to further explain how the use of certain assessments impacted their

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engagement in class and with course content. Classroom observations allowed nuances to be seen that may further explain how assessments impacted student engagement. Through the course of triangulating data that was found, I may be better able to assist teachers as they develop a deeper understanding of how assessments influence student engagement.

CHAPTER 4: RESEARCH AND FINDINGS

This research study focused on the impact authentic assessments have on student levels of engagement among a population of gifted learners. Through the use of both quantitative and qualitative methods, I hoped to determine how authentic assessments influence gifted learners' perception of their level of engagement in middle and secondary school classes. As teachers transitioned from traditional, multiple-choice assessments, levels of student engagement may have increased as authentic, performance-based assessments were incorporated into core curriculum. Based on this information, the following research questions were formulated:

1. Does the use of authentic assessments in lieu of traditional multiple-choice assessments increase student engagement among identified gifted learners?

2. How do students perceive authentic assessments as an alternative to traditional assessments?

Gifted learners often thrive in situations in which they can express elements of creativity and choice of products as they demonstrate their mastery of content knowledge. Authentic assessments may provide gifted learners with such opportunities; however, gifted students also struggle when presented with tasks that require extensive effort, as these students often succeed on surface levels with minimal attention or effort. Authentic assessments may present as challenging assignments to gifted learners who, in prior situations, have not put forth dedicated effort toward showing their understanding and application of knowledge.

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Research Strategy

This study utilized a mixed-methods design, as research participants answered Likert-type surveys, as well as semi-structured interview questions. Classroom observations were also conducted in an effort to triangulate findings. While answers to survey questions provided quantitative measurements of students' engagement during certain types of assessments, answers to interview questions and notes from classroom observations offered qualitative understandings of data gathered throughout the study process.

From the population of gifted students in grades six through twelve in Washington County Virginia Public Schools, fifty students were randomly selected. Utilizing PowerSchool, the student information system (SIS) database used in Washington County, the five hundred and seventy-three students in grades six through twelve identified as gifted in the division were placed in a list. Student demographic information was exported in alphabetical order from PowerSchool using an Excel spreadsheet. From there, fifty students were randomly selected using the random number generator at Random.org (2019). Each of these students, as well as their parents/guardians, received invitation and permission to participate letters. These letters were distributed via the students' Washington County Public Schools secure emails and the parent/guardian emails listed in each student's PowerSchool record. Recipients of the letters were directed to click on a link to a Google form that recorded which invitees wished to participate. Out of the initial fifty invitations, twelve students indicated that they were interested in participating in the study. After a week-long wait, fifteen more students were randomly selected from the study population. These students and their

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guardians also received invitation and permission letters via secure email. From those fifteen additional students, four indicated that they were willing to participate in the study, bringing the total number of initial study participants to sixteen.

Quantitative Data Collection

The sixteen students who indicated permission and willingness to participate in the research study received a Likert-type survey via a Google Form sent to their secure Washington County Public Schools email account. From the initial sixteen students, eight students agreed to complete the survey and share their perceptions of different types of assessment practices. These students answered an initial survey regarding multiple-choice assessments, followed by a survey about authentic assessments. Each survey contained ten questions intended to gauge students' levels on interest in the assessment itself, the content the assessment measures, the levels of difficulty and creativity allowed in each type of assessment, and the amount of effort put forth by students when completing assessments.

Qualitative Data Collection

The eight students who completed the Likert-type surveys were sent semi-structured interview questions via a free response Google form upon closure of schools due to the Covid-19 pandemic. Five students agreed to continue to participate and completed the interview. The interview questions sought to determine how students perceived their levels of engagement while completing different types of assessments. Students were also able to express how they chose to study or prepare for certain types of assessments, as well as how much effort they put into completing assessments and how much information they felt they retained relative to assessment type.

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Additionally, middle school and high school classroom observations were conducted while students were working on and/or presenting authentic assessments. Detailed notes were collected during each observation, in order to gather data pertaining to student attention and behaviors, as well information pertaining to the overall classroom climate. These notes provided details to supplement findings from both surveys and interviews.

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Findings

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Data collected through both quantitative and qualitative instruments was reviewed to determine how findings related to the problem of practice and the research questions. Initially, participants demonstrated increased engagement with the use of authentic assessments. These discoveries, however, were nuanced in how student engagement increased at particular grade levels and across certain subject areas. Additionally, gifted learners who participated in the study readily admitted shortcomings in their study skills, preparation for assessments, and general interest in curricular concepts. The use of authentic assessments and whether or not they increased levels of student engagement was not something that can be easily determined through action research within a small school division; however, the findings of this study may significantly impact how Washington County Public Schools moves forward in assessing students' proficiency in content area and how gifted learners are served in the classroom.

Quantitative Analysis

Two Likert-type surveys were administered to students who participated in the study. At the beginning of the study, students responded to statements that gauged their levels of interest and engagement with multiple-choice assessments. Following the

implementation of authentic assessments in certain courses, students then responded to similar statements pertaining to such assessments. Within each survey, students rated the degree to which they agreed with each statement. The response choices were assigned a point value as follows: Strongly Disagree-1 point, Disagree-2 points, Neutral/No Opinion-3 points, Agree-4 points, Strongly Agree-5 points.

Upon initial review of the means of each question, one could see a rather large difference in the second, sixth, and eighth questions on the surveys. The second question required students to indicate the level to which assessments allow them to be creative. The mean score for multiple-choice assessments was 2.265, while the mean for authentic assessments, 4.0, was considerably higher. This may have signified that students express their understanding and mastery of content in a more creative manner when completing authentic assessments. The sixth question asked students to rate the ease at which they could complete multiple-choice and authentic assessments. The mean score of the question pertaining to multiple-choice assessments was 4.125, while the mean for authentic assessments was 3.25. This suggested that gifted students feel that authentic assessments are more difficult to complete than their multiple-choice counterparts. The eighth question measured the degree to which students felt each type of assessment would prepare them for the future. The mean score of the multiple-choice survey question was 2.875, which was arguably lower than the score for authentic assessments at 3.75. This may have indicated that gifted students believe that authentic assessments will better prepare them to use content knowledge in the future.

Likert-type Questions Pertaining to Multiple-Choice Tests. Ten statements addressing multiple-choice assessments were included in the first part of the Likert-type survey. The table below details each question, as well as the mean score for student responses.

Table 4.1: *Multiple-choice Assessment Survey Results*

Question	Mean Score
1. Multiple choice assessments allow me to show everything I have learned about a topic.	3.25
2. Multiple choice assessments allow me to be creative.	2.625
3. Multiple choice assessments are interesting to me.	3.25
4. Multiple choice assessments make me want to learn more about a topic.	2.5
5. Multiple choice assessments are the best way for me to show what I have learned.	3.125
6. Multiple choice assessments are easy for me to complete.	4.125
7. I often remember the material on multiple choice assessments long after I have taken a test.	3.25
8. Multiple choice assessments will prepare me to use information in the real world.	2.875
9. Multiple choice assessments help me further understand the topics I study.	3.215
10. Multiple choice assessments are challenging for me.	2.0

Likert-type Questions Pertaining to Authentic Assessments. Ten statements

related to authentic assessments were included in the second part of the Likert-type

survey. The table below details each question, as well as the mean score for student

responses.

