EXPERIENCE, TIME, AND OPPORTUNITY:

AN EXPLORATORY CASE STUDY REGARDING THE ARTISTIC JOURNEYS OF MIDDLE SCHOOL ADOLESCENTS AND THEIR PERCEPTIONS OF THE INFLUENCE OF ENVIRONMENTAL FACTORS ON THE DEVELOPMENT OF THEIR VISUAL ART TALENT IN RURAL MONTANA COMMUNITIES

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by

Gayle B. Roege

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DEDICATION

To *[my late]* Dad, my inspiration;

Yes…“I did it my way.”

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ACKNOWLEDGEMENTS

Walking the brick pathways of William & Mary in the shadow of those great men who walked them before me, was not only an honor, but an opportunity I will forever cherish. Pursuing this degree has been enormously enlightening; and achieving this goal is not an end, but a beginning….

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but for continuing to ask anyway! …And for reminding me that yes, dreams really do come true!

. . . Mom, for always "being there;" for recognizing what I needed, and then providing the encouragement, consoling support, the "hugs" or the prayers; for your unrelenting willingness to hear every detail of every phase of this endeavor—the elation and frustration; the progress and the set-backs; and for helping me see each tiny step as a milestone…then celebrating it with me.

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I love you

In all your ways, acknowledge Him, and he will make straight your paths. Proverbs 3:6

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ABSTRACT

Artistic talent is critical to offering creative contributions to society's challenges and opportunities (in balance with technical, business, and other domains). Emphasis on art experiences and skills is missing in school programs, due to financial and accountability constraints, and encouraging prioritization on "core" subjects. Rural environments present particular challenges: while they are identified as fertile ground for developing a creative class, low population density makes it difficult to provide substantial support for in-depth exploratory, experiential creative endeavors.

A crucial element of maintaining personal commitment to one's talent area is support. While support from the family is essential, the value a community (which includes the school) places on any talent domain largely impacts the individual developmental trajectory for that talent—especially in teenagers. This study was conducted to explore the perceptions of individual talent among artistically gifted adolescents in rural communities in the U.S., and concluded that immediate and extended families provided adequate levels of support for the adolescents to remain committed to their talent and that a critical factor associated with school and community support is missing: the time necessary to devote to development of that talent.

The study offers the opportunity to open a dialogue related to research on the marginalization of visual thinkers (of which the artistically gifted are a sub-group); to apply the findings to the current climate in education; and to establish collaborative efforts to promote artistic talent development in answer to the demand for art and design thinking, innovation, and creativity on a global scale.

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EDUCATIONAL POLICY, PLANNING, AND LEADERSHIP

K-12 ADMINISTRATION

THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA

EXPERIENCE, TIME, AND OPPORTUNITY:
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CHAPTER 1: THE PROBLEM

"It is something to be able to paint a particular picture, or to carve a statue, and to make a few objects beautiful; it is far more glorious to carve and paint the very atmosphere and medium through which we look…to affect the quality of the day— that is the highest of arts." - Henry Thoreau

Background

Art is ubiquitous. Art *talent* is languishing. New thinking is needed about investment in developing this creative talent as both human capital and social competitiveness in an age of complexity and uncertainty (Florida, 2012; Hennessey & Amabile, 2010; Pink, 2005; Robinson, 2006, 2010; Robinson & Aronica, 2015). The call for creativity and innovation has grown more desperate today as the topic of 21st century challenges pervades discussions in business and society, and ultimately affects expectations for education (Hennessey & Amabile 2010; Pink, 2005); particularly in the visual arts (Robinson, 2010), which were the focus of this study. Creative capacity is critical to the ability of the United States to maintain a position among the world's leading nations as drastic shifts in traditional societal elements (work, values, and preferences) emerge (Florida, 2002). The plethora of creativity-focused publications signifies its prominence in current discourse about preparation for yet-to-be discovered needs of the future. Moreover, in a world that has become "standardized," (being test-and rule-oriented), "creativity is important as an antidote for a sterile environment" (Zimmerman, personal communication, February 17, 2014). Although art and creativity are not synonymous, research shows that "art is a site where creativity can be developed and nurtured for all students with emphasis on both individual processes and cultural practices" (Zimmerman, 2009).

Efforts should be concentrated not on *what*, but *where* creativity is, in terms of the multiple factors responsible for the complex and evolving systems of any type of creative development Csikszentmihalyi (1988). This view highlights *place* as an essential element of creativity in any form because creativity is not only an individual action, given that individuals cannot be isolated from their environments (Plucker & Barab, 2005). According to Csikszentmihalyi (1988):

> [Creativity] is the product of three main shaping forces: a set of social institutions, or *field*, that selects from the variations produced by individuals those that are worth preserving; a stable cultural *domain* that will preserve and transmit the selected new ideas or forms to the following generations; and finally the *individual*, who brings about some change in the domain, a change that the field will consider to be creative…so the question 'where is creativity?' cannot be answered solely with reference to the person and the person's work... [it] is a phenomenon that results from interaction between these three systems (p. 325-326).

In this study, *place* referred to the rural context wherein the three systems reside. As more evidence surfaces about the benefits of rural environments to creative aspirations, more research is needed to understand how to cultivate local art talent (Rosenfeld, 2013). Unique cultural traditions and values of a rural community need to be considered in any effort to recognize and support rural talent (Clark & Zimmerman, 1997). Building synergy in small communities can increase the likelihood of students' access to meaningful experiences that help support the development of creative talent (Colangelo, Assouline, Baldus, & New, 2003; C. Howley, 2009).

Artistic talent specifically, the creative construct that was investigated in this study, is conceived as a natural creative gift which has been developed to some degree, based upon a number of factors and conditions which are discussed in this paper. This study utilized a qualitative research approach to explore specific cases of adolescent artistic ability to better understand students' perceptions about environmental factors that help or hinder their talent development (Gagné, 2008; Getzels & Csikszentmihalyi, 1976; Katzko & Mönks, 1995).

Figure 1 illustrates the conceptual framework that was used for exploring the artistic journeys of these students. Inspired by Gagné's (2008) Differentiated Model of Gifts and Talent (DMGT) this conceptual model was developed to promote a better understanding of the primary components of this study. The environment or milieu (in this case, a rural community) serves as one predominant factor of talent development and, as is the case in the Gagné model, hosts all other factors embodied within that environment, all of which serve as catalysts of talent development.

The study components were conceptualized as follows: a) presumed natural creativity (artistic giftedness) exhibited as high artistic ability (specific-domain talent), indicated by the arrow leading from the natural gift to the artist's palette. The palette is representative of the attribute being studied in middle school-age adolescents; b) multiple spotlights symbolize four primary environmental influences (self, family, school, and community) on participants' talent development; c) the large arrow stretching across the model indicates the uniquely personal developmental trajectory from some level of potential to some level of achievement or expertise; and finally, d) the eventual outcome (beyond the scope of this study) of the development of talent shown as anticipatory—

represents growth toward some end, yet undefined. Although art ability may remain a priority in one's life and be demonstrated in adulthood, even continued interest in the domain may not result in choosing an art profession or ever becoming eminent in the field. Additionally, because students have had little experience in the social world of art, no presumption or expectation existed in this study for them to demonstrate the production of artistic products that achieved a high social value (Csikszentmihalyi, Rathnude, & Whalen, 1997).

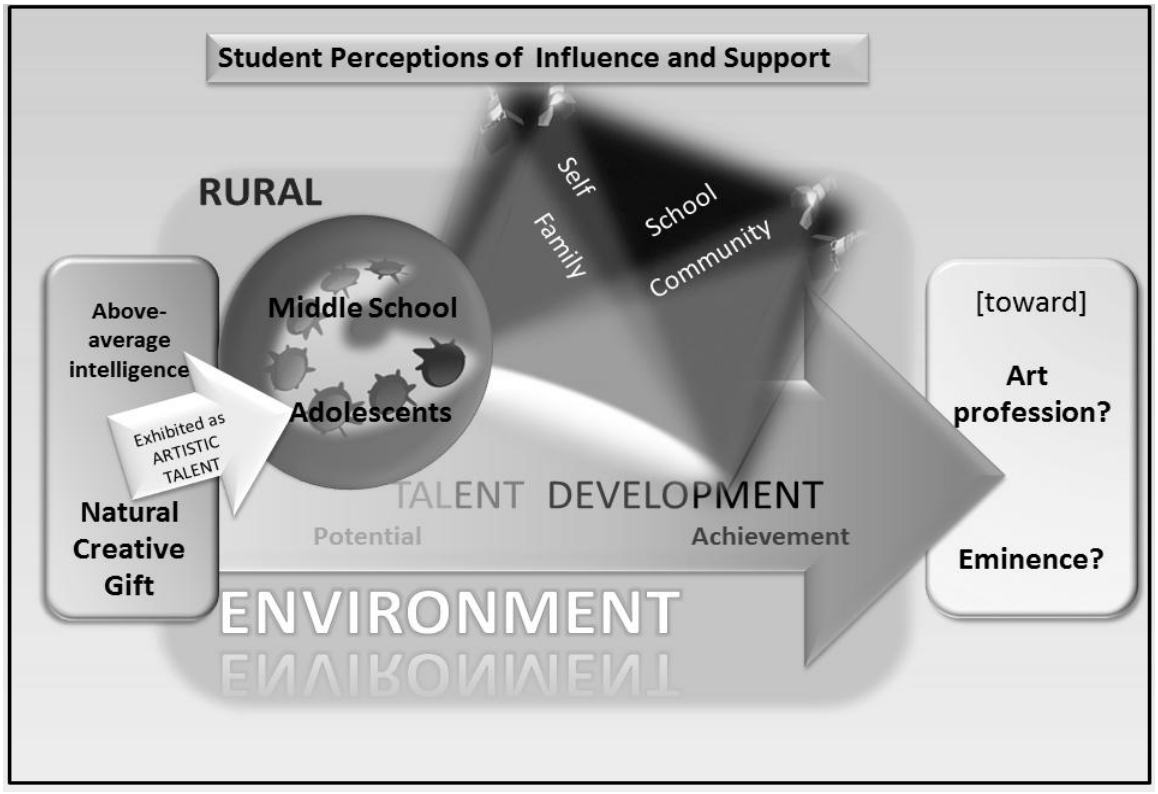

Figure 1. Conceptual model of the study of adolescent perceptions related to influences on personal talent development in rural communities. Adapted from DMGT (Gagné, 2008).

Rationale

Commitment to Talent

As definitions become more standard about giftedness, creativity, and talent, misconceptions still prevail, regarding *artistic* talent development. Lack of knowledge pertaining to quality, availability, and outcomes of art experiences persists in rural public schools (Talbot, 2009). Recent estimates show approximately three million identified gifted children in the United States, representing roughly six percent of the total school population nationwide, yet no data exists that specifically point to the number of artistically talented youth; although it is likely that a portion of the academically gifted also possess artistic talent (National Association for Gifted Children [NAGC], 2008). The NAGC (2012) *State of the Nation in Gifted Education* report served as a call to action emphatically stating that:

> Developing and supporting high levels of talent in every area requires national, systemic attention by all stakeholders. This is a commitment we have not seen in more than two generations…[T]o thrive in the 21st century we need a renewed commitment to excellence and development of talent, and help[ing] students achieve beyond grade level [is] necessary to restore the assets lost and place our nation on more solid footing in an increasingly competitive global ecosystem.

Recognition of Talent

Insights drawn from comprehensive research confirm "the difficulty of honoring an area of human functioning before it has been clearly identified and named" (Richards, 2007, p. 29). Complicating the effort is the misguided belief that artistic talent is easily

recognized. Visual learners "see" the world more figuratively; interpret it in shapes and symbols; are capable of fluency of imagination, directness of expression, complexity and elaboration, and have a keen visual memory, giving them perhaps a greater advantage for 21st century employment (Badenoch, personal communication, January 23, 2014; Kay & Carroll, 2009; L. K. Silverman, 2014), yet they have difficulty thinking in the linear, sequential fashion required in most formal learning situations (L. K. Silverman, 2002). Therefore, the structure of schooling (at any level) tends to be a hostile environment for visual learners, where they become marginalized because their artistic talent is often misunderstood thus, left unaccommodated (L. K. Silverman, 2014). These students—adolescents especially—may mask talent in class but exhibit high art ability in extracurricular art activities because they may be more rewarding, and because the threats that exist in the regular classroom have been removed (Clark & Zimmerman, 2005; Fine, 1970; L. K. Silverman, 2014). Theoretically, education should be about talent development, but schools often limit the horizons of some students while effectively helping others succeed (Ford, 2003). Public schools were not designed to value and promote creativity; their purpose has been to institutionalize learning and generate a predictable outcome (Rolling, 2013). "Can we locate creativity's social origin, and if so, can we better understand its purposes toward the development of learning without containment?" (Rolling, 2013, p. 42). Small schools certainly face unique hurdles in terms of what they can offer in the way of appropriate art experiences for artistically talented students (Clark & Zimmerman, 1999). In Montana, where the study was conducted, only 45 of the 10,000 teachers statewide are specialists in any type of gifted education, and of those, few have any type of gifted education credentials (Shupert, personal communication,

March 3, 2015) posing a unique challenge to being able to recognize and support talent. However, rural schools and communities *can*, when united in serving students in practical and useful ways, encourage engagement in those activities that bring benefits to creatively talented students.

Needs of Adolescents

Adolescents are more motivated to pursue their talent when they are provided encouragement in the form of parental support, knowledgeable and understanding teachers, and access to "challenging opportunities to express their gifts" (Csikszentmihalyi et al., 1997). These external influences (families, peers, community, institutions, and the value society places on a given domain at a given time), whether perceived or real, appear to contribute either positively or negatively to how a student perceives and is able to develop his/her own talent (Clark & Zimmerman, 1988; Dai & Schader, 2002; Evans, Bickel, & Pendarvis, 2000; Rakow, 2005). Today's technological capabilities make access to distant sources of advancement and enrichment more likely, increasing the chance that students find appropriate resources to develop their talent; however, this option is often considered in isolation of localizing opportunities.

Rural Creative Talent

Rural communities are not just smaller versions of urban areas, and urban educational models are not well suited to gifted students in rural districts in many cases (C. Howley, 2009; Stambaugh, 2010). When community support networks base their practices on the value of "ruralness," and not solely on cosmopolitan ideas of the way things should work, students can benefit from the best of both worlds (A. Howley, Howley, & Pendarvis, 2003; Rakow, 2005). Recent literature indicates that rural environments are becoming

magnets for creative clusters, but that local talented youth continue to seek opportunities outside of their community (Florida, 2002; Rosenfeld, 2013). With a thoughtful approach to talent development, schools can avoid the deprivation of talented individuals so often prevalent when educators view rural residence as a disadvantage, and outmigration to urban locales as the most appropriate goal for talented students (A. Howley et al., 2003). Current research that provides a new look at the development of art talent can offer timely information about how to increase the nation's creative output. The personal experiences of talented students offered a more in-depth look at ways local talent can be cultivated and retained in these small communities.

Problem Statement

The problem that was addressed in this study is how adolescents perceive their own talent and how the rural community influences the development of artistic talent in high-ability students. Recent studies affirm that art significantly affects the overall health of rural communities, and that artists are particularly important for their contribution to their economic sustainability (Florida, 2012; Pink, 2005; Rosenfeld, 2013). Studies on the topic of adolescent artistic talent are limited, are no longer current, and are primarily focused on urban and suburban populations. Those studies have shown, however, that talent appears to rely on the presence of specific interpersonal and environmental factors (across established domains), based upon the perceptions of talented students (Clark & Zimmerman, 1988; Csikszentmihalyi et al., 1997). Additionally, only a scant number of studies address the specifics of art talent development in rural communities, particularly from the perspective of the students themselves (Moorefield-Lang, 2007, 2010). Knowledge about accommodating for local artistic talent in rural communities stems from

findings of the longitudinal study conducted almost three decades ago by Clark and Zimmerman (1997). “There is a dearth of research about artistically talented youth related to their development and how the rural community hinders or helps that development” (Zimmerman, personal communication, February, 17, 2014).

Statement of Purpose

The purpose of this study was to explore individual cases of art talent and the perceptions of middle school adolescents regarding the relationships that influence the development of their talent, and compare findings to previous research in urban and rural environments to better understand how to support this aspect of creativity.

Study Objectives

The objectives of this study were three-fold and aimed to:

1. Uncover the personal journeys of the study participants related to the broad influencing forces of the development of their individual artistic talent.
2. Identify ways rural communities help or hinder the development of that talent.
3. Begin to shed new light on how to best support artistically talented students at the middle school level, in rural communities.

Major Research Questions

1. What are the perceptions of artistically talented, middle school adolescents in a selected rural community regarding their individual artistic talent?
2. What are the perceptions of artistically talented, middle school adolescents in a selected rural community regarding how their school and community encourages or inhibits the development of their talent?

Significance

The study focused on perceptions of artistic talent, and is significant for several reasons. First, it may help school personnel to recognize the importance of accommodating for all visual learners and to make specific provisions for artistically talented students as a subset of visual learners; second, at the local level the study may encourage improvement in ways the community views artistic talent and forms collaborative efforts to support it; and thirdly, even though the administrative rules for Montana (ARM) which include state education policies for visual art (ARM 10.58.503) and gifted education (ARM 10.55.804) teacher preparation program standards have recently been reviewed and revised, findings from this study may influence future policy in other contexts related to services for students talented in the visual arts.

Assumptions

Theoretical assumptions centered around four primary areas:

1. The voice of students is a vital resource in bringing greater understanding about specific phenomena; middle school students are typically capable of articulating their feelings (regarding programming and other benefits to them) in both academic and non-academic realms when asked about their perceptions (Schmakel, 2008).
2. The *essence* of generalizability with a small sample size can be achieved through the richness of the phenomenological nature of naturalistic inquiry, and application of the five strategies to evaluate external validity (Patton, 2002; D. Silverman, 2004) discussed in Chapter 3.
3. The uniqueness of rural communities demands understanding the local culture

and traditions which is essential to *living well* within the environment we reside in (Hass & Nachtigal, 1998), and to providing appropriate support services for gifted students (Clark & Zimmerman, 1997; C. Howley, 2009; Zimmerman, personal communication, Feb. 17, 2014).

4. The development of talent will continue along an upward progression to a certain point, after which, appropriate relationships/mentorships are necessary to further develop potential talent (Vygotsky, 1978).

Delimitations

Trustworthiness in naturalistic inquiry is demonstrated through credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). This study was delimited by making deliberate decisions to use specific methodologies in collection, analysis and reporting of data.

1. Credibility- researcher's commitment to accurate identification and description of the participants in both school and community context. Prolonged engagement, participant observations, (explained in depth in the observation section of Chapter 3), and triangulation (or more aptly, crystallization) were operational techniques to support the credibility of this study.
2. Transferability- external validity of the research. Thick, rich descriptions about participants and the study setting enables the reader to enter the context to make tentative judgments related to applicability of the researcher's field observations to their own context.
3. Dependability- careful and detailed documenting of events, settings and observations during the study. Field notes and reflexive journaling ensured reliability of data

collection, analyses and descriptive reporting of the proposed study

4. Confirmability- concept of objectivity. Triangulating data and reflexively analyzing it to the point of crystallization provided confirmability of the study.

Limitations

The purpose for and limitations of the small but specific sample for this study were delineated, and the researcher was diligent in "reporting the methods and the results in their proper contexts" (Patton, 2002, p. 563) to help ameliorate concern about the study's credibility due to bias. Some limitations, however, are recognized for the study. Small sample size was drawn from multiple rural schools with profiles that: a) are predominantly Caucasian, middle class students, b) have a low student/teacher ratio (average 12:1), therefore are more personally-oriented, meaning school climates are typically positive; that may have an effect on student perceptions regarding their school experiences.

Biases may exist related to:

1. The perception of the researcher regarding the direct effect resulting from the degree of value the community places on art (See Appendix A for *Researcher as Instrument Statement*).
2. The researcher's familiarity with the school districts and some faculty due to a) researcher's prior work with the schools in various capacities; and/or b) membership in the state gifted association which affords association with school teachers and leaders from various districts.

Definitions of Related Terms

Artistic Giftedness

Operationally defined in this study as an innate creative ability which is malleable, with potential to be moved along a developmental path to a greater level of achievement, artistic giftedness may be manifested as specific-domain (visual art) talent when provided the appropriate conditions, support, individual dedication, perseverance, and time (Csikszentmihalyi et al., 1997; Gagné, 2008; Subotnik, Olszewski-Kubilius, & Worrell, 2011).

Artistic Talent

In this study, artistic talent refers to outstanding natural ability in visual art "when compared with others of their age, experience or environment who require services and activities not ordinarily provided by schools" (ED, 1993, p. 26) "in order to fully achieve their potential contribution to self and society" (MT OPI, 2008, Appendix II *School Laws of Montana*, Part 9, 20-7-201). These individuals draw in a characteristically different way (Milbrath, 1998), and they are creative in a qualitatively different way than their average peers (Winner & Martino, 2003).

Middle School

In Montana, middle school typically refers to the instructional level that follows elementary school (and is commonly understood to include the seventh and eighth grades), but may be housed in the same building as the elementary grades. The study participants were all early adolescents in the 12-13 age range, who were in middle school, at the seventh or eighth grade level.

Rural

Defined by the U.S. Census Bureau (2010), an urbanized area refers to a geographic location with a population of more than 50,000. Urbanized clusters are locations comprised of at least 2,500 but less than 50,000 people. By default, *rural* is *anything not urban.* In Montana, where the proposed study took place, over three quarters of the state's 56 counties are designated as "frontier" counties, indicating geographic isolation and very low population (National Network of Libraries of Medicine, 2012). The state averages 6.8 people per square mile according to a recent census report (U.S. Census Bureau, 2010).

Rural School

The U.S. Department of Education (ED, 1993) defines a rural school as one with an enrollment of fewer than 600 students and/or one located in a county with a population density of less than 10 individuals per square mile.

Visual Thinking

Symbolic images are created from perceptual stimuli to aid the development of conceptual and analytical thought about something in a cyclical process termed visual thinking (Arnheim, 1969). The visual mechanism by which conscious thought is both facilitated and transcribed symbolically to achieve meaning functions as fluid and engrossing (Csikszentmihalyi, 1996; Locher, 2010). In this study, visual thinking encompassed any artistic expression (artwork and other artistic representations) exhibited or referred to by students within the context of school and/or community, which related to the enabling of learning in any subject.

CHAPTER 2: REVIEW OF THE LITERATURE

The review of the literature presented in this chapter focused on three interrelated topics that provided the theoretical framework for this study. The first section discusses talent from a developmental perspective, and its relationship to giftedness, creativity, and high-potential artistic ability. Section two discusses talented middle school adolescents and their educational needs during this critical transitional stage of human development, including the importance of having their own voices heard in relation to these needs. The focus of the third section relates to the importance of *where* artistic ability is situated and highlights the rural community as a unique and crucial catalyst in talent development.

Giftedness was conceptualized in this study as natural high ability in a talent domain that may progress along a trajectory consisting of three stages (potential, achievement, and eminence) wherein "both cognitive and psychosocial variables are malleable and need to be deliberately cultivated" (Subotnik et al., 2011, p. 7). Recognized in this way, giftedness is considered to be the potential that once developed, translates into achievement (Gagné, 2008; Simonton, 2010; Subotnik et al., 2011). The terms talent and talent development refer to the purposeful nourishing of natural ability.

Talent Development

Developing and sustaining talent is one of the most important and rewarding fields of study (Dweck, 2009). Today, talent development is regaining attention as a path to supporting innovation and potential eminence in a field for both individual and societal benefit. Currently, America's youth often fail to reach their full potential, which represents a loss for both the individual *and* society (NAGC, 2012; Sternberg &

Davidson, 2005). Creating and retaining a leadership pipeline of individuals in all fields who demonstrate evidence of high potential is critical to success in today's "volatile, uncertain, complex and ambiguous" (VUCA) business environment (Fernández-Araloz, 2014, p. 6). Though potential is one of the most important predictors of future success (Fernández-Araloz, 2014), no single factor can be attributed to outstanding achievement in any domain (Walberg, Williams & Zeiser, 2003). Appropriate support for maximization of potential is made more difficult if there is not thorough knowledge of the variables related to talent (Subotnik et al., 2011).

Seeking, developing and promoting potential across disciplines is becoming embedded in the employment practices of American entities on a larger scale than ever before. PricewaterhouseCoopers' 17th Annual Global CEO Survey, *Talent Challenge* (2014), revealed that business leaders posed a concern about the prospects of talent availability in the future. Results showed that 63% of 1344 CEOs (a 5% increase over the previous year's survey), believed a top priority for future survivability was developing a leadership and talent pipeline that would be meet 21st century demands.

The onslaught of recent publications on the topic is evidence of society's current infatuation with talent and the need to cultivate it (e.g., *Rise of the Creative Class, Revisited* [Florida, 2012]; *StrengthsFinder 2.0;* [Rath, 2007]; *Creative Schools* [Robinson & Aronica, 2015]; *Swarm Intelligence* [Rolling, 2013]). Helping individuals position themselves to take advantage of strengths and talent is one way to tap potential and encourage talent development. However, of 10 million individuals surveyed, a Gallup report indicated that seven million were in fields or jobs that did not offer opportunities for them to take advantage of their strengths and talents (Rath, 2007). Innovation "comes

from the edges" (Delgado, 2013), where people think and behave differently, and when conditions are aligned with their individual abilities, positive outcomes have resulted on a multinational stage (Austin & Sonne, 2014). When efforts are concentrated on the abilities that various talents spawn, possibilities open to new ways to manage those diverse talents (Delgado, 2013). Although this is essential in order for individuals to remain engaged in any talent area long enough for the talent to be developed, this practice is seldom considered (Bloom, 1985; Csikszentmihalyi et al., 1997). Moreover, training the strengths rather than identifying the deficits in America's school children results in a greater percentage of talent being developed (Amabile, 1989) and these conditions can be encouraged in and out of school and in work settings (Csikszentmihalyi et al., 1997; Rath, 2007). In support of recognizing talent, the Jacob K. Javits Gifted and Talented Students Education Program funded research and development related to integrated curriculum models in subjects such as social studies, mathematics, and language arts, which served as field-validated practical classroom models for talent development (VanTassel-Baska, 2003).

Talent Development Models

A desire to organize and categorize the empirical literature related to outstanding accomplishments of learners, artists, and performers into practical, useful guides for research and practice in education resulted in several models of talent development (Olszewski-Kubilius, 2000). Even with these models in place however, a lack of consensus regarding definitions of and conceptions about giftedness, creativity, and talent development has slowed progress in finding fruitful ways to cultivate and nourish talent (Clark & Zimmerman, 2004).

Talent development models typically focus on pathways from the precocity of youth to adult accomplishment, and delineate factors related to family, teachers, and mentors, as well as individual and social aspects of potential (Davidson, 2009, Gagné, 2005, 2008; Tannenbaum, 1983, 2003); and recognize that individual commitment, dedication, and the drive to excel in the talent area is tantamount to making significant contributions to a field (Ericsson, 1996; Simonton, 1997). The differences between the models relate to how talent development is conceptualized and what the framework is intended to describe. Some models are designed to consider talent that goes beyond school (e.g., Development of Talent [Bloom, 1985]; Universal to Unique Continuum [Feldman, 1986]; Pyramid of Talent Development [Piirto, 2000, 2004]; WISC [Sternberg, 2005]; Scholarly, Productivity/Artistry Model, (SP/A) [Subotnik & Jarvin, 2005]; and the Sea Star Model [Tannenbaum, 1986, 2003]), based on the premise that talent is evolutionary.

Moreover, those same models, in addition to others, (e.g., Co-incidence Model [Feldman, 1986]; Differentiated Model of Gifts and Talents, DMGT [Gagné, 2008]; Enrichment Triad Model [Renzulli, 1978, 2014]; and Talent Search Model [J. C. Stanley, 1976]) may include a focus on talent trajectories, meaning that a set of sequences (though not always spelled out within the model), act as conduit through which the developmental process travels. Four models in particular, have served to inform the field of gifted education, and provide a foundation for talent development in the United States and other nations (Subotnik et al., 2011). Those models are all relevant to this study, and are summarized here; however it is noted that the current study most closely aligns with the Gagné model, which immediately follows.

The Differentiated Model of Gifts and Talents (DGMT). In his model, Gagné, (2005, 2008) places natural gifts at the beginning of a transformational path toward high-level mastery and competence in a domain. Intellectual, creative, socio-affective, and sensorimotor abilities are situated within the environment conceptualized in this model as one of the most critical aspects of the developmental process. The synergy between environmental and intrapersonal catalysts serves to either facilitate or inhibit transformative progress. Chance plays a primary role in the availability of opportunity and support, as well as to the presence of psychological traits that are conducive to the kind of motivation and persistence needed to commit to the talent area over the long term. Incorporated into the model are the elements of effort, volition, and receptiveness to learning. The malleability of a natural gift into realized talent along a developmental trajectory (Gagné, 2008; Subotnik et al., 2011) which is affected by the environmental context, conditions, support, catalyzing events, and chance opportunity illustrated by the Gagné (2008) model were critical to the investigation of talent development in this study.

The Enrichment Triad Model. Renzulli (1978) based this model primarily on finding and developing talent in youth within the school setting. Three overlapping variables—above-average ability, task commitment, and creative ability, and their relationship to individual performance—forms the basis of a three-ring conception of giftedness. The most salient component of the theory associated with this conception is the interaction among the three clusters of traits. Whereas abilities appear to remain relatively constant, creativity and task commitment are viewed as "contextual, situational, and temporal" (Renzulli & Reis, 2014, p. 21). The enrichment triad as a learning theory comparable to the three-ring conception of giftedness, was developed into a model that

offers guidance for achieving the conditions within an instructional setting that create the environment for promoting and developing talent. The criteria used for observationally identifying artistic giftedness in this study relied in part on the overlapping occurrence of above-average ability, creativity and task commitment.

The Wisdom, Intelligence, Creativity, Synthesized Model (WICS). In his model, Sternberg (2003, 2005, and 2009) emphasized an approach to developing educational leadership ability by balancing intrapersonal and extra-personal traits and preferences to serve the common good (Sternberg, 2005). Practical knowledge is presented as an integral facet of realized potential, and assures that the developing talent is connected to a particular audience or population making it relevant and thereby more fully realized (Subotnik et al., 2011). These attributes are presumed to be the result of substantial individual control rather than an innate set of predispositions. In mild contrast to this model, this study *did* presume innate ability; however, implicit in this study was regard for the impact of a combination of intrinsic motivation and external factors on talent, with particular emphasis on opportunity.

The closed system of schooling that preserves educational opportunities for some while denying them to others, can be overcome by pooling resources, building consortiums, and utilizing a common model that emphasizes strengths and potential. The WICS model offers alternative perspectives to the use of standardized methods of assessment for selecting students for talent development services. The synthesis of the three attributes of wisdom, intelligence, and creativity is the key to attaining high levels of leadership that will enable appropriate identification and accommodation of talent in students in various domains (Sternberg, 2005).

The Talent Search Model. J. C. Stanley (1976) developed his model in response to his inaugural Study of Mathematically Precocious Youth (SMPY) conducted at Johns Hopkins University in 1971, to focus on finding and developing talent. Still ongoing today, the model that grew out of this initial effort is one of the most widely known talent development models in the U.S., and has been responsible for the broad implementation of outside-of-school programs and some school curricula that cater to developing talent in youth in ways that schools are typically unprepared to do. J. C. Stanley (1976) believed that identifying precocious youth in the area of mathematics would enable them to develop their talent through appropriately challenging academic programs. By identifying students who have mastered material beyond their grade-level, or who score exceptionally high on above-level tests, the talent search program seeks to provide the brightest students with educational opportunities that will promote the highest level of talent optimization for both the individual and society's common good.

Regional talent searches in the U.S. that have been inspired by the Stanley model include the Duke University Talent Identification Program, TIP; Johns Hopkins University Center for Talented Youth; Northwestern University Center for Talent Development; and the University of Denver Rocky Mountain Talent Search. Current internet searches for talent-find programs specifically geared to visual art produced zero results though revealed a number of decades-old articles related to searching for [academic] talent *through* the arts (e.g., Goertz, 2003). This study's purpose reflected the basic premise of the talent search models summarized here relative to the benefit of recognizing youth with outstanding talent which may increase support and the likelihood that opportunities will be made for them to realize that talent.

Limitations of Talent Development Models

While no empirical analyses have made comparisons of the available talent development models for gifted education, they *have* been analyzed and summarized for their conceptualization of the definitions of giftedness, talent, creativity, used in educational settings, and identification of the variable environmental factors that lead to accomplishment (Plucker & Barab, 2005; Subotnik et al., 2011). *The Importance of Contexts in Theories of Giftedness* (Plucker & Barab, 2005) forwards the notion that one of the shortcomings of contemporary models is that they often provide only cursory references to the specific roles of contextual factors (which research confirms as paramount to the development of talent). In doing this, the models' predominant focus is on identifying the individual to be targeted for development (Plucker & Barab, 2005), not on providing the right conditions that will help the individual thrive (Csikszentmihalyi et al., 1997). When those environmental factors *are* discussed, the models summarized here (e.g., School Wide Enrichment, [Renzulli & Reis 2014]; Talent Search, [J. C. Stanley, 1976)]; WISC, [Sternberg, 2009]), do not fully articulate the processes involved in the interactions between the individual and the environment (Plucker & Barab, 2005). Even in the educational approaches to talent development that were inspired by notable models (e.g., Coleman & Cross, 2001; Karnes & Bean, 2001), locating the gifted child is the emphasis (Plucker & Barab, 2005). The dualism represented by the separation of the individual from the environment demonstrates inadequacies in the models regarding the perception of the person and context as integrated systems.

Another limiting factor of most models is that the theories they present are rarely applied in classrooms that are relevant to life outside of school. In order for the models to

be effective, practices used in the classroom must mimic those in the cultural context at large, and be offered as an emergent process (Plucker & Barab, 2005). Moreover, although the models are based on diverse perceptions of giftedness, and *do* acknowledge either implicitly or explicitly, the distinction between early potential and growth that follows a trajectory toward fully developed forms of giftedness, that distinction is seldom operationalized (Gagné, 2005).

Curriculum models spawned by varying conceptions of giftedness offer their perspectives for application to the classroom in specified domains, although none were focused on visual art specifically. The models do, however, set the stage for establishing frameworks for future research that could lead to models geared to developing artistic talent (Subotnik et al., 2011).

Shifts in Thinking

Bloom's (1985) landmark investigation of several domains of talent (artists, scientists, and athletes) nudged the thinking about giftedness toward a new concept that was broader and more inclusive. Rather unique to his study was the idea that talent develops differently in different domains. The scant amount of research related to artistic talent in particular, and the technological changes in the world since the major studies on the topic were conducted, remains a concern regarding whether we are offering appropriate opportunities to develop artistic talent (Zimmerman, personal communication, February, 17, 2014). Additionally, "[c]hanging social contexts alter how talent can be defined and cultivated" (McWilliams & Plucker, 2014, p. 49). The growing acceptance of a social link to the emergence, identification, and development of talent has and will continue to play a significant role in moving the field forward (Katzko & Mönks,

1995). New dispositions and transforming domains are changing what even counts as talent (McWilliams & Plucker, 2014). Katzko & Mönks (1995) asserted that little research has been conducted related to society's role as a protective shield for talents. New research in this area has potential to contribute timely information to improve talent-finding support and to formulate strategies that may offer insight into the way artistic giftedness and subsequent talent are both perceived and accommodated in the future.

Giftedness

The different viewpoints related to the conception of giftedness quite naturally affect the expectations for the outcome of giftedness (Borland, 2012; Subotnik & Jarvin, 2005; Subotnik et al., 2011). Definitions have evolved as new knowledge has become available, and though new theories have been developed, many continue to be based on various conceptions of intelligence as what is valued (Callahan, 2009). While this study did not specifically address intelligence as an independent factor or variable to be assessed, it is necessary to understand its relationship to both giftedness and talent development.

Giftedness as High Intelligence

Giftedness—high performance levels in a domain—was traditionally perceived as a product of high intelligence based on seminal works which found that students who demonstrated extraordinary ability in a domain were also found to have high levels of intelligence (Terman, 1925). Throughout the last century, IQ was the primary determinant of giftedness, even as Guilford's (1967) *Structure of the Intellect* model raised questions about that long-standing belief. More recently, the axiom that IQ is and should be the measure of intelligence used to identify above average ability has been

fundamentally challenged as knowledge about the nature of intelligence changes, and notions of giftedness change with them (Feldman, 2003). Moreover, the significance assigned to the role of intelligence varies between research and practice, with recent theory departing from traditional intelligence models of giftedness (Mendaglio & Peterson, 2007).

The education system must acknowledge new ways of identifying talent, as well as encouraging engaged time and promoting task commitment to its development. Particular groups of the adolescent population especially, have been disproportionately underrepresented in gifted programs in America (Worrell, 2010), and there have been few solutions to remedy the problems with gifted education after decades of research (Feldman, 2003).

This may reflect back to Feldman's (2003) assertion that if the field of gifted education is ever going to see marked change, past successes made possible by scholarly research must be appreciated; notwithstanding, challenges that this new era presents must be overcome with new vision for a future much different than gifted education has ever known. From Feldman's (2003) perspective, some of the salient problems that will need to be addressed relate to the fact that: a) resources dedicated to gifted education are diminishing, and will most likely continue to shrink; b) the nation's population is morphing into a "minority-majority" in many regions, potentially rendering traditional methods of identification and assessment ineffective; c) research and theories from outside the field have posed serious challenges to the central assumptions in gifted education; d) the socio-political climate has changed and anti-elitism sentiments of those outside the field stir up resentment toward passionate advocates of gifted education; e)

what will be needed in the way of aptitudes and talent in the future will be far different from what was crucial for success in the past; and f) international conceptions of giftedness often vary sharply from those in the U.S. and make it difficult to hold onto America's infatuation with IQ-based giftedness.

Elitism and Anti-Intellectualism

The argument for dismissal of the IQ notion of giftedness is predominantly connected to perceptions of elitism and anti-intellectualism, which have been responsible for the emergence of contemporary conceptualizations of giftedness and talent. In an effort to equalize the education of all students, and give everyone a fair chance to succeed, America has ignored the development of talents and the needs of the nation's brightest students (Colangelo et al., 2003). Early thinking presumed that giftedness was an outcome of innate ability, and focused on ways to identify and serve the needs of those with heightened ability. This often meant segregated classes, enrichment opportunities, and other special services that have been more recently viewed as exclusionary and elitist (Ford & Whiting, 2009). It was argued that children from diverse backgrounds may be less likely to be identified for selection for these special services, thereby creating whole groups that were underrepresented in gifted programs (Ford & Whiting, 2009). As a result, pressure was exerted (by those who perceived gifted services as elitist) to eliminate the support—therefore the funding—for gifted programs. Artistically gifted, as one set of diverse and marginalized learners, (L. K. Silverman, 2014), have nevertheless been excluded from discussions about underrepresented groups; therefore, have been overlooked and unaccommodated in school environments (Bolster, 1990; Clark & Zimmerman, 1997). While efforts are underway to desegregate gifted education and

eliminate elitism associated with it (Ford, 2003; D. Matthews, 2009), other efforts propose to positively reverse negative *mindsets* about elitism, stereotypes, identifying, and labeling in order to meet the potential of all types of gifted learners, and offer external support that is essential for developing their talent (Dweck, 2012; Freeman, 2005, 2010; Niehart, 1999; Subotnik et al., 2011; Worrell, 2010). However, until it is recognized that high ability is unequally distributed, and that gifted students have the same right to have their needs met as students anywhere along the talent scale, our public schools will continue on the path toward "homogenized mediocrity" (G. K. Stanley & Baines, 2002, p. 13), with talents being potentially wasted (Csikszentmhalyi et al., 1997). Championing individual liberty, Thomas Jefferson espoused the view that to be well educated embraces both the democracy of opportunity and the aristocracy of talent (G. K. Stanley & Baines, 2002).

Even as recently as half a century ago, it was recognized that a democratic society depends upon a diverse array of talent and leadership in order to survive, and that the most devastating outcome of the adherence to mindsets and practices that demand *equal* treatment of all students, is the thwarting of the potential talent of America's youth (Fund for the Advancement of Education [FAE], 1957). This is still pertinent today. Those fifty-plus years ago, when innovation and high achievement were perceived as prestigious, programs encouraged early entrance to college (including traditionally Black universities); honored high achievement and talent; and were supported in efforts to provide richer opportunities for their students in order to discover hidden abilities (Csikszentmihalyi et al., 1997; FAE, 1957; Subotnik et al., 2011).

As a result of the passing of the National Defense Educational Act (NDEA, 1958) during that time frame, the United States experienced a period of growth in innovation and productivity (Tannenbaum, 1983). In the decades that followed, other directions in education and politics took precedence, and the nation experienced a decline in the prioritization of talent—which went relatively unnoticed with exception of those in gifted education working feverishly to build support for talented students (Heng, 2003; Roeper, 1996). Responding to the country's spiraling needs, the National Science Board (NSB) has more recently suggested that investments in talent and innovation through provision of opportunities for excellence to America's gifted students must replace the complacency that has existed about gifted education (NSB, 2010) as a result of politicized arguments for justice which have undercut efforts to support academic and artistic gifts (Sapon-Shevin, 2003). Research has shown that providing gifted students with opportunities to socialize and learn with like-ability peers in programs focused on their talents benefits both their attitudes about school and perceptions of giftedness Delourt, Loyd, Cornell, & Goldberg, 1994). Looking at it realistically, practices that have become standard in education may no longer be acceptable. Helping youth find a place between their own inclinations and the possibilities that society offers requires looking at school as only a small part of students' lives (Sosniak, 2003), and advocating for a "curriculum of conscience" (Cooper, 1998, p. 59) which would nurture both mind and spirit toward the end goal of a learner-centered vision of education (Darling-Hammond, 1997).

Intelligence Theories

Two prominent theories emerged in the late twentieth century challenging traditional views of intelligence, as well as pedagogical strategies and practice in the classroom. Sternberg's (1998) *Triarchic Theory* proposed three distinct sub theories of intelligence within which giftedness can be manifested. The *componential* sub theory identifies the mental components responsible for the planning, execution and evaluation of intelligence. The *experiential* sub theory refers to the ability to deal with novelty and social demands; it includes being able to automate information processing. The *contextual* sub theory relates to the influence of the environmental context on objective, purpose, adaptive ability and socio-cultural influences (Virgolim, 2009). Intelligence theories considering any less than these three areas together are, according to Sternberg (1998), "impoverished and restricted" (p. 13) and can no longer be defended.

Gardner (1994) offered his theory of *Multiple Intelligences* which identified eight cognitive competencies that can be viewed as independent intelligences where giftedness can become manifest. Individuals may possess high ability in one or more of those intelligences; and their personal and unique interests and aptitudes need to be recognized and understood in terms of their relevance to real world situations in order for them to be accommodated. Gardner (2004) posits that "intelligence" can be defined by three different interpretations: a) a property consisting of eight or nine separate and distinct intelligences, which all humans possess; b) a dimension whose profile is never the same for any two individuals; and c) the way an individual carries out a task, even though it may make no sense to others. Growing out of this theory was a middle school curriculum entitled *Practical Intelligences for School*, and a set of curriculum-and-assessment

instruments intended to document learning in three different art forms. These efforts led to an interest in—and authorship of several books on—creativity (Gardner, 2004).

Given more current research and a changing society, the IQ measure of intelligence, when viewed as the primary criterion for giftedness, is limited because that perspective does not take into consideration the significance of diversity among the human dimensions of capability, therefore is irrelevant in today's society (Feldman, 2003). It is now believed that as IQ increases, reliance on the right hemisphere of the brain also increases; intellectually gifted students were found to demonstrate more enhanced right-hemisphere brain functioning than non-gifted students based on results of the Kaufman Assessment Battery for Children (Benbow, 1986; O'Boyle & Benbow, 1990). However, highly precocious youth in general tend to utilize both hemispheres of the brain *simultaneously*, which is more strongly correlated with visual-spatial functioning than the auditory-sequential processing associated with the left hemisphere (L. K. Silverman, 2009).

Visual-spatial processing involves a transformation of stimuli into images and feelings, as expression that relies on manipulations of spatial patterns and relationships, guided by intuition, senses, and emotions (L. K. Silverman, 2009). Image-making is a mechanism for making sense of the immediate world by creating visual concepts that organize a set of complex stimuli into a somewhat orderly array—a type of problem-solving known as *perceptual intelligence* (Arnheim, 1969). Spatial ability enables the cognitive functions associated with both assimilating preexisting knowledge, and developing new knowledge; and without this ability, structures that support creativity and innovation are incomplete (Kell, Lubinski, Benbow, & Steiger, 2013; L. K. Silverman,

2014). Studies have shown that all students could benefit from using visual-spatial processes in conjunction with learning (L. K. Silverman, 2013, 2014) because as Arnheim (1974/1954; 1969) theorized, developing visual perception, a skill that is particularly honed in those with artistic ability, has the power to strengthen the human perceptual component and increase productive thinking in *any* discipline because "[a]ll perceiving is thinking" (1969, p. 5).

Evolving Definition of Giftedness

When definitions evolving from research and theory and the variables that were considered of greatest import for advanced aptitudes were compiled by leaders in the field, the result was more than a dozen different interpretations of giftedness (Sternberg & Davidson, 2005). Made possible initially by the information offered in the *The Marland Report* (Marland, 1972), the first national report to Congress on gifted education, the Jacob K. Javits Gifted and Talented Education Act of 1993, provided the definition most in use today by states and schools. Regardless of the specific definition used, it is generally agreed that *giftedness* is comprised of several dimensions that can be classified in two strands: general (intellectual and creative) *ability* and specific (academic, arts or athletic) *talents* (Callahan, 2009). Defining giftedness as higher-than-average brain function efficiency rather than strictly IQ includes all categories of giftedness—general intellectual ability, specific domain aptitude, creative-productive thinking, leadership ability, visual and performing arts, and psychomotor ability (Ross, 1993). Tannenbaum (1983) cautioned against delineating the terms gifted and talented for fear it would result in the interpretation that one is superior to the other. Nevertheless, it has become more common to refer to high ability in what are perceived to be academic

domains as *gifted* and the possession of high ability in the arts, athletics and other "non-academic" domains as *talented* (Callahan, 2009; Clark & Zimmerman, 1988, 1997, 2004; Sternberg, 1985).

Giftedness Manifested as Specific-Domain Talent

The development of talent in any domain is complicated by the fact that there is no universal agreement related to where to set the bar for behaviors that identify manifestations of talent (Horowitz, 2009). Attempting to define the nuances of talent can be compared to trying to place a value on the subtle differences observed in the design of a kaleidoscope, with each slight twist.

Just as giftedness was thought to derive from high innate ability, *talent* more recently is believed to be the outcome of nurturing that natural ability or gift, regardless of domain (Csikszentmihalyi et al., 1997). When gifts are perceived as innate high levels of untrained aptitudes, talents are viewed as high levels of developed ability catalyzed by appropriate intrapersonal and environmental influences including chance as one environmental variable (Gagné, 2008). From another perspective, talent is believed to respond to educational inputs along a developmental path whereas giftedness is thought to be a fixed concept not amenable to external influence, but related to genetic factors (Feldhusen, 2003; Subotnik et al., 2011).

Kinds of support for various talents are not consistent. External rewards do appear to make a difference in the degree of development in the fields of mathematics and science, both of which are valued by society and parents as potential career options; whereas in the domain of art, even given its cultural importance, there is little support from parents to warrant investment in the talent toward a future career. Lacking this

support, artistically gifted youth are on their own to develop their talent based on their individual passion for drawing (Csikszentmihalyi et al., 1997).

In addition to the level of support provided, contemporary theories include the element of chance and 10,000 hours of sustained effort as significant factors in the development of talent in any domain (Gladwell, 2008); however, talent is generally less likely to develop in those areas undervalued and unrewarded by society (Sayler, 2009). Talent is considered by most accounts to be demonstrations of product-oriented creativity and innovation with development geared to high achievement and the potential for recognized change in a field through highly acclaimed works (Tolan & Piechowski, 2013). Even if talent *is* successfully developed during a time when circumstances and *zeitgeist* are not favorable (Mönks, 2014), the lack of value placed on the talent renders it less meritorious, reducing the likelihood it will ever result in field-changing contributions (Feldman, 2003).

The criticality of talent to survival and to society can be divided into four major categories, according to Tannenbaum (1983): a) scarcity talents—in short supply but needed by society and all peoples; b) surplus talents—desired by society, but not essential for its survival; c) quota talents—which fall between scarcity and surplus; d) anomalous talents—exceptional achievements that may have practical value, or primarily provide entertainment (skills such as speed reading, gourmet cooking, break-dancing).

Schoolhouse (high-achieving) giftedness and creative-productive giftedness although not necessarily mutually exclusive, refer to different interpretations of possessed talent and how it can be developed in a school setting (Renzulli, 1978; Renzulli & Reis, 2014). The Schoolwide Enrichment Model-SEM (Renzulli & Reis, 1985) is based on the

premise that schools *should* be places for talent development, and educators *should* provide the opportunities, resources, and encouragement that enable students to develop their individual talent. Winning SEM schools are firmly committed to—and their practices grounded in—six common elements that result in a positive synergy leading to greater talent development progress. Those six elements—*Knowledge about the [SEM] model, Ownership, Energy, Teacher/administrator trust, Opening door, Attitude, and School culture*—enable enrichment to happen in schools because the teachers and administrators alike are committed to the common goal of developing talent in all students (Renzulli & Reis, 2014).

A fresh perspective daring to dislodge deeply rooted theories within gifted education proposes that eminence be the ultimate goal of talent development, which has potential to bring "unimaginable benefits" to society (Subotnik et al., 2011, p. 40). This perspective has been refuted by others (Tolan & Piechowski, 2013) as missing the importance of personal growth as a child-centered rather than society-centered goal. The interpretation used in arguing the case against eminence is that the promotion of talent toward potential eminence assumes that at the adult level one is not gifted unless there is demonstration of product-oriented achievement; that one's giftedness is of little value if it is not evident to society in the form of ongoing and observable talent. The authors of this new view of giftedness (Subotnik et al., 2011) however, counter that this does not preclude promoting individual growth in all students, and posit that focusing on eminence maintains a focus on excellence; especially when the promotion of talent in this vein receives the appropriate support from family, teachers, and community (Subotnik et al., 2011). Acknowledging the magnitude of this visionary conceptualization of talent within

the field of gifted education while also challenging the premise of potentially broad social effects, Borland (2012) asserts that if instead of striving for eminence, concentrated efforts are made to offer appropriate talent development for all advanced-ability students within an educational format focused on current strengths to addresses and accommodate individual needs, both individual and society benefit over the long term. Debates such as these continue to precipitate the controversy that has been a tradition in the field of gifted education (Feldman, 2003). In any case, students' current strengths can present themselves as high intellectual ability, specific domain talent, or creative productivity (Bloom & Sosniak, 1981; Csikszentmihalyi, 1996; Gardner, 1982; Reis & Renzulli, 2010; Renzulli, 1978, 2002; Sternberg, 1985); and talent in any of these areas must be defined using real-world, multi-criteria performance measures rather than aptitude assessments that utilize indirect, standardized measures and do not apply appropriately to artistic creative ability (Clark & Zimmerman, 1997; Sayler, 2009).

Creativity

Creative *giftedness* as untrained natural ability is purported to develop naturally over the maturation process; whereas creative *talent* typically refers to high levels of performance related to sets of skills within specific domains such as the arts, which can be systematically developed (Amabile, 1989; Gagné, 2008). Creativity is considered a motivating and energizing *factor* of unfolding talent in any domain (Khatena, 1992; Pfeiffer & Thompson, 2013). As the construct gains more attention, questions continue to be asked about how creativity fits into everyday life (Richards, 2010; Rolling, 2013). Most research however, does not include an explicit definition of creativity therefore

semantics are often responsible for varied results of numerous studies dealing with the same aspect of creativity (Plucker & Makel, 2010).

In order for creativity to be clearly understood it must be clearly defined (Runco & Jaegar, 2012). Like talent, creativity is usually associated with product generation. Both type and quality of creative products distinguish individual contributions (Csikszentmihalyi, 1996; Kaufman & Baer, 2005), and specific distinctions can be drawn about creative outputs by exploring the four c's of creative-productive contribution (Kaufman & Beghetto, 2009).

Mini-c can be observed in very young individuals and those without advanced knowledge in one specific domain exhibit creativity at this level to construct personal understandings of the world. Little-c creativity incorporates both originality and meaningfulness in activities related to work or leisure. This type of creative engagement is described as the type everyone has to some degree and that which is central to human survival; it is about process, rather than product. Pro-c creativity represents a developed level of knowledge, skills, and motivation that enable the individual to make creative advances in a selected profession; and Big-C identifies the revolutionary level of creativity that changes a domain or profession through eminent contributions (Kaufman & Beghetto, 2009; Richards, 2010; Runco, 1996).

Creative ability is considered to differ from talent in the sense that although sustained effort may be exerted, creativity may not result in accomplishments that are widely recognized *even* when they reside in a domain that is socially valued at the time (Csikszentmihalyi, 1996). Debates persist over the meaning and significance of creativity in its relationship to giftedness and talent, and often center on whether it is domain-

specific or across domains (Baer, 2010). Studies conducted by Feist (1998, 1999) that investigated personality traits, evidence of talent and levels of interest among scientists and non-scientists, more-creative and less-creative scientists, and artists versus non-artists, found both similarities and differences among the groups across domains. Findings indicated that creative people in art *and* science both tended to be open to new experiences, less conventional, more ambitious, self-confident and impulsive; yet those same groups do not exhibit similar personality profiles. Artists employ more affective-emotional functioning, whereas scientists appeared to be more solidly conscientious. Left unresolved is causality among personality and creativity (Baer, 2010; Feist, 1999).

The systems theory of creativity aptly views it as a process sculpted by a myriad of forces (Rathnude, 2009), rather than a singular ability. Traditionally believed to be situated outside the normal curve of academic talent and in the category of non-cognitive skills, (Renzulli & Reis, 2014), highly creative-productive talent is garnering more interest and its development in all domains is considered requisite for 21st century innovation (Badenoch, personal communication, January 23, 2014; Florida, 2002, 2012; (L. K. Silverman, 2009).

For this study, the constructs of giftedness, creativity, and talent development were operationalized as overlapping and interdependent. The model presented in Figure 2 illustrates how the multidimensionality of giftedness connects the three components. Natural (innate) untrained gifts are present as either intellectual or creative ability and comprise the first of the two primary strands of giftedness. How these abilities are exhibited in a specific domain forms the second, or *talent* strand of giftedness (Callahan, 2009). Domain-specific talent, represented as manifested giftedness, depends upon a

variety of factors; including the genetic make-up, environmental forces which serve to positively or negatively influence development, the nuanced and complex intrapersonal traits, and finally, the broader social conventions which place some level of value on particular types of creativity (Csikszentmihalyi, 1988, 1996; Csikszentmihalyi et al., 1997; Gagné, 2008; Subotnik et al., 2011). The intricately patterned graphic is representative of the complexities related to the relationships of the influencing factors capable of moving talent along a trajectory which are unique to each person (Subotnik et al., 2011) and appear to apply differently to each separate domain (Bloom, 1985; Eisner, 2002). Tubular shapes extending from the delicate and intertwining pattern in the model represent the separate domains within which talent could be developed. Because artistic talent was the focus of this study, no other domains were labeled. Giftedness and talent are perceived in this study to be mutually reinforcing with creativity embedded within each, as represented by the yin yang.

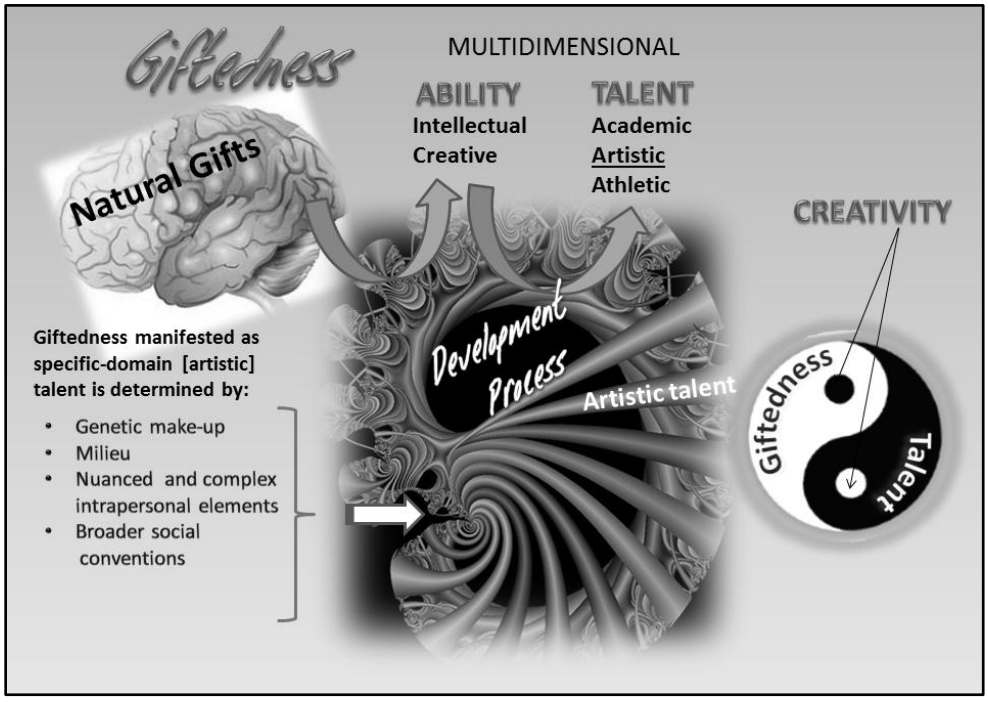

Figure 2. Giftedness, Talent, and Creativity, Operationalized.

Building Creative Potential

A need for creative talent has been identified by business executives as the stumbling block when hiring in today's market (Lichtenberg, Woock, & Wright, 2008; see also *The Creativity Crisis,* Kim, 2012). When surveyed, 63% of business executives, and 70% of school leaders believed creativity should weigh more heavily in new-hiring practices than technical skill level (Lichtenberg et al., 2008). A recently renewed effort to include the arts as integral to a complete education has resulted in a campaign to modify STEM (science, technology, engineering, and mathematics) curriculum to add the development of art and design skills (inserting an A in the acronym). Supported by a bipartisan congressional STEAM caucus (see also stemtosteam.org) this is considered critical because both art and design are poised to transform the 21st century economy; art asks the questions and design brings about solutions (Maeda, 2013; McGirt, 2013). Badenoch (personal communication, January 23, 2014), CEO of an innovative company operating in a high-tech arena, believes this is due to the fact that the missing link in the STEM effort has been the aspect of effective communication, which art naturally embodies. Badenoch (personal communication, January 23, 2014) claims that art plays a pivotal role in one's ability to instantly connect with ideas and with others (e.g., *Badenoch: Science, Invention, Design in Defense and Energy*) and observes that:

> If we are serious about leading in the area of STEM, then we have to get serious about making the connection with others more efficiently in both depth and time. Cycling through the spatial-functional-technical wheel is true for architecture, engineering, science, invention and design. It's a learned paradigm…Art is the

> key to achieving our cultural "Moore's Law"[1] of technical achievement [and]…. [i]f we are serious about ideas and technology, then we must be serious about making connections that infect people with ways that challenge their perception of their own limits so they dare to venture into the unknown, to toy with the dangerous if only in their mind….Being able to synthesize ideas into three and four dimensions (time sequencing) and the power of visualization emerged [for me] directly from drawing. Even now, I make a point of drawing freehand every day. There is a link there that is fundamental to unlocking creative skill and tapping into the process of discovery. (January 23, 2014)

The conceptual age has evolved from the industrial and information ages with a focus on "right-brained" skills (Pink, 2010). Leaving eras of compliance (industrial age) and routine (information age) behind, and ushering in non-conforming ambiguity and innovation will enable a more harmonious blend of the analytical and the creative realms (Hartley, 2008; Florida, 2012).

The enormous shift that has taken place over the last few decades across the globe in most advanced countries is the recognition that great minds are androgynous. No longer is it beneficial or even practical, to rely on the analytical and linear functions of the left hemisphere of the brain to discover new meaning in a world of technological half-lives, and social intricacies never before witnessed. Rather than imagining the left brain as the all-knowing dominant power of thought and the right brain as the lesser—support—mechanism, considerations should be given to the synergistic, the synchronous,

[1] Moore's Law, an observation first made by Gordon Moore at Intel, relates to the speed with which the complexity of computer processors increases, meaning the ability of the system to perform operations that satisfy demands for capability. Here, it is used as an analogy to illustrate that art is the catalyst for achieving that kind of performance momentum in creativity and innovation in our culture.

and the concurrent nature of shared hemispheric activity to produce novel and innovative ideas that can be applied in practical environments. There is substantial evidence that much of the thinking we do in everyday situations is based on the formation and transformation of visual images and that visualization plays a key role in cognition and creativity (Arnheim, 1969, 1974/1954; Badenoch, personal communication, January 23, 2014; Florida, 2012; Pink, 2005; Tinio & Leder, 2013).

Creativity Connection to Artistic Talent

Artistic talent is closely associated with the measurable construct of creativity (Khatena, 1982), a multifaceted, complex and interactive system of relationships among person, process, and product in social and cultural contexts (Csikszentmihalyi, 1996; Feldman, 1999; Pucchio & Cabra, 2010). *Artistic* creativity is sometimes referred to as a subset of creativity incorporating knowledge of art, concepts and traditions of a culture, highly-developed visual skill, and intrinsic motivation (Amabile, 1983). The term artistic creativity however, remains ambiguous in education, but re-conceptualizing its usage through research, development of new strategies, and qualitative measures of assessment can help achieve broader understanding about relationships of creativity to artistic development (Zimmerman, 2009). Connected to that however, is the fact that the relationship between creativity and the development of creative talent can be conceptualized three different ways complicating talent development efforts: a) giftedness and creative talent can be viewed as *separate* abilities, b) creativity can be seen as a fundamental concept *within* giftedness, and c) creativity can be viewed as a separate *category* of giftedness (Hunsaker & Callahan, 1995). The contradiction and confusion that exists with regard to achieving agreement on what creativity, artistic

giftedness and talent are and what that means for development of artistic talent serve to retard the developmental process (Clark & Zimmerman, 2004).

There has been a relatively long history of the "cross-pollination of ideas" (Kay & Carroll, 2009, p. 51) between research relating to creativity and that relating to artistic ability. Although it is common to assume that creativity and artistic ability are *synonymous*, some researchers claim that measures on creativity tests do not substantiate that belief (Kay, 1999; Kay & Carroll, 2009), while other evidence shows that those with artistic talent receive consistently higher scores on Torrance Tests of Creativity (Burton, Horowitz, & Abeles, 1999). This can be confounded by adjectival nouns such as Locher's (2010) use of the words "artistic creativity" (p. 131), interpreted to be evidence of perceptual ability, drawing skills, personality traits, personal history, and other factors drawn from the literature (e.g., Kozbelt & Seeley, 2007), all of which in some way affect the artistic process.

Nearly one third of all articles in *Studies in Art Education* from the journal's inception through the 1960s are related to studies focused on creativity (Kay & Carroll, 2009). Once again, after a decades-long hiatus, creativity resurfaces as a salient issue in the education and talent development of artistically gifted students (Zimmerman, personal communication, February 17, 2014). Both creativity and artistic production require high levels of motivation, creative problem finding and solving, and direct engagement of the senses (Kay & Carroll, 2009). "[C]reative-productive giftedness is the type that authors, designers, and artists apply to selected areas of cultural, economic, and social capital" (Renzulli & Reis, 2014, p. 15).

Academically and artistically gifted individuals share three characteristics: a) early and often surprising precocity and mastery in a symbolic domain; b) the urge (motivation) to master; and c) unique problem-solving and talent development pathways (Winner, 1996). The gift of human imagination must be recognized and perceptual and creative capacities valued within an educational system that aspires to develop the whole child (Robinson, 2006), and encourage a creative-productive citizenry (Florida, 2002, 2012; National Governor's Association [NGA], 2005).

Artistic talent. Even when creativity, giftedness, and art talent development *are* clarified and defined for purposes of identification, curriculum, and assessment, it is difficult to recognize artistic ability—primarily in adolescents—in order to help develop that talent (Clark & Zimmerman, 2004; Fine, 1970). Acknowledging a broader spectrum of talent, *The Marland Report* (Marland, 1972), included the inaugural recognition of the term *artistic ability* as an area in which giftedness could be manifest, and resulted in what is now widely known and commonly accepted as the federal definition of giftedness (Public Law 91-230, Section 806). Despite that progress, artistic talent still does not reign as one of the nation's priorities (Csikszentmihalyi et al., 1997).

Artistic talent is generally defined as advanced ability in the *visual* arts as it applies to conceptions of creativity, giftedness and talent (Kay & Carroll, 2009), and should be considered developmental rather than an all-or-nothing trait (Csikszentmihalyi et al., 1997). Perceptions vary, however, in terms of whether there is a similarity between the arts and other domains of giftedness and talent (Freeman, 2005; Gagné, 2005), and some scholars disagree about the nature of cognitive processes involved in the artistic production of creative works (Gardner, 1982; Haroutounian, 2014; Zimmerman, 2005).

Conflicting perspectives, the lack of agreement on the definition of artistic talent, perceptions of incompatibility between art productions and intelligence, and the relationships between gifted, talented, and creativity continue to cast a negative shadow on talent development in art (Zimmerman, 2005).

Art Connection to Intelligence

Although artistic talent has been shown to correlate positively to intellectual ability (Gardner, 1982; Lansing, 1963), misunderstandings still prevail with regard to the relationship between superior artistic ability and above-average intelligence (Clark & Zimmerman, 2004). Even though research has confirmed that a) general achievement and artistic ability both depend on intellectual capacity (Tiebout & Meier, 1936); b) that a connection between art ability and intelligence exists (Eisner, 1994; Ziegfeld, 1961); and c) that students with high academic ability may also be talented in art (Shubert, 1973), varied results in the research and in perspectives over time, and have resulted in a separation of art ability and intelligence (Kay & Carroll, 2009; Winner & Martino, 2003; Clark & Zimmerman, 2004) in practice. The unfortunate consequence of enrolling students of lower intelligence in art class under the assumption that it is a place where they can find success; and counseling artistically gifted students out of art class believing they are better served by courses in other subjects, is detrimental to all students (Clark & Zimmerman, 2004).