Table 4.2: *Authentic Assessment Survey Results*

Question	Mean Score
1. Authentic assessments allow me to show everything I have learned about a topic.	3.875
2. Authentic assessments allow me to be creative.	4.0
3. Authentic assessments are interesting to me.	3.375
4. Authentic assessments make me want to learn more about a topic.	2.75
5. Authentic assessments are the best way for me to show what I have learned.	3.25
6. Authentic assessments are easy for me to complete.	3.25
7. I often remember the material on authentic assessments long after I have taken a test.	3.375
8. Authentic assessments will prepare me to use information in the real world.	3.75
9. Authentic assessments help me further understand the topics I study.	3.375
10. Authentic assessments are challenging for me.	2.875

T-test Results. A two-tailed T-test was conducted using the mean scores from each question in both Likert-type surveys. Online software from Mathportal (2020) was used in conducting the t-Test and calculating the quantitative data. Upon completion of the test, it was found that the P value equaled 0.0836. While some questions contained marked differences in mean scores, others did not. Overall, the difference found in this T-test was considered to not be statistically significant. Furthermore, the mean of "Multiple Choice Assessments" questions minus "Authentic Assessments" questions equaled -0.37500. A ninety-five percent confidence interval for this difference ranged from -0.81103 to 0.06103. The table below further details the results of the t-Test.

Table 4.3: *T-Test Results*

	Multiple-Choice Assessments	Authentic Assessments
Mean	3.0125	3.3875
Variance	0.321	0.1613
Standard Deviation	0.5666	0.4016
n	10	10
t	-1.9456	
degrees of freedom	9	
critical value	2.262	

*$p < .05$, two-tailed

Qualitative Analysis

Participants in the research study completed semi-structured interviews, in which they gave their opinions regarding different types of assessment practices, particularly multiple-choice and authentic assessments. While the questions were the same for each participant, students were allowed to provide answers as in-depth as they chose, as well as elaborate on any question as they saw fit. Interview transcripts were uploaded into QDA Data Miner Lite (Provalis Research, 2019) and pertinent themes were identified.

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Codes were assigned to each transcript and coding frequencies were calculated to determine overall participant attitudes toward assessment practices.

Classroom observations were also conducted at the middle and secondary levels. In each observation, students were immersed in some type of authentic assessment process. Notes were recorded that detailed the activity of the students, as well as the overall classroom environment and actions of the teachers. Upon completion of these observations, notes were also uploaded into QDA Data Miner Lite (Provalis Research, 2019). Codes were assigned to the themes that presented themselves and coding frequencies were calculated, as well.

Overall, the qualitative data gathered throughout this portion of the study addressed the first and second research questions, in which participants indicate how they perceive authentic assessments in relation to multiple-choice assessments. Student interview data were reviewed in relation to classroom observations in order to best determine how students perceive different assessment types, as well as how those perceptions may be influenced by classroom environments.

Student Interviews. Once surveys had concluded, participants were given the opportunity to complete a semi-structured interview. Sixty-three percent of the initial participants agreed to complete an interview, which due to unforeseen school closures, were conducted via Google Forms. Participants were presented with thirteen questions, along with directions for completion, and were permitted to respond to each question with as much depth as they chose. The interview questions are as follows:

1. Tell me the school you attend. What is your current grade level?

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2. What do you think about multiple choice assessments? Do you enjoy completing these tests? Why or why not?

3. What do you think about authentic assessments? These are assessments where you have a choice in what you create. Have you been able to complete an authentic assessment in any of your classes? Do you enjoy completing these assessments? Why or why not?

4. Tell me about how you prepare for a multiple-choice assessment. Do you study beforehand? If so, how do you study?

5. Tell me about how you prepare for an authentic assessment. Do you study beforehand? If so, how do you study?

6. Describe what happens to the information you have learned after you complete a multiple-choice assessment. Do you remember this information for a long time? Do you understand how to apply this information in the real world?

7. Describe what happens to the information you have learned after you complete an authentic assessment. Do you remember this information for a long time? Do you understand how to apply this information in the real world?

8. How much attention do you pay to multiple choice assessments?

9. How much attention do you pay to authentic assessments?

10. How do multiple choice assessments make you feel about learning more about a topic?

11. How do authentic assessments make you feel about learning more about a topic?

12. How do you think teachers could use assessments of any kind to improve what and how students learn?

13. Is there anything else you would like to tell me about how you feel about

assessments?

Each participant's responses to the interview questions were saved in a Microsoft

Excel spreadsheet and then uploaded into QDA Data Miner Lite (Provalis Research,

2019). Each participant was assigned a numeric identifier and their transcript was coded.

Several themes related to the use of assessments emerged throughout the analysis of

student interviews. These themes had both positive and negative connotations, depending

on whether gifted learners were discussing multiple-choice or authentic assessments.

Ease of Completion. When asked about multiple-choice assessments, all

participants stated that they found these assessments easier to complete when compared

to authentic assessments. However, all respondents also noted that they do not study or

prepare in any way for most assessments. The nature of authentic assessments required

students to read, research, and prepare an original product, which was something the

gifted learners interviewed had not regularly done in the past. Due to the amount of work

required to complete an authentic assessment, several participants believed that such

assessments were more difficult. Middle school students, in particular, noted that multiple

choice assessments were often preferable due to the level of ease necessary for

completion. Student One and Student Three both stated that having options from which to

choose made selecting the correct answer easy, especially if they were unprepared for the

assessment. Students at the high school level were more detailed and insightful in their

responses to multiple choice assessments. When asked about whether or not they enjoy

multiple choice assessments, Student Five commented "I think multiple choice

assessments have their place in most classes and if the teacher sets them up right they are

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a good measurement of the material we learned. I wouldn't say I enjoy completing them, but I don't mind them in moderation." While middle school students recognized multiple-choice assessments allowed for easier completion, high school students understood that such assessments should be used in moderation and have little impact on a student's application of content to real-world situations.

  Retention of Material. Participants also discussed how likely they were to retain curricular material upon completing different types of assessments. Most students believed that they better retained knowledge after they were able to complete authentic assessments. Only forty percent of participants stated that they remembered information assessed with multiple-choice tests, while sixty percent stated that they did not retain content from such tests. Student Two, a high school gifted learner, addressed retention of material covered on multiple-choice assessments by stating "I can only retain this information for a short period of time if it is not reviewed. I often have no idea how this information is applicable in real world situations." Middle school participants described some initial frustration with authentic assessments because they perceived these assessments to be difficult in nature; however, when asked about retention of content, Student One stated "I usually remember it because I have to prepare more."

  Engagement with Content. Gifted learners also described how engaged they were with curricular content throughout the assessment process. All participants stated that they paid attention to and were engaged with curricular material that was evaluated with authentic assessments. Sixty percent also stated that they retained material covered in authentic assessments once the evaluation process is complete. However, sixty percent of

participants believed that authentic assessments were overly difficult, but only twenty

percent noted that they made efforts to prepare before completing the assessment.