Art as intelligence. Cognition, perception, emotional feeling, and intelligence have been explored extensively in the domain of music leading to the assertion that music, as one of the arts, belongs to a unique frame of mind that the other arts do not share. Each discrete art form relies upon a specific and unique intelligence related to the

artist's application of skill and medium toward the creative end result therefore cannot be treated generically (Eisner, 2002). This differs from Gardner's "arts intelligence" theory, which views the arts as a whole, not delineating the specific roles of intelligence within each art form (Reimer, 2004).

Visualization as art intelligence. Making pictorial art is equated with mastery of a complicated and complex set of skills including dexterity, that are requisite to becoming a creator regardless of age (Gardner, 1994). Viewpoints that disregard the role of intelligence in the process and production of art ignore the complexity, the necessity of thinking effectively "in terms of relations and qualities" (Dewey, 1934, p. 47) in a visually symbolic paradigm that can be compared to the thought required for understanding verbal and mathematical symbolic meanings; because "[v]isual perception is visual thinking" (Arnheim, 1969, p. 14).

Cognitive operations typically referred to as thinking do not rely strictly upon mental processes outside the realm of perception; but depend upon the syncing of many mental functions to make order of the world. Perceptual thinking therefore, is comprised not only of sensory operations, but involves a more holistically cognitive process that can be divided into intuitive and intellectual cognition (Arnheim, 1969). Visual thinking and imagination are not only associated with creative eminence, but students, teachers, designers, engineers, scientists, artists, and others utilize visual thinking every day in the course of their work (Richards, 2007). Students whose preference for a visual-spatial orientation of learning have observed however, that the need to arrange ideas in a way that they can understand them is oppositional to the way they are *supposed* to learn them (Piechowski, 2006). Flash insight is often common for gifted visual learners at this age,

who claim to have little explanation for how they "got there," except to say it just came to them. Because classroom expectations do not accommodate the atypical visual-spatial learning (VSL) mode, these [visual] responses to problems are often suspect in an environment where sequential steps to problem solving are mandatory, except perhaps in geometry, geography, and art (Piechowski, 2006). VSL moves in a more dynamic space where everything has an imaginational reality, and cannot be readily explained in words (L. K. Silverman, 2009). The ability to visualize what cannot be seen directly is critical to the sciences (Cunningham, 2005). Einstein for example, explained that words did not seem to play any particular role in his mechanism of thought and described the primary elements of his thinking as signs and rather distinct images (Hadamard, 1945).

Characteristics of Artistically Gifted Individuals

Artistically gifted individuals score higher on imaginational and emotional overexcitabilities than the intellectually gifted do (Kay & Carroll, 2009). Additionally, results of a longitudinal study (Milbrath, 1998) confirmed that over ten years, children ages 4-14 demonstrated that artistically gifted children are guided more by figurative than operational processes in their approach to the world, when compared to a non-gifted control group. Figurative knowledge is representational, whereas operative knowledge involves more interpretive processes (Feldman, 2000). Children with a high level of talent in art draw in a characteristically different way (Milbrath, 1998), and they are creative in a qualitatively different way than their average peers (Winner & Martino, 2003). Although it should not be considered in isolation, or as the only sign of artistic giftedness, a distinguishing factor of artistic aptitude is the ability to represent objects and forms with astonishing realism at a young age (Golomb, 1992; Kellogg, 1969; Milbrath,

1998). Moreover, children who are artistically gifted appear able to create art works that represent the cultural conventions of their society at a very early age, regardless of nationality (Winner & Martino, 2003).

Personality traits figure prominently in the possession and development of artistic talent. Stereotypical views of the artist as a lonely, disheveled, social outcast have evolved as society's relationship with and need for art has evolved. Historically, artists have been the boundary-pushers and boundary-breakers—taking the ordinary to the edge; envisioning ways that standard methods of doing something or thinking about something could be made more exciting—*better*? Artistically creative individuals frequently question the very premises for—and existence and acceptance of—certain practices, highly value their independence, lack a desire to conform in any context, and prefer to experiment, going beyond what others are doing (Csikszentmihalyi et al., 1997; Eisner, 1992; Piirto, 2000). Investigations into the emotional aspects of visual artists' personalities revealed their deference to yet somewhat rebellious separation from the social standard and need to make good impressions (Barron, 1972). This exemplifies the significance of experiential quality that became the basis for Eisner's (1992a) conceptualization of the importance of "*being artist"* (Ross, 2005, p. 72), influenced by the theoretical preponderance of Dewey (1934). Developing talent is reliant on the experiential repertoire, and it is the lived experience of being an artist and the telling of one's own story that defines who artistically gifted individuals are and positions them differently than what is commonly accepted (Clandinin, 2005; Davis, 1997; Eisner, 1979)

Visual art development, unlike development in other arts areas, appears to follow a U-shaped trajectory whereby the precocity that is apparent in very young children is

followed by a waning of interest in the elementary years and a marked increase in the adolescent years (Davis, 1997; Gardner & Winner, 1982). Separate studies conducted on children's drawing over an extended amount of time however, confirm a period of pre-adolescent regression that results in either a return to more primitive drawing, or a ceasing of drawing altogether; and a renaissance that appears to occur at adolescence, when students resume a more sophisticated, stylistic manner of creating original drawings (Kellogg, 1969). In contrast, investigations of the literary arts have found that sixth graders exhibit the highest level of imaginativeness and sensitivity in the aesthetic realm, and that during the period of later adolescence formal operations are more likely to dull the senses in regard to aesthetics and art (Gardner, 1994).

Strong evidence seems to exist, according to some cognitive psychologists, that the gift of artistic ability is innate; however it is motivation, hard work and perseverance—deliberate practicing of the craft—that lead to high achievement (Ericsson & Faivre, 1988; Ericsson, Krampe, & Tesch-Römer, 1993). Artistically gifted adolescents attending a summer arts institute attributed their talent to hard work and the devotion of large amounts of time and energy to their art (Clark & Zimmerman, 1988) rather than art experiences related to school. In western culture, artistically gifted students have been wary of formal art lessons, interpreting them as a method that unravels their individual talent (Gardner, 1980). The typical structure of schooling (regardless of level) remains hostile for students with advanced visual and artistic ability because their talent and the inability to function well on a linear level is often misunderstood, left unrecognized, unaccommodated and undeveloped (L. K. Silverman, 2014).

Recognizing Artistic Talent

Although it would seem needless to mention, talent *recognitio*n is the primary requisite condition for the development of talent that results in a future creative enterprise (Csikszentmihalyi et al., 1997). Artistic talent is difficult to recognize however, due in part to a lack of psychology research that investigates skills and behaviors related to art and because these complex activities often defy patterns associated with norms (Gardner, 1994; McCarthy, Ondaatje, Zakaras, & Brooks, 2004a, 2004b). Once talent *is* recognized, the attrition rate for continued development is relatively high, and can be attributed to a number of factors, including gross inattention by those who could most aid the development process (Csikszentmihalyi et.al, 1997; Benbow & Stanley, 1983). Bloom (1985) reported that talent development requires the right balance of support from parents, teachers, and others, and that an essential ingredient for creative productivity in the arts, academic fields, or psychomotor activities is the student's own acceptance and understanding of their personal talent (Feldhusen, 2003). Merely acknowledging that all individuals have potential in one or more areas and that the range of human capabilities is extensive is not enough; those capabilities need to be considered and identified in order to fully educate the population to function in society at their most optimal level. One reason for the lack of attention to talent is attitude toward giftedness. Attitudes affect and are affected by research in gifted education influencing values, preferences, practices, and outcomes related to talent development (Raut & Lim (2009). This has resulted from an American education system that has promoted intellectual and academic talent development predominately, causing artistic talent to remain marginalized (Clark & Zimmerman, 2004).

Early 21st century research and theory identified the areas of artistic, personal-social and vocational-technical as important aspects of human talent that must be considered in addition to cognitive-academic aptitude, as part of future talent development efforts (Feldhusen, 2003). Omitting intelligences other than those deemed to be academic from gifted programs leaves the nurturing of artistic talent to chance opportunity outside of the school context— the one exception being athletics (Bolster, 1990; Horowitz, 2009). Moreover, there has been very little new research about (and few appropriate instruments/measures developed in the past three decades to identify) artistic talent in general (Zimmerman, personal communication Feb. 17, 2014).

Two landmark studies focused on developing artistic talent were conducted in the late 20th century provided some of the most comprehensive and timely findings on the topic to date. The longitudinal studies—one focused on urban multiple talent areas including art (Csikszentmihalyi et al., 1997), and the other on artistic talent, in adolescents from both rural and metropolitan cities (Clark & Zimmerman, 1988)—relied directly on perceptions of the sample populations (208 urban students and 20 multi-national summer art institute students participated in the respective studies). Students in both contexts were shown to benefit from factors related to family, teachers, environment, and opportunities to develop their talent. An experience sampling form (ESM) (Csikszentmihalyi et al., 1997) measured the external dimensions (conditions, settings and situations) that help shape how and what the urban students were thinking and feeling. Interviews were utilized in both studies to explore meanings and relevant questions. Most of the institute students were aware of their talent, had positive views of self, were motivated to improve their ability, and introspective about the role of art in

their lives (Clark & Zimmerman, 1988). Findings from the 1988 study were also consistent with earlier research by Getzels & Csikszentmihalyi (1976) who reported that a) students talented in art draw many of the same type of images as other students; b) they receive high levels of praise for their artwork compared to their classmates; c) they expended a great deal of time and energy devoted to drawing; d) they can recall drawing from an early age.

A summary of findings from the urban study (Csikszentmihalyi et al., 1997) included the following factors as the most salient in development of talent: a) great gifts of youth will not become useable talents of adults unless they are recognized and supported; b) talented students have personality traits conducive to developing those talents (achievement, endurance, openness to experience, awareness, and understanding). These characteristics describe both genders, which implies that teens with above average aptitudes are not as stereotyped, and are freer to explore "a deeper range of human potentials (p.245); c) teens who develop talents have characteristics conducive to cultivating talent (more modulation of attention, deeper levels of concentration, more time alone, are more androgynous; and related to the attention factor, there was more family cohesiveness, more psychological support, and less time spent by the adolescent in mundane tasks like chores or working outside of school; d) talented teens are more sexually conservative, able to discern the value of productivity related to their talent versus various levels of social engagement with friends; e) families providing both support and challenge enhance the development of talent; f) home environments can be undermined by negative experiences at school; g) talent development is a process that

requires both expressive and intrinsic rewards; and h) talent will only be developed if it conjures optimal experiences.

Neither study, while providing evidentiary proof of the need and strategies for developing adolescent talent, incorporated the importance of creativity as an element of —or factor related to—talent. While both are illustrative examples of the relationships of environmental factors to adolescent talent development, the decades following the research have ushered in the resurgence of creativity in education as well as technological advances that could not have been foreseen when those studies were conducted, which invariably changes the way talent development is viewed today.

Identifying for Support Services

Procedures such as self-, peer-, parent-, and teacher-nominations, observations, interviews, art and creativity tests, and portfolio samples need to be considered essential for appropriate art talent development; and a positive step in that direction has been the more frequent focus on the creative process as an important aspect of artistic giftedness to explore (Pariser & Zimmerman, 2004). This study did not employ identification procedures, but instead utilized in-place referrals for selection of artistically gifted adolescent participants; however, it is important to note that identification is one critical step in the talent development process, therefore an overview of the practices that inhibit that process is provided for the reader.

Assessments typically used to confirm observations of aptitude are not always aligned to the services eventually provided, meaning that identified abilities are often left without appropriate support (Sternberg & Grigorenko, 2002, 2007). This practice denies artistically gifted students the development opportunities they deserve (Zimmerman,

personal communication February 17, 2014). Although psychometric criteria are well-developed and accepted (Horowitz, 2009), when identification assessment is limited to those there is a risk of talent remaining unrecognized as a multi-faceted and developmental process, thus perpetuating the low percentage of talent being cultivated (Baker, O'Neil, & Linn, 1994). Comprehensive assessments using appropriate ability and preference tools which target the richness and multidimensionality within gifted and talented populations is necessary to avoid this minimization of talent (Achter, Benbow, & Lubinski, 1997).

Attitudes About Identification

Apprehension regarding alternative assessment stems from firmly ingrained beliefs and values related to diversity of talent, and from questions related to the reliability and validity of performance-based assessments, and has slowed the widespread acceptance and practice of using them (Johnsen, 2003). Additionally, within educational contexts, teachers' self-efficacy and beliefs about educating gifted learners determines their willingness to use alternative assessments (Moon, 2009). The departure from the traditional standard of using metrics (to including students' work, and students as active participants) needs to be better understood and more effectively employed in order to improve the cultivation of talent (Johnsen, 2003). Alternative assessments which include performance-based and authentic measures of talent can help recognize early potential and ability and enable the appropriate nurturing of talent even before identifying the child as gifted (A. W. Gottfried, Gottfried, & Guerin, 2006). One misconception inhibiting any type of assessment in the arts is a long-standing belief that intervening to develop art

talent diminishes personal creative expression-the idea that artists are born not made (e.g., Viola, 1942).

Lacking the knowledge about artistic talent, teachers' perceptions about what talent should look like is another major factor related to low numbers of identified artistically gifted students (Gallagher, 1985). The student who conforms to behavioral expectations and does well in art class is often thought to possess the most talent (Guskin, Zimmerman, Okolo, & Peng, 1986). Moreover, teachers may exhibit negative responses toward students who are gifted, holding stereotypical views of gifted students as being arrogant, self-centered, overachievers, and these teachers may resent programs that specifically cater to them (Raut & Lim, 2009), or worse, minimize their talent to prevent them from entering gifted programs or receiving those special services (Achter, Benbow, & Lubinski, 1997; Gallagher, Coleman, & Nelson, 1995). Social justice, equity, and excellence in American education continue to affect efforts to develop talent the visual arts (Clark & Zimmerman, 2004).

Cultivating Talent

All youth need opportunities to engage in activities focused on their individual interest/talent areas to make self-discoveries about what talents they may possess, to increase the likelihood that those talents will be recognized and developed, increasing potential to become creative-productive citizens (Reis, 2010). Individual paths to talent development will not be identical due to their dependence upon the external factors such as fate, family, level of support, educational climate, community involvement, and individual levels of motivation and perseverance (Reis, 2010). All talented individuals appear to pass through three basic stages which lead to development of talent: a) love of

subject; b) development of discipline and technique; and c) individual position in the field (Bloom & Sosniak, 1985). All artistic individuals acquire their drawing skills in the same order, when untutored (Schaefer-Simmern, 1948), however, left alone, these talents will become latent. Initial mastery does not equate to developed skill; it is only the *basis* for the development of complex processes (Vygotsky, 1978). The zone of proximal development (Vygotsky, 1978) is the place where natural progression of ability due to maturation stops, and appropriate intervention guides further development. Csikszentmihalyi (1996) emphasizes that this is not only true for young learners, but that if teachers are influential in helping or hindering development of adolescent students, they impact students' success even more so at the college level, stating: "…even a Ph.D. is not worth much in terms of a career without the active support of one's teachers" (p. 185), a reminder that talent development is an ongoing process that warrants attention at all levels of development.

Feldman's (1996) universal-to-expert model of talent development in any domain illustrates the stages along a developmental path when appropriate educational interventions are introduced. Patterns from the available research depict differences in the development of talent in the arts versus talent in the sciences, however. Whereas artistically able students felt it necessary to experience the love of subject first (an intrinsic motivator), and secondarily the instrumental (practical) benefits, students talented in science felt that the importance of what they *did* outweighed their emotional tie to the subject (Bloom & Sosniak, 1985). Intrinsic reward is intangible and difficult to define (Deci & Ryan 1985; McCarthy, Ondaatje, Zakaras, & Brooks, 2004; Ryan & Deci, 2000); however a reciprocal connection between the two components must exist for the

individual in the arts or the sciences to remain engaged in the talent area in the future (Csikszentmihalyi et al., 1997).

Benefit to Society

"Only when we unleash the great reservoir of overlooked and underutilized human potential, will we truly enjoy not just sustained economic progress but a better, more meaningful, and more fulfilling life" (Florida, 2012, p. xix). Current political, social, and economic conditions demand new thinking about investment in developing creative talent as both human capital and social competitiveness in an age of complexity and uncertainty. The human capital created by skilled, ambitious and educated entrepreneurs is central to future social and economic progress (Corbett, 2013), and creative capacity and ability to innovate for tomorrow's needs is critical to the economic balance of the United States as shifts in the elements of work, values, and preferences emerge globally (Florida, 2002, 2012).

Artists are integral to catalyzing creativity in society, not only in the form of cultural richness, but through technology advancements and market economies (National Governor's Association, NGA, 2005). As communities begin to comprehend the significance of investment in the arts as a valued force for economic development, more interest might germinate among industries to inspire innovative ways to capitalize on art and design to promote the "human superorganism" (Rolling, 2013, p. 2). Artists are poised to be the innovators of the 21st century, as art functions to bring about dramatic changes in the way we view problem solving (Badenoch, personal communication,

January 23, 2014; Eisner, 1991)[2]. However, artists and other creators need the freedom to explore, discover, and experiment with the talents they have, and schools do not offer them that space (Rolling, 2013).

Underachievement in the form of disengagement from the talent among youth has been observed in different fields and explanations for this phenomenon, though diverse, point directly to the level of support offered (Csikszentmihalyi et al., 1997 Without the ongoing support many individuals—adolescents especially—will cease to exert the effort necessary to continue to develop talent in an area of high ability (Albert & Runco, 1986; Bloom, 1985; Csikszentmihalyi et al., 1997; Rimm, 1991).

Adolescents

Critical Transitions

Adolescence represents a particularly unique and critical transitional stage in the lives of students, affecting them academically, developmentally, and socially (Laycraft, 2014; Lerner & Steinberg, 2004; Keating, 2004; Rakow, 2005; Schmakel, 2008). Gifted students have many of the same needs at this time as their non-gifted peers, although because their special abilities are often untapped by standardized tests, and untended by the adults who work with them, this is an especially critical time for them. Not only are they more cognitively advanced, their sensitivity to the world around them, their introspection, sense of justice and fairness, self-criticism, and intensity (Mendaglio, 2012) set them apart from other students. They experience the world differently in five different dimensions (emotional overexcitability, psychomotor, sensual, intellectual, and emotional)

[2] Both Scott Badenoch and Elliot Eisner attended the Chicago Art Institute, (Badenoch over several years as a child enrolled in the Saturday Young Artists program, and Eisner as an adult in a degree program), and reflected on the influence of developing art talent on their success in their respective careers. Eisner (1991) claimed that "If the visual arts teach one lesson, it's that seeing is central to making [a difference]" (p.1). Badenoch believes that art has led to his ability to recognize and close critical gaps in a cutting-edge high-tech industry (personal communication, 2014).

than do their peers (Laycraft, 2012; Piechowski, 1986, 2006). Because school is the place where children spend the greatest portion of their day and form perceptions based what they experience there, schools must seek ways to match support to individual differences (e.g., Colangelo et al., 2003; C. Howley, 2009; Rakow, 2005, Staumbaugh, 2010). Adolescents' distinct social and emotional needs necessitate support for both cognitive and affective talent from trained professionals who are understanding and competent to help maximize their potential (Rakow, 2005). It is not the giftedness which results in heightened social-emotional vulnerability, but a lack of differentiation that is required to meet both cognitive and psychological needs and the level and type of support available that is often responsible for students' negative perceptions of self, school, underachievement, and stresses that affect learning outcomes—including talent development (Csikszentmihalyi et al., 1997; Laycraft, 2014; Rakow, 2005). During early adolescence, the disintegration (loosening, dissolving, re-organizing) of mental structures and functions that have been in place throughout childhood brings about disequilibrium (Dabrowski, 1972). Authentic creative processes that are involved in the *re*forming of a previous reality are also associated with a disruption caused by emotional conflict (Dabrowski, 1973), and "every step forward in the direction of authentic existence is combined with shocks, sorrows, suffering and stress" (1973, p. 14).

Stress Factors

Studies about adolescence (Casey et al., 2010a) have identified physical maturation, increased desire for independence, importance of peer relationships, and physical development of the brain as several additional stress factors for students at this age that might contribute to mental and emotional instability. Moreover, exceptionalities

can be unfairly judged as defects or abnormalities, which exacerbate emotional intensities and uneasiness felt by the gifted adolescent who is not being understood (Piechowski, 2006). Intensities are often viewed as over-reactions that demand correction rather than as the "ground of talent development" (Piechowski, 2006, p. 26). Extraordinary minds require high levels of activity, stimulation, complexity and challenge—*exercise*—much as the body does, to remain fit, and without outlets that allow that to happen, under-stimulation leads to frustration, boredom, restlessness, and potential depression (Piechowski, 2006). Underlying biological and mental forces which act to control behavior and its development—the "instincts, drives, and intellectual processes combined with emotions—are the dynamisms" that "move mind and matter toward an activity or progress" (Dabrowski, 1972, p. 294) optimally. *Optimal* brain activity in high ability students is that which represents "the normal level for that particular individual," …. [and]…."the challenge [for adults] is to recognize and respect such minds when they are still young" (Piechowski, 2006, p. 33).

Brain Changes

Adolescence is also a critical time of adjustment in the brain's structure and function, and "other than the first three years of life, no other developmental stage is characterized by more dramatic changes" (Steinberg, 2011, p. 3). During adolescence, the neural fibers of the corpus callosum connecting the two hemispheres of the brain undergo significant physical growth, expanding the actual grey matter where learning takes place, and altering the function of the brain, opening a window of opportunity at approximately age 12 for new knowledge and skill-building, that is short-lived. By the age of 16, this growth begins to taper off, eventually closing that window (Barnea-Goraly et al., 2005;

Casey et al., 2010b; Casey, Giedd et al., 1999; Giedd, & Thomas, 2000). While this cognitive development is in high gear, experiential input is critical to both executive and social functioning (Blakemore & Cloudhury, 2006; Casey et al., 2010b; Casey et al., 2000). Heightened brain development empowers adolescents to analyze, reason, solve problems, think abstractly, reflect, and contemplate the future, followed by a sustained period of pruning in later adolescence. Concurrent to the pruning of the synapses formed during this heightened period, is an *increase* in white matter, *myelination* in the frontal, parietal and temporal cortices, and while the extent of the forces that influence brain development have not been firmly established (Giedd, 2004), the integration of areas of the brain where myelination has occurred provides timely opportunities for these youth to learn experientially in a variety of areas (Laycraft, 2012). During this myelination process skills, perceptions, abilities, interests and talents that are developed will survive, those that lie dormant, will be pruned and lost forever (Feinstein, 2009). The power of the adolescent mind evolves from this "vibrant, socially-connected, novelty-seeking" period, encouraging creative thought and offering "a golden age for innovation," when adolescents are driven to explore their world in new ways (Siegel, 2013, p. 94). Elaborating on the importance of experience during this process in an interview with Public Broadcasting System (PBS, 2002) Giedd (e.g., Giedd et al., 1999) reiterated that if teens are actively engaged in challenging activities relative to their interests those connections will become hard-wired. This period of proliferation, pruning and myelination Fuller (2005) suggested that for nine to 18 year old students, it is crucial to establish provisions that are adolescent-centered and appropriately experiential.

Critical Needs

Middle school adolescents specifically, require multiple opportunities to make decisions for their learning under the guidance of a caring adult is integral to this period of transition (McCombs, 2012), particularly when pre-assessments are used to identify prior knowledge and ability (Rakow, 2005), and activities are at the appropriate level of challenge and interest to them personally (Csikszentmihalyi et al., 1997; Rakow, 2005; Schmakel, 2008). Adolescents experience an array of dichotomous situations (ie: demanding independence from their adult caregivers while needing emotional support from them; defining their personal identities while needing to be accepted by peers as one of the group) thereby making it essential to understand what is beneficial to them in terms of their development. A cornerstone of adolescent cognitive maturity is the ability to choose goal-directed behaviors over inappropriate ones especially when incentives are provided (Casey, Galvan, & Hare, 2005) which reinforces the fact that the various dimensions of adolescent life must be taken into consideration to effectively assist the development of their individual talents.

The roles of constancy and change as they apply to the complex systems of development can be operationalized as the integration and differentiation of factors related to talent and its development. This can be simplified by saying that integration is the bringing together of mutually reinforcing independent factors responsible for development, and differentiation can be regarded as the distinctions made among them (Csikszentmihalyi et al., 1997). Four integral systems—*personality, social* (family, peers, teachers), *cultural, and experiential*—determine the level of attention, flow, motivation,

and dedication associated with individual talent in students can be better understood through subjective inquiry (Csikszentmihalyi et al., 1997).

Artistically Gifted Adolescents

Talented students have a greater capacity than their peers typically, to articulately define who they are, what they want, and who they wish to become. This ability to create a personal identity is made possible once the individual develops a sense of competence which overcomes the inferiority generally associated with teenagers through industriousness and mastery of concrete tasks (Csikszentmihalyi et al., 1997). Artistic youth tend to be able to recreate a timeline for their talent, recall being interested in art from very young age, and to identify the time period when their talent appeared to be catalyzed (Clark & Zimmerman, 1988; Csikszentmihalyi et al., 1997; Gardner, 2004). Moreover, rather than a smugness over achieving an enviable amount of extrinsic rewards such as possessions and status among peers, artistic individuals are able to discern the difference between intrinsic and extrinsic motivations (Csikszentmihalyi et al., 1997).

Talented students exhibit deeply-rooted traits of concentration (*flow*) and openness to experiences which are conducive to developing talent in an area of interest (Csikszentmihalyi et al., 1997). Because high-ability students in any domain need curricula that focus on their interests (Gallagher, 1994; Maker, 1982; Renzulli, & Reis,2010), the emotional toll that results from inattention given to matching the learning experiences to students' needs at the middle school level—especially those who are gifted and/or talented—has long-lasting effects (Rakow, 2005). Understanding differences in interests is an essential component of being able to encourage talent

development, and relates to the choices students have among several potential areas of talent, and decisions about them that are made in mid-adolescence (Sosniak, 1985).

Passion. Although passion has seldom been explored in association with giftedness (Piirto, 2000), a recent study found that passion is a critical component for artistically and athletically talented youth, but not for those talented in academic areas (Frederick, Alfred, & Eccles, 2010). Interviews relating specifically to the genre they were passionate about were used with artistically and athletically gifted youth however, academically gifted students were asked only about school in general which may have presented somewhat of a bias in terms of the relationship of passion to increased performance in a given domain (Subotnik, et. al, 2011).

Passion is directed toward a particular domain and is the drive to continue exploration within that domain (Piirto, 2000). The flow model of optimal experience in a domain of interest (Csikszentmihalyi, 1975, 1990) refers to the level of involvement in an activity one considers to be rewarding and intrinsically motivating. The state of flow results from clearly-set goals related to the activity and unambiguous feedback about the activity, combined with the opportunities for engaging in the activity and the individual's capacity to act when those opportunities present themselves (Csikszentmihalyi et al., 1997).

Opportunity for the nurturing of talent is clearly a major criterion in the maximization of talent (Syed, 2010). Capitalizing on these opportunities is the responsibility of the individual, and requires a commitment to pursuing the talent area, as well as resilience with respect to cultivating a number of protective factors —including optimism and the ability to rely on one's inner resources (Noble, Subotnik, & Arnold,

1999; Flach, 1988). Without appropriate environmental conditions however, the talent will never be optimized (Gagné, 2008; Worrell, 2010).

Supportive Environments

Recognizing differences in how young people commit to and pursue their interests is essential to affording them the respect they deserve. The direct costs of not doing that are for one, a waste of societal resources, and the undermining of students' trust in adults when they perceive that specific aspects of their lives are being ignored; and two, the opportunity cost of failing to achieve better understanding about youth development, effective programs, and educational interventions (Nightingale & Fischhoff, 2001). Learning environments that affirm the worth of talented adolescents while simultaneously being supportive, empower them to be more resilient, more productive, and also, to remain in school (Rakow, 2005). Even though school was not intended to be the primary caretaker of talent, and students who become disenchanted with and choose to leave school may no longer have the opportunity to devote time to their talent resulting in that waste of talent (Csikszentmihalyi et. al, 1997).

Support systems. Networks of support that are highly correlated to students' commitment to engagement in areas of personal interest and ability help motivate them to stay committed to their talent as adults (Czikszentmihalyi et al., 1997; Schmakel, 2008). An urban young talent program (offering arts instruction to students enrolled in public schools beginning at grade three and continuing through adulthood) is credited with being the most influential external success factor in the long-term artistic development of three cohorts of students (Oreck, Baum, & McCartney, 1999).

School. Adolescents in the Indiana summer art institute recognized the differences between their school art classes and those at the institute, admitting that they had preferred being grouped with those like themselves, and appreciated the resources available to them at the university (Clark & Zimmerman, 1988). Schools are not structured in a way provides the rich depth of experience associated with talent development, but they can *become* places that encourage students to learn about their personal talent, and help them do the most they can with it (Reis, 2010). "A generation of bored and challenge-avoidant young adults is not going to be prepared to deal with the mounting complexity of life" (Larson, 2000, p. 171) if the education they receive is not based on relevance to the real world, and to the individual strengths of these students (Rakow, 2005; Rath, 2007). When schools make a deliberate effort to better understand the culture and characteristics of talent through ongoing professional development they can help reduce the negative consequences related to boredom (Rakow, 2005). Additionally, partnering with community resources (parents, businesses, professionals in the talent area) allows schools to communicate the value of and respect for students' talent and offer ways for students to develop talent even without drastic changes on the school's part (C. Howley, 2009; Stambaugh, 2010).

Parents. Family dynamics have long-term effects on the development of children. Crucial aspects of the early environment include stimulation and stability, which help make the complex development of talent in later life possible (Csikszentmihalyi et al., 1997). From a social-systemic perspective, family plays the major role in the development of their children's' talent (Moon, Zurich, & Feldhusen, 1998). Today's changing social structures related to marriage and family directly impact adolescent talent

development and what are believed to be the optimal conditions for development of adolescents. While this differs from what was espoused a few years ago, optimal conditions for development of adolescent talent today continue to rely on a delicate balance of *inter*dependence and cohesiveness, which includes moral, physical, and emotional support (Csikszentmihalyi et al., 1997). While family support is critical, it does not appear to be important that the supportive adults conform to traditional family roles; however it *is* important that a commitment of those adults to each other by means of blood relationship or a socially sanctioned bond has been established so as to form a unit that *represents* family (Csikszentmihalyi et al., 1997). A teen's interdependence with rather than total *in*dependence from parents seems to balance dependence with a level of support that encourages both less negative peer influence which can be a distraction from dedication to talent (Csikszentmihalyi et al., 1997)

Community. Because creativity is granted greater value today, our corporate-driven economy is shifting to become more people-oriented (Florida, 2012). Place matters in determining how talent is optimized (Florida, 2012; Hass & Nachtigal, 1998). People in communities can become invaluable as mentors, financial contributors, and leaders of the effort to develop talent that will change numerous aspects of society, including the community where that talent is recognized (Bolster, 1990; Clark & Zimmerman, 1997; Stambaugh, 2010). Understanding interactions between genetic, developmental, and environmental factors when studied from a talent development perspective, especially from the individual's vantage point, is an important future direction in the study of adolescent talent development (Casey, et al, 2000; Zimmerman, personal communication, February. 17, 2014).

Student Voice

The importance of talking to students about their personal talent and the experiences related to it cannot be understated (Cook-Sather, 2002a, 2006; Fielding, 1999, 2004. 2006; Fielding & Bragg, 2003; Harding, 2001; Lindquist, 2009; Moorehead-Lang, 2007; Smyth, 2006; Stefl-Mabry, Radlick, & Doane, 2010; Zimmerman, personal communication, Feb. 17, 2014). Inquiry and theory should not be an enterprise reserved for professional researchers; rather, they also should invite intellectual resources that students can offer (Gaff, 2001; Lindquist, 2010).

Students as Co-Researchers

The promise of meaningful transformations in education seems to be more attainable when students work in partnership with educators to examine and question the present status of their educational situations (Cook-Sather, 2002a, 2002b, 2004; Lindquist, 2009), however, for students, the most compelling transformations are often their own (Cook-Sather, 2004, 2006; Fielding, 1999, 2004; Fielding & Bragg, 2003; Lindquist, 2009).

Fielding (1999) argued that in every educative experience, there is reciprocal learning and in that respect, students are not merely targets of professional efforts but "partners in the learning process" (1999, p. 21). While it is becoming more common today to include students in research that will impact them directly, literature that emphasizes the importance of student voice and connects it to theoretical underpinnings that support both advocacy and transformative education has been somewhat limited (Fielding, 2004). Findings do suggest that corroboration of students' perspectives with existing research can lend additional validity to previous findings (Salim, 2011).

Adolescent Perceptions

Studies to assess-talent development-in middle school adolescents in rural communities from the students' perspective were conducted over twenty-five years ago (Csikszentmihalyi et al., 1997; Zimmerman, 1988, 1997). The need for current studies that address 21st century issues from the perspective of the recipients of school and community program activities is dire. Moreover, how students in rural environments view their own talent and the talent development opportunities in their communities will lend invaluable insight into future talent development efforts (Zimmerman, personal communication, Feb. 17, 2014). When educational decisions are based predominately on indirect observations and assumptions by adult observers, research efforts are positioned out of reach of the primary beneficiaries (Cook-Sather, 2006); and when these studies are not concentrated within the context where the students live, what is believed to bring the best results to learning and the school environment may not be fairly represented (Zimmerman, personal communication, Feb. 17, 2014).

Perceptions of artistic talent. Research specifically about students with art talent was largely absent from literature related to labeling of gifted and talented students in the 1980's (Guskin, Zimmerman, Okolo, & Peng, 1986). In their five-year study, Csikszentmihalyi and his colleagues (1997) explored the experiences of talent with the teenagers, revealing how students felt while engaged in activities in their talent area, distractions that prevented them from engaging, motivations to continue to pursue the talent, and time spent engaged in activities related to their talent area. How those students perceived being labeled talented was not evident in the 1997 study. Today, little research can be found that investigates students' perceptions of art talent and the labels related to

their advanced aptitude. New research that explores the personal lives of adolescents with high ability in art may open a door to pathways for improving talent development in that domain (Zimmerman, personal communication, Feb. 17, 2014).

The Rural Community

Characterization of Rural

Advocating for educational opportunities for gifted students which capitalize on preserving the integrity of rural schools and the communities they are situated in affords tangible benefits to students and community (Colangelo et al., 2003). Having no specific, standard definition for rural (U.S Census Bureau, 2010; National Center for Educational Statistics [NCES], 2008) leads to individuals harboring stereotypical and often negative viewpoints about what rural means (Semke & Sheridan, 2011; Stambaugh, 2010). Cosmopolitan ideas of what works in education do not often match rural communities (C. Howley, 2009; A. Howley et al., 2003), and the consolidation of country schools through progressive reform measures effectively communicated the low value attached to rural education (A. Howley et al., 2003). Branding "rural" as deficient, reformers believed that modernization (translation: urban traditions) and the latest technology were the way forward (A. Howley et al., 2003). This represented the conflict between "the rural life-world and regional and national priorities" (A. Howley et al., 2003, p. 81).

Sustaining the meaning of community and the value of place (Haas & Nachtigal, 1998) can be attained through several commitments that acknowledge rural as definitively distinct from urban (A. Howley et al., 2003). Very little research has been conducted about rural aspects of gifted education and talent development and in particular, with artistically gifted adolescents (Zimmerman, personal communication Feb.

17, 2014). The literature that exists continues to highlight rural deficits and frame them with a metropolitan view of education (C. Howley, 2009).

Talent Development of Rural Students

Conversations related to educating students in rural environments typically center on the challenges of rural *schools* rather than on those aspects of rural *communities* that can translate to quality educational experiences (Colangelo et al., 2003; C. Howley, 2009; Morton & Harmon, 2011; Stambaugh, 2010). Small student enrollment, isolation from densely-populated urban centers, and more direct community support can be an advantage for rural students (Colangelo, Assouline, & New, 1999; Colangelo et al., 2003; Spicker, Southern, & Davis, 1987), yet gifted students in those areas often perceive less challenge in their academic work, and limited access to artistic and cultural opportunities (Gentry, Rizza, & Gable, 2001). Whether this is directly related to the lack of access to rich cultural experiences or more to the attitudes that prevail regarding what is considered best for students is a question that continues to be pondered (A. Howley et al., 2003).

How rural schools operationalize and support talent depends upon whether the district defines their educational aims—and bases their practices on—the cosmopolitan view of what is best for students, or is aligned with dedication to preserving the community culture and serve as venues for community life (A. Howley, et al., 2003; Morton & Harmon, 2011). Rural communities are becoming recognized as incubators of talent (Corbett, 2013) yet rural talent has traditionally been extracted and deposited in urban centers (C. Howley, 2009). Gifted students are often encouraged to seek educational and career opportunities outside of their communities, and research suggests that guidance counselors need to become knowledgeable in directing students toward

those opportunities (Cross & Burney, 2005). Talented students in rural, suburban, and urban environments are currently steered toward STEM careers, with the arts and humanities regarded as subservient (A. Howley et al., 2003; Stambaugh, 2010). This practice assumes a deficit stance, insinuating that rural communities have little to offer and that exiting them to become immersed in urban culture is a favored option (C. Howley, 2009).

The illusions that restrain new thinking about rural potential are difficult for even s*easoned* educators to circumvent, including beliefs that schooling and education are one and the same; representation of knowledge is definitive rather than contingent upon something; political and economic power reign over intellect, and that there is one proven way to do everything in education—the *best practices* (C. Howley, 2009). However, it is the *next* practices, or *what-ifs* blended with current research that offer greater promise to *transform*, not simply *re*-form, the way children are educated and the outcomes that result (McNulty, 2011). There is a critical need for professional development to help rural educators exhibit more courage and integrity, and build alliances that will confront the illusionary foes more directly (C. Howley, 2009).

Schools in rural towns affect and reflect the community's economic and cultural composite (C. Howley & Eckman, 1997). They are positioned to bring about positive educational results through collaborative efforts and shared decision-making related to programming, curricular choices, and educational opportunity including talent development (Haas & Natchigal, 1998; C. Howley & Eckman, 1997; Natchigal, 1992). Cultural opportunities provided to rural youth by their families are not always valued in school, yet the traditions that families honor can bridge the rural family to both the rural

school and the community (Haas & Nachtigal, 1998; A. Howley, Rhodes, & Beall, 2009). Complicating the process of promoting positive family-school connections is that the majority of empirical research to date has been conducted in urban and suburban settings (Prater, et. al., 1997; Semke & Sheridan, 2011). Recognizing contextual characteristics can help avoid a carte-blanche approach not wholly representative of non-traditional rural gifted students—especially those with artistic talent (C. Howley, 2009; Zimmerman, 2010). Rural creativity is far more nuanced and complex than Florida's (2002) urban conceptualization of the creative class reveals. The processes involved in developing rural creativity must be viewed through a more focused lens (Fulkerson, Thomas, & Seale, 2014). Rural students possessing highly creative ability in any domain benefit from newer, broader definitions of talent and wider perspectives of what constitutes preferable life choices in rural communities (A. Howley et al., 2009). The industry, lifestyle, and traditions of a small town can dictate the focus for talent development efforts for students whose creativity lies in art; conversely, fostering talent development in specific domains relevant to the community's complexion helps shape a particular lifestyle (Misra, Srivastava, & Misra, 2006).

Rural is more than an "ism" and deserves attention as a real and viable space where "improvisation can serve as a productive metaphor for curriculum" (Corbett, 2013, p. 1), blending rural traditions with modern technology (Corbett, 2013).The success of rural schools depends upon relationships, professional development, access to resources, and a network of support (C. Howley, 2009; Johnsen, Haensly, Ryser, & Ford, 2002; Stambaugh, 2010), and creative strategies can be implemented to pair gifted and non-gifted students with community members to engage in a variety of activities centering on

their individual interests (Colangelo, Assouline, Baldus, & New, 1999; A. Howley et al., 2009; Semke, & Sheridan, 2011; Sosniak, 1999; Stambaugh, 2010). Fostering a sense of cultural identity for artistically talented students in small communities can be accomplished by forming connections that include professional artists and art teachers, and matching practicing artists with the students (Nebraska Center for Research on Children, Youth, Families, and School [CYFS], (2010). Forming these communities of practice invites students to become part of local or virtual communities, working with adult mentors who share an interest in or engage in the same talent areas (Sosniak, 1998, 2003). Blending cosmopolitan and rural schools of thought can be advantageous in and for small communities (Webb, Shumway, & Shute, 1996).

Rural Support Networks

Categorical designations such as rural, urban, Hispanic, or Asian-American fail to capture the variation in levels of poverty, opportunity, and education within the subgroups included within each category (Olszewski-Kubilius & Clarenbach, 2012). These variations interact to have different effects on educational opportunities and outcomes for different geographical, cultural, and racial groups. "We need to know what works, with whom, when, and in what doses" (Olszewski-Kubilius & Clarenbach., 2012, p. 21) in order to capitalize on the strengths of communities.

Because rural communities are unique in and of themselves, support networks for developing local talent need to accentuate the positive aspects of ruralness (A. Howley et al., 2003; Rakow, 2005). Applying cosmopolitan models to rural communities not only does a disservice to the students receiving the inappropriate educational opportunity, but to the community as well (A. Howley et al., 2003).

Rural locales have experienced a top-down authority over the purposes of schooling and curriculum, rather than an appreciation for the significance (the meaningfulness) of rural ways of being, living, and knowing (C. Howley, 2009). Concentration on the cultural heritage of the community to develop art talent is crucial in order to provide the meaningfulness essential for talent development (Clark & Zimmerman, 1997; A. Howley et al., 2003). When experiences can be directly relevant to the students' lifestyle and residential environment, cultural meaningfulness is preserved (Haas & Nachtigal, 1998; C. Howley, 2009). Representing the actual experiences of youth in their natural settings through qualitative approaches that provide careful description (Rossman & Rallis, 2003) can elicit valuable information for encouraging and supporting talent (Clark & Zimmerman, 1997; Csikszentmihalyi et al., 1997). Through ongoing research, improvement in the systems that shape the trajectories of people's lives in rural areas may help address roadblocks to progress in rural education (CYFS, 2013).

Table 1

Summary of Findings from Selected Studies in the Literature Review

Literature related to:	**Study/Theory**	**Methodology/Key Findings/Proposed theories**
Talent Development	Csikszentmihalyi Rathnude, & Whalen, 1997	Qualitative longitudinal study Investigation of the experience of talent in urban teenagers to identify external and personal factors conducive to talent development. Revealed eight primary criteria for talent to develop in adolescents, and complexity of psychosocial, familial, and personal factors involved.

	Subotnik et al., 2011)	Monograph: Expansive theoretical analysis of available research in areas of gifted, talent development and creativity. Proposed a new perspective of stage theory of talent development; focus on excellence, with eminence as ultimate goal.
	Clark, G., & Zimmerman, E. (1988)	Qualitative, longitudinal study. Views of adolescents from U.S. rural and urban communities, and from international large cities attending art institute about family and self, and external variables related to their artistic talent development. Compared and identified similarities and differences between findings of theirs, and three previous studies on closely-related topic.
Giftedness	Gagné, 2008	DGMT model of giftedness: Interaction and influence of environmental and intrapersonal factors influencing talent development. Relationships of innate gifts, developed talent, environmental catalysts and the element of chance on a developmental pathway toward competencies.
	Subotnik et al., 2011	Theory of Giftedness: a manifestation performance or production at the upper end of the distribution in a talent domain. Perceived as developmental with three stages along the trajectory: potential (a key variable), giftedness as a high level of achievement, and eminence as fully-realized or maximized potential that is recognized. All psychosocial variables are malleable and need to be deliberately cultivated.
Creativity	Kaufman & Beghetto, 2009	Categorization of creative production into four Levels. The 4 C's: *Mini-c, Little-c, Pro-c,* and *Big-C,* coinciding with development of talent in creative-productive domains.

	Feist, 1998, 1999	First of its kind, quantitative meta-analysis of empirical studies exploring personality and evidence of talent of 13,000 individuals. Levels of interest among scientists and non-scientists; more-creative and less-creative scientists; and artists versus non-artists, were investigated. Both similarities and differences were found among the groups across domains.
Adolescents	Csikszentmihalyi et al., 1997	The type and level of support during adolescence determines attitudes toward school and continued pursuit of talent.
Stress	Piechowski, 2006	Exceptionalities unfairly judged as defects and abnormalities exacerbate emotional intensities and stress. Intensities are often negatively viewed as overreactions that demand correction rather than positively as the "ground of talent development" (p. 21).
	Casey et al., 2010	Physical maturation, increased desire for independence, importance of peer relationships, and physical development of the brain are identified as stress factors for adolescents whether gifted or not.
Brain growth	Barnea-Goraly et al., 2005	Brain-imaging studies of adolescents before and after puberty, found neural fibers of the corpus callosum connecting two hemispheres is responsible for improved functioning. Critical window of opportunity for particular types of experiential input.
	Giedd et al., 1999	Longitudinal studies on 145 children at two-year intervals. Physical change in grey matter pre-and post-puberty, affecting anxiety, thought, behavior.
	Feinstein, 2009	Improved mental capacities of adolescents related to brain growth; and need for utilization of new skills during synapse pruning.

	Casey, Jones, & Somerville, 2010	Neurobiological model of adolescence based on empirical evidence from behavioral and human imaging studies of developmental regulation of emotion. Findings identify adolescent behaviors related to investigations.
	Blakemore & Cloudhury, 2006	Review of histological and brain imaging studies. A key finding is the identification of dramatic changes in the adolescent brain, which recognizes the complex interactions between genetics, brain structure and the physiology and chemistry of the environment.
Student voice	Lindquist, 2010	Biggest pedagogical problem in U.S. education is the lack of understanding about students. Student voice as powerful means of meeting students' needs and building trust within educational environments.
	Cook-Sather, 2006	Shifting some authority for their learning to students. Interpreting and expressing the value of learning situations, and policies that impose those values has been the purview of adult educators afraid to share responsibility for learning matters.
	Fielding, 2004	Transformative practices of hearing what students say; Suggests students as co-researchers, as opposed to anachronistic structures and cultures where students and teachers are two separate and unequal entities, trying to make sense of the world.
Rural Environments	Haas & Nachtigal, 1998	Value of "place" to meaningfulness in pursuit of educational/talent development endeavors
	C. Howley, 2009	Cultural meaningfulness versus political and economic authoritative power, viewed as superior to intellect. Positive perspective or rural.
	Semke, & Sheridan, 2011	18-study review of family-school relationships and community partnerships in rural towns revealed limitations of available research; lack of a clear definition of rural; few methodologically sound causal and comparative studies, and underrepresentation of rural-specific investigations affect perceptions

CHAPTER 3: METHODS

The purposes of this study were twofold: to investigate and describe the perceptions of artistically gifted middle school students in a rural setting regarding their individual artistic talent, and to explore their beliefs about whether their talent is encouraged or inhibited within the school and community contexts. Thus, a qualitative research approach seemed best suited to the study, using methodologies that would enable a greater depth of response to the proposed research questions. The study was based on a phenomenological design that used unstructured but guided interviews, observations, field notes, and memos for data generation, and constant comparison analysis using coding to build conceptual understanding of the data (Corbin & Strauss, 2008; Patton, 2002). This study endeavored to answer the following primary research questions:

1. What are the perceptions of artistically talented, middle school adolescents in a selected rural community regarding their individual artistic talent?
2. What are the perceptions of artistically talented, middle school adolescents in a selected rural community regarding how their school and community encourages or inhibits the development of their talent?

Research Approach

Qualitative research methods allowed discrete pieces of information to be combined in a composition of sorts, using a deep, richly descriptive narrative that were "visualized" much the same way as we visualize an artist's painting as a representational form of interpretation (Patton, 2002); however, it is both an art and a science (Patton,

1990). The science involves the grounding of concepts to the data that were generated (Corbin & Strauss, 2008; Glaser & Strauss, 1967); and the art aspect lies in the researcher's ability to apply creative flexibility to procedures to solve analytic problems and compose a coherent and explanatory story that derives from the data (Corbin & Strauss, 2008). Each researcher focuses on different aspects, providing levels of interpretation that flow from "the prism through which" data is viewed (Corbin & Strauss, 2008, p. 50). "The art aspect of research transcends all forms of research and it is doubtful that any significant piece of research could be accomplished without it" (Corbin & Strauss, 2008, p. 48).

Interpretivism is both a paradigm and a theoretical perspective and can be thought of as "a view of the world that is socially-constructed, complex and ever-changing" (Glesne, 2011, p. 8). It is concerned with not only lived experience and all of its ambiguities (Rossman & Rallis 2003), but also with the fact that the analysis of data, using this paradigm, can tell more than one story (Corbin & Strauss, 2008). Interpretation in phenomenological studies implies a researcher's understanding of the events and experiences related by the participants and the mindful appreciation of the sensitive undertones of language (Corbin & Strauss, 2008; van Manen, 1990) and that understanding depends upon the researcher's experiential repertoire (See Appendix A) nearly as much as the experiences the participants themselves relate. Additionally, seeking to understand the world as someone else perceives it punctuates our *a priori* knowledge—our notions, assumptions, prejudices, and justifications—with the exigency of becoming more attuned to how it defines us (Glesne, 2011).

Data do not indicate for us what is important and what is not; therefore the analyst brings to the analysis process and to the data, introspective elements that are reflected in the interpretive aspects of analysis (Corbin & Strauss, 2008). Therefore, each aspect of the data generation, coding process, concept formation, and eventual reporting of findings undertaken in this case study research was influenced somewhat by the researcher's introspection with regard to personal experiences in artistic endeavors. An autobiographical reflection on the personal artistic journey of the researcher provided an initial and first-hand understanding of the broader meaning of artistic talent and its development. However, hearing participants' stories not only broadened the understanding of the researcher in this study, but the telling of them by the participants helped build understanding for them about their individual talent; the integration of the two allowed the researcher to "see" the meaning through a reciprocal process of "insightful invention, discovery, or disclosure—grasping and formulating a thematic understanding" of artistic talent and its development which is not rule-bound (VanManen, 1990, p. 79).

This freedom of interpretation as an art form in itself—the absence of formulaic, mechanical, and prescriptive rules (Denzin, 1994)—invited this researcher to impose a meaningful order from all of the pieces of data (what the participants say; the symbols and signs; the situational aspects of the setting) to illuminate the phenomenon of artistic talent development. Inherent in this approach to inquiry was the ability to be a skilled listener; to absorb what the participants said and integrate that with what the researcher already knew from personal experience, to offer new clarity and meaning: the rainbow that follows the storm.

A relativist ontology is *suggestive* of a subjective nature grounding the interpretivist paradigm (Rossman & Rallis, 2003), therefore in this study the notion that the subjective cannot be entirely distinct from the objective, was recognized because we remain a part of our external world, and not only influence it but are in some ways, influenced and acculturated *by* it. Phenomenological techniques used in this study attempted to separate the prejudices of cultural influence from a new perspective that can be gained from participants.

Naturalistic inquiry, according to Patton (2002) is research that takes place in a contextual setting without manipulation of the phenomenon of interest, and allows that phenomenon to unfold and develop over time, deepening a researcher's understanding of it. By interviewing middle school artistically gifted students in an environment that is relaxed, comfortable, and familiar, the likelihood of getting honest responses regarding their perceptions about experiences in both school and non-school settings was increased (Patton, 2002). It was assumed that the participants' responses were honest and accurate. The study was naturalistic and also heuristic, (concerned with humanistic research) which incorporated flexible "creative processes and self-discoveries" (Moustakas, 1990, p. 9) Important to this inquiry were those personal discoveries, (the insights, or *Aha* moments) experienced by the researcher which shed light on emerging patterns beginning to develop within and across cases, built understanding, and legitimized the human experience as data. Heuristic inquiry must tend to the question of *how* the researcher's experience of the phenomenon relates to and overlaps the personal experiences of the participants, when both participant and researcher experience the phenomenon intensely (Patton, 2002). Analytic memos revealed the researcher's relationship to the study as a

practicing artist whose visual art journey began in early childhood, and allowed for the decoding of subtle meaning in the participants' stories. The interplay of underlying perspectives guiding this study provided the essential tools for discovering phenomenon-related experiences, and developing the emerging portrait.

Rationale for Using Case Study

Case studies are not a methodological choice but a choice about what to study; therefore they are more of a strategy to be employed by the researcher (Stake, 2000). In addition to having a particularistic focus that enabled deeper understanding about situations, occurrences, or questions that arose related to everyday problems and practice (Merriam, 1998), the multiple techniques used in this case study research, made it somewhat eclectic (Rossman & Rallis, 2003). What can be learned from case studies is relative to the contextual and temporal setting, therefore is not generalizable, except by reasoning of analogy that allows for application to similar situations and settings (Rossman & Rallis, 2003). The case study approach relied on the researcher's ability to provide validity in two ways: a) being able to get the participant to share their personal realities honestly and openly, and b) the ability to clearly identify the time frame of the study; because what a researcher does to construct meaning now may be different from what he/she might do in the future, and impacts the results (Gall, Gall, & Borg, 2007). The thickness of description that resulted from this case study permits the reader to interpret and apply what is learned to other settings, empowering the reader to make individual judgments. Through this process of analogy, the in-depth case study may offer the kinds of insights that promote understanding about similar cases (Merriam, 1998; Rossman & Rallis, 2003).

Case studies are generally identified as one of three types: intrinsic, instrumental, or collective. Intrinsic case study, while providing perhaps the deepest level of understanding about a particular issue, is used primarily to draw a basic generalization. Instrumental case studies are conducted using several participants that share a common situation. Collective case study offers the opportunity for investigation of a phenomenon, population, or general condition (Glesne, 2011). In this study, the individual cases were nested within the primary focus or approach; that is, within the contextual (rural setting) and phenomenological (development of talent) arenas that set the stage for this qualitative research; therefore, elements of both instrumental and collective case study applied.

Participants

Using purposeful, criterion sampling, the sample population was comprised of six artistically gifted adolescent students, ages 12 and 13 attending middle school. Purposeful sampling (Patton, 2002) is aimed at intended focus on a specific issue or topic of concern. Rather than a concern for findings being generalizable to a larger population of which the sample is representative, purposeful, *or purposive,* sampling is done by selecting individual participants who, it was believed, would provide information-rich data to answer the designated questions which underpin the purpose of the proposed study. The small sample size, along with cross-case analyses to illuminate the study's purpose, allowed for greater depth of understanding related to visual art talent development in rural settings which is preferable to the breadth that is commonly associated with larger sample sizes (Patton, 2002).

In absence of a standardized criterion, this study drew from the definitions for gifted and talented offered by the U.S Department of Education as the *Marland Report* (Marland, 1972) and the Montana Office of Public Instruction, ([MT OPI], 2008) to guide

the selection process. Criteria for identifying talent in art are the most subjective in nature among the various domains and the most difficult to operationally define according to Csikszentmihalyi and his colleagues (1997). The researchers assert that adolescent artists—even the most talented—typically have yet to submit their work to public critique and expert judgment and "school art courses do not provide a ready measure of natural ability" which makes one almost wholly "dependent on the informed judgment of instructors familiar with the work of their students" (1997, p. 46). The Montana OPI (2008) supports the use of "professionally qualified persons" such as "artists… and others with specialized training who are qualified to appraise pupils' special competencies" (Appendix II, *School Laws of Montana*, Part 9, 20-7-201). Because Montana neither identifies nor provides differentiated services for artistically gifted students, the participants were nominated by informed observers from the school and community.

Case selection resulted from an initial pool of students referred by individual professional artists, art teachers, parents, and students. The general criteria that was provided to potential nominators of student talent was based on the notion of outstanding talent in visual art "when compared with others of their age, experience or environment who require services and activities not ordinarily provided by schools" (ED, 1993, p. 26) "in order to fully achieve their potential contribution to self and society" (MT OPI, 2008, Appendix II *School Laws of Montana*, Part 9, 20-7-201) (See Appendix B).

Participants selected were those who were recognized as fitting the study criteria for artistic talent even though they may not be enrolled in any art instruction, and who exhibit some modicum of the traits of high ability, task commitment, and creativity—the three overlapping rings of giftedness— as theorized in the School Wide Enrichment

Model presented in Chapter 2 (Renzulli, 1978; Renzulli & Reis, 2014). Implicit in this study was the awareness that students who are artistically gifted typically demonstrate their talent in a variety of contexts (home, school, community). Therefore, this study invoked input from knowledgeable members of the student's community, because as Csikszentmihalyi and his colleagues (1997) emphasize, "dependence on teachers does not exclude the possibility that underachieving or achieving in venues outside of school will be missed" (p. 47).

The questionnaire that potential participants would receive would determine the extent to which participants' talent was utilized across contexts. Additionally, although it is acknowledged that artistically gifted students often possess advanced intellectual aptitudes as well, and may be receiving special services in an area of academic giftedness, that was not addressed directly in this study.

Cases were chosen from participants enrolled in a rural middle school in one of three different communities (the intent was to have two students from each of the three schools, however final selection produced three students from two of the schools, and only one from the third school). The selected schools and community art programs from which cases were drawn are all in the state of Montana, which is situated in the northwest United States. Nearly 80% of the state's counties still maintain "frontier "status according to the US Census Bureau (2010) and the Montana Office of Rural Health, (2012). The state averages a population density of less than six people per square mile. Currently, the average ratio of students to full-time-equivalent (FTE) teacher across the state is 12:1. The Association for Gifted and Talented Children (AGATE) in Montana advocates for and provides resources, scholarships and mentoring in school districts statewide, for

academically gifted students. Currently, there are no specific outreach programs or scholarships available for artistically gifted student identification or services. This study's aim was to highlight artistic talent and bring attention to the need for that talent to be recognized and cultivated.

The composite of the cases was not confirmed until informed consents (See Appendix C) were signed and returned by the parents of students and then selected by the researcher as *potential* sample participants, to be further screened for the study. It was hoped that a balanced gender representation would be achieved within the sample group for students who are recognized for their artistic talents in their middle school, or in community contexts. This was not accomplished, however. Montana schools do not prohibit monetary incentives for participation in research; therefore the incentive/appreciation gesture was intended to be a $25 gift certificate for a local business, and snacks and refreshments during the interview(s). The first interviewee received the gift certificate to a local art supply store; however all other participants, not having an art store accessible in their community, were presented with a wooden art box complete with a variety of mediums and papers for roughly the same cost as the certificate. Only one interview was *scheduled,* with each participant, however participants and parents were informed of the possibility that the researcher may need to request additional shorter interviews as data unfolded, in order to clarify, and understand more fully, the information presented.

Qualitative study capitalizes on ordinary ways to gather information in order to become acquainted with particular things. However a well-organized plan for carrying out the data generation process is essential to case study research (Stake, 1995).

The first step to gaining access to the schools and choosing the participants for the desired number of case studies followed three successive stages: a) a phone call to request referrals of enrolled students as potential participants, (made to the school superintendent or directly to the art teacher) followed by an email which explained the purpose of the study, and provided the general criteria for referral of potential participants[3], b) responses from the art specialists and/or administrators to establish which schools would be among those considered as site schools for the study, and c) the Student Interest Survey (see Appendix D) would then be distributed to each of the potential participants in the form of a questionnaire, to assess individual commitment to talent. Parent consent forms seeking authorization for their child's participation in the study, explaining the purpose of the study and the rights of their children to opt out of the research process, were sent to each school that would have students participating in the study, accompanied by the official approval by the School of Education Internal Review Committee (EDIRC) of the College of William and Mary's Internal Review Board (IRB) was distributed. The IRB statement assured that the case study participants were assumed to face no greater risk of psychological or physical harm by participating in this study than they would from a typical day of attendance at the school.

Five school districts, several local artists, and one gallery owner were contacted by phone or in person, about providing potential study participants. No referrals resulted from the artists who were contacted, or the gallery owner. A parent of one student who was enrolled in after school art instruction was notified of the referral of the youth for

[3] This method of contact to request approval for school access to conduct the study was sufficient in this case, due to 1) small school sizes; 2) the researcher's network of connections and visibility as a gifted education leader in Montana; 3) interest of teachers and administrators who are aware that the study will be conducted.

participation in the study. The parent immediately contacted the researcher and completed the informed consent granting permission for her child to participate. Attempts to make phone and email contact with superintendents of two of the school districts resulted in no response in one case, and no further communication or referrals in the other. An inquiry made to an after-school teacher in one of the non-responding districts held potential that a discussion with the art teacher could produce one or two additional referrals; however no referrals came from the district. Three school districts (identified in the study as Schools A, B, and C), provided referrals. One student in school C immediately opted out of the study upon being notified by her teacher of the potential to be included.

The researcher visited each school district to meet with the referred participants, collect informed consents, and distribute the questionnaire to be filled out. Completed questionnaires were analyzed to determine whether the student responses indicated a level of talent commitment that would align with the purpose of the study. Response items in Section A of the questionnaire were assigned a value based on the importance of this attribute to the purpose of study; response items in Sections B and C were Likert-type responses. The choices were *seldom-1; occasionally*-2; *frequently-3;* and *always-4*. Students were not aware of the actual value of each item. The overall potential score was 85. As a screening criterion, ten of the 20 items (numbers 1, 2, 5, 7, 10, 12, 13, 15, 17 and 20) reflecting individual interest in and commitment to art were identified as the most essential attributes for participants to have. Each of these questions was assigned a minimum value a student should score in order to be considered for inclusion in the study. A threshold score on each of the ten questions would sum to 32, which equals 70%

of the total possible score of 46 across those items. All students scored between 32 and 38 points on these items. As a secondary screening criterion, a raw score of 59 points (again, 70% overall) was established for inclusion in the study. This percentage was chosen as ideal for this study, because few adolescents have demonstrated their talent in ways that reflect their true potential, and to set a higher cutoff, would have eliminated those who may show promise as older adolescents. The scores of five of the participants averaged 65 out of the 85 possible points. It was noted in the second phase of scoring that one student's scores were somewhat lower than the average for the remainder of the participants. A response to an open-ended question pointed to some bias in the questionnaire, and triggered a more thorough analysis of the cause for the lower scores. The student had mentioned his perfectionist tendency with his freehand drawing, even though he believed that his real talent lay in his advanced capability with computer-oriented art—coding for design and digital art for web-based applications; and the fact that he intended to pursue this avenue in college, which indicated future commitment. No items on the questionnaire related to digital art. The student's lowest scores were in Part B which reflected behaviors relating to more traditional art mediums. He was accepted into the study with a raw score of only 51; a 60% average score overall.

Data Generation/Collection

Data will be collected from multiple sources of information including a) interviews; b) informal/situational/participant observations; and c) field notes and memos which will continuously be compared. As Neuman (2006) states:

> A non-linear research path makes successive passes through steps, sometimes moving backward and sideways before moving on…It can be highly effective for

> creating a feeling for the whole, for grasping subtle shades of meaning, for pulling together divergent information and for switching perspectives. (p. 152)

The use of many data collection methods or data *sources* is important to qualitative research for what it offers in terms of credibility that is often questioned in social science research. The metaphor *crystallization* might be better suited to this phenomenological study than the term triangulation because "the triangle—a rigid, fixed, two-dimensional object "is less symbolic in this situation, than the crystal "which combines symmetry and substance with an infinite variety of shapes, substances, transmutations, multi-dimensions, and angles of approach" Richardson (2000, p. 934); not to mention the full array of colors produced by light illuminating the substance. Establishing a synergy between the researcher, the participants, and the context, will help enable the crystallization of data into useful conceptualization.

Individual Interviews

An interview guide (See Appendix E) was created to identify important issues to be discussed with participants to ensure that the line of questioning remains consistent with each person interviewed (Patton, 2002) while still allowing for flexibility and richly detailed responses by participants. This study drew from field-tested protocols, rather than creating and piloting one for this investigation, given that the research attempted to extend the findings of other research on the same topic. Therefore, the protocol for this study was developed using salient, applicable questions from the Clark & Zimmerman (1988) and the Csikszentmihalyi et al. (1997) studies of talent development in adolescents, and the Clark & Zimmerman (1997) study of talent development in rural communities. (See Appendices, F, G, & H). The interview protocol was designed to

address very broadly, how participants view their own artistic talent; the forces that influenced it; individuals and catalyzing factors that have affected its development; and how it has been encouraged, inhibited, and cultivated in the rural school and community contexts.

Table 3 shows how the questions that will guide the interview process in the current study are correlated to those of the previous studies. Questions were composed to assess students' *beliefs* about those factors such as personal talent, family, school, and community, which have the greatest impact on their interest and talent in art, ability to pursue it, and the continued development of their artistic talent. Additionally, because the current study was centered in a rural context, questions related to perceptions that participants have about their rural school and community specifically, and their influence on individual talent development were included. Some of the anticipated questions were not necessary, as they were answered within the context of another question; others were added as the conversation progressed and questions emerged.

This allowed interviewees to respond to questions more openly, and provided the flexibility for new ideas and topics to potentially emerge throughout the interview process, to inform the research questions. Initial interviews ranged from 38 minutes to one hour in length. Like the kaleidoscope, patterns began to emerge with every twist and turn of the interactive conversation. The open-ended interviews yielded the primary data related to insipient and developing talent in all participants, and the connection to themes developed through the analysis process related to factors of influence, family and community support, personality and behavioral characteristics, the experience of art-making, and passion and commitment to the talent. Flexibility was built into the

interview and the informal observation process to periodically verify interpretations with the participants, assuring that inaccuracies are clarified and reconciled (Corbin & Strauss, 2008).