Student Two, a high school student, added "I will be more likely to understand

and remember the information and sometimes understand how it is applied." Student

Two also noted "Teachers could use different assessments other than multiple choice to

force students to have a deeper understanding of their work." While the gifted learners

interviewed acknowledged that authentic assessments may be more difficult for them to

complete, they demonstrated an understanding of how such assessments promote

retention, understanding, and application of curricular content.

Tree	Table	Count	% Codes	Cases	% Cases
Multiple Choice-Positive					
• Prepare and Study		2	3.1%	2	40.0%
• Easier		7	10.8%	5	100.0%
• Engaged		5	7.7%	4	80.0%
• Retention		2	3.1%	2	40.0%
Authentic Assessment-Positive					
• Easy/Creative		2	3.1%	1	20.0%
• Study/Prepare		2	3.1%	1	20.0%
• Pay Attention/Engaged		12	18.5%	5	100.0%
• Retention of Material		6	9.2%	3	60.0%
Multiple Choice-Negative					
• Do Not Study/Prepare		7	10.8%	5	100.0%
• No Retention of Material		6	9.2%	3	60.0%
Authentic Assessment-Negative					
• Difficult		5	7.7%	3	60.0%
• No Retention		4	6.2%	2	40.0%
• No Study/Preparation		5	7.7%	4	80.0%

Figure 4.1: *Student Interview Transcript Coding Frequency*

Note. Image shows coded themes and the frequency with which they appear in the

document.

Classroom Observations. During the course of the research project, three

different classes were observed, including two middle school classes and one secondary

class. At the beginning of the research project, I sent an email request to middle and high

school teachers who were using authentic assessments with gifted learners in their

classroom. In this email, I gave a brief overview of my research project and asked that I

be allowed to observe in their classes. Three teachers responded to this request and subsequently invited me to observe in their classrooms. The middle school observations took place in an English Language Arts class and a Science class. I was allowed to observe the ELA class once and the Science class twice, during which I was able to see not only the planning and research that took place during the authentic assessment process, but product presentations, as well. I also observed product presentations in a high-school honors English class. After all observations were complete, notes were uploaded into QDA Data Miner Lite where themes pertaining to authentic assessments were coded. Like the data gathered from student interviews, several themes emerged from classroom observations. Those themes are outlined below.

Student Engagement with Content. Throughout each classroom observation, I observed students actively engaged in curricular content. Eleven notations pertaining to student engagement were recorded over the four different observations. Seven different notations detailed how the classrooms were bustling with classroom activities that included students working in groups, speaking with peers and their teacher, and conducting independent research at various paces. There were five different notations of students' expression of how authentic assessments were challenging, mostly occurring at the middle school level. Middle school gifted learners also demonstrated excitement in their ability to choose what type of product they would create during the assessment process. However, at the secondary level, students expressed that they put forth minimal effort of such assignments, as these comments were noted four different times. Those students who did go above and beyond the minimal requirements of the authentic assessment demonstrated a high degree of self-motivation.

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One gifted learner, who I will call Matthew, was a sixth-grade student who was working on a project centered around the science Standard of Learning that pertained to living systems (Virginia Department of Education, 2019). Matthew was fixated on learning the different zones of life throughout the depth of the Atlantic Ocean. As Matthew conducted independent research, he eagerly gathered information about what animals and organisms lived at different depths. He saved numerous pictures, watched videos and documentaries, and kept a fact journal. Upon completion of his authentic assessment, Matthew had created a three-dimensional model of the depth zones of the ocean, complete with smaller models of the living creatures in each zone. To accompany his diorama, Matthew had created an iMovie that served as an instructional video for his classmates. As part of the presentation process, Matthew was able to share his work with high school science teachers, all of whom were impressed with his enthusiasm for the topic, as well as his understanding of this curricular content.

Teacher-Student Relationships. At the middle school level, teachers' guidance of their students, along with the overall classroom climate created by parameters in which the students worked, seemed to create a higher standard of expectations for students; however, the middle school teachers also provided significantly more input toward and control of the products created by students during the assessment process.

Students in the middle school ELA class demonstrated visible comfort in their classroom environment. As students entered the class, their teacher, who I will call Ms. Moore, greeted each of them and asked questions about their day. After a short introductory lesson, students began working on their digital products and Ms. Moore made her way throughout the classroom, chatting with each group of students. While Ms.

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Moore had clear expectations, rules, and procedures, her classroom oozed with positive energy. She allowed students to talk among one another as they worked, as well as openly talk with her. Ms. Moore's warm demeanor, coupled with her visible interest in her students as individuals, seemed to make her gifted learners feel at ease in her classroom.

The teacher in the middle school science class, who I will call Mr. Adams, also demonstrated positive relationships with all of the students in his class. He would ask students questions about their research and projects while giving them ample wait time as they pondered their answers. Mr. Adams often spoke with students individually and posed questions to them that required additional research. Student responses were praised, not specifically for the answers themselves, but for the thought and inquiry each student put toward their response. Students eagerly welcomed Mr. Adams' fist bumps and words of encouragement and affirmation. Matthew, the student discussed earlier, expressed during his presentation how the support he received from Mr. Adams made him want to go beyond the basic requirements of the assessment. Matthew knew that with Mr. Adams' support, he could investigate his topic beyond the scope of the sixth-grade standards, resulting in a remarkable authentic product and memorable assessment process.

	Count	% Codes	Cases	% Cases
Authentic Assessment				
Engagement	11	30.6%	1	100.0%
Retention	2	5.6%	1	100.0%
Challenging	5	13.9%	1	100.0%
Teacher Guidance	4	11.1%	1	100.0%
Active/Classroom Activity	7	19.4%	1	100.0%
Minimal Effort	4	11.1%	1	100.0%
Self-Motivation	3	8.3%	1	100.0%

Figure 4.2: *Classroom Observation Notes Coding Frequency*

Note. Image shows coded themes and the frequency with which they appear in the

document.

Analysis of Data Based on Research Questions

Throughout the course of this study, two driving questions guided all research.

The research questions for this study were as follows:

1. Does the use of authentic assessments in lieu of traditional multiple-choice
   assessments increase student engagement among identified gifted learners?

2. How do students perceive authentic assessments as an alternative to traditional
   assessments?

The collection and analysis of both quantitative and qualitative data allowed for students

to objectively identify how they engage with content when using two different

assessment types, as well as detail the nuances of personal opinion and environment that

may influence student levels of engagement. Quantitative survey data gathered through

the administration of two Likert-type surveys was compared by finding the mean score

for each question, followed by a t-Test to determine statistical significance. Qualitative

data were gathered through semi-structured interviews with students and notes taken

during several classroom observations. Interview transcripts and observation notes were

coded to determine pertinent themes, which may support the findings in the quantitative

analysis. Furthermore, qualitative data may also indicate ways in which teachers can alter or improve assessment practices in order to increase student engagement among gifted learners. Upon initial analysis, quantitative data provided information related to the first research question, while qualitative data applied to the first and second question.