Table 2

Protocol Source Summary

PROTOCOL CATEGORY	**PROTOCOL QUESTION No.**	**ADAPTED FROM:**		
		Csikszentmihalyi et al., *Talented Teenagers*, 1997	Clark & Zimmerman, *Views of Self* study report. 1988	Clark & Zimmerman, *Project Arts* 1997
I. Self & Personal Experiences				
Views of Self		Appendix 3.4 *Open-ended interview* Phase I Part I		
	1, 2, 3	#1 *Self concept*		
	3a, 3b, 3c		Views of Self (p. 342)	
	3d			South Carolina *Student Self-Inventory Form* (p. 74) [Adapted from Orleans, IN Paoli Community Schools]
Personal Influences	4, 5, 6, 7, 8	#2 *Personal influences*	Views of self/*past remembrances* (p. 342)	
Future Expectations Goals/ Challenges	9, 10	#3 *Present goals/ personal challenges*	Future expectations (p. 343)	
Commitment to talent area	11	#4 *Motivation for/commitment to goals*		

	12 Discuss pre-selection *Student Interest Survey* responses *(Appendix D)*			
	Survey Items 1-6 Part A	Appendix 3.8 C *# 1-6 of Personal Interests Survey* (p. 276-277)		
	Survey Items 7-12 Part B			New Mexico *Parent's Survey*, p. 81[Adapted from Orleans, IN Paoli Community Schools]
	Survey Items 13-20 Part C			*Student Interest survey*, P. 53; item #'s 6, 7, 8, 9, 11, 12, 13 [Adapted from Orleans, IN Paoli Community Schools]
	13, 14		Views of School and Studying Art/*school* (p. 343)	
Home/Family & Friends		Appendix 8.1 *Complex Family Questionnaire* (p. 280-281)		
	15	# 3		
	16	# 7		
	17	# 11		
	18	# 13		
	19-24		Views of Family and Home Environment (p. 343)	

	25	Appendix 3.8 *Flow experience* p.275		
II. Talent Development				
Understanding Personal talent		Appendix 3.4 *Open-ended interview;* Phase I Part II *Talent Development Questionnaire*		
	26-28	#2-4		
	29-34*a-m*	#6-35*a-m* (*adapted to use interview as interview questions)*		
Present Interests	35, 36, 37, 38		Views of Self (report, p. 342) *Present Interest*	
III School		These questions are unique to this study, however were inspired by both the Clark & Zimmerman *Project Arts* (1997) and Clark & Zimmerman *Views of Self, Family Background, and School: Interviews with Artistically Talented Student*s (1988).		
	39-47			
IV Community				
	48-52			

Verbatim transcriptions and summaries were generated from the audio-recorded conversations within two to three weeks of the interview, using Dragon transcription software in some cases, and overnight professional transcribing services in others. Member-checking (going back to participants to confirm that what was interpreted is what the participant actually meant) occurred during the interviews as needed; and brief follow-up interviews (15-20-minute sessions) occurred with all six participants who were first provided a transcript of the interview to peruse. Checking back with participants helped confirm that the emic perspectives—what people think and feel about their

world— gathered during the data generation process have been fairly, accurately, and completely reported (Gall, Gall, & Borg, 2007, and served to provide needed clarification, elaboration, as well as to ensure the quality and credibility of the data;, because credibility in qualitative analysis depends upon believability of the participants' stories.

Participant Observations

A primary purpose for observational analysis is to situate the reader in the setting that was observed. It is not intended to record frequencies of occurrences or acknowledge particular criterion-based behaviors or characteristics. In this study, the observational technique is informal, fluid, and ongoing in tandem with the interviews, to provide an additional lens for understanding the data. Inherently, conversations do provide a perspective about the participants that cannot be obtained other ways; however informal observations encourage direct participation in a way that offers potential for greater detail than the insights of others can provide (Patton, 2002). Patton (2002) contends that qualitative inquiry *requires* of the interviewer, the ability to be a keen observer, sensitive to how those factors outside of the interview itself can affect what is being said, and to be carefully attuned to the nuances of the interactions taking place. Although observation and interviewing are typically understood to be separate and distinct from each other, in this study they were in fact, integrated approaches that were mutually reinforcing (Patton, 2002).

Throughout the data collection, observations of participants and the setting were utilized by the researcher, using a guide for recording notes in both journal and more organized fashion (See Appendix F). The purpose was to take notice of those situational

aspects that could not be detected through transcribed language: feeling, emotion, attitude, decorum, patterns of behavior; especially because the emotional state can impact the quality of the interview (Patton, 2002). This approach enabled the researcher to bring life to the written word, while maintaining the self-awareness necessary to prevent becoming over-zealous with interpretations of the coded and themed responses.

Field Notes, Personal Memos

Field notes served as distinct pieces of the data or theoretical connections to the data being generated during the events, and allowed the researcher to come back to those during formal analyses when concepts were being formed. More importantly, the field notes and memos offered a reflexive view of information gathered. Reflexivity involves critical reflection on the interactions taking place between the researcher, participants, and setting; and asking the questions about researcher biases, value-laden perspectives, and appropriateness of procedures and processes being employed in the analysis (Glesne, 2011).

This process was to some degree, symbiotic, with the participant aiding the researcher in the acquisition of understanding—thereby, learning (Novak & Gowan, 1997). No prescriptive structure for the mechanics and procedures for note-taking are possible because the *approach* to note-taking is optional and entirely dependent on personal style and work habits; but "[w]hat is *not* optional, is the *taking* of field notes" (Patton, 2002, p. 302), which is, according to Patton, (2002) the fundamental work of a qualitative researcher. They are the "most important determinant of later bringing off qualitative analysis" (Patton, 2002, p. 302). In this study, which focused on painting a portrait of each artistic adolescent, through careful observation and reflection of all

aspects of the study context, they were "the observer's *raison d'être*… if not doing them, [she] might as well not be in the setting" (Lofland, 1971 p. 102).

Personal memos provided lengthier, more descriptive more conceptual writing about the data being collected; they were written later after the researcher has left the field to clarify personal meaning from events that have taken place. These were in journal format, with artist's renderings accompanying some of the most notable entries because as an artist, this researcher processes information visually. Although the original intent was to provide a semi-structure for the organization of the field notes by categorizing them as *observational notes*, which describe the actual events or situations, and *theoretical notes*, which are the researcher's own thoughts about the event (Schatzman & Strauss (1973), to help differentiate between them, they were simply divided into two notebooks labeled as 1) field and reflective notes, and 2) analytical notes. Analytic *memos* were generated in a digital file separately, adjoined to specific excerpts of participant responses, lifted from the transcripts. Field notes, reflections, and memos helped establish an audit trail that lent credibility and trustworthiness to the study (see Appendix E).

Data Analysis

In this qualitative research, purpose formed the context of the study, and guided the analysis. Applying the guidelines of qualitative analysis required both judgment and creativity, not adherence to a strict set of rules, and because each qualitative study is unique, the analytical approach in this case study was also unique (Patton, 2002. p. 433). Cross-analysis—building the collage that presents the participants' collective voice as

well as their personal voice—was one approach taken, for how the findings represent the individuals who then relate to a homogenous group.

Each case was assigned a color as a method of organization for large amounts of information, and for cross-referencing throughout analysis. All information pertinent to that case was kept in a pocketed folder of that color with the participant's alias on the front and a number to indicate the order of the interview out of the total of six.

For the purpose of this qualitative study, data was analyzed and techniques implemented based on Strauss & Corbin's (1990) coding paradigm. The researcher performed a coding of text of varying length—a word, phrase, sentence, or paragraph. Coding is defined as "the operations by which data are broken down, conceptualized, and put back together in new ways; [i]t is the central process by which theories are built from data" (Strauss & Corbin, 1990, p. 57). The coding paradigm used is divided into three major types of data analyses: open coding, axial coding, and selective coding.

Strauss and Corbin (1990) offer coding as a standardization that can be held as somewhat equivalent to the generalizable results in quantitative research. In addition to the coding strategies mentioned above, holistic coding was used to capture large amounts of data from interview transcripts, field notes, and journals, to enable the researcher to "chunk" them into the broad topic areas as a first step to seeing the big picture. To do this, a priori codes were drawn from components of the interview protocol, which were based on the Csikszentmihalyi et al. (1997) study of talented adolescents—and established a basic framework to facilitate initial understanding of large amounts of transcribed data.

Because the interview did not follow a prescribed and structured order, a priori codes provided ready-made "compartments" into which whole segments of the transcript

could be placed as an immediate coding solution, and served as the preparatory groundwork for more detailed coding that followed (Saldana, 2013). After a first reading of the text, segments were highlighted in yellow on the printed transcript, and main words or ideas were circled and labeled with an initial or primary code name. Each of these segments portrayed one element of artistic talent development, and also became a meaningful piece of the larger composition representing all aspects of the phenomenon being studied. Large index cards were color-matched to the folder for each participant, and held the informed consent, Student Interest Survey (questionnaire used for final sample selection validation), and the interview transcript, which provided a quick file solution for all information relevant to an individual case. Each colored index card was labeled with the initial code name (and any related code that derived from a priori and first-cycle coding). The code or code pair was assigned a number, which was written on the top left of the card. As data were re-visited and became more familiar, sub-category codes were added to the card using small sticky notes, and code names were changed as necessary. On the back of the index card was the primary code's operational definition, its properties, and any inclusion criteria for that code.

Specific coding procedures functioned as co-applications to further break apart and then re-connect data. Open coding broke down the larger segments of raw data into smaller chunks of manageable information by conceptually categorizing them, in terms of their properties and dimensions (Corbin & Strauss, 2008). These concepts were simultaneously analyzed using axial coding to a) make cross-connections between them; and b) to elaborate on unique qualities that separated them at different level of analysis; and then selective—or in-vivo—coding (Saldana, 2013) was employed as a way to select

portions of the actual words or phrases of the participants and set them apart in italicized block quotes in the findings report, rather than the researcher's *interpretation* or synthesis of them. It is a particularly advantageous coding mechanism for beginning qualitative researchers in the practice of coding data, and for those whose study focus is strongly associated with prioritizing and honoring the voices of the participants (Saldana, 2013) as this study was. A coding process is the interweaving of the action/interaction/emotion present in relation to a particular situation or problem. In this study, this involved sequential as well as concurrent action that was purposeful and continuous (Corbin & Strauss, 2008) with the goal of obtaining *as much* knowledge as possible related to artistic talent development in adolescents. It also required checking back with the participants to request explanations and elaborations until the potential for additional thematic development was exhausted. Coding moved continuously, simultaneously with the data collection process, to discover what lay beneath the words, the symbols, the nuances. Because codes can accumulate quickly, and organization of them was an essential ingredient in managing them, a codebook (a compilation of all emergent codes and their content descriptions and reference to the data) provided a specific place for recording and defining the codes as they pertained to answering the research questions. (Glesne, 2011; Saldana, 2013). A digital file was created for the codebook in which all initial and subsequent coding entries and all revisions were recorded. Emergent codes and themes necessitated handling the [transcribed] data many times throughout the analytical process, lending added familiarity and meaning. To keep track of the coding changes, codebook entries subsequent to first-cycle codes were also color-matched to the six transcripts to identify which of the data initiated new thinking about the code. The

codebook also provided the grounding that prevented inadvertent shifts in definitional aspects of the codes as the analysis evolved (Glesne, 2011).

Constant comparison, as its name implies, refers to the systematic method embedded in the coding process which entails comparing each new incident or piece of data back to what was previously experienced or obtained, to identify similarities and differences. Information drawn from each subsequent interview was compared back to previously conducted interviews in the study. This element was essential to thorough analysis because it allowed the researcher to effectively "differentiate one category/theme from another, and to identify the properties and dimensions specific to each category/theme" (Corbin & Strauss, 2008). Table 3 indicates the major data sources and analytical procedures used to answer research questions.

Analysis then, morphed from raw clips of information into something that could actually be used to better understand the particular phenomenon of interest. Building a framework for communicating the meaning of the data was a critical step in the analysis process. Utilizing multiple analytic processes, not as discrete procedures, but as colorful and overlapping brushstrokes of data, offered greater potential for the ultimate depiction of understanding and thus, meaning, through depth, perspective, and luminosity. A multi-method analytic approach maximized the potential for increasing the range of data available, and served to strengthen the overall analytic process, lending trustworthiness to the study, and providing an audit trail.

Table 3

Alignment of Data Sources and Analytical Procedures to Primary Research Questions

Research Question Summary	Data Collection Method/Instrument	Analysis Procedure
1. Adolescents' perceptions/attitudes about individual talent	Individual Interviews	Holistic, open, axial & in-vivo (selective) coding, constant comparison
	Participant observations	Holistic coding
	Field notes/personal memos/analytic memos	Holistic & axial coding, content analysis
2. Adolescents' perceptions about how school/ community encourages /inhibits their talent development	Individual Interviews	Holistic, open, axial & in-vivo (selective) coding, constant comparison
	Participant observations	Holistic coding
	Field notes/personal memos/analytic memos	Holistic & axial coding, content analysis

Summary

The study focus was centered on how artistically gifted adolescent students' perceive their own artistic expression and subsequent development of their artistic talent. The objective was to uncover the personal stories related to how these middle school students in rural communities perceived the factors in their lives that relate to their talent, and to describe what was learned about those journeys with the artistry of a connoisseur. Eisner (1981) coined the term *connoisseurship* to refer to the expertise that a qualitative researcher brings to the topic of study, that enables him or her to rely heavily on ones' own judgment and determine what constitutes excellence when analyzing and reporting the finding (Patton, 2002). The methods of data collection and analysis for this study were deliberately chosen to assure a multi-dimensional approach and accurate, ethical reporting.

CHAPTER 4: PARTICIPANT PROFILES

Demographic Information

Participants were six middle school adolescents ages 12 and 13, (one had her 14th birthday prior to scheduling fact-checking with her). All of the participants were referred by a Visual art teacher (either at their school or from whom they are taking private art lessons) for their above average ability in visual art. The numbers of participants residing in western and eastern Montana were equally divided, although they represented three different communities, three schools (one from each community), and two counties. Two of the communities were in western Montana, and one was in eastern Montana. Four of the participants were in the eighth grade and two were seventh grade students. Only one of the six participants was not currently enrolled in any type of art instruction (this was due to a schedule conflict; Title I math and 7th grade art were offered during the same class period). Five females and one male comprised the sample population for this study.

The average population density across the three communities from which the sample was drawn is 12.8 (almost double the state average of 6.8). The schools that all participants in this study attended classify as rural according to the census bureau's requirement of a total enrollment under 600; although two of the schools are situated in a county not designated as "frontier" (10 persons per square mile or less). Enrollment varied across three schools however, from 58 to 233 students total when considering only the student population in seventh and eighth grades. (School C included sixth grade in its middle school, resulting in an actual school enrollment of 423). Ethnic diversity across Montana is very low, particularly in the eastern regions of the state. The larger percentage

of minority populations in western Montana schools closely matches the state composite which is roughly 90% Caucasian. Table 4 shows the breakdown of demographics for the state of Montana; Table 5 presents the specific information for the participating school districts and communities; and Table 6 summarizes participant information.

The demographics demonstrate a rather significant difference between the study communities in the eastern and western regions of the state in terms of financial resources. In the eastern region only 10% of students (School B) receive free and reduced lunches, compared to the western Montana schools (Schools A and C) aligning more with state average; however, those additional monetary resources enjoyed in the smallest community in this study did not equate to broader opportunity for the three students from School B. Further discussion is offered in Chapters 5 and 6.

Table 4

Montana State Demographics (2014-15)

State Population	**Population Density**	**Ethnicity (2014)**					**Free/reduced lunches**
		White	Black	American Indian	Asian	Hispanic	Public schools
1, 023, 579	6.8/sq. mile (from 2010 census report)	89.7%	0.6%	6.6%	0.8%	3.5%	43.20%

Table 5

Breakdown of School District Demographics (2015)

Public School	**County Pop. Density (2010 census report)**	**7th/8th grade enrollment**	**Minority populations**	**Free/reduced lunches**	**Student/ teacher ratio**
A	16.8/sq. mile	195	11%	42.6%	13:1
B	5/sq. mile	58	1%	10%	15:1
C	16.8/sq. mile	233 in 7th & 8th grades. (middle school includes 6th, for total of 423)	11% 6th-8th	50.6%	16:1

Table 6

Participant Background Information

Item	**Category**	**School A N=1**	**School B N=3**	**School C N=2**	**Total (Frequency %)**
		(Frequency %)			
Gender	Male	0 (0%)	1 (33.3%)	0 (0%)	1 (0.16%)
	Female	1 (100%)	2 (66.6%)	2 (66.6%)	5 (83.3%)
Age	12	0 (0%)	2 (66.6%)	1 (0.16%)	2 (33.3%)
	13	1 (100%)	2 (66.63%)	1 (50%)	4 (66.6%)
Ethnicity	White Other	1 (100%) 0 (0%)	3 (100%) 0 (0%)	2 (100%) 0 (0%)	6 (100%) 0 (0%)
Grade	7	0 (0%)	1 (33.3%)	1 (50%)	2 (33.3%)
	8	1 (100%)	2 (66.6%)	1 (50%)	4 (66.6%)
Academics	Adv. courses (non-art)	1 (100%)	2 (66.6%)	2 (66.6%)	5 (83.3%)
	Gifted services (any)	0 (0%)	2 (66.6%)	1 (50%)	3 (50%)
	SPED/Title 1 services	0 (0%)	1 (33.3%)	0 (0%)	1 (0.16%)
Current Art Instruction	School Art program Privately taught lessons	1 (100%) 1((100%)	2 (66.6%) 0 (0%)	2 (100%) 0 (0%)	5 (83.3%) 1 (0.16%)
Referral by	School art teacher Private art instructor	0 (0%) 1 (100%)	3 (100%) 0 (0%)	2 (100%) 0 (0%)	5 (83.3%) 1 (0.16%)

Multi-Potentiality

All of the students demonstrated talent in more than one domain; with two of them exhibiting musical talent —playing a musical instrument (violin, and flute); two were active in sports (track or cross-country running); and one identified improving on

her running times not only as a primary goal, but as one of her passions. Four of the six had advanced ability in math; and three were above average in science.

Five of the study participants were receiving advanced instruction in their academic courses, and three were receiving some type of pull-out gifted services. One was enrolled in Title 1 math. Table 7 illustrates advanced ability in multiple domains for the participants. An X in the subject row indicates advanced ability/accelerated coursework. A star (*) in the subject row indicates gifted or advanced instructional services were being offered in that subject. A star beneath the name indicates receiving gifted services but no mention of which specific subjects.

Initial analysis showed more similarity overall, for most of the adolescents; however collective case analysis revealed the distinct differences.

Table 7

Indicators of Multi-potentiality in Study Participants

Specific Talent Area Other than art (indicated where no gifted services apply)	**School A**	**School B**			**School C**	
	Lilac	EJ	RF *	Rose	Daisy	Patricia
Math	X				*	*
Instrument				flute	X	violin
Dance					ballet	X
Science	X				X	*
History	X				X	
Language arts Writing Poetry					* X	X
Sports				track	X	X

This study's intent was to reveal the artistic journey to adolescence for each of the participants as they personally recollected it. The information the participants shared in the interviews tell their personal stories. By providing an introduction to each individual (using only their aliases) to better acquaint the reader with the personality and various characteristics of each of the youth, the researcher invites the reader to retrace those artistic paths through the collage that is offered in Chapters 4 and 5. Profiles are categorized by the schools that students attended.

School A

Lilac (13, 8th grade; student celebrated her 14th birthday during the study)

Lilac is a vivacious and gifted young woman of average height who is physically, emotionally, and cognitively mature for her age; and an independent thinker. Her mid-length light brown hair, subtly highlighted, somewhat disheveled, was worn either pulled back or left to drape over her shoulders each time we met. She wore little or no makeup, casual brand-name apparel, canvas sport shoes, and hats—she said she loves hats. She had been accelerated one grade level when she returned to public school after being a victim of bullying, and had completed a year of home school in her sixth grade year. In addition to her advanced artistic ability, her strengths are math, science and history. She shared that she enjoyed being in the school art class, however experienced frustration when at times, her individual creativity and expression of her personal response to a topic (which often results in unconventional though non-controversial art pieces), were discouraged. Lilac thrives on challenge and frequently creates her own, she admitted. She can easily converse about topics typically beyond the interest and comprehension of others her age, although she commonly used the word "like" in verbal exchanges,

especially when nervous, as she appeared to be early in the scheduled interview for this study. Lilac began drawing at a young age, inspired by her mother's interest in art.

She is American-born to immigrant parents, who moved to this country (her dad in 1984, her mother in 2000), resided in a large west coast city, and became US citizens. Lilac was born there, and following the birth of her siblings, her parents decided to move to Montana for a less hectic lifestyle and to provide their children with a more personalized education in the state's smaller schools. They have resided in Montana approximately four years. She lives in a traditional two-parent household and is the oldest of three children. The youngest, a brother, is a gifted high-functioning autistic nine-year old. Lilac shared that she enjoys learning in all art mediums and encouraging the creative interests of both her siblings. Receiving support from both parents for her artistic ability and interest has allowed her to pursue that interest through after school art lessons. Her dad, who is active in the local politics, frequently urges Lilac to draw political cartoons from his ideas. She did not hesitate to say that she finds it difficult and unfulfilling to attempt to re-create someone else's vision, in large part because it did not initiate from her own imagination. Although Lilac felt the community made opportunities available for youth art, she felt that the reason there is not a larger turnout at the offered art events, was directly related to the fact that young people spend a lot more time on their computers than they should: '*it feels like more people are interested in doing more introverted things and staying inside home, 'n' I think they should— the community should— go out to those people and get more people to do more things like art…cuz there's less and less people attending these art classes here in [her town].'*

Together, her parents built the large family home, which also serves as a licensed assisted living facility that can accommodate the needs of eight elderly clients. All family members participate in the functional aspects of the business. Lilac maintains that she will always be passionate about art but will most likely not try to make it a career, because it is difficult to make money in the art field. However she asserted that art will continue to serve her as a way to both think about and solve life's challenges, and hopes to incorporate her art talent to help others. It was delightful to hear her "next big art ideas."

School B

EJ (13, 8th grad**e)**

EJ is a fair-skinned young lady of average height with blue eyes, and straight, neatly combed natural-blonde hair falling to her shoulders, who carried herself with grace and poise. She was soft-spoken and admittedly introverted and shy. The dichotomy of her extreme shyness and her desire to have "*somebody important notice what I can do,"* seemed baffling to her. Living on a farm in an area situated outside of the very small town contributed to her sense of reality; the farming business requires much of each family member in this traditional two-parent household, in terms of responsibility and time investment, often demanding that personal sacrifices be made.

EJ seemed to take in stride the fact that the lifestyle limited her opportunities for involvement in various activities outside of the family, knowing that she contributed to and is gaining from that lifestyle. EJ was causally, though smartly dressed each time she met with the researcher. She spoke with ease and fluidity and with few exceptions, appeared confident and self-assured. Her laugh was genuine and her smile contagious. She shared her disappointment over being unable to enroll in the school art class due to a

conflict with the Title I math class that she needed to take to improve her math skills; but stated she is making progress which gave her hope that she may be able to enjoy being in art before the school year ends. She was very gracious and a joy to be around each time she met the researcher for fact-checking sessions. Her interest in art began when she was in mid-elementary school and she associated drawing with having nothing else to do, and with getting a dog; however, attributed her talent to an interest in art on both sides of the extended family—"*everyone was doing art"*! She shared that in early elementary school, the art lessons seemed boring and lacking in expressive quality. Then by fourth grade, she had found that art offered many creative and expressive options. Beginning with realistic drawing, EJ branched out to engage in caricatures and cartooning; and as she drew more and her ability was recognized by others, she felt encouraged to continue drawing. EJ identified herself as someone who cares about people and hopes to find an outlet for her art that would provide benefit to others. She intends to make a career of interior design, however is realistic enough to understand that the need to make a secure income may impact that projected course.

RF (13, 8th grade)

RF is a slender male of average height, who walked nonchalantly down the hall with the researcher and two fellow students toward the teacher's work room where potential participants would fill out a questionnaire. Conversation was casual, and RF expressed gratitude for being considered for the study. The day of the scheduled interview, he was kneeling at his locker chatting with another study participant, as this researcher approached. In a chivalrous manner, he jumped up, gave a welcoming and friendly greeting, and offered to carry the researcher's backpack and book bag. Living in

a traditional two-parent household with one sibling—a brother, who like RF, is academically gifted—he appeared to be a rather private person, somewhat detached and uncommunicative; harboring what at least at times mimicked a stereotypical teen attitude regarding parents and school.

It took some prompting to get him to engage during the interview— to talk about himself. He repeatedly corrected himself, stating "*well, I'm—I— don't really know how to explain this*" wanting to be certain that his responses were explicit and accurately painted the picture of his situation. Although he said he loves to draw, and has above average skill in that area, his art interests were primarily centered on media design and coding for web-based application; and he stated very confidently that his computer knowledge and skills are well beyond what most people his age are capable of. He shared his disdain regarding the lack of technology available in art class that would permit him to create computer-generated art pieces. He opined that teachers could probably be doing things differently, and there could be more time allotted for art that would allow for deeper involvement, but that art class was "*okay, and kind of fun."* In spite of the fact that he doodles a lot, and especially enjoys creating art on Adobe Illustrator© and other software, RF related that he seldom shared his computer-generated art with his parents; but that they do see—and have occasionally framed —the hand-drawn artwork that he has done. He stated: "[w]*hen I grow up, I want to be … [m]aybe something big, I don't feel like I could do as much unless I become bigger and more important."* A very bright youth, and mature thinker, RF comprehended the "big picture" and the potential impact that social, political, and economic situations will have on his own future decisions, even if perhaps he felt it was "*difficult to explain.*"

He admitted being somewhat of a dreamer, lacking focus while in the midst of mundane chores, and identified that as a general lack of common sense. RF was receiving gifted services at the school he attended when he participated in the study, earning straight A's. He asked that any future contact for fact-checking be carried out as soon as possible because in about three months he would "*not be here for a while*," which he later clarified to mean that he was moving—an event he was clearly not looking forward to—emphasizing it with his facial expression, a short sigh, and shake of the head. In the months since the data collection for this study was complete, he did in fact, relocate with his family to another state and applied to an elite career and technical school (a perfect match for his advanced ability in technology-related art media), aiming to concurrently earn his high school diploma and an engineering certification. [*Note: This researcher later received an email from the RF's mother, with news of his acceptance to the very selective school. He ranked 13th out of 580 students applying, and would have earned a higher score had he shown up for the interview in full business attire*].

Rose (12; 7th grade)

Awaiting her turn to be interviewed, Rose had been at her grandparents' home in town, and showed up to the interview early; enthused to be a part of the study, and eager to "tell her story." The petite youth sat quartering away from the researcher in her chair across the table, in a room where the previous interview had been conducted. The windows let in a stream of warm fall sunlight backlighting Rose's dusty blonde hair. Appearing somewhat nervous, or maybe a bit shy, she smiled and laughed a lot throughout the interview conversation, often interrupting her own sentences with a small laugh. She kept her hands in her lap, not using them to illustrate her words, and

frequently looked out into the room rather than at the researcher as she spoke—pensively, thoughtfully— preparing her responses. Her apparent nervousness seemed to dissolve midway through the interview and she became particularly animated during various segments of the conversation—particularly when discussing the expressive value of art. Her initial introduction about herself included her love of rodeo; her best friend who had broken her leg, but would have the cast removed that day; the farm animals she and her siblings raise for 4H; and the challenges that their family's farming lifestyle presents in terms of involvement in personal activities, for this traditional two-parent family. Attending school sports events most often offered the only opportunity for family outings not related to trips into town for farm supplies, or to visit extended family. In addition to his farming responsibilities, Rose's dad is a volunteer firefighter and EMT at the local fire station, and Rose aspires to follow his lead in that area; however, also inspired by her mother's volunteer work making blankets for the neonatal center at the local hospital, Rose intends to pursue a career as a NICU nurse. She hopes to embed her art interests in the work she does in some way, "*in order to help others*."

School C

Daisy (12, 7th grade)

A very tall, slender female, Daisy barely acknowledged the introduction made by the researcher as she entered the hallway with her mother, to begin the interview. Her demeanor gave a first impression of an air of aloofness—perhaps even self-consciousness. She looked down at her hands as she spoke, not making direct eye contact with the researcher during most of the initial interview however then spoke comfortably about her

talents: *"I have the dance, math, and language arts, [I'm] kind of sciency but then I have the art… I do ballet; it's a form of art."*

She did confess that she is only quiet in school-related environments; that with her friends and outside of the school context, she is likely to be boisterous and silly. She wore slim fit jeans and a long grey sweater shawl over a black shirt. Her straight blonde hair hung long and was draped mostly in front of her shoulders. Some of her first words of introduction about herself were "*I'm glad that I'm tall, because that means that I can do more stuff…[and] I like that I can draw…people like to compliment me…I'm not the best person out there for drawing, but I'm pretty good*." Dividing time between her divorced parents' homes in the same community, Daisy said she enjoys hunting, hiking, and the inspiration that nature provides. She revealed that her dad has been a great influence in her interest in art and enjoyment of the outdoors. Her sister may have also had some influence "*because she used to do a lot of drawing"* and her "*great-grandpa used to draw really cool things around his house*." Daisy's dad owns a contracting business, and her mother is a non-certified staff person working in the high school administrative office. Daisy keeps a sketchbook in her dad's truck for recording those inspired sketches after hiking or hunting trips. Her favorite art medium is graphite pencil drawing followed closely by working with clay, *"even though,"* she says, *"I'm not very good at the potter's wheel, I like making stuff out of clay… and I want to be able to get better at the potter's wheel."*

Besides three sisters and her parents, Daisy's "family" includes five dogs, horses, chickens, two goats, and a cat, even though she does not participate in 4H. She would like

to be a doctor, so does not predict that art will be something she will do professionally, although she felt she would always continue to "*sketch and stuff.*"

Patricia (13, 8th grade)

Patricia was accompanied by her dad, a retired military vet, as she walked up the sidewalk, entered the double doors, and crossed the hall of the high school to the spot she would meet this researcher for the scheduled interview. Dressed in jeans, a white shirt under a pleated silver-grey satiny top, black zip-up sweatshirt, and black boots, Patricia took a seat in the small media lab. As she settled into the chair and flicked her long, medium-blonde, pulled-back hair to dislodge it from her sweatshirt, I noticed that the last several inches had been colored turquoise. A very articulate speaker, Patricia was polite, soft-spoken, and seemingly self-assured. She enunciated when she spoke, and did not use the filler words "like" or "um," which meant the interview took much less time than the scheduled hour. She shared that being busy conflicted with her ability to be involved in everything she had an interest in; however she had played the violin for seven years. Drawing is her passion; it's what she does the most when she has time. She loves sports and staying active—anything that gets her "*out there*." It was her dad, she believed, that influenced her the most in her art; "*he would always sketch little drawings when I was younger, and I was always wanting to follow him and just make them bigger.*" He continues to draw "*here and there*" she stated. Her dream art class would include individual studio space with a choice of music to inspire personal creativity. She plans pursue a degree in veterinary medicine, and aspires to be a "*very powerful person; someone that others identify as being very trustworthy… I don't know… I've always wanted to be a strong person because when I was younger, my best friend was going*

through a hard time, and I wanted to help her become more self-confident or something like that. Then we grew up with a lot of animals, and so that just made me grow towards—[wanting to be a vet].” She claimed she does not foresee a place for art in her career, however stated that she will always be passionate about art nonetheless, and that it will always be a big part of her life on a personal level.

Summary

This chapter introduced the reader to the participants by offering their individual profiles—their biographical information and personal reflection related to growing up in a rural community—which will aid the reader in tracing the artistic journey of each of those participants as the findings which derived from the interview process are presented in the following chapter

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CHAPTER 5: FINDINGS

This study was conducted in the summer and the fall of 2015, and explored six cases of visual art talent in middle school students to better understand the relationships that influence the development of that talent in their rural communities. Qualitative methods were used to collect, generate, and analyze multiple-source data, which included participant interviews, field journal and analytic memos, and informal researcher observation within the context. Participants were somewhat diverse in terms of their background in art, and length of residency in their current community, though similar in that all were purposefully selected from rural communities across Montana under the assumption that the information they could provide would be sufficient to answer the study's research questions. The data generated through interviews were analyzed using holistic, axial, open, and in-vivo coding, as well as constant comparison between and across the six cases; and content analysis was used to extract meaning from analytic memos. The informal observations performed during the interviews by the researcher within the study context as well as the field and analytic memos, were analyzed using holistic and axial coding. As mentioned in Chapter 3, a priori codes were determined using components of the interview protocol for this study, which had been guided primarily by the findings of the Csikszentmihalyi et. al, (1997) study on talented teenagers, and the Clark and Zimmerman study (1988, 1997) related to views of self., and community talent development. These a priori codes were useful in establishing categories for data in the early coding rounds (See Table 8).

Table 8

A priori Codes Drawn from Components of Interview Protocol Guided by Csikszentmihalyi et al., (1997) and Clark & Zimmerman (1988, 1997) studies.

Talent RQ1				
Experiences	Views of Self	Influences	Expectations/ Goals/Challenges	Home/Family/ Friends
Conditions RQ2				
Encouragement/ Recognition	School		Community	

Findings for this study were initially sorted & compartmentalized by their relationship to the a priori codes. A first cycle of holistic coding combined with in-vivo coding produced several broad topic areas that could be categorized under the a priori code names. For example, "being an artist," "doing art," "having talent," "why I love art so much," or "being able to express myself," were initially filed under the a priori code name "views of self," related to talent. As significant words and phrases were identified across transcribed data, simultaneous use of axial and open coding further delineated the larger chunks of data into smaller, easier-to-manage pieces of information. As the new relationships emerged during this first cycle of coding (See Figure 3), conceptual mapping helped visualize the connections which transcended the a priori code categories, necessitating the assigning of new code names to primary and sub-code categories.

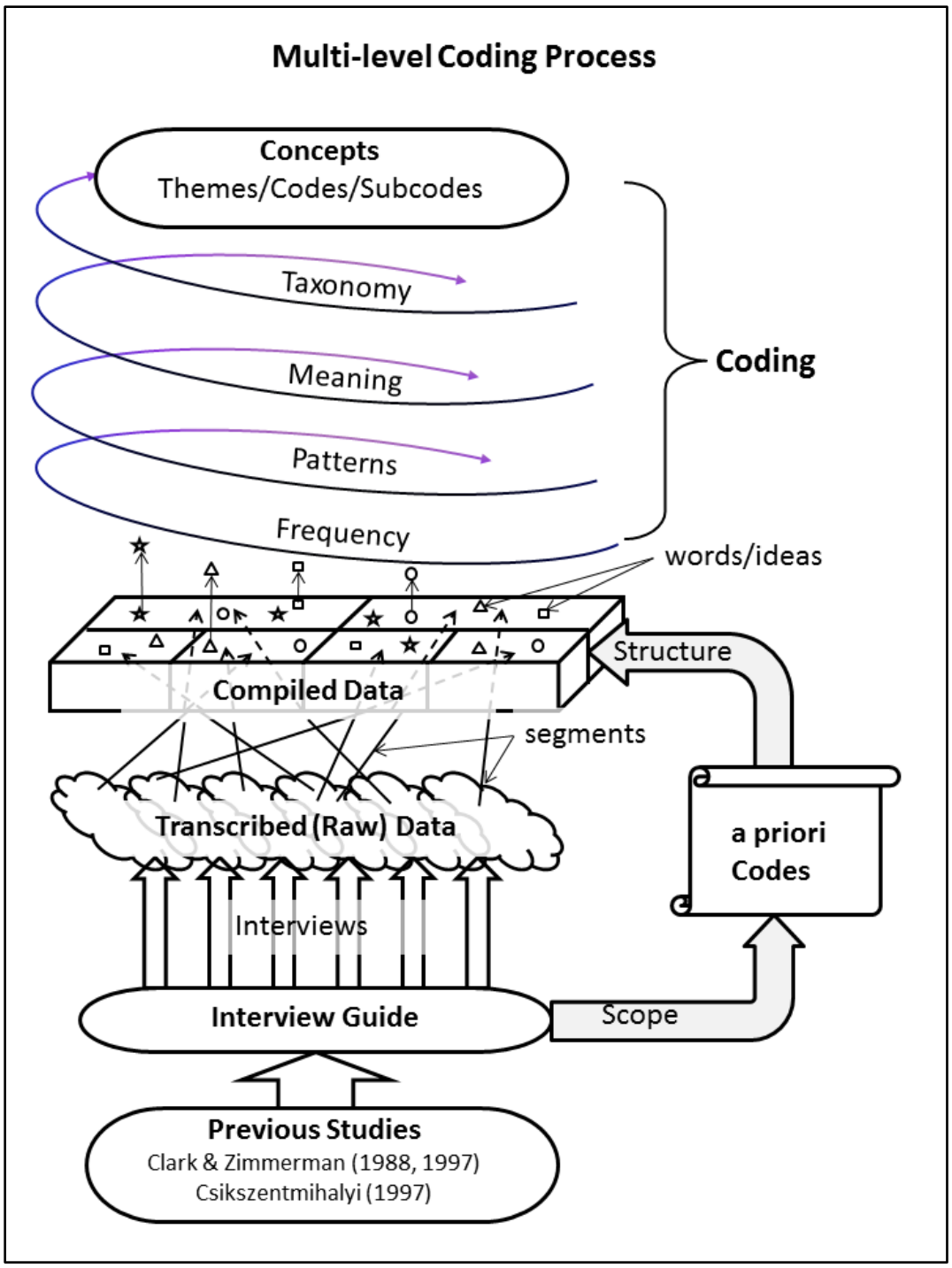

Figure 3. Analytical Process Map Showing Cyclical Multi-level Coding for this Study

The development of ideas, themes and codes after the first-cycle concept-mapping was evolutionary and involved coding, re-coding, and eliminating as several rounds of second cycle coding took place as a continuous and cyclical process. Figure 4 shows the progression of

conceptual thought after the first-cycle conceptual mapping process, as new categories begin to take shape. Next, as new codes continued to emerge, data were re-organized under those codes. Now the concepts related to: experience of talent, tension between talent and responsibility, motivation; and then to conditions of adult support & encouragement, and commitment to talent which were then all categorized as *opportunity* to develop talent.

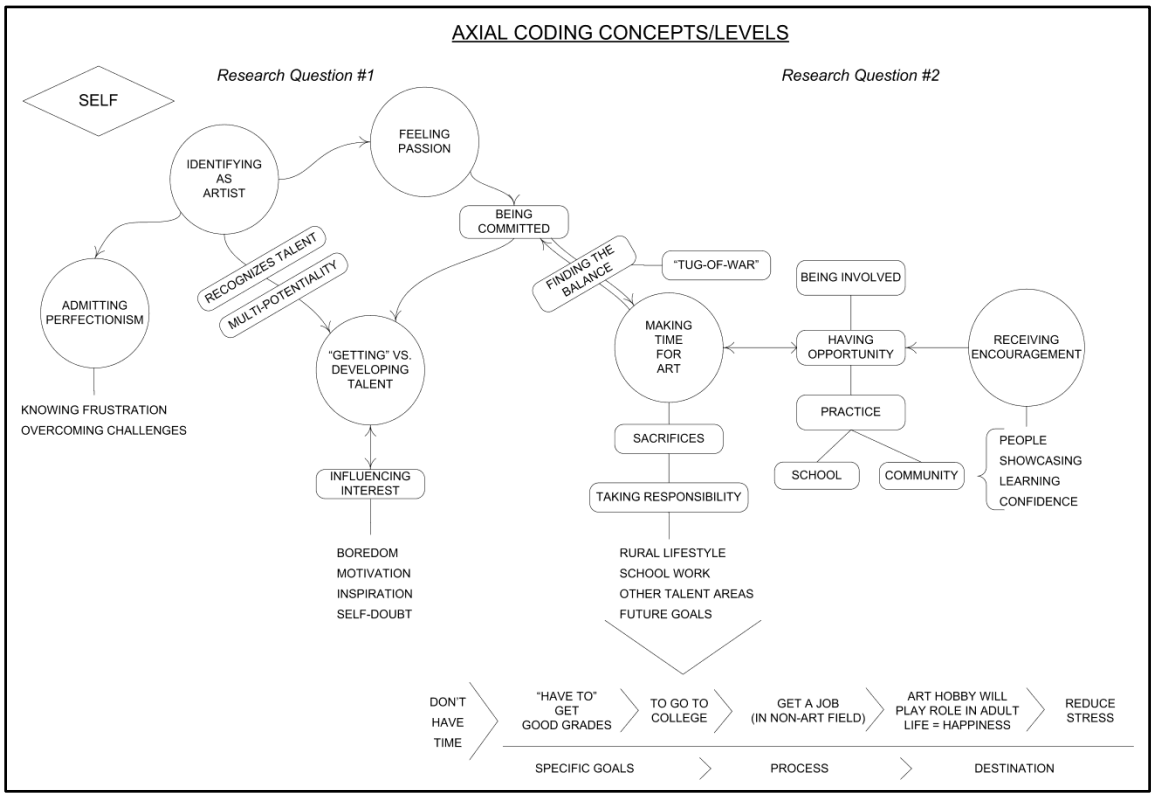

Figure 4. Beginning Concept Formation from First-Cycle Axial Coding

Three trinity codes or overarching themes (Saldana, 2013) eventually emerged from the analysis process: Experience Time and Opportunity. The Venn diagram in Figure 5 below shows the relationship of the three themes. Experience relates to all of the tangible and intangible connections between the adolescent and his or her environment related to talent. Both time and opportunity must be available as conditions that encourage the development of that talent. Time, situated at the apex, impacts both the quality of experience and access to opportunity. Emotional connections to the

experiences which correspond to the current level of commitment for the adolescents in this study were identified as secondary and tertiary themes to further categorize the findings. Encouragement supports both experience and opportunity. Findings are presented in this chapter under the themes of Experience, Time and Opportunity, in that order.

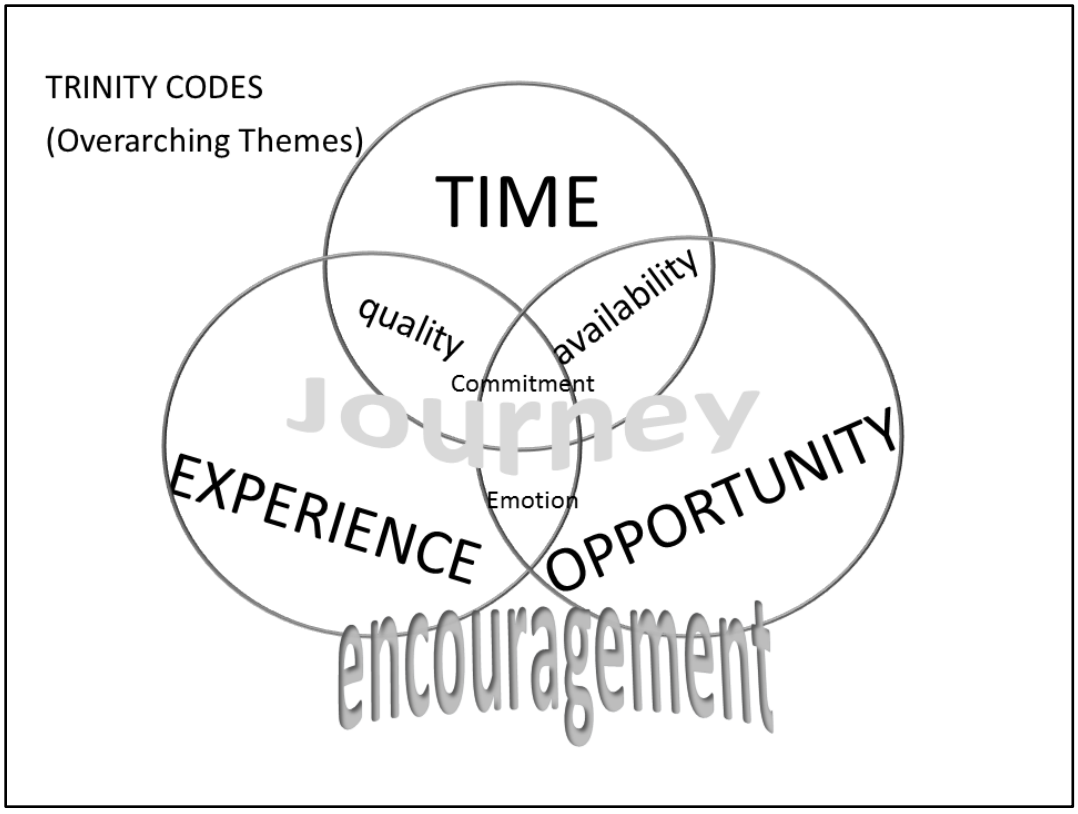

Figure 5. Three Overarching Themes Emerging From Analysis, and the Relationship of Other Factors

The case study explored personal aspects of artistic giftedness to ascertain how participants came to be talented in visual art, what continues to influence that talent, and how much support they were being given in their schools and communities to develop it. Factors that were of special interest in the investigation were the students' family dynamics, living situation, involvement in co-and-extra-curricular activities, perceptions

of self, commitment to talent, flow and persistence, goals, background in art, and opportunities available for them to practice and showcase their artwork. This chapter summarizes the understanding of the current situation for adolescents when it comes to finding support for staying motivated and committed to their talent, and to remain engaged with their talent over the long term.

Results of the analysis presented in this chapter will answer the two primary research questions in the order that they appear here.

1. What are the perceptions of artistically talented, middle school adolescents in a selected rural community regarding their individual artistic talent?

2. What are the perceptions of artistically talented, middle school adolescents in a selected rural community regarding how their school and community encourages or inhibits the development of their talent?

As indicated in Chapter 3, the multiple sources of data collection as well as a synergy that developed between the researcher and the participants/context, allowed for *crystallization* of data into useful conceptualization.

Findings for Research Question 1:

What are the perceptions of artistically talented, middle school adolescents in a selected rural community regarding their individual artistic talent?

All of the findings for this question relate to the overarching code, *experience*.

Experience of Talent

The family influences the essential first habits that children develop which prepare them for more complex development at later stages in life (Csikszentmihalyi et. al, 1997). Situations varied across the cases, however, all six students mentioned that a

family member—parent, sibling, or extended family—exhibited an interest in art, and engaged in art-making. Some did not necessarily link their own art interest to that family member, however. All of the students were able to remember some of their earliest experiences and reflect on their impression of those experiences as being positive, negative or neutral.

Reflecting on Early Art Experiences

All six of the students were able to remember their earliest art experiences, name people or events which inspired them, and what their impression of those experiences were. Some were positive, as was **Lilac's**:

> *None of my family members are really that interested in art; they're really more interested in like doing —I don't know how I should say this, but—more flamboyant; things like, just put themselves out there— and they like to talk, and… I guess my mom would be one of them [that influenced me]; cuz she's actually really interested in art, and… I remember when my mom drew these humans and animals and dolls when I was little, and it inspired me to be an artist, basically… because my mom encourages me to do art and she's like 'of course; you can do those things!'*

EJ's memories reflect a personal indifference to the art she was exposed to as a young child, because they did not offer any personal expressive opportunities. Rather, **EJ** says:

> *They started teaching us with a fruit bowl-they'd set it on the desk and tell us to draw that. I wasn't really interested in art then…I didn't really realize what kind of stuff it had in it….*

EJ then goes on to say she remembers coloring with her mom and reflects on that as a positive memory:

> *My mom used to color with me in my coloring books…My mom's always been good at blending colors… when I was a little kid, she used to color in my coloring books and she'd blend colors—*

RF's recollection of his experiences revealed memories similar to EJ's in that the art he was introduced to from first grade through middle elementary, did not feel interesting and creative; and were neither meaningful nor personal. Pressed to clarify, **RF** admitted creating his own doodles, out of disinterest in the lessons:

> *I did have an art class a really long time ago. I can remember it being [from] all the way down to first grade. We were just doing little art classes and learning colors and something really silly like that. I remember like in fourth grade I would just doodle in class.*

RF then provides a somewhat neutral account of family history involving art, as he contemplates any further connection to art in his early years:

> *Well, my brother draws, but I don't really see it often and [he] rarely does it [anymore]. My mother used to do crafts and stuff like that— jewelry, little cards, she used to do that a lot; she doesn't have time for it any more. I think that was art, but she didn't really consider it art. I've never seen my dad do anything like that though.*

Two students share memories that jump-started their art journey in a positive way.

> **Daisy:** *The clay… it would be 5th grade because … Wait, not 5th grade, before— 2nd grade, because we got the little balls of clay and then you would roll them out*

and make cool figures and stuff. Then for drawing, I liked it when I was really young…maybe [from] my sister who's a year older than me because she used to do a lot of drawing and stuff. Not really [any extended family] — my great grandpa, he used to draw really cool things around his house. He just drew them and sketched them out. It was really cool pictures that he made. But probably when we go on hikes and hunting all the stuff around you is really pretty; the nature and stuff.

Patricia: *I like to travel and that's kind of how I started drawing because we would be stuck in the car for hours and hours. We've been to every state in the U.S. except for Hawaii…. [And] I think it was my dad…[because] he would always sketch little drawings when I was younger, and I was always wanting to follow him and just make them bigger. I think it was in the first grade when I started to play the violin; the violin was first, then I got into art, and it just pulled together. I used to write a lot. I started creating images in my head, and then I would draw a picture to go along with my story.*

Doodling was a frequent art activity for three of the participants who were all enrolled in the same school; and one student gave two rationales for doodling. Doodling was conceptualized as quick drawing or detailed pattern design that was rendered without excessive thought or planning. Doodling was specifically mentioned by four of the students in relation to early art experiences as a way to pass the time, to keep from being bored; or to increase practice time related to drawing. Below are their comments:

Two of the students specifically mentioned boredom as an incentive to begin doodling; sometimes randomly on assignment paper border; sometimes as something they created with intent.

Lilac: *…sometimes…when I'm bored [and] sometimes…I just doodle on it [my assignment] and I get in trouble for it… Yeeahh…[and] I have, actually used doodles for inspiration for a drawing or something like that.*

EJ: *when I moved here, I didn't find anything else to do and then I drew that picture. Sometimes in study hall, [I think] 'Oh, I'll just doodle for now, and then—it feels like only ten minutes—and the bell rings! Ohhhhh shoooooot!' Sometimes my dad, he goes to the fire hall—he's a volunteer there—and they have a chalkboard. And I take the yellow chalk and just doodle all over it, but the chalk's only like 'that big' [shows size with fingers] and there's only one color so I kinda have a hard time.*

RF: *…[S]ometimes I just take some of my free time just to doodle and stuff like that. We have a sketchbook in art class and I started doodling in there too. Sometimes I doodle on the giant white pages, but I decided that was a waste of paper and I have a bunch of different sketches on one page, so sometimes I just take out a blank piece of paper and doodle on that all the time. My grandma gave me this wonderful art set, and it's wonderful, with these large blank pages; and sometimes…I'm just doodling on them forever.*

Rose: *I like to do art; I've been doing it for a long time now, I guess my cousin introduced me to doodling and stuff… I like to doodle a lot-and work with bright colors.*

The primary predictor of sustained commitment to the talent area for adolescents relates to the positive emotional experience of enjoyment (Csikszentmihalyi et. al, 1997). Reflections of emotion connected to their art experiences were positive across all six cases. Responses varied in terms of what those positive emotions were however, with some students citing more than one reason for their engagement in art.

The Emotional Experience of Art

All six participants were able to relate an emotional connection to art-making. One adolescent described the feeling of being valued—personally validated—through art-making experiences. Five related involvement in art to *particular* emotions. All six described the experience of art-making as enjoyable, fun, or a pursuit that makes them feel good.

Feel good. This pertains to deliberately doing art for the specific purpose of making one feel good, or happy.

RF: *I just feel like I do art to make myself happy and to make myself feel better; a way to spend time.*

Enjoyment. Finding art enjoyable results in repeated attempts to produce that emotional outcome.

Rose: *…this is my first actual year in art…so I'm excited. I like learning about the arts and principles, and I like doing more of the arts… we are just starting on a new project again, and I think that it's really fun that we get to learn new things.*

Daisy: *Art is really … It's really fun to do because then you hold on to different things that you can do with it. You can make pots which was one of my favorites. Even though I'm not very good at the potter's wheel, I like makings stuff out of*

clay. In art class, it's fun to just … that we can draw and stuff… because that's fun.

RF: *I just do it because I feel like it's cool, it's interesting; I just think it[art]'s fun and cool… I really enjoy it…*["cool" in this context, meant something the respondent rated as pleasure-producing; not something judged by others as "cool" by social acceptance standards].

Escape. Art provides a respite from routine or uninteresting activities.

RF: *Sometimes I just don't really do what I plan to do …; I like computers and electronics a lot—sometimes I'll just doodle on Adobe Illustrator and programs like that…*

Rose: *sometimes I come home and instead of doing my homework and stuff, I just start coming up with like, art and stuff.*

Calm. Having experienced a reduction in stress during one art activity increases the chance it will be utilized again when there is a need for calm.

Lilac: [*art will always be*]*… a big stress-reliever in my life and it'll help me express myself*

RF: *I just feel like I do art to make myself happy and to make myself feel better. I don't really do it because I've had a bad day, It just overall makes me happier; it picks me up sometimes when I'm down, gives me something to do, and just makes me feel better.*

Rose: *Yeah, like if I'm stressed, like if I have a huge assignment due, I can just like take off my my—like, thinking cap and just play around with my art and stuff and umm and then… my mom, she'll let me stay up til like about 9:30, doing art,*

and in the mornings— I ride a bus—so she'll have me do my homework on the bus and stuff, so I guess that helps me a lot.

Patricia: *Yeah, [reduces stress] cuz it lets everything us fall out onto the paper, rather than—some people have their diary…I just have my sketchbook to record things.*

Validation. Finding validation from art created a sustained pleasure in reproducing that perception of self-worth. Lilac claimed the art-making process produced a feeling of being valuable, important. It allowed her to feel proud of herself and overcome perceptions of low self-worth instigated by situations or other people.

Lilac: *…and just keep me proud of myself because um… when I was always brought down by something like sometimes I feel like unimportant or 'unvaluable'[sic] and so I just do art to make me feel valuable.*

Motivation. Both reward systems (intrinsic and extrinsic) produced motivation to continue doing art.

The social environment is important to motivation and engagement for students of all ages, and it may be particularly important for adolescent students (Ryan & Patrick, 2001). Individuals will continue to engage in those activities they enjoy, and they tend to enjoy what they do well (Csikszentmihalyi et al., 1997); therefore the cyclical connection between the emotional response to creating art, and the recognition of talent by others resulted in the reinforcement of intrinsic motivation to persist. **S**tudents were prompted to discuss what most motivated them in pursuing their art interests. A follow-up question was posed about whether they would keep drawing if others did not recognize their ability.

From self. Three of the six believed their intrinsic motivation was what kept them in art-making*:*

Lilac: *It's mostly the inside that triggers…the like, motivation for me to do more, and sometimes it's the motivation from other people that just keeps me motivated to do activities and makes me feel good. But yeah, it's usually just mostly myself that makes me do it.*

EJ: *I think what motivates me is thinking that I can do this; I can let someone notice; I can make this one of the best drawings I've ever done*.

RF: *I just do it for fun. I would probably say it's myself.*

From encouragement. All six students expressed the belief that recognition by immediate and extended family had provided encouragement that to some degree impacted their continued interest in art. They were asked whether, without that encouragement, they would persist with their art.

Lilac: *My grandparents and my sister—my sister, she started out in art because of me and so she was very supportive and same with my grandparents… yeah, they were just really supportive. I feel like it's something…[it's] what I get from my family.*

EJ: *I like being able to do this stuff; my uncle, he liked art—he did art but when he saw mine he said 'I'm not able to do that; I can only visually see, I can't copy like that out of my head like that' then when I started drawing a bit more, people would ask me to draw things for them.*

RF: *I think my family [helps motivate me] and maybe my cousins and stuff like that; they just recognize my art. I've many cousins. Well, depends…usually the*

computer art I do I don't really show my parents, but the ones that I doodle, my little drawings, I usually show my parents. My little sketches I usually just save, my shadings, that sort of stuff. The really big ones, my parents will actually buy a whole painting for it, well a ...frame.

Rose: *... a couple years back, like every single year we go to my aunt's house and she paints a lot and stuff so she kind of has given us like little lessons; like me and my cousins and stuff, so I think that's where I got—as long as I can remember, a lot of—I've gotten stuff from when I was little tiny from her…plates, and stuff, so…I just started drawing more and more and then everyone told me that I was really good at art so I just kept going and yeahhehe…*

Daisy: *Probably my parents… they motivate me because they think I'm really good at it. But yeah, [I'd be] probably a little bit, [even without that].*

Patricia: *I started to realize I was good, then other people started joining in saying that too; that's reinforcing. [If other people didn't notice] I might've keep it [my art] more quiet and secretive. I would mainly work harder because it's something I like to do, so I would want to get better and better; but if people were definitely helping me or supporting me, I would definitely try harder.*

Passion. Four of the six students in the study specifically used the word "passion" or "loved" to describe their strong desire to do art, without being prompted. The students who mentioned being passionate also related their passion to a past art experience or future goal. Three of the students related artistic interest to specific goals.

Lilac: *Art is a passion for me; not as a career though—but I wanna incorporate my passion into my career. There aren't much opportunities for art careers-that*

you do—that you can be a when I started art is an artist— and it involves money, even though art is more essential— An artist basically it's like…it's like…..it's like a limb or something; it's like part of you— being an artist— and ummm you create things out of your own image, it's like you can be creative and do whatever you want with art.

EJ: *I started to draw some more and then when I realized I was getting really good at it, I didn't stop so from fourth grade til now, art is still my passion.*

Rose: *When I was in kindergarten, we did these journals…I always loved to do little dresses and stuff in my journal, and I filled up my journal about a third of the way into the year so I had to get another one, and [laughs] I still have it; it's kinda cool though.*

Patricia: *I like to think that I'm really passionate about it. I love to draw, and that's one of the main things I'll do. When we're doing posters together or if people have to share painting, I'll want to finish it. I'll just get so into it, but I realize I have to stop myself.*

Understanding Personal Talent

All six adolescents provided their perspective, although responses were varied regarding what talent it is, how they believe they became talented, and how to develop it. While some felt they "got" their talent from family, others thought it could be natural ability but that in order to be developed it takes personal effort, practice (e.g. Gladwell, 2008; Syed, 2010) and hard work.

Lilac: *[Being talented in art means] you create things out of your own image, it's like you can be creative and do whatever you want with art.*

RF: *To me I think it's like being able to be persistent and to think out of the box and to do something that's completely [different]—or not exactly the same as other people or what's done. Sometimes I just see something off the internet and do it in a different way. I think it's the ability to make something special and something that makes people happy or makes you happy.*

Rose: *Talent is that you believe you can draw good and that you're happy with what you do and that you're good [at art] and you're glad you have that gift. The more you practice the more you get better so I guess it depends on how hard you work to try to get better. I play my flute a lot, I do cross-country —I like to run— and I like to do poetry.*

Daisy thought aloud contemplatively, as she plodded through what talent meant to her, and how it related to her personal abilities in different areas of study:

Not being really good at it but just paying attention to the details about it. Shading it in and stuff, making it look better than just a plain old stick figure. I think you earn it after the years after practice from it. You might have [natural] ability, but for talent I think you earn it after years of practice from it… mmmm, That's true for some things but not all…maybe science, because you read stuff, but… you've got to study it then take the tests about it but you actually have— yeah, you could do…[laughs] you have to work on everything! I have the dance, math and language arts, [I'm] kind of 'sciency'; but then I have my art…[voice trails off]

Rather than defining what being talented meant to her individually, one student offered her perception of the source of that talent.

EJ: *My mom's side, my dad's side, everyone was doing art—my cousins, my uncles—so I realized that's where I got that talent.*

In addition to the intent to ascertain students' understanding of their personal talent, they were asked whether educational aims should focus more on developing the strengths and talents of students in preference to being required to achieve a minimum standard of proficiency across the board. Three students gave answers demonstrating a basic understanding of the implications put forth in the question. However, their comments reflected a dual lack of comprehension regarding its purpose: a) they related talent development simply to personal practice in order to improve, which while essential, is a single-dimension perspective leaving out the availability of opportunities; and b), the concept of developing talent toward potential eminence was not particularly familiar to them nor viewed as necessarily important. Other students' answers were not relevant to the question. A request to make their responses more relevant would have required specific prompting which would have introduced researcher bias into the data. The three responses that related to the question follow below:

RF: *I <u>don't</u> really think that they have to do that. I think they can do whatever they want. They can be small, they can be big, it's up to them. I, personally, want to be bigger, not the best, not top of the line, but I just want to be known about*.

Rose: *I think that <u>would</u> be really cool, because like, I know a lot of kids that when we were little like say oh yeah, we wanna change the world but it's like easier said than done. Like, some little actions might change your community or your school but it takes like a big difference to change the world.*

Patricia: *I do think so because if someone's confident and strong about one subject and not the other, I think they should push to make the one that they are confident in just be amazing. Yeah. I think the benefits would just- it'll make people, I don't know, just express their feelings and express what they're good at, and I just think it'll make, if you were to do something like that, I think it would just make the kids a lot more happier and they would ... It would be nice for them to express what they are good at.*

Locating Self on Talent Spectrum

Participants were asked to talk about their personal artistic talent, and where they perceived that talent to be in relation to others. While students proclaimed advanced ability, there was a sense of self-doubt generated by observing others' talent which is perceived to surpass their own, in some cases. Two students confidently claimed that they were artists, and equated "being an artist" with advanced ability in drawing.

Lilac: *I am an artist. I'm good at art. Sometimes I would see some other kids my age and I would think oh, they're so much better than me and sometimes I uh, think about –think that way about my sister's own artwork-like hers is better than mine… I feel like I'm a one out of ten compared to their artworks, but then there's other artworks that I create that I think I'm pretty good. Not bragging or anything… [and] wellll, everybody keeps asking me to draw this and that for them.*

EJ: *Everyone, like my friends, my family, say that they wish they could do things that I can do. And I wish I could do the things that they can do—make the pictures pop out of the page, or feel the paper. Sometimes I can't get that; sometimes I can. When I was in 7th grade, our teacher-our art teacher-…she put up this contest and*

I put in a drawing; and out of my grade and most of the high schoolers, I got 4th place. I felt pretty good! And now, with most artists in my class, I do feel really good. And now I'm drawing without taking pictures on the computer. I'm still getting better.

RF expressed some apprehension related to his perception of his personal talent in art that appeared to stem from the fact that he does not consider himself to be among the ranks of "typical" artists, even though he enjoys drawing and doodling. In terms of being a digital artist, he has had little exposure to the field that has only recently gained the attention of the general public; and, as an adolescent, has not found his niche quite yet; therefore he is not confident to claim that talent as artistic. Following is what **RF** shared:

When I hear 'artist' I usually think of people that draw and paint and stuff. I like both. I like both a lot but, I think I'm good with both but, I mean I can do color but not as well on paper. I can do shading much better when I do it on paper, but I can't do it very well on the computer, but I have skills a lot of people don't have on the computer, so I usually like doing it more, my friends might not know how to do that. One of my friends is really good at art. I can't really beat him. There's some things I know I can, like using Adobe Illustrator and stuff like that, but regular drawing with a mechanical pencil or pencil or anything like that, he'll beat me and… and I just know he's better than me, but I know a lot of people who can't do as well as me.

Rose: [*Talent is when] you believe that you can draw good and that you're happy with what you do, and that you're good, but you're glad that you have that gift. In some way it [being an artist] IS the same as being talented, but some kids-a lot of*

kids are talented in different ways, like some of 'em are athletic, and others are better at like, math and stuff…but like, I know a lot of kids in our class that are pret-ty artistic. I'm glad that I got into art at an early age, and that I know how to do things.

Daisy: *I like that I can really draw because some people they like to complement me on my drawings. I'm not the best person out there for drawing but I'm pretty good.*

Patricia: *I like to consider myself an artist.*

Habits

All six of the students were able to describe particular characteristics that they personally possessed their likes and dislikes, and the habits that personally helped or hindered their talent from their perspective. Two students related talent growth to the ability to be more open to their world, see things from a different perspective and be exposed to new styles and ideas:

Lilac: *I feel it's flowing a lot but it's kinda like it's notched down a little because of the little time I have for it…ummm…but…I feel like it's improving because I'm more open to different kinds of art styles and um, yeah, not just like cartoons, but also impressionism…and it's like really helping me like know more like what's out there, in the art world, and yeah…*

Patricia: *I think [my art's] improving because I started to be outside more. I started to "see" things more, and so it just helped me improve.*

Two others stated that practice was a primary contributor to their ability to further hone their art skills:

EJ: *[I'm improving] because I'm practicing. Sometimes I would look things up online to try to see if I can upload some things that (and I have to ask my mom for permission. laughs) and sometimes I try to look at pictures for a long time and then see if I can draw it.*

Rose: *...I guess the more you practice the more you get better so I guess it just depends on how hard you work to try to get better.*

One student revealed his uncertainty about how to go about improving, his skill, because what he was currently doing was not making visible changes in his art ability:

RF: *I want to get better, but I can't really see anything else happening that well. I don't know, I will have art in [the state he would be moving to] but I haven't seen much change in my art; in my skills—getting better.*

One student related talent to a generalized notion of attention and focus in school.

Daisy: *You have to be good in school and ... You have to... be good in school, pay attention so that you can get the details and stuff.*

Half of the participants admitted some degree of behavior related to disorganization.

Lilac: *Most of the time I don't really bring a sketchpad with me just because...I 'm not really that organized...I just draw on whatever I have with me...my artworks are here and there scattered around the house and sometimes my mom just takes them and puts them in my portfolio, but yeah they're just kind of everywhere.*

RF: *I like to think that I am really smart but I forget common sense sometimes. For example, one time I forgot to put away the dishes or something like that and I put them in completely the wrong place, but I might do good on algebra or something like that. I get my mind off something and I really don't concentrate very well.*

Rose: *Yeah, my mom sa—well, cuz I'm not very good at keeping my room neat—so she said if I keep it clean I can get more journals [to draw in]…so…yeah.*

All six participants indicated an interest in improving their arts skills, however only five believed they were a perfectionist to some degree, and acted as their own harshest critic; sometimes persisting to work through challenges to the finish; at other times being able to start a piece of artwork over; or able to just throw it away and begin an entirely new project.

Lilac: *I get a little hard on myself when I see other kids and their art is better than mine-It's just what I think—and I see kids that are better than me and sometimes it discourages me. I'm kinda just hard on myself because I just see like other kids on the internet [and] they're just like 'look what I did…' you know.*

EJ: *I'm pretty picky, on how it's laid [laughs] out… I sometimes do get frustrated…if I don't like it, like maybe it's leaning a little bit to this way, sometimes I want it completely straight, I'm uhhh [laughs] little picky.*

RF: *Sometimes I am a perfectionist; I will spend an hour just working on one drawing. I'll just erase the whole thing and do it all over again and—maybe it's a little bit different— just redo it. Just something— it doesn't feel right…[but] when*

I'm using my computer, I'm using Adobe Illustrator or Paint or whatever, I get a little bit angry and a little bit frustrated, but I just move on …

Rose: *It just kind of depends. Like with colored pencils, I can't blend 'em and I can't— I like to paint and I if I use pencil, I'm like erasing all the time but I like, with paint, it's pretty much like no mess-ups, and I maybe try and be more careful, so I guess it turns out a lot better.*

Daisy: *I'm a little bit OCD.*

Three students mentioned the difficulty they experienced with trying to do art requested by others and still maintain their personal creative expression.