Review of Quantitative Findings

While the two-tailed t-Test did not determine a statistical significance in the answers of the two survey sections, detailed review of the mean scores for each question provided some insight to how engaged gifted learners feel with multiple-choice and authentic assessments. Specifically, those students who participated in this research study indicated that they felt authentic assessments allowed them to demonstrate creativity while showing content mastery. The students also stated that they felt better prepared for using curricular content in the future after completing an authentic assessment. This may be due in part to the perceived difficulty of authentic assessments and the amount of effort gifted learners applied when completing such assignments.

In relation to the research questions of this study, the quantitative findings addressed the first question, which sought to determine if authentic assessments increased engagement among gifted learners. The results of the t-Test indicated that student engagement was not largely affected by the type of assessment administered. While the overall differences in the mean survey scores were not statistically significant, differences in three particular questions indicated that further investigation in the areas of how assessments prepare students for real life scenarios, as well as how assessments allow expression and development of creativity, may be beneficial. Additionally, because gifted learners may disengage from any activity that they deem uninteresting, the way in which

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authentic products were presented in the classroom may impact how students feel about such assessments.

Review of Qualitative Findings

By reviewing student interview transcripts and classroom observation notes, several findings came to light. Foremost, gifted learners paid more attention to and were more readily engaged with authentic assessments versus those presented in multiple-choice format. Gifted students were apt to retain curricular content that was covered in an authentic assessment process. Gifted learners who participated in the study unanimously agreed that multiple-choice assessments are easier than their authentic counterparts; however, participants also readily admitted that they did not study or prepare for most assessments, no matter the format in which they were presented.

The classroom setting in which students completed authentic assessments also seemed to play a large role in how students perceived each type of evaluation and the attitude they had in regard to demonstrating their competence. Students whose teachers provided consistent and firm structure, coupled with independent student work and constructive feedback, appeared to gain more from the authentic assessment process. These students demonstrated active engagement, positive interactions with the teachers and classmates, and deeper understanding of curricular concepts.

Gifted learners also demonstrated higher levels of engagement with subject matter that personally piqued their interest. During interviews, Student Three stated "I usually always remember math, science, and history, on the other hand language arts does not have the most of my interest, but now that we are having a project on the Iditarod, it has spiked my interest a bit." In order for students identified as gifted to experience optimum

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engagement during an assessment, the subject matter or choices of products for completion must align with their interests.

Research Question One

The first research question sought to determine if student engagement increased with the use of authentic assessments. Analysis of qualitative data, supported by the differences in the mean scores of three survey statements, indicated that student engagement rose when teachers implemented authentic assessments in their classroom. Matthew's visible excitement for learning required science standards, as well as the amount of attention paid to authentic assessments by gifted learners in all three classes observed, supported the determination that student engagement increased when given the opportunity to demonstrate their mastery of content in an authentic manner.

Additionally, Student Two and Student Five were particularly able to express during their interview that authentic assessments were more engaging, while they noted that how teachers used these assessments in the classroom often impacted their levels of interest. Student Five noted "I hardly retain information on the content of [some authentic] assessments because I am preoccupied with making it visually appealing in order to receive a good grade. Once again, it depends on the topic." Student Two stated "I will be more likely to understand and remember the information and sometimes understand how it is applied" depending on how each teacher utilized the authentic assessment process in their classroom.

Research Question Two

The second research question sought to understand how students perceived authentic assessments when compared to traditional, multiple-choice assessments.

Student interview feedback, in addition to survey responses, indicated that students believe authentic assessments are a preferable assessment method when utilized properly in the classroom. Student Five noted that some teachers grade for creativity versus content, which showed that some of their teachers had likely not been properly trained in the use of authentic assessments in the classroom. Student Two also indicated that authentic assessments may better prepare them for using content knowledge in the future, as they were more likely to retain that information compared to that which was evaluated via multiple-choice tests. In relation to how assessments are used in the classroom and what assessments were preferred, Student Two stated "teachers could use different assessments other than multiple choice to force students to have a deeper understanding of their work." While the gifted learners who participated in the research project noted that authentic assessments were often more difficult to complete, they were better able to retain and apply information when allowed to complete such assessments.

Supplemental Analysis of Data

During the research process, three types of data were collected in order to determine how gifted learners' engagement is affected by assessments, as well as student perceptions of authentic assessments. Data obtained from participant completion of Likert-type surveys revealed that while student attitudes toward different types of assessments was not statistically significant, review of individual questions showed that students felt better prepared for the future when allowed to complete authentic assessments. Survey data also supported how authentic assessments allow students to express themselves creatively. One student, however, expressed during their interview that some teachers tend to assign the products students complete during an authentic

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assessment with higher scores if those products are especially creative or artistic, despite the level of content mastery demonstrated by the piece. While this comment may have represented a fluke in assessment and grading practices, it may have also indicated a deeper need among teachers. Those who chose to utilize authentic assessments in their classroom should have had a solid understanding of the entire process, from beginning conception to research to product completion and presentation, before they undertook such a task with their students.

Data collected through participant interviews and classroom observations provided valuable insight to assessment practices in the school division and how gifted learners perceived those assessments. While participants clearly indicated that they were more engaged with authentic assessments, as well as retained more curricular content with these assessment practices, they also stated that they did little to prepare for any type of assessment. Some gifted learners, especially at the secondary level, only completed minimum requirements during the authentic assessment process. The role the teacher played in the classroom, as well as the climate and expectations for student performance, also seemed to influence the authentic assessment process from start to finish.

Overall, data collected through interviews and classroom observations provided answers to the two research questions posed at the beginning of the study. Students were, in fact, better engaged with content when allowed to complete authentic assessments in lieu of traditional, multiple-choice assessments. Additionally, while gifted learners feel that authentic assessments may be more difficult to complete, such assessments lead to deeper content knowledge, as well as an understanding of how information can be used in the real world.

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Implications and Further Study

While this research project was conducted in a relatively small school division with few participating students, the findings of this study supported recent literature that suggested gifted learners excel when given the opportunity to conduct independent research on a topic of interest. Furthermore, student choice of product in the assessment process also sparked enthusiasm among gifted learners that was not present during traditional assessments. This may initially lead one to believe that authentic assessments naturally increase student engagement with curriculum and excitement for demonstrating mastery of content.

Upon closer examination of the data collected during this study, it was revealed that the use of authentic assessments varied from classroom to classroom, and perhaps more importantly, across grade levels. Gifted learners may have had opportunities to complete meaningful authentic assessments in the middle grades, but those chances may have decrease with time or vice versa. Depending on the subject area and/or grade level, students identified as gifted may have had differing experiences with authentic assessments from year to year or class to class. The role teachers played in implementing authentic assessments, as well as their fundamental understanding of independent student research and choice in product creation, was crucial in determining the amount of engagement students experience. Furthermore, classroom teachers should have had basic knowledge of gifted learners' academic and affective needs in order to successfully design assessment opportunities that pique students' interest and encourage high levels of work ethic. While some teachers in our school division successfully met those criteria, others, unfortunately, did not. Student interview data, especially at the secondary level,

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revealed that some teachers focus on nonessential areas when assessing authentic products. High school gifted students were adept at recognizing this shortcoming and some may have downplayed their ability, opting to complete the minimal amount of work required to maintain acceptable scores in a course.