Lilac: *Everybody keeps asking me to draw this or that for them, and yeah…sometimes I get a little uncomfortable because I like to do things on my own, and yeah…it's hard to do what everybody wants me to do.*

EJ: *If I were to draw something curvy, maybe something out of the lines for once, and someone told me to draw it completely straight I'd kinda have troubles redrawing the thing that I really like, to make it something completely straight- [something somebody else wants].*

Rose: *Sometimes I find it difficult, when like someone's like oh can you draw me like a frog or something, I'll be like ok, well, I guess…I'll try & go look up online pictures of some interesting frogs and go from there, and …yeah.*

Four others shared their preferences for being alone most of the time, rather than doing art without others around.

Lilac: *I like working alone. It's because I don't feel bothered by other people and I can just get into the flow and yeah…basically…. (voice trailed off).*

EJ: *I like to have my alone time, but sometimes I like having people around, like my sister…or my friends.*

RF: *Not a team-work thing, I don't like to work in groups as much, but I like to help people. Sometimes it doesn't really matter to me, I just doodle, but sometimes I just want my private space.*

Patricia: *I, most of the time, work alone.*

All six participants prefer using pencil to draw. Some utilize other media to create art; however, for those who had a strong preference for the medium used in their art pieces, drawing in graphite pencil was the preferred choice.

Lilac: *Pencil drawing for sure. [I like to draw] people and detailed drawings. — I can do my best work with pencil drawings and I can do the least mistakes but ya know this is coming from a person who doesn't really paint a lot…and [I like]making filming videos-doing film production; [but] pencil-that's really become my favorite-well, as you can see from some of these things, pencil drawing or pastel pencil –some type of pencil is what I feel the most comfortable with, even though I like to do other things…*

EJ: *I don't know what it is….but I just wanna stick to the pencil for now… I guess it's because I kinda want to wait-I don't know what I'm waiting for… but somethin' tells me to wait…and maybe I'll try introducing some of it on my own time.*

RF: *I have a few colored pencils, a whole collectible set of pastels, but I don't really use it, I usually just take my mechanical pencil, [and] doodle, or use my computer. I use color but I don't really go into painting or anything like that.*

Rose: *I like to paint and I if I use pencil, I'm like erasing all the time but like, with paint, it's pretty much like no mess-ups, and I maybe try and be more careful, so I guess it turns out a lot better...I just like using oil pastels and chalk things, cuz you can like blend 'em together and create different textures; and I really like working with bright colors and, I like to do stuff with my little sister like chalk and so…*

Daisy: *I like the graphite pencils because you can get different colors of the gray. I got this little kit that I bought that has blenders, color pencils and graphite pencils. I use the blender and it's really cool. Because you get to make the shadows darker and then you can fade it out to make it look actually more realistic.*

Patricia: *When I get home from school or if I can't sleep, I'll wake up, I'll get my sketchbook, and most of the time, I will finish. They're mainly in black and white. It's mainly pencil, but I'll put in some pen shading …like that. I know I do a lot of black and white, mainly, and so I don't know, it's- I don't know.*

The Expressive Voice of Art

Four of the six students made the connection between their art-making and having a voice. Two of them loosely identified the value of expression as a personal freedom; others as a way to communicate through their art.

Lilac: *So, about myself: I'm an artist, I'm really good at art; it helps me express things, like…better than any other sorts of activities. Being an artist basically is like…a limb or something; it's like part of you, being an artist, you create things out of your own image, it's like you can be creative and do whatever you want*

with it. And I think that's most important thing about being an artist like I said, it's… expressing yourself and it makes me feel good about myself in a way.

EJ: *Well, I'm a little too shy…I get nervous and what I like about myself is to be able to do this stuff, and have people be able to see what I can see; what they weren't able to see before.*

RF: *Creativity can really show people what can happen and get more people's attention.*

Rose: *I'm glad I got into art at an early age, and that I know how to do things; if I didn't have art, I'd be lost… nowhere to express my emotions; art has really high importance to me and has a big impact on my life…I like to express how I feel, and stuff with my art. [W]hen it comes to art, I just let my creative side go, and sometimes the art that I draw, like my little doodles and stuff, they make my friends laugh.*

Two students reflected conscious efforts to exercise visual thinking to extend learning and understanding by drawing ideas and concepts.

EJ: *Sometimes on math, I'll sometimes draw a picture of a dragon flew this many miles to get to this place, and then he flew back a few more miles to get to this place…*

Patricia: *It doesn't happen that much, but I'll find myself starting to sketch what I've been learning.*

On the topic of showcasing their artwork, and what might inhibit them from doing so, the six students' responses varied. There are some contradictions both within

and across some cases, regarding the students' confidence to have artwork exhibited and judged by others.

Lilac: *I love to put my creativity out there.*

EJ: *Yeah I don't think I'd really mind people ---not saying that [that my art is good], cuz I get a little shy when someone kinda comments on it. I would like someone important like maybe the president [laughs] to [laughs….] notice what I can do. Since—I know I'm shy; I don't know why I'd be thinking of this—but I just want someone older or more important to notice, and maybe do something about it. I just…kinda want everyone to notice, what I'm tryin' to—*

RF: *We had art competitions, we showed them off and I thought it was really nice for other people to see my art.*

Rose: *We have an art project where we do posters, and usually our teachers will hang 'em out in the hall, so when somebody walks by they can look at 'em, and I think that is good, too…but I think it'd be more interesting if we could go around and see ….yeah, everybody's art, like all different ages and …yeah; [and] our art teacher, he had us all draw posters and get into groups and draw 'em, and then he'd display 'em out in the hallway, and they'd put tally marks on whose they think is the best but we weren't allowed to put our names on it and stuff, and I thought that was interesting to see what people liked—*

Daisy: *I would probably do it [exhibit my art] if it's one I made … Like one of my favorite ones that I'd do. [But] Probably like someone really not liking your work… quite a few people not liking it and also if you don't think you like it.. Well, if you think you like it at the beginning of when you put it out but then you look at*

it again and you're like, 'Ah, I don't think that's so good anymore,' [might discourage her from exhibiting].

Patricia: *Yeah… I do most of the time. Yeah. If [the art teacher] asks me, I'll say yes so they can put it up.*

Family Support

Space. Most students reported having some kind of space at home for doing artwork, although none of them had specific studio like environments within which to work. One did not have any designated space, and two of the students stated that they draw outside, and have options such as open space, barns or sheds.

Lilac: *no I don't really have a place; I just —do my artwork wherever I go…*

EJ: *In my room or downstairs; we renovated downstairs so it looks much nicer now hehe [laughs] than it was before.*

RF: *… I go into my room.*

Rose: *… I have bunk beds in my room, but I don't share a room, so I go up on my top bunk where my window is, and I pull my curtains apart, shut my door, and I have a chandelier, so I turn my— my chandelier on, and I can just sit up there with the clipboard and do art, so…*

Daisy: *Probably in my room, but sometimes I get disturbed by my siblings. They just come in.*

Patricia: *I have my own desk in my room...*

Supplies. A factor of support for talent is having the appropriate conditions including the tools or supplies necessary to engage in the area of talent. Participants had limited supplies at home with which to create their art.

Lilac: *[the supplies] are kind of just everywhere…*

EJ: *Yeah, I've got coloring crayons, colored pencils, I don't have much paint, and my uncle [name] bought me some watercolors.*

RF: *I have a few colored pencils, a whole collectible set of pastels, but I don't really use it, I usually just take my mechanical pencil, doodle or use my computer. I use color but I don't really go into painting or anything like that.*

Rose: *Yes, I do. Like, my grandparents uh they've passed me down like paint brushes and, um I guess we have some uh paints but they're a little dried out hehe [laughs] and we also have a [sic]art cupboard, so..*

Daisy: *it's just sometimes I don't have the supplies at our house to do a lot of stuff.*

Students were also asked if they had available resources at home such as instructional materials about art mediums or techniques; or books about art that they were able to view.

Lilac: *I have like four illustration books that are like, cartoons but I'm planning to get some with like paintings…*

EJ: *In the water coloring pack that my uncle gave me, I'm gonna read through that-see how I can do this right, cuz you kinda have to read through the directions*

RF: *No, I don't*

Rose: *Not that I can think of….*

Daisy: *Maybe 2 or 3. I do have this one like… little—step-by-step one but then I have another thing that just has a few paintings in it.*

Patricia: *I do. I do have a few, and so, if sometimes I do draw a blank, I'll pull it out, and then sometimes I'll change the picture to what I like artistic-wise.*

Leeway. Two students specifically mentioned feeling supported by one or both of their parents in terms leeway to spend time on art, even though there are chores to do.

Rose: *Yeah, like if I'm stressed, like if I have a huge assignment due, I can just like take off my—like, thinking cap and just play around with some of my—some of the—my art and stuff and umm and then after like my mom, she'll let me stay up til like about 9:30, doing art, and in the mornings.. I ride a bus—so she'll have me do my homework on the bus and stuff, so I guess that helps me a lot.*

Patricia: *I have chores, but my dad supports me*.

Current Commitment

Individual involvement and participation in art was rated for each adolescent by the screening questionnaire administered prior to the study, and provided information on how each of them *felt* about their commitment. During the interview, questions relating to what they do when they have a choice, or when there is nothing else to do, offered data pertaining to actual preferences for art-making over other activities.

Achieving "flow" is a term coined by Csikszentmihalyi (1990) to describe an optimal experience whereby a state of total involvement and deep concentration are distinct from everyday reality. Two students used the word flow to refer to their deep concentration during the art process. Lilac termed her experience as "flow mode." Patricia labeled it "my flow." None of the other students however, used— nor appeared

to fully conceptualize— the term and its relationship to the enjoyment of being immersed in an activity that produces pleasurable outcomes.

Lilac: *usually when I get into my flow mode that's when I put my best effort into my artworks so I try my best and sometimes I get frustrated cuz I make mistakes in it and yeah there are definitely times when I just have to get out of the flow then when I come back to my artwork that I'm working on, sometimes I just kinda …lost the inspiration to do more of it.*

Patricia: *That's happened a few times [that I get into deep concentration] but…if I do get interrupted in the middle of my flow, I'll leave it there and go back.*

Choosing art

EJ: *Sometimes my dad, he goes to the fire hall—he's a volunteer there …they have a chalkboard, and I take the yellow chalk and I just doodle all over it.*

RF: *A lot of the time I just don't really do [the kind of things that have anything to do with] what I plan to do in the future, but sometimes I just take some of my free time just to doodle or draw and stuff like that.*

Rose: *Sometimes, like I play my flute a lot and sometimes I get really stubborn and don't [but] sometimes I come home and instead of doing my homework and stuff, I just start coming up with like, art and stuff. I go up on my top bunk where my window is, and I pull my curtains apart, shut my door—and I have a chandelier, so I turn my chandelier on—and I can just sit up there with the clipboard and do art.*

Daisy: *I keep a sketchbook in our dad's truck so I [can] just draw stuff in the car on trips.*

Patricia: *When I get home from school or if I can't sleep, I'll wake up, I'll get my sketchbook…*

Persisting

Three of the six students specifically felt they persisted when faced with challenges in the art creation process, or were dissatisfied with the results of an art piece.

Lilac: *Sometimes when I get an idea on doing—working on— a project, and it doesn't turn out well, I might start out and nail [it] or work on the idea, the image I have in my mind— but starting like a new paper and sometimes it works out and sometimes it doesn't; like I just come up with a completely totally new idea and just work on it. I'm determined to—it's just—if I fail at something that… I tried, um… it just motivates me and gets me determined to attempt at it again and then just try with it until I uh get to mastering it then. Sometimes, I get regret not finishing other idea but to be honest most of the time I just get spoof ideas and just work on the new ones.*

RF: *Well, sometimes maybe it's [my drawing] a little bit different and I'll just erase the whole thing and do it all over again and, maybe it's a little bit different, [so I] just redo it. Just something, it doesn't feel right even though it looks—I usually just finish it; just keep on working at it, finish it, come back right away. I usually keep on improving it or do so much detail into one little thing, [until] I don't really feel like I can do any more.*

Patricia: *I do [have persistence] most of the time; if I really want to start something new and learn something new, I'll make it happen.*

Goal-Setting

Most students had at least identified short-term goals related to their talent development.

Lilac: *[I want]…to improve my art and have more time for it and cuz I don't really have that much time to do art anymore but I try to make up for it and express myself freely when I do art, so that's like my main goal… I want to be better and want to improve.*

EJ spoke more about wanting to improve her math so that she could transfer to art class*:*

I'm getting better at math! In the middle of the year, some of the high schoolers will do sculptures…I wanna get out of Title because they're gonna do sculptures and I wanna get— to be able to do that.

RF: *I know I [could] do better, I could get better in art, I could improve my art, I could improve my art skills, maybe feel more confident about my art and probably feel better that I can bring it up into my future and my job and stuff like that. When I make my art, I don't usually think it's the best art, I know I could do better and I know it's not as great as my other friends', or as other people's, but… I don't really want to be 'famous', but I want to be known about, maybe the co-owner of something big. Not like top-top like you would already know it but something that if you worked on it that's the first thing that would come up on the list. If I searched up this, that's the first thing that would come on the list, you wouldn't really know it already.*

Rose: *[My goals are] probably getting good grades and improving with my art, and get more art supplies.*

Daisy: *Even though I'm not very good at the potter's wheel, I like making stuff out of clay. I want to be able to get better at the potter's wheel.*

Patricia: *[Art is] something I like to do, and so I would want to get better and better.*

Expectations. When asked about their future plans and goals, the challenges they may encounter in achieving those goals, and how art might fit into that, the six participant responses were split between short and long-term goals. One participant expressed that even though she believes art is an essential part of life, she faces the reality that it is difficult to make a decent living in the art field.

Lilac: *I really want to be an artist when I become older, like…I really wanna incorporate that passion into my career, but I feel that as an artist there aren't that much opportunities like, for car…eers…that you can be as an artist and it involves like—money, even though art is more essential.*

EJ: *[I] kind of see myself designing things like maybe…my Mom said I could be an interior designer——Design an office like this, or maybe a house, or something. And…my sister thinks I could be a comic…a comic writer, and I think I can do both of those things. If I do become an interior designer, it's paying workers—they do the work, I design things— If I don't get enough money to pay them, then I might lose some things…like maybe lose workers, I might have to fire them to stay in…yeah, stay afloat…and I'm not mean like that; I don't like to see people sad.*

RF*: When I grow up, I want to be like one of those telecommunications people; maybe general software or just communications. Maybe something big, like internet service provider or stuff like that, maybe manager… I like computers and electronics a lot…I also want to be a programmer, so I could do art. Not like the kind of coding, more of the animation and stuff like that. I feel like that's really most of it. I wanna do more of the art stuff; less of the work and balancing and stuff like that. I don't really think of any big problems.*

Rose: *I really wanna go to college and become a NICU Nurse and help with little babies, and want to go into the [local volunteer] Fire Dept. But I know that like, my mom, she had the girls scout troop do little blankets and stuff for the NICU, so I think that would be kinda fun to do, but I don't know if it has a whole bunch to do with art. So I would probably have—maybe try to have— a side job, like own a[sic] art shop or something.*

Daisy: *[I would] probably not [pursue art] because I was going to be a doctor or something like that but I would probably sketch and stuff.*

Patricia: *I definitely want to take art classes [in high school] but I don't think I might want to take it—like, have my whole career off of art; I think I want to twist in my art somehow to help.. But I think it'll just help me out; it'll yeah….balance everything out. I want to grow up and be a very powerful person. I want people to think of me as someone trustworthy, and they can come to me. I want to go to college, and I think I might want to be a vet. Well, there might be people who don't think I can do it or people who will go against what I'm trying to do, so I think that's my biggest worry.*

Figure 6 shows the response frequency for the primary codes related to Research Question 1. Possible responses were totaled for each code category and the actual response is given as a percentage of the total possible. Bars are shaded to represent the responses by students in eastern and western Montana. Appendix J details the distribution of responses across all coded categories.

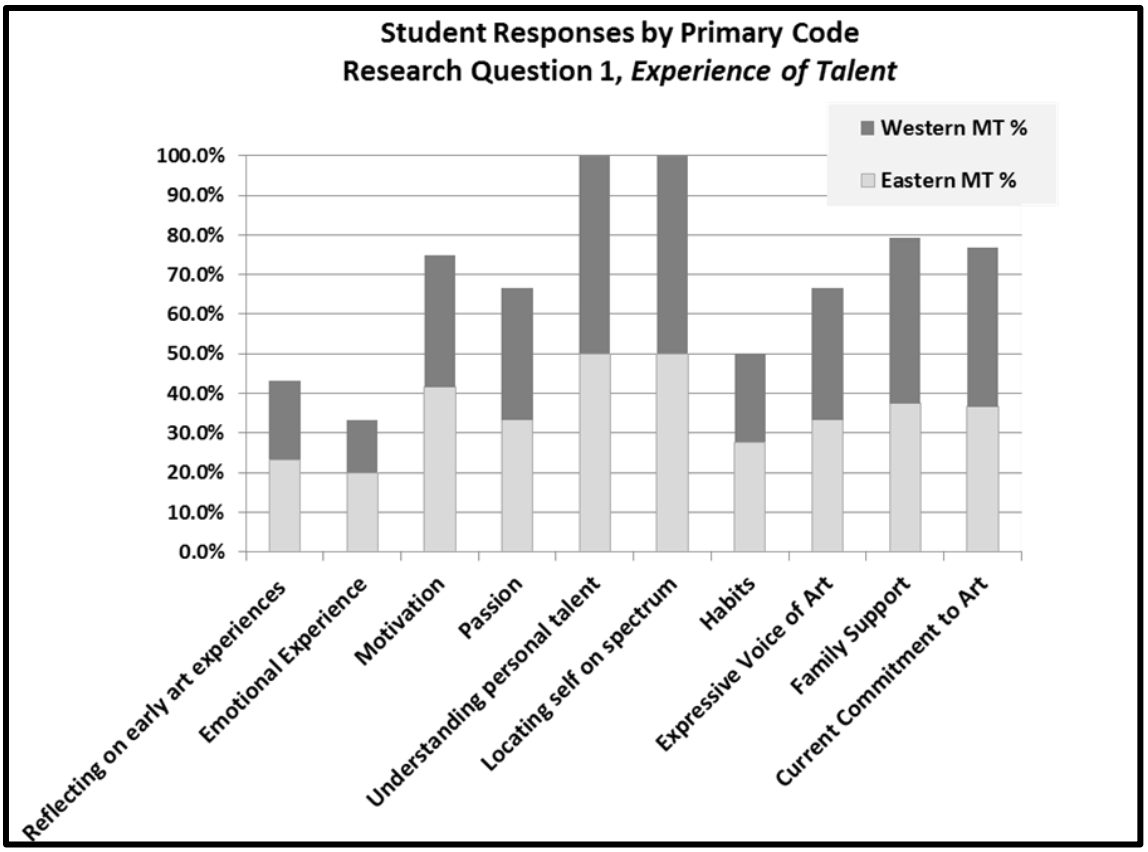

Figure 6. Participant Response Frequencies Corresponding to Code Categories for Question 1

Findings for Research Question 2:

What are the perceptions of artistically talented, middle school adolescents in a selected rural community regarding how their school and community encourages or inhibits the development of their talent?

All of the findings for this question relate to two main themes: *time* and *opportunity.* As presented in Chapter 2, opportunity for the nurturing of talent is clearly a

major criterion in the maximization of talent (Syed, 2010). As mentioned in Chapter 2, capitalizing on these opportunities is the responsibility of the individual, and requires commitment and resilience in pursuing the talent area (Noble et al., 1999). Without appropriate environmental conditions however, the talent will never be optimized (Csikszentmihalyi et. al, 1997; Gagné, 2008; Worrell, 2010).

Time

Synergy of Time and Opportunity

Many factors hold potential to influence the development of talent in any one individual. Study participants were asked to provide their perspectives on the availability of the appropriate conditions in their school and community—encouragement, support, and space to work on the talent, and the individual's ability—including the time— to take action when those opportunities present themselves— (Csikszentmihalyi et. al, 1997) which they felt personally impacted their talent.

Balancing

Time was mentioned by most students as the greatest inhibiting factor related to being able to do art. Time is represented in both the allotment of discretionary hours and the investment in practicing art. They viewed the lack of time as something that was not within their control to change. It was their belief that to get good grades and prepare for college, and attend to daily responsibilities of life all required immense amounts of time; therefore, whether speaking of themselves or others, responsibility in their view, necessitated sacrificing time spent on those activities that are pleasurable. At fact-checking sessions both Patricia and Daisy referred to the balancing of time and responsibility as a "tug-of war."

Lilac: *[I want] to improve my art and have more time for it and cuz I don't really have that much time to do art anymore but I try to make up for it and express myself freely when I do [my] art, so that's like my main goal…I feel it's [personal talent] flowing a lot but it's kinda like it's notched down a little because of the little time I have for it; I think I discourage myself the most because I'm so hard on my artwork and I want to be better and want to improve. …and sometimes it does discourage me...and it's also the amount of time I get to do my artwork; I don't have some—much time to do my artwork.*

EJ: *…sometimes I can't have the time because I have volleyball and other stuff.*

RF: *My mother used to do crafts and stuff like that, jewelry, little cards, she used to do that a lot, [but] she doesn't have time for it any more.*

Rose: *I'd start [drawing] at my grandparents' house because we had extra time… but like if my mom tells me to go do dishes, I'm like [whispers] no, no…and I just wanna go do art!*

Daisy: *Probably [the biggest challenge is] not having time because you get busier and stuff…maybe not doing as much art because you don't have as much time. I don't usually journal but I usually draw. I usually don't draw up on the trails because I probably don't have time…I was going to go to this one art thing but we didn't really have time in the summer for it because my sister took it and she thought it was really fun…[and] Actually I like reading but sometimes I don't have time for it[either], but I do like it. [But] since I have art class, I get time to practice art then, and I've had that all through—and going to have it— all through middle school so…*

Patricia: *I would probably try to make the time. It's pretty busy with all the school work, but ...*

Rural Life

The role of parents and extended family members in the lives of adolescent youth in rural communities is multi-dimensional given that in addition to parenting responsibilities, the adult members model the hard work and sacrifice needed to sustain a family-run business. Adolescents in the study did not seem to question the lack of time; rather stated it matter-of-factly as an aspect of their life.

EJ: *...I can understand that because during the summer when we do have time [from school activities] we can't really do that because that time is put into farm work, and getting the [irrigation] pipes out, so…mmm…we don't really have that time.*

Rose offered a similar scenario in her family. Being farmers requires year-round focus on crops, animals, and all of the responsibility that comes with that. The town where she attends school is very small, and the family lives on one of the few scattered ranches in the hills several miles from there.

Rose provides a snapshot of life in a rural agricultural environment where children learn the various aspects of the family business and are expected to be integral to the operation of it:

Well, I guess…my parents own cows— so do my grandparents—we have…goats in the summer, and pigs for 4H and…yeah, it gets pretty busy; sooner or later, I'm gonna have to learn to drive a tractor! So…actually we're looking for some land t' put our cows on; and so this year we're gonna have our cows calve at our

house… usually they're in—well right now they're up in the hills up by [the] Dam—so I guess, usually—have 4-wheelers that we try to get 'em into the corral and then we have 'em in a big huge horse trailer and we take 'em to where we need 'em. I could probably spend a little more time on my art, but with my brother's sports and stuff, and everything going on, I'm betting that after all the sports are done, then it will be a lot less challenging and so [I'll be able]to try to fit in time to work on my art, so yeah, I think— well, I guess— I'm getting a calf and, and so, a lot of times what we did with our goats, we set out a lawn chair and did our homework or read a book, like… I did art a lot…out there.

Daisy: *…but I was going to go to this one art thing because my sister took it and she thought it was really fun… but we didn't really have time in the summer for it.*

Patricia*: I'm really busy because I signed up for 4-H, and I have a lot of activities from all the schoolwork, a lot of stuff like that so I don't have much time, but I do try to make time.*

Opportunity

Opportunity relates back to this study's conceptual model based on Gagné's (2008) Differentiated Model of Gifts and Talents in Chapter 1, which illustrates the environmental conditions that potentially impact the talent trajectory. Students were asked to shine a personal light on those conditions.

Conditions Which Encourage and Inhibit

At school. The study participants expressed their perceptions of those things in the school context that encouraged or inhibited their continued commitment to their art. None of the students identified a current school art teacher as a source of encouragement,

though one student recalled the positive memories of a previous teacher. Five of the participants were referred by the art teacher in their school of attendance. When the question was posed concerning what conditions or individuals at school provide encouragement, three mentioned their peers, and one of those students also pointed to a particular class as a source of encouragement.

Individuals. Students were asked about any people in their school context who they felt provided encouragement or help in terms of improving their artistic ability.

Lilac's response below stems from a fact-checking session, when she offered information related to a specific remembrance of a teacher's frustration with her symbolic, recognizable, yet not precisely representational artwork; the teacher wadded it up and threw it away, saying Lilac could do better; however provided no guidance on how she might accomplish that.

> **Lilac:** *ok…not teachers,* [to clarify, you're not talking about teachers being encouraging then…?*] No… Never!*
>
> **EJ:** *When I was in 7th grade, our teacher—our art teacher—she put up this contest and I put in this (gave detailed description) artwork out of my grade and most of the high schoolers, I got 4th place. Yeah! I felt pretty good!*

EJ spoke of another teacher who has encouraged her:

> *Career class. [The teacher] says you can do whatever you can, she wants us to tell our strengths, our skills, and the passions we can do to make it a job. So I think that's what builds my hope that I can make this a job…and that I can turn my passions into something.*

RF: *My really good drawing art friend, he'll tell me things to improve and stuff like that, and then my other friends will just say it's cool or interesting and tell me something else to do.*

Daisy: *Yeah, they [friends and teachers] think that my stuff's really good.*

Events. Students were able to identify those memories of times in school, which in one way or another encouraged their talent.

RF: *We had art competitions, we showed them off and I thought it was really nice for other people to see my art… Yeah. I'm glad we're going to be doing it in eighth grade too. I think that it's probably just my friends. Probably just that I want to maybe impress them or show them something cool.*

Rose: *we have an art project where we do posters, and usually our teachers will hang 'em out in the hall, so when somebody walks by they can look at 'em, and I think that is good, but…Well I know that the library-the public library here-I know that they might be able to hang up some art in there or something and yeah, like our art teacher, he had us all draw posters and get into groups and draw 'em, and then he'd display 'em out in the hallway, and they'd put tally marks on whose they think is the best but we weren't allowed to put our names on it and stuff, and I thought that was interesting to see what people liked, and…*

Daisy: *…because she sometimes—mostly with our papers— she has a board on the wall before we walk into the lunch room. She puts them up there if you only want her to.*

Patricia: [the teacher], *she'll hang up a whole bunch of posters or just other pieces of art that are really fascinating, and they're really nice to look at.*

Wishes

Students were asked to name anything that might help them develop their art talent that was not available now; four identified potential activities for their school.

> **Lilac:** *More art programs and maybe more time for us to do art during like school now. Bigger time to do something; to do your—to continue your artwork, in art class and stuff…*
>
> **EJ:** *I'd like to have an art competition or art show maybe twice a year, or have everyone just do an art project once in a while, cuz I think that would let everyone engage in something creative, maybe let them see, and maybe I see, what everyone else can do and see how that would influence their project… I wanna get out of Title because they're gonna do sculptures and I wanna get to be able to do that.*
>
> **RF:** *I think there would be an improved art class, more things to do in art class. They might actually have Adobe Illustrator on their computers, we could take online art and stuff like that, that'd be really cool. Maybe there could be an art class over the summer here, maybe an art camp here, that'd be interesting too. I still think they'd be having more computers, more technology and probably improving the way teachers do things, maybe have an online planner, so if you miss something you could still catch back up, help you improve in case you got caught back; maybe more time in different classes, more time in school, so you could still get more time to learn and more time to improve.*

Rose: *Maybe like, host an art show, or an art display area where we can like one or a couple nights to just have them up in the gym and just put up all of our paintings, and stuff like that…I think it'd be more interesting if we could go around and see ….yeah, everybody's art, like all different ages and yeah.*

Patricia: *I think, you would have all your art supplies, everything and your own template or whatever you're using to draw and get your own section so it could be just you. You could have a radio or some kind of music playing. [but] I think what they have set up now is pretty nice.*

Community

When the artwork of youth is publicly exhibited offering critiquing by individuals other than family, friends, and teachers, students perceive the value of the activity to be greater, and more meaningful, and are rewarded by increased confidence.

Recognition

Daisy's work was published in *Signatures* from Big Sky a publication sponsored by Montana Association for Gifted and Talented Education (AGATE), and she expressed her elation at having had the opportunity for her art to be recognized and appreciated statewide. **Daisy** recalled:

I did this one picture in 5th grade of a self-portrait— 5th or 6th grade—and it was really cool that it got to be in that sky booklet…

Students were asked if they were aware of local artists or ever see their work in public places in their town, and if any of those places might exhibit the art of youth.

EJ: *Oh, there's this one shop that in the building, there's pictures there…and there's some Coca Cola posters, football posters and that's pretty much about it.*

RF: *No. It [student artwork] goes to [a larger town] exhibit museum. No one directly comes to the school, but you can see the art there. We get it back. The art you do here gets graded [judged], you do all the work; you send it there* to get money out of it.

Daisy: *Some— sometimes if I'm wandering around downtown with a friend or something, I sometimes like to go in one [of the galleries]. I think it's [name of gallery] or something, and they have paintings in there, even though they're really expensive, it's really cool to just look at them. I think that it might be cool to go somewhere else and go to an art museum that has [a] little larger stuff. It would be really fun to see that.*

Events

When asked if their community offered enough opportunities for them to be involved in art-related activities in order to grow their talent, five of the students' responded that there were either not enough, or were not matched to the interests of adolescents in order to draw them into the community, as in Lilac's case:

Lilac: *I feel like it's something…[it's] what I get from my family, but I know there's a—some— programs for the community that help you; you might have a chance to share your art, but I felt like the art community that helps you keep, or like you know, that you can have your chance to do your artwork, like… but I feel like the art community in [this town] is not that big; it feels like more people are interested in doing more introverted things and staying inside [their] home, 'n' I think they should— the community should— go out to those people and get more*

people to do more things like art. Cuz there's less and less people attending these art classes here in [this town].

Lilac was then asked to clarify whether she was speaking about everyone, or her own age group. Her response:

Just the adolescents because as…as technology improves, um, then more kids from that time get more… I dunno, like sucked into those things and they just like 'go away' from the stuff that the community provides for you . I'm not really involved in a lot of stuff around the community but when I get the chance, my mom will get me registered in those. Maybe [I could] to do more after school activities that include art that will give me more time to practice on it…yeah.

EJ: *I don't think [laughs] there are any opportunities to do that yet.*

RF: *No. I also find it really interesting that later in high school you can even sell your art, from here.*

Rose: *Oh, there's this one shop that in the building, there's pictures there…and there's some Coca Cola posters, football posters and that's pretty much about it.[but…]I'd like to see a building that would post people's artwork; I'd like to see at least, more than one person's artwork; cuz sometimes I only see like 5 high schoolers' artwork, in that one building. And only like 3 pictures in my class. And I wanna see more people get engaged in art and have theirs put up.*

Patricia: *I don't think there's anything for us to be this young, I think it's more once you get to high school.*

One student felt that there were opportunities available, but that perhaps there could be additional offerings that would accommodate more people:

Daisy: *Yeah, I think they do. I've heard that there are some drawing contests. I think someone in my grade or a few people in my grade drew ducks and they did it for the [specific] refuge I think or something like that.…[j]ust— a little bit late on knowing it.*

Although she added:

But I think they could do more contests in the newspaper or…where you can enter in a little drawing thing for the newspaper [like what] I did for the weather and stuff. In the summer, they could have open classes that anyone can join for 5 bucks or something. That would be really cool.

Mentors

Students were asked whether they knew any professional artists, or someone from the community who share their artistic expertise with them**,** and whether, if they were available in their community, the students would take advantage of that opportunity. Two of the six students could recall a community mentor who could share their talent in art; however only one had personal experience in relation to a professional.

Lilac: *I don't really have that much friends that are like involved in art but if I ever get close to working with a professional artist, like with [name of after school art teacher] I look at their artwork and just kinda like study it, and see, kinda like what techniques they use, and…yeah***.**

EJ: *No; I would try to.*

RF: *Not that much. When I hear 'artist' I usually think of people who paint or stuff like that and I'm doing more like electronic and stuff like that. So I don't think as much of what they would do.*

Rose: *Not really. But yeah, that'd be really fun; I like to express how I feel, and stuff with my art, and if I had somebody to come and help us, I think that would be really really cool. My sister, both of my sisters—one's in 2nd grade, and one's in 5th grade—they have a [sic] art teacher that comes in and helps them so that would be kinda cool, too. And I think this is like the first year that they've done it sooo…Yeah, that'd be really fun.!*

Patricia: *Not that I can think of, no. [but…] Yeah, I would. I would probably try to make the time. It's pretty busy with all the school work, but ...*

The asked whether she had ever been to any of the artist receptions hosted each month at one of the galleries in the town nearest hers, Patricia commented:

No…I don't think so.

Internet as Community

All six participants mentioned their use of the computer related to art. They were asked during fact-checking whether they felt the computer or the internet had any influence on their art. Living in the country varying distances from town, with no transportation but what parents can provide, the students in this study referred to a variety of immediately accessible learning resources via their computers at times that were convenient to them.