Going forward, it would behoove administrators in Washington County to invest in rigorous training for teachers in the understanding and use of authentic assessments in the classroom. Some teachers may have had a rudimentary understanding of how to utilize authentic assessments in their classroom, but they did not fully comprehend the nuances required to completely engage students with content in ways that made meaningful connections to students' lives. Additional research regarding teachers' understanding of authentic assessments, as well as their knowledge of gifted education, is necessary in Washington County as instructional administrators continue to implement authentic, performance-based assessments as end of course measures of students' proficiency in certain courses (Virginia Department of Education, 2018). Furthermore, teachers who lack essential understandings of strategies for engaging gifted learners should have the opportunity to participate in professional development and academic learning throughout the school year.

Summary

Data collected throughout the course of this research study provided valuable insight to assessment practices throughout Washington County Public Schools. Quantitative findings, while not statistically significant, suggested that authentic assessments allowed students to express creativity through assessments, as well as increased engagement among gifted learners. Qualitative findings from the study further

expanded upon survey results. Student interviews continued to cement how authentic assessments increase engagement, but also showed how some gifted learners did not fully apply themselves throughout the assessment process, as well as how the use of authentic assessments varied widely across courses and grade levels. Classroom observations detailed how the classroom climate, in addition to teachers' abilities to implement authentic assessments, greatly influenced engagement among gifted learners.

CHAPTER 5: REVIEW

The purpose of this mixed-methods action research study was to determine whether the use of authentic assessments impacted student engagement among a population of middle and high school gifted learners. Furthermore, I sought to understand how gifted learners perceive authentic assessments when compared to traditional, multiple-choice assessments.

Problem of Practice

Washington County Virginia Public Schools, along with other school divisions across the Commonwealth, were implementing authentic, performance-based assessments as measures of students' understanding of curricular content in multiple grade levels and subject areas (Virginia Department of Education, 2018). After relying on multiple-choice assessments for nearly two decades, Virginia educators were pushed to transition from traditional assessment practices to those that require students to demonstrate not only their understanding of curricular content, but their ability to apply knowledge in real-world situations, as well. Gifted learners may especially benefit from this transition, as these high-ability students may be apt to underachievement or low levels of engagement when assessments do not pique their interest or provide academic or affective challenge.

Research Questions

This study sought to answer two questions specific to gifted learners in our school division. They are as follows:

1. Does the use of authentic assessments in lieu of traditional multiple-choice assessments increase student engagement among identified gifted learners?How do students perceive authentic assessments as an alternative to traditional assessments?

Purpose of the Study

The purpose of this action research study was to determine how authentic assessments used in gifted education curriculum affect student engagement. Gifted learners often thrive in environments in which they have autonomy over learning experiences and ways in which they demonstrate understanding of content (Matsko & Thomas 2014). When designed correctly, authentic assessments may provide such opportunities for gifted students, which may affect their engagement in the classroom.

Authentic assessments gave gifted learners a chance to create products that link content to real-world situations and offer opportunities for connections with community audiences, as well (Lee & Hannafin, 2016). The use of authentic, performance-based assessments may allow students to more actively engage with content and increase their levels of satisfaction with classes and areas of curriculum.

Review of Methodology

Throughout this mixed-methods, participatory action research study, data were collected using three specific methods. Likert-type surveys, semi-structured interviews, and classroom observations were conducted and analyzed to determine if authentic

assessments increase engagement for students who are identified as gifted learners. The participants in this study were middle and high school students identified as gifted learners in Washington County Virginia Public Schools.

At the beginning of this mixed methods study, a two-part Likert-type survey (Efron & Ravid, 2013) was administered to students to determine how students feel regarding multiple-choice assessment practices, as well as authentic assessments. A t-test (Efron & Ravid, 2013) was used to compare the mean of both sections of the survey to determine if there was a statistical difference in the results.

Semi-structured interviews were conducted following the surveys. Predetermined questions were asked of all participants via Google forms and students were allowed to elaborate on any question that prompted further thought or comment. Classroom observations were conducted during the same timeframe as when students were completing the initial surveys. I observed middle and high school classes as teachers implemented and students completed authentic assessments. I wrote field notes that detail student and teacher behaviors, as well as any other details about the overall classroom environment. Interview transcripts and observation data were coded, grouped into categories, and analyzed to determine student engagement patterns (Efron & Ravid, 2013). In the review of both quantitative and qualitative methods, I gave equal weight to all sources of data. The results of each method were presented separately; however, the collective findings were triangulated to provide cohesiveness (Efron & Ravid, 2013).

Review of Findings

The findings of quantitative and qualitative data were reviewed independently and later triangulated, as well as compared to each of the study's research questions. Two

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Likert-type surveys were administered and the mean scores for each question were calculated. These were compared using a two-tailed t-Test, in which the difference in the scores were found to be not statistically significant. Upon review of each individual question, however, some differences were found in students' perceptions of how much material they retained when completing multiple-choice and authentic assessments, as well as the amount of creativity they were able to apply to each assessment type.

Semi-structured interviews were conducted, in addition to classroom observations. Interview transcripts and classroom observation notes were coded to determine pertinent themes that emerged throughout both qualitative sources. Qualitative measures indicated that gifted students, in fact, felt that they retain more information when allowed to complete an authentic assessment. Gifted learners also believed that authentic assessments better prepared them for future endeavors, as well as allowed them to demonstrate creativity. One key theme that also emerged was the importance of teachers' abilities in implementing true authentic assessment processes, as well as the classroom environment in which such processes took place.

While a likely increase in student engagement was discovered through qualitative means, those gifted learners who were more fully engaged throughout the completion of authentic assessments were in classrooms managed by teachers who had a solid understanding of both best practices in gifted education and the use of authentic, performance-based assessments for the measurement of content mastery. Overall, gifted students demonstrated increased engagement with content and bolstered retention of knowledge when completing authentic assessments

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Description of the Action Researcher as Curriculum Leader

Within my school division, I am an instructional leader by way of my current position as Facilitator of Gifted Education Programs. As part of that position, I also influence curriculum and services received by our division's gifted learners. In order to provide our gifted students with educational experiences that meet their vast range of academic and affective needs, I must continually survey what we are teaching our students, how that instruction is being delivered, and how students are allowed to demonstrate mastery.

The action research process aligned with my role as a curriculum and instructional leader in multiple ways. Through actively identifying problems within our school division, I could search for practical solutions for improving equitable, effective service for gifted students. Action research also allows curriculum leaders, such as myself, to gauge what solutions may work for our unique issues (Efron & Ravid, 2013). While most school divisions have a common goal of providing excellent education for children in their communities, each division has unique student populations, coupled with strengths and weaknesses of their teaching staff, community demographics, and so forth. Action researchers within a division could address specific needs among their school communities by identifying particular problems that impact their current students (Efron & Ravid, 2013). Collecting data from students, teachers, families, and community members allows curriculum leaders to further understand how problems of practice impact schools. Understanding such problems, coupled with a knowledge of theory and best practices, can lead curriculum designers and educators to solutions that work best for their individual student needs.

Action Plan

Based on the results of this action research study, several needs in Washington County Public Schools have come to light. In order to better serve the gifted learners in our school division, several steps should take place. While this study concluded that engagement among gifted learners increased with the use of authentic assessments, how such assessments are used across our school division remains disjointed.

The goal in using the information provided by this study is to improve the authentic assessment process for gifted learners, as well as other students in the school division. This goal is two-fold, as it requires that teachers learn proven instructional strategies for teaching gifted students, as well as learn how to properly utilize authentic assessments in their classrooms. As this information will be disseminated at the central office level, school division leaders will be charged with creating professional development to support this goal for teachers and students.

First, based on the findings of this study, teachers need training in the understanding and use of authentic assessments in their classroom and curricular area. Student interviews and classroom observations revealed that teachers often have differing views of authentic assessments. How teachers allow students to gather information and create products varies greatly from classroom to classroom. Furthermore, teachers must understand that the products created must contain academic substance and not merely assess student work based on aesthetic qualities. Gifted learners may readily disconnect from authentic assessments that are poorly implemented in classes, working only at a minimal level and expressing little interest in content (Bourgeois & Boberg, 2016). Members of the instructional administration team should create or locate quality

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professional development pertaining to the use and evaluation of authentic assessments in the classroom. As Washington County Public Schools assigns professional development funds to each school, as well as the gifted education department, those may be used to offset any costs incurred during this process.

Secondly, all teachers should have a minimum requirement of professional development in understanding the academic and affective needs of gifted learners. While some teachers have a firm understanding of gifted education practices, many classroom teachers have never had formal training in gifted pedagogy. This leaves teachers at a loss when trying to create assessments that evaluate what a gifted learner knows and how they can apply such information. Even when teachers successfully utilize authentic assessments, they may not provide the needed accommodations for gifted learners that lead to challenge and student engagement. Again, professional development resources allocated to the gifted education department can be assigned to training that addresses pedagogy for teaching gifted learners. Many of these professional development opportunities can also be sourced from national and state level gifted education professional organizations (National Association for Gifted Children, 2020).

These two facets of the action plan should take place during the 2020-2021 school year. In addition to completing training in utilizing authentic assessments, as well as gifted education teaching strategies, teachers will complete formative and summative assessments throughout. Teachers will also have the opportunity to indicate areas pertaining to both topics in which they feel they need support prior to implementation of the training, as well as post-training feedback to indicate their level of satisfaction with the professional development provided.

Recommendations for Practice

Going forward, educators in Washington County Public Schools would benefit from several changes in practice. In addition to ongoing teacher training in the understanding and use of authentic assessments, as well as gifted education, additional changes to curriculum and instruction would be advantageous for all educators in the division. Primarily, division-level administrators who are responsible for curriculum and instruction should assess their own understanding of assessment practices and gifted education. Having been out of the classroom for several years, these individuals may lack practical application of theory and instructional methods. These instructional leaders should place their own professional learning at the forefront in order to better lead building administrators and teachers.

Additionally, school principals and classroom teachers, while stretched thin with the demands placed on them by their jobs, should take the initiative to know the gifted learners in their classrooms, as well as study current trends in gifted education. Gifted learners who do not feel a personal connection with educators may underachieve, in addition to creating barriers between themselves and teachers who they perceive as genuinely not caring for them or their peers (Neumeister & Hebert, 2003). Relationships between school-level administrators, teachers, and gifted students can only be strengthened by an increase awareness of the needs of gifted learners, as well as support for the teachers charged with their education.

Finally, school leaders cannot let training in assessment practices and gifted education fall by the wayside. This focus should be continuous, from year to year, with steady attention paid to these needs throughout each school year. Efron and Ravid (2013)

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suggest that "as you put your research conclusions into action you need to monitor the impact of these actions" (p. 238). Frequent needs assessments and surveys of teachers and students may indicate where gaps lie in the instructional and assessment practices. Adaptations and adjustments can be made when instructional leaders determine current practices are limiting engagement and growth among gifted learners.

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Implications for Future Research

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After completing this action research study, I continue to believe that further research in different areas would be beneficial to students and teachers, not only in my school division, but other divisions with similar student populations and demographics. Going forward, research pertaining to teacher attitudes and understanding of authentic assessments and gifted education could provide guidance when developing programs of professional development. As part of the action research cycle (Efron & Ravid, 2013), student attitudes could be reassessed after teacher training is conducted to determine if any changes to engagement are noted among gifted learners.

Furthermore, because this study was conducted in a relatively small school division with a small, purposeful sample group, further research addressing the use of authentic assessments and gifted learners could be conducted among a much larger population. This type of research may indicate differences in practice across various school divisions or states. Additionally, the results of such a study could be more widely generalized, leading to a larger scope of changes in assessment practices within gifted education.

Summary

The use of authentic assessments is rapidly changing the landscape of statewide end-of-course assessment practices. While Virginia implements authentic, performance-based assessments to determine student mastery, understanding, and application of curricular content (Virginia Department of Education, 2018), educators have an opportunity to improve student engagement among gifted learners.

While students identified as gifted often have unique academic and affective needs, the proper utilization of authentic assessments may present as an opportunity to address such needs and actively engage gifted learners with content, the classrooms, and their larger community. Often longing for opportunities to express themselves academically and creatively, gifted students may thrive in situations where they are provided choice in how they demonstrate their understanding of a concept (Waters, Smeaton, & Burns, 2004). Furthermore, such students desire learning opportunities that are personally meaningful; authentic assessments may allow for such experiences (VanTassel-Baska, 2013).

Assessment practices will likely continue to shift over time; however, educators must constantly evaluate not only what gifted learners know, but the effectiveness of the methods intended to measure that knowledge. Assessments are further opportunity to engage gifted learners with curricular content and educators must be mindful of fostering academic, social, and emotional growth of students through the assessment process.

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APPENDIX A: RESEARCH STUDY INVITATION LETTER

January 6, 2020

Dear Washington County Gifted Learner,

My name is Felicia Lowman-Sikes and I am a doctoral candidate in the Department of Education at the University of South Carolina. I am conducting a research study as part of the requirements of my degree in curriculum and instruction and I would like to invite you to participate.

I am studying how authentic assessments affect student engagement in gifted learners. If you decide to participate, you will be asked to complete a survey about different types of assessments teachers use in the classroom and meet with me for an interview about how you feel about different types of assessments.

In particular, you will be asked questions about how you feel about different types of assessments that teachers use in the classroom. You will be asked how much attention you feel you pay to certain types of assessments and how those assessments affect your feelings about subject matter. If you feel uncomfortable answering some of the questions, you may skip any questions that you do not wish to answer. The meeting will take place at your school and should last about ten to fifteen minutes. The interview will be recorded (audio only) so that I can accurately transcribe what is discussed. The recordings will only be reviewed by members of the research team and destroyed upon completion of the study.

Participation is confidential. Study information will be kept in a secure location at the University of South Carolina. The results of the study may be published or presented at professional meetings, but your identity will not be revealed.

Participation, non-participation or withdrawal will not affect your standing in the gifted education programs or your grades in any way. If you begin the study and later decide to withdraw, you can do so at any time.

We will be happy to answer any questions you have about the study. You may contact me at 276-477-9819 and/or fsikes@wcs.k12.va.us or my faculty advisor, Dr. Aisha Haynes, at haynesa@mailbox.sc.edu.

Thank you for your consideration. If you would like to participate, please complete the Google form at https://forms.gle/TBMxXcQ7nKwS5P4m9 or contact me at the number listed below to discuss participating.

With kind regards,

Felicia Lowman-Sikes

812 Thompson Drive

Abingdon, VA 24210

276-739-3018

276-477-9819

fsikes@wcs.k12.va.us

UNIVERSITY OF SOUTH CAROLINA

PERMISSION/ASSENT TO BE A RESEARCH SUBJECT

The Use of Authentic Assessments in Gifted Education and Their Impact on Student Engagement

I am a researcher from the University of South Carolina. I am working on a study about assessments used in schools and I would like your help. I am interested in learning more about how students feel about different types of assessments.

If you want to participate in the study, you will be asked to do the following:

- Answer some written questions about assessments using a Google form.

- Meet with me individually and talk about how you feel about different types of assessments. The talk will take about fifteen minutes and will take place at your school.

Any information you share with me (or study staff) will be private and confidential. No one except me or my advisor, Dr. Aisha Haynes, will know what your answers are to the survey or interview questions.

You do not have to help with this study. Being in the study is not related to your regular class work, will not help or hurt your grades, and will not affect your participation in the gifted education program. You can also drop out of the study at any time and for any reason.

Please feel free to ask any questions you would like to about the study.

*For Minors:

My participation has been explained to me, and all my questions have been answered. I am willing to participate.

Print Name of Minor   Age of Minor

Signature of Minor   Date

Print Name of Parent/Guardian

Signature of Parent/Guardian   Date

APPENDIX C: PARTICIPANT SURVEY STATEMENTS

MULTIPLE CHOICE SURVEY

1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

1. Multiple choice assessments allow me to show everything I have learned about a topic.

2. Multiple choice assessments allow me to be creative.

3. Multiple choice assessments are interesting to me.

4. Multiple choice assessments make me want to learn more about a topic.

5. Multiple choice assessments are the best way for me to show what I have learned.

6. Multiple choice assessments are easy for me to complete.

7. I often remember the material on multiple choice assessments long after I have taken a test.

8. Multiple choice assessments will prepare me to use information in the real world.

9. Multiple choice assessments help me further understand the topics I study.

10. Multiple choice assessments are challenging for me.

AUTHENTIC ASSESSMENT SURVEY

1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

1. Authentic assessments allow me to show everything I have learned about a topic.

2. Authentic assessments allow me to be creative.

3. Authentic assessments are interesting to me.

4. Authentic assessments make me want to learn more about a topic.

5. Authentic assessments are the best way for me to show what I have learned.

6. Authentic assessments are easy for me to complete,

7. I often remember the material on authentic assessments long after I have taken a

   test.

8. Authentic assessments will prepare me to use information in the real world.

9. Authentic assessments help me further understand the topics I study.

10. Authentic assessments are challenging for me.

APPENDIX D: PARTICIPANT INTERVIEW QUESTIONS

1. Tell me the school you attend. What is your current grade level? *

2. What do you think about multiple choice assessments? Do you enjoy completing these tests? Why or why not? *

3. What do you think about authentic assessments? These are assessments where you have a choice in what you create. Have you been able to complete an authentic assessment in any of your classes? Do you enjoy completing these assessments? Why or why not? *

4. Tell me about how you prepare for a multiple-choice assessment. Do you study beforehand? If so, how do you study? *

5. Tell me about how you prepare for an authentic assessment? Do you study beforehand? If so, how do you study? *

6. Describe what happens to the information you have learned after you complete a multiple-choice assessment. Do you remember this information for a long time? Do you understand how to apply this information in the real world? *

7. Describe what happens to the information you have learned after you complete an authentic assessment. Do you remember this information for a long time? Do you understand how to apply this information in the real world? *

8. How much attention do you pay to multiple choice assessments? *

9. How much attention do you pay to authentic assessments? *

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10. How do multiple choice assessments make you feel about learning more about a topic? *

11. How do authentic assessments make you feel about learning more about a topic? *

12. How do you think teachers could use assessments of any kind to improve what and how students learn? *

13. Is there anything else you would like to tell me about how you feel about assessments? *

APPENDIX E: PARTICPANT INTERVIEW WRITTEN RESPONSES

1. Tell me the school you attend. What is your current grade level?

STUDENT 1: wms 8th grade

STUDENT 2: John Battle 10th

STUDENT 3: Wallace Middle School, 6th Grade

STUDENT 4: Gsms 6th grade

STUDENT 5: Abingdon High School Grade 11

2. What do you think about multiple choice assessments? Do you enjoy completing these tests? Why or why not?

S1: yes because if i have answers to choose from it makes it easier

S2: I believe they are easier. Especially if I am unfamiliar with the content.

S3: I like these more than fill in the blank tests because it narrows down the answers

S4: Yes, i enjoy these

S5: I think multiple choice assessments have their place in most classes and if the teacher sets them up right they are a good measurement of the material we learned. I wouldn't say I enjoy completing them, but I don't mind them in moderation.

3. What do you think about authentic assessments? These are assessments where you have a choice in what you create. Have you been able to complete an authentic assessment in any of your classes? Do you enjoy completing these assessments? Why or why not?

S1: they're a lot harder, yes i have been able to complete some in my classes. i don't hate them because they are a lot harder

S2: I do not enjoy them because I must have a deep understanding of the content

S3: I dont really understand this question

S4: I dont like them because i like to get told exactly what I need to do

S5: Authentic assessments are fun, but they don't require me to learn much or remember what I learned in class. I have done a few in my classes before. My enjoyment depends on the subject, but overall they seem more like a project rather than an assessment, as most teachers grade based on artistic ability and creativity rather than content.

4. Tell me about how you prepare for a multiple choice assessment. Do you study beforehand? If so, how do you study?

S1: i don't usually study but if i do i go over the questions a few times

S2: I don't study for any test

S3: I dont study I just pick it up really quickly during class

S4: Yes i study work ive already did

S5: Depends on the test and the class; sometimes I study, other times I don't. If I do study, I review on Quizlet or look back at my notes, tests, or quizzes.

5. Tell me about how you prepare for an authentic assessment? Do you study

beforehand? If so, how do you study?

S1: i study for about 20 mins.

 S2: I do not study for any test

 S3: I dont really understand what an authentic assessment is, but I havent studied

 since 3rd grade so I dont study beforehand

 S4: I dont really study

 S5: I never study beforehand.

6. Describe what happens to the information you have learned after you complete a

multiple choice assessment. Do you remember this information for a long time?

Do you understand how to apply this information in the real world?

S1: depends on the subject it's in.sometimes i understand how to apply it but not

all the time

S2: I can only retain this information for a short period of time if it is not

reviewed. I often have no idea how this information is applicable in real world

situations.

S3: If it is science, history, and math I usually never forget it, on the other hand I

forgot a few details this year on figures if speech but now I remember them

perfectly fine

S4: I foget it

S5: I most often remember the information for a long time. Yes, depending on the

situation. Most math concepts will never be used again unless you major in

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engineering, etc, same for science. English is used every day. History is important for everyone and knowledge of events is imperative to fashioning a good and well educated citizen.

7. Describe what happens to the information you have learned after you complete an authentic assessment. Do you remember this information for a long time? Do you understand how to apply this information in the real world?

S1: i usually remember it because i have to prepare more.

S2: I will be more likely to understand and remember the information and sometimes understand how it is applied

S3: Just like my previous answer I usually always remember math, science, and history, on the other hand language arts does not have the most of my interest, but now that we are having a project on the Iditarod, it has spiked my interest a bit

S4: I completely forget everything

S5: I hardly retain information on the content of these assessments because I am preoccupied with making it visually appealing in order to receive a good grade. Once again, it depends on the topic. Overall my retention is very strong for most anything but in comparison I retain more with multiple choice assessments.

8. How much attention do you pay to multiple choice assessments?

S1: a lot of attention

S2: Little to none

S3: 99%

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S4: Not alot

S5: A good deal of attention; I am focused in them.

9. How much attention do you pay to authentic assessments?

S1: a lot of attention

S2: I often focus and listen more deeply if preparing for an authentic

assessment

S3: 99%

S4: A little

S5: Same as the multiple choice assessment. No matter the assignment, I pay

attention.

10. How do multiple choice assessments make you feel about learning more

about a topic?

S1: they make it easier to understand a subject

S2: I often learn very little from them

S3: They increase my knowledge about certain categories and subjects and

sometimes increase my ambition to want to know more about it

S4: I dont like them and i dont think they help

S5: Tests don't really have an influence on my drive to learn more. That

comes on my own if I find interest in a subject.

11. How do authentic assessments make you feel about learning more about a topic?

S1: they make it harder but i remember more

S2: I often have to put more effort into retaining the information when taught

S3: They arent my favorite but my interest gets spiked every once in a while

S4: It doesnt help at all

S5: Tests don't really have an influence on my drive to learn more. That comes on my own if I find interest in a subject.

12. How do you think teachers could use assessments of any kind to improve what and how students learn?

S1: see how that specific student learns better

S2: Teachers could used different assessments other than multiple choice to force students to have a deeper understanding of their work

S3: They could include more diagrams, pictures, and interesting details in the questions

S4: Just not use them

S5: I personally think multiple choice or even fill in the blank tests are the best way to go. However, these should not just be getting students to memorize answers and spit them back up only to never touch on the subject again. Each test should have review or applications not only for new material, but for topics covered throughout the year.

13. Is there anything else you would like to tell me about how you feel about assessments?

S1: nope.

S2: Although I dislike taking test that are not multiple choice I know they are very useful

S3: Nope

S4: I dont like them

S5: No

APPENDIX F: CLASSROOM OBSERVATION NOTES

Middle School Classroom Observation Notes

ELA Class, 8th grade:

I am seated at a small desk in the corner of a classroom. Students come into the class in an excited manner. The teacher is also one gifted education coordinators for the school, so the students have seen me in and out of the classroom working with their teacher. I am not viewed as a stranger and the students quickly forget that I am in the room. The desks are grouped in pods of four. Students are allowed to choose where they sit as long as they are not disruptive to others. The classroom teacher pulls all students together to review concepts that are being covered in class and to remind students of their responsibility in reading assigned literature (based on student readiness levels and interests) and completing assessment pieces. Students then have independent time to work on their reading assignments and digital projects. There is significant chatter in the classroom, with some students laughing together. When the teacher approaches the groups of students individually, she sees that the students are talking about their projects. Students seem excited to share ideas with one another in their groups of four. They also talk openly about their products with their teacher. Occasionally, some students get distracted, but the teacher is very adept at picking up on when students are off task. She mingles around the room, chatting with groups and redirecting students when needed. Students seem to know the routine and procedures that take place in the classroom. Excellent classroom management on the part of the teacher and excellent teamwork on the part of the students. Students do not seem to put forth an extreme amount of effort, though. It appears that students are interested in their literature topics, as well as the products they are creating, but only some students challenge themselves at an advanced level. Perhaps those who are challenging themselves are more self-motivated in other areas, as well. The amount of personal drive students show may vary based on personalities and learning preferences.

Science Class, 6th grade:

In this class, I am able to mingle among students, due to the non-traditional setting in which this class take place. The long, rectangle room has multiple standing workstations, as well as some places where students can work seated, both alone and with others. Students were able to choose an SOL (Standard of Learning) that aligned with some question they would like to answer. Students are given a task sheet where they can see the requirements of the authentic assessment, the areas in which they must gather information, and the types of products they can create. This is a mixed-ability class where there are some students with special needs and approximately six identified gifted learners. Each student's task sheet and product options are tailored to their ability. However, the teacher has very clearly defined the expectations in his classroom and how students treat one another in that environment. Having different task cards and different product choices are normal for the students in the class and they do not question the classroom climate. Students work respectfully and talk among one another throughout the class. They eagerly help one another while they look up information and bounce ideas around as they determine the products that they want to create. Students seem excited to conduct independent research. Their attention to their task sheet and the sources of information is commendable. Perhaps, this is due to students having some choice of the SOL and question they want to answer as their starting point. Students are on task throughout the entirety of the class period.

For the second observation day of this class, I am able to see the products that students created at the end of their research period. The students presented their products to members of the community and were assessed using a rubric. I go from student to student and let them tell me about their area of interest, how they gathered their information, and how they created their product. The students are set up in a gallery walk type format. Each student gives me a check sheet and I am able to rate how well they present their information and the quality of their product. As I talk with students, they are eager to elaborate on their topic of interest and can readily make connections between what they researched and the standards covered in their class. Out of all the gifted students in the class, each stated that they preferred completing this type of product instead of taking a traditional test on the subject matter. Granted, each student's topic pertained to different standards, so I am not certain if this type of assessment would be feasible for each unit of study.

<center>High School Classroom Observation Notes</center>

Honor's English:
Students came into the class in a respectful manner and took their chosen seats. I am seated next to the teacher's station. The students acknowledge my presence, but do not seem to be distracted. Students had been conducting independent research on careers in which they are interested. Students had to determine various aspects of their chosen

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career and the ways in which they could prepare for said career. The students had a choice of the way in which they presented this information to their classmates. Several of the students created slide show presentations using Google Slides, while others created videos with movie making apps. I am able to observe student presentations. Students are extremely respectful of one another as they take turns sharing their product. Some students seem to have researched and provided information only for the minimum requirements of the assignment. Some students have gone above and beyond the requirements and create outstanding products with ample information about their topic. At points in their presentation and at the conclusion, the teacher asks students questions about their topic, the research process, and what they have learned. It is after the teacher asks these questions that I can see the students "light up." Even those students who seemed to put forth minimal effort and information were able to volunteer additional facts and/or detail what they learned during the authentic assessment process and how they would extend their study if they had the time. Some identified students, however, stated that this project was "easy" for them, even compared to writing and reading SOL tests that are commonplace in high school honors English class.