Lilac: *—oh yes, definitely! Actually, [the internet's] where I learned a lot of my stuff or— yes, it's from the internet; a LOT, actually. Yeah, actually I HAVE done [film production] when I had a working computer at—like about almost 2 years ago—but I haven't…but the computer's now broken but I'm getting back to the produc—the filming production thing, umm… with my iPad so yeah…*

EJ: *It was when I first got my computer, sooo…sixth grade, I went to just get on the computer, and try and see if I could do art. And then when I realized I could do art, I took a piece of paper, took a picture on my computer and I drew that! And now I'm drawing without taking pictures on the computer. Most times, I would do it on the computer, but sometimes I would draw it, take a picture and do it on the computer…It's not really a program, it's like saved images that you right click and it says "edit" then I can paint that image.*

RF: *I like computers and electronics a lot so sometimes I'll just doodle on Adobe Illustrator and programs like that. I've done quite a few things.*

Rose: *I like to go into town and look at all the art and stuff, and on like, [the] Pinterest [website], and look on there to try and find different ideas for like 4-H projects and different art things, so…*

Daisy: *Yeah, I have my tablet and then I search something up and then I have that as a reference and then I draw on. It's like free hand. I like going on YouTube and other sites and finding little tutorials on how to draw and then I sketch them out and do that. Sometimes I color them but most of the time I just leave them pencil because I think that looks really cool.*

Patricia: *I used to do a lot of the art apps or whatever they have on my computer. I used to use that a lot… and I would make a lot of pieces. I mainly used it because it was a lot easier to access just on the computer, I guess. I don't know***.**

Figure 7 shows the response frequency for the primary codes related to Research Question 2. Possible responses were totaled for each code category and the actual response is given as a percentage of the total possible. Bars are shaded to represent the

responses by students in eastern and western Montana. Appendix J details the distribution of responses across all coded categories.

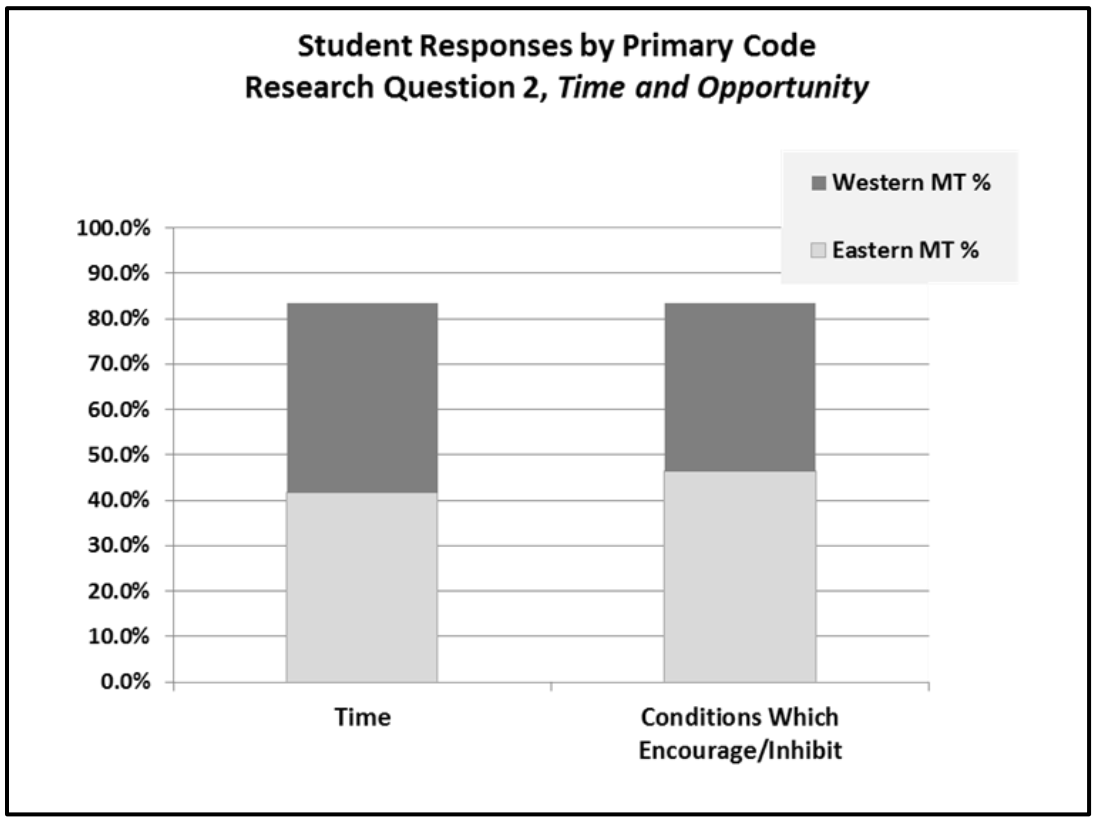

Figure 7. Participant Response Frequencies Corresponding to Code Categories for Question 2

Summary

The findings in this chapter resulted from unstructured interviews and follow-up fact-checking sessions with six adolescent middle school students from three different communities, about their artistic talent. Not all students responded to all categories; and some provided a response for more than one sub-category under a heading. Responses for the most part however, were fairly evenly divided between students in eastern and western Montana (See Appendix J).

The majority of students in this study believed that their immediate and extended families provided the highest level of support and was, therefore, the most influential

element in their commitment to their art talent. The balance achieved between intrinsic and extrinsic motivation, however overall, teachers were not viewed as either encouraging or influential. The majority of this study's findings align with the Clark & Zimmerman (1988; 1997) and the Csikszentmihalyi et al., (1997) studies; and while findings also demonstrate the importance of family, encouragement, and a set of other factors related to opportunity to pursue their talent area, some of this study's findings derived from temporal conditions under which this investigation took place. Students' access to computers and a lack of time to devote to their talent were unique to the current educational climate. The limited amount of time students perceived to have to devote to their talent could be associated with the technology that exists today which is embedded in students' everyday lives and was not a factor when the other studies were conducted; or due to the fact that the majority of students were involved in multiple extra-curricular or school-related activities. In any case, this data cast light on current conditions and the potential implications.

CHAPTER 6: SUMMARY, DISCUSSION, AND IMPLICATIONS FOR PRACTICE AND RESEARCH

Summary of Findings

The purpose of this study was to explore the personal art experience and the influences and support mechanisms that impact the development of artistic talent in adolescents, from their perspective. Six middle school students were interviewed about their perceptions of their individual talent and the various factions of support offered to them to develop that talent.

Instrumental and collective case study analysis was used to understand the artistic journeys of these students and the factors that related to the development of their talent. The stories of these adolescents paint a realistic picture of the temporal and contextual climate surrounding the development of talent in these rural environs. While all of the students reported varying levels of interest in art, and intend to continue drawing as adults, several rationales were given for that continued interest.

The art backgrounds of the students varied—some enjoyed positive art experiences through elementary school; others did not appreciate the value of art-making until mid-or late-elementary. All of the students mentioned immediate or extended family members who were likely influencers of the student's interest in art. At the time of the study, all of the participants had been enrolled in their current school for at least three years. Five were currently enrolled in the art class offered by their school; one was taking Title I math, which conflicted with the art class. One student was enrolled in a privately-run after school art program. All of the students engaged in drawing in their free time, or

when boredom set in, even when that boredom occurred in their classes at school. Students referred to this kind of drawing as doodling if it occurred either spontaneously or was precipitated by a lack of interest in the activity at hand. All of the students were referred for the study by a middle school or after school art teacher, based on their observed above-average artistic ability, passion for drawing and "all things art;" and for their potential involvement in art in different contexts.

Rural families often spend a large amount of time together because of their chosen lifestyle and participation in a family-owned business that involves every family member. Lilac, EJ, RF, and Rose live in traditional two-parent households both of whom are their biological parents. Daisy and Patricia divide their time between their divorced biological parents who both reside in the same community where their children attend school. Lilac, EJ, Rose and Daisy's parents are entrepreneurs, and involve their children in the business operations. Lilac's parents built their large home to accommodate local clients needing elder care. EJ's and Rose's families farm for a living. Daisy's dad owns a contracting business. Family dynamics for all students included the strong support of at least one parent for their artistic talent. While some students believed that an art career would not provide them with financial security, none claimed parental influence for that perception.

A discussion of the findings' in this chapter provides the opportunity to share what was learned as those findings were contemplated and compared to the research this investigation was meant to extend. The discussion includes the overarching themes of experience, time, and opportunity, as well as the primary codes related to a) the students' emotional connection to the experience of art-making; b) the power adolescents perceive

in having a personal voice through art; c) the importance of family encouragement and support of their personal talent; d) the internet as a community to which adolescents belong; e) the unforeseen element of a lack of time related to developing talent and f) the adolescents' view of the timeline of opportunity.

The Experience of Talent

The diverse set of relationships between the artistically gifted adolescent and the environment—the breadth of the individual's experiential repertoire—are interlocking determinants of how the adolescent has thus far experienced his or her personal art talent. That repertoire includes memories of past and present art experiences, and the emotions connected to them; family encouragement; sources of motivation; level of understanding about one's own talent; habits; and the potential opportunities related to the commitment of talent.

The annexation of new meaning and value to previous experiences that were identified with art reinforces a subconscious relationship of the participant to the environment which serves as the conduit for future engagement in the art process, therefore, development of talent. This establishes a rhythm of reflection and re-engagement during which a coalescing of the art experience with non-art experiences, ideas, senses, and feelings are intuited and become part of a larger, somewhat mystical individual aesthetic journey which integrates all aspects of experience. The passion that may intensify through this process is the desire (spawned by the emotion derived from a previous experience) to fulfill a new art objective (Dewey, 1934).

Passion for art was one indicator of talent observed by teachers that enabled the students to be referred for the study. Although not widely researched or understood

(Piirto, 2000), passion is deemed a critical factor for artistically gifted youth to remain committed to their talent (Frederick, Alfred, & Eccles, 2010). Aligning with that assertion, four of the early adolescents in the study explicitly claimed their *passion* for art to be the reason for continued pursuit of art-making activities. The responses of the other participants did not indicate a clear connection between passion and engagement; One student's claim that he was "not as passionate as he could be," related more to his interpretation of passion as the amount of time he actually spends doing art.

While passion for art was not a finding that could be empirically validated it was intuited by this researcher, from an artist's perspective, that the experiences recounted by the adolescents as positive and intrinsically motivating are the seeds which will enable their passion to develop and intensify, because unlike most other talent areas:

Art must be an expression of love or it is nothing -Marc Chagall.

Therefore it is *experience* that initiates the process of engagement leading to development of talent (and potentially passion), and is the overarching theme for Research Question 1.

All participants in the study reported that art-making was an enjoyable experience; it made them feel good, made them happy, or created other specific emotional responses; and that art would be an enduring part of their lives in the future. One student engaged in art specifically *to produce* those positive emotions; the others stated that making art simply *resulted* in particular emotions. Cases were similar in terms of students' ability to distinguish between the kinds of feelings that resulted for them personally, from engaging in drawing or other art-related activity. Some students identified more than one emotional benefit of art creation. Three students participated in art activities for the sheer enjoyment; four because it produced a sense of calm. One student felt it validated her self-worth.

Five of the six adolescents in the study did not assert that those feelings directly impacted their willingness to persist in their chosen art activities.

In their current social environment, students in this study are able to maintain their interest in art as beneficiaries of praise and recognition from immediate and extended family, first and foremost; and secondarily from peers, which then reinforces their intrinsic motivation to remain engaged. All six students considered their involvement in art as an activity which offered the reward of enjoyment and intrinsic motivation which affirms the basic premise of the flow model of optimal experience (Csikszentmihalyi, 1990); however achieving the state of flow and maximizing talent also depends upon clearly-set goals for the activity, unambiguous feedback, opportunity to engage in the activity, and the individual's ability to act on that opportunity, which were largely missing in these students' experiences. Nevertheless, their experiences overall, were deemed positive.

Emphasis on Doodling

An interesting finding of this study was the amount of emphasis three of the participants placed on doodling. It was noticeable that all three were enrolled in the same school. They referred to the art they did as "doodles"; and doodling as a mere unplanned activity predicated by factors of boredom and otherwise unproductive lulls in time, regarded by some as a "mindless" exercise. A fourth student offered two rationales for her engagement in what she labeled as doodling (a more elaborate, detailed and even shaded pencil sketch), stating that she was more likely to be engaged in doodling as a spontaneous exercise to alleviate boredom, or for the purpose of experimentation with ideas (Gardner, 1980). Doodling for half of the participants consumed the largest portion

of their involvement in any type of drawing outside of art class. There were few significant differences between cases in terms of the use of doodling by those who claimed they engaged in it. The two who did not, consistently used the term "drawings" rather than doodles, when referring to the pencil art they produced.

Finding an Expressive Voice through Art

Students found that art gave them an expressive voice to visually demonstrate their personal interpretations of the world; to communicate with the world and to induce emotion in others through their art. Two students linked artistic expression to a personal freedom: freedom from shyness; freedom to be oneself. One identified it as a way to bring attention to societal issues. Another student believed art offered an outlet for her to address emotional conflict; and for that, art was of highest importance to her. In a role as *performer* the artist has a certain amount of freedom to execute the product in accordance with his or her own concerns and interpretations (regardless of whether a theme or guideline has provided to them). This offers the powerful reward of having their voice heard through the expressive medium of art (Csikszentmihalyi et. al., 1997).

The Importance of Encouragement

The majority of participants believed their interest in art stemmed from their family members' interest or engagement in the domain; however, encouragement offered by peers, teachers, and others did have an effect on the students' perception of their talent, and interest in doing art.

Family. RF identified his love of video games as the inspiration for his interest in the digital art form, but gave his parents credit for appreciating the art he did when he shared it with them and recognizing his talent. Adolescents in this study also viewed the

encouragement they received from both immediate and extended family as the primary reason they have remained committed to their talent. They did not directly express the notion that it was in any way related to the positive art experiences that lead to their sustained passion in art.

Overall, the encouragement of family—parents, siblings and extended family members—was the most significant contributor to the student's sustained interest in art, even when they did not directly link that influence and encouragement to the *development* of their talent. Noteworthy is that findings show that *all* of the family members who were named by participants as being influential in their interest in art, had at one time engaged in art or were currently doing art. Parents and siblings were all mentioned in the immediate family; grandparents (one *great*-grandpa), an aunt, an uncle, and cousins also were mentioned and played a positive role in increasing the adolescent's desire to improve their art skills. Three of the participants claimed at least one parent currently did art; two had mothers who at one time enjoyed art-making activities; and two students' dads were still doing art. Regardless of who the family member was, praise and recognition of the adolescent's talent served to motivate the students to continue drawing, even when it was a *younger* sibling. Family members, as people the adolescent knew, liked, and respected, offered an unspoken endorsement for the importance of art as an expressive medium through their own modeling of a love of art.

Peers. Students in this study found their friends' acknowledgement of and praise for their artistic ability to be a pronouncement of the *student*, him or herself. While all of the participants mentioned friends in one context or another two elevated them to a level of "critic" who inspires them to improve their skills; three used artistic friends or

classmates as a barometer by which to assess their own personal talent; and one admitted producing some of his art primarily at this point, to impress his friends.

Teachers. Students did not refer to teachers among those individuals who encourage their art talent. Even though the school art teacher in each of the participating schools referred the students for this study whether they were in the art class or not, the students did not connect that recognition by the teacher of their talent as encouragement. One student of the six named two she felt were instrumental in helping her stay interested in drawing, while she was in elementary school. One student recalled that when a teacher criticized her artwork, no guidance was provided to help the student improve. The student was enrolled in after-school art classes, which enabled individual growth through more personalized instruction and guidance.

Community. The reward of having artwork publicly featured was a significant event that provided the greatest potential to encourage commitment to the talent area. One student spoke of the acceptance of her artwork into the statewide *Signatures* Arts Magazine featuring visual art, prose, and poetry by students in Montana schools. Another student related his anticipation of being able to send his artwork to a gallery in a town nearby and actually set a price for the sale of the artwork through that gallery, once he is in high school. All of the students considered exhibitions a good way to get their art recognized by the public, and voiced their preferences for that to happen in both school and community contexts.

Internet as a separate community. Students all mentioned computers, iPads and Tablets as immediately accessible tools with which to gather information about art media, watch YouTube videos and tutorials demonstrating techniques, and search topics of

interest to draw. A minority of the participants reported having a book or two that they could use to look *at* art, however the majority of the adolescents in the study stated they are basically self-taught and the internet has been their source and guide for learning about and improving their art skills and techniques. They admitted that art classes can be fun, although they provide more structured and prescriptive lessons which do not always align with their personal interests. Students related that the online medium allows them to customize their art learning.

Relationship of Time and Talent Development

An unforeseen element of the findings was that students believed they have very little time to devote to their art. This related in part, to a rural lifestyle and the responsibilities required of every family member in a family-owned business; and to the amount of homework and study time that goes into maintaining good grades to prepare for college. All six students mentioned that they would prefer more time to spend doing art, and to improve their skills, and that they did art or doodled in their "free time," which they defined as times when there was not something more pressing to do. Five students claimed they made the choice to engage in art rather than another activity during those times.

The Future of Opportunity

Students were not fully aware of the opportunities offered by their communities. Some of that resulted from not yet being able to drive, and relying on parents to get into town. Most claimed their awareness of events came from the local newspaper, a once-per-week publication in each of the communities. Additionally, even when they were informed about art events, they were not inclined to check into them or view them as

something particularly suited to them as early adolescents. Students reported knowing that opportunity awaits them when they reach high school and believed there was little for them as middle school students.

Discussion

The study revealed several prominent themes related to artistic talent development in adolescents. These themes, and the similarities and differences that underlay them in the journeys of the participants, are worthy of discussion.

Emotional Connections to Art Experiences

Consistent with findings from the previous studies this study was intended to extend, similarities between the students were that they were all able to recall being interested in art from pre-school or early elementary, and remembered specific people or events as triggers for their interest in art (Clark & Zimmerman, 1988), and that the experiences students perceive as optimal will have long-lasting and energizing effects on the development of talent: positive emotional experiences being a strong predictor of future commitment.

Differences were noted however, between the participants regarding the type of emotional connections they recalled for those first art experiences. Students who reflected on art lessons in school viewed those experiences more negatively; while those whose earliest memories of art included family members viewed them in a more positive light. A redeeming factor was that as students built a repertoire of experiences related to art practice and recalled those experiences as enjoyable, their emotional connection became more positive overall.

Students stated that current participation in art-making produced a variety of positive emotions which tended to motivate the sustained interest in the talent area for all of them. The findings, aligning with previous research, (Csikszentmihalyi et. al., 1997), confirmed that these artistically gifted students based their impressions of their talent on the value they placed on the expressive or emotional rewards derived from the activity. Although some of the participants did perceive art to be *useful*, that criteria did not place high on the scale of what motivated them to persist.

Students all indicated that a need to do well in school and get good grades was a top priority for them as prospective college students. This is directly related to the perception projected by the educational community, and somewhat to the attitude of parents—who even while supporting their children's' talent, encourage a career outside of art for stability and security—that non-art courses are more useful and require more discipline, and dedicated time and energy. Even when subtle, through policy and scheduling, the message that is communicated to students is that art is enjoyable, and an enterprise that can be undertaken on one's own time, therefore is valued less in educational environments. However, developing talent requires a synergistic combination of rewards that were *both* expressive and instrumental (Csikszentmihalyi et. al., 1997).

The strong emphasis on STEM in schools further separates the arts and sciences. Most students in this study, in keeping with the predominant educational viewpoint and potential messaging by parents, did not foresee themselves choosing a career relying solely on art, though they expected to retain their art interest as an adult, potentially interweaving art with their professional work. None of the students in this study directly alluded to influence by their parents for their choices, however. While five of the

participants had identified a career choice, one intended to "be an artist" but not as her profession. Two hoped to be doctors, one, a nurse, and two of the students expect to pursue careers which rely directly on art: interior design, and digital and web-based art and design.

The Power of Expressive Voice

Adolescents found it especially rewarding to discover their voice through the expressive properties in art. Even those who were less than certain about having their creations exhibited for others to judge felt the immense power of being able to unleash emotion and communicate an understanding of their world through visual means.

Findings showed that all of the study participants felt art provided an avenue to being valued, heard, and understood that would be otherwise inaccessible to them. Whether through doodles or more elaborate pieces, art provided a spectrum for the adolescents to make meaning that could be represented and shared (Eisner, 2002). Giving others a window into their soul—their "truth" about the world that surrounds them—offered a significant boost to their psyche and incentivized continued engagement in art. Researcher-observation data revealed the importance of self-expression to the participants through demonstrations of increased animation, change in voice pitch, and changes in body language while they shared their impressions of what art meant to them.

Artistic expression had the capability of offering a freedom that was not experienced in other classes or contexts. How that freedom was interpreted varied however, between the adolescents. It was found that in the case of EJ, the ability to overcome extreme shyness was achieved through visual communication. This provided an element of commonality with peers who were more capable of verbalization of their

opinions and ideas amongst classmates. Something inside was crying out to be seen; a desire for someone with superior authority or status to recognize and hear what this student was feeling and attempting to say, was of ultimate importance to her.

For Lilac, art provided a pathway to "extroversion" that was more acceptable to her, and avoided directly disagreeing with others in her educational and social milieu. Being more socially and politically conservative caused her to feel distanced in some situations, from the mainstream populations at school (both teachers and peers), and art allowed for a level of acceptance to a certain degree, and growing confidence to respond to issues through art in ways that she felt inhibited to, otherwise. This is an example of the " visual artist personality," which shows deference to—yet somewhat rebelliously separates from—the social standard and need to make good impressions (Barron, 1968, 1972); and exemplifies the significance of the experiential quality related to the importance of "*being artist"* according to Eisner (1992a & 1992b). Using her creative expression as her emotional outlet provides flexibility for Lilac to overcome inhibitions and adapt to new situations properly in any context (Lowenfeld, 1947), demonstrating a cognitive maturity to choose goal-directed behaviors over inappropriate ones especially when they provide incentives (Casey, Galvan, & Hare, 2005).

Four of the study participants were enrolled in either advanced academic courses or receiving gifted services in addition to possessing above-average artistic talent. The findings showed that through different representational systems, art had allowed the students to analyze, reason, interpret, and express their inquiries related to the critical stage of development they found themselves in as adolescents. Although only EJ and Patricia specifically recalled conscious attempts to visually decipher academic content,

substantial evidence shows that much of the thinking we do in everyday situations is based on the formation and transformation of visual images and that visualization plays a key role in cognition and creativity (Arnheim, 1969, 1954/1974). For both academically and artistically gifted youth, the opportunity to utilize alternate ways of demonstrating knowledge and intellect is critical to their social and emotional development (Eisner, 1981; VanTassel-Baska, Cross, & Olenchak, 2009). Like the Clark and Zimmerman (1988) study results, this study found that adolescents had few close friends and few classmates who shared their art interests, which resulted in limited opportunities to be grouped with others of like mind when assigned collaborative projects in classes. RF and Lilac for example, shared their dislike for teacher-assigned work groups, which required them to compromise their personal artistic creativity.

Impact of Family on Talent

Although it may seem too obvious to mention, youth must have their talent recognized and supported in order to have any chance of that talent being developed, and families are crucial in providing that early recognition. Study findings demonstrate the importance of encouragement from family to the overall talent development trajectory of the rural adolescents. Findings validate research related to the aspect of stimulation in the early environment being critical to the complex development of talent (Csikszentmihalyi et al., 1997). All students drew inspiration for early involvement in art from an immediate or extended family member; all of them named multiple family members who had some influence on their continued interest in art; and four credited at least one parent for some of that influence. Interestingly, the percentage of students identifying parents as their primary encouragement in this study matched findings from Clark and Zimmerman's

(1988) study of artistically gifted adolescents. This also aligns with research indicating that adolescents are more motivated to pursue their talent when they are provided encouragement in the form of parental support (development (Albert & Runco, 1986; Bloom, 1985; Csikszentmihalyi et. al., 1997). In all of the cases, at least one relative of every adolescent had been or was currently doing art.

In terms of support that families provided, the study showed that while every student had access to the private space of their rooms to engage in art, none had a studio-like environment within which to work, which aligns with the findings in the Clark and Zimmerman study (1988). Students did have a few colored pencils or art sets gifted to them by relatives (and the researcher handed each one a high-quality pastel set complete with papers, after the interview for participating in the study); however none claimed to have a large quantity or variety of art supplies available at home. Rose and Patricia specifically recalled times when there were chores to be done or homework to be completed, and parents relaxed the rules to allow them that time to do art instead. All participants believed family provided sufficient encouragement and support for their talent.

Only one of the adolescents had taken art outside of school, however several were involved in extra-curricular activities and two were taking lessons related to other arts: dance, and music. Interesting to note, is that all of the students who were enrolled in extra-curricular instruction outside of school resided in western Montana, in Schools A and C, where census statistics show the median income to be on average, 8% below the county in eastern Montana where School A is located. This may relate to a greater amount of discretionary income being available in households owning family businesses

not related to farming—an occupation with fluctuating profit margins highly dependent upon multiple variables which are out of the control of the individual farmer; and to the communities being in closer proximity to larger towns which do not require long-distance travel costing extra time and fuel. Wealth in terms of assets for farmers did not translate to expendable income.

Lilac's story is especially positive evidence of parental encouragement and support which has allowed her to work on developing particular aspects of her talent. Her mom's willingness to enroll not only her, but her younger sister in their after school art lessons means traveling two round trips totaling 50 miles in order for them to attend each weekly two-hour class. Many rural families are unable or unwilling to offer that level of support. In RF's case, his parents' encouragement led to his acceptance into the highly selective school where he can integrate his engineering and art interests toward a dual diploma/certificate. His story is also evidence of family support that exceeds the typical in rural towns.

Time

An unexpected outcome deriving from this study was the common belief across all six cases that lack of time to spend on art inhibited their talent development. All of the students were well aware that without sustained practice, skills do not improve and mastery is not achieved (Gladwell, 2008; Syed, 2010). Two predominant explanations were offered: a rural lifestyle; and the amount of study time required to make good grades in school.

The rural lifestyle related to several underlying issues: a) students in rural areas typically do not live within walking distance of school, extra-curricular activities are not

always in the same town where the student lives, and sports events require travel to another town, often half the state away; meaning time away from home depletes available time a student has to engage in art; b) family-owned businesses are common in Montana rural areas, and their operation (especially in the case of the farming occupation) typically includes all members of the family limiting discretionary time at home, even on weekends and holidays.

With relation to study time, all of the participants claimed to have as a primary goal, getting good grades and going to college, even if they had not narrowed down a career path. For the five adolescents who were enrolled in the school art class, scheduling was blamed for having no time during the school day, to do art. After school, aside from any extra-curricular activities, including attending sibling's sporting events together with the family, the amount of homework and hours required to prepare for tests in advanced courses consumed the bulk of their remaining time. Even though all of the students referred to how "busy" their life was, and expressed disappointment that they had little time for art, it was a fact they took in stride, to preparing for college and a career were of greatest import in their lives right now and that their studies and responsibilities were a greater priority than their art. Rather than journeying on "the road less traveled" Figure 4 in Chapter 5 revealed that most of the adolescents in this study are on a thoroughfare, all racing from school to mapped out destinations: college, a job, and security.

With that in mind, a follow-up question was posed during fact-checking sessions. It asked students to contemplate the possible impacts of educational aims focused more on spending time developing the potential of individual strengths and talents in preference to trying to achieve a standard level of proficiency in all subjects. The three

students whose responses were at all relevant took opposing viewpoints: Patricia believed that rather than to spend time on weak areas it would make sense to build on strengths and make those be "amazing;" *And* it would make people happier, she believed. Rose believed it might promote the big changes that would allow individuals to make a difference in the world: "I know a lot of kids that …say oh yeah, we wanna change the world; but it's like easier said than done… some little actions might change your community or your school but it takes like a big difference to change the world." Conversely, RF (referring specifically to developing talent toward eminence), believed that choice should be left up to the individual to make, even though he mentioned early in his interview that he wanted to "be something big" because he did not feel he could "do as much, unless [he become[s] bigger and more important." Research shows that training the strengths will increase the likelihood that talent is developed at a greater rate (Amabile, 1989), and the fact remains that left to their own resources, adolescents' tend to lose interest in or abandon their talent development (Csikszentmihalyi et. al., 1997).

Finding more time to engage in their art was something none of the students felt was within their control to change. Artistically talented adolescents in this study tended to choose art over other optional activities when they *have* a choice however, it was difficult to ascertain the percentage of their discretionary time that was allocated to art. In another follow-up fact-checking session, one student offered a "guesstimate" that it was approximately 1½ to 2 hours per week (not including art classes) that accumulated over several smaller sessions. Although participants did not mention social media, it is unclear how much of their time on the computer was spent on websites not related to art, and how other choices impacted time.

Culture of Technology

Study findings showed that all of the participants owned or had access to computers in their homes, which was not a factor in the two previous studies (Csikszentmihalyi et al., 1997; Clark & Zimmerman, 1988), although television-watching by talented teenagers increased by 5 ½ hours between the 1970's and 1980's. Questions related to a) whether that increase was due to improved technology and the advent of cable networks; and b) whether television provided the needed respite for talented teenagers who experienced more stress in a life comprised of tougher classes and involvement in extra-curricular activities, more so than average teens were posed by the earlier studies.

Reminiscent of the 1988 (Clark & Zimmerman) research, this study found that the artistically gifted adolescents had difficulty finding friends or classmates who shared their interest in art, and that adolescents in this study tended to resort to accessing online art tutorials or galleries from which to draw inspiration, rather than spending time socializing, when they had free time. On the one hand, a drawback for these rural students—especially because at ages 12 and 13, they must rely on others to transport them into town—was that they had less opportunity to actively view, discuss, and participate in art with like-minded individuals in their own communities; on the other hand, the internet *became* the community to which these students belonged, and felt comfortable, and because artistically gifted adolescents tend to prefer doing art alone rather than in a group, this may have offered a richer learning opportunity.

Gifted programs in Montana are not consistent; there are few trained teachers who understand giftedness, and artistic gifts are seldom identified in the state, even when a

quality gifted program is in place in the school district. However today's technological capabilities make access to distant sources of advancement and enrichment more likely, increasing the chance that students find appropriate resources to develop their talent. All of the students in the study believed the computer was an effective tool for learning, and did not view it as a replacement for in-person events, rather a resource that was customizable to their individual art interests.

The Internet community to which these adolescents belong satisfies—at least for now—their desire to expand their knowledge and skill in various art forms. However, it will become critical in the next few years for them to have guidance and support of knowledgeable teachers and community mentors in their school and community.

Timeline of Opportunity

Findings revealed that three of the study participants believed that few opportunities were open to them as middle school students, but would become more available to them when they reach high school or beyond. They assumed it to be part of the natural progression of growing up however, and accepted it without question. Nevertheless, they were able to identify opportunities they looked forward to. This is an example of the opportunity cost of lost potential which could have served both individual and society if the factors of increased brain growth (that offers a window for new knowledge and skill-building), and importance of offering experiential learning (which is critical to adolescents executive and social functioning) had not been ignored (Barnea-Goraly et al., 2005; Blakemore & Cloudhury, 2006; Casey et al., 2010b; Casey, Giedd, & Thomas, 2000).

Two of the students named specific events they were eager to participate in as high school students. EJ referred to a sculpture exhibit that the high school hosts each year, which she hoped to be a part of, if she could improve enough to get out of Title I math. RF mentioned he found it interesting that in high school, students were given the option to exhibit in a gallery located in a town which has become a tourist attraction in both winter and summer months. He expressed his excitement about potentially participating in that. Showcasing their art there also affords students the potential of selling their art. Two of the students in western Montana believed their community offered enough opportunities if students had time to participate in them. Patricia mentioned that her sister had enjoyed some community art classes, but that she was unable to follow suit due to time constraints of being involved in 4-H in addition to ballet, violin, and sports. Lilac believed that opportunities did exist in her community but they were not well matched to middle school students in terms of interests or time; and when they were, they had not been advertised effectively enough to draw adolescents from their comfort zone: in their rooms on their computers.

Implications for Practice

The findings of the study demonstrated similarities related to the artistic giftedness for all of the middle school adolescents. They all:

- Reported an individual love of art
- Related emotional connections to experience which keep them interested in drawing
- Felt empowered by the personal voice derived from the expressive quality of art

- Believed family encouragement and support were sufficient at this time in their lives, to incentivize active engagement in art, including the fact that all students had at least one relative who did art
- Had a private space for doing art at home; though it was not a studio-like
- Had a limited number of same-age peers who share their interest in art tended to seclude them from like-minded individuals with whom to collaborate, discuss, and critique artworks
- Perceived little opportunity for critiquing own work
- Excluded art teachers as encouragers of talent; stating teachers, critiqued, but did not offer guidance for improvement
- Admitted they were largely "self-taught"
- Claimed posters assigned by teachers as the primary outlet for expression in non-arts classes
- Identified constraint of time impacted hours spent on art practice
- Experienced no differentiation for artistic talent
- Utilized the internet as a primary resource for instructional support associated with art forms, techniques and styles their local art class and community did not offer.

Differences related to how personal time was allocated, whether or not students were enrolled in any type of art class;, whether or not they believed their community offered enough art-related opportunities, whether they were receiving advanced academic and art instruction, the extent of their multi-potentiality, and how they perceived future commitment to art. Minor differences were observed between perceptions of the

adolescents in the eastern Montana community (School B), and the two western Montana communities (School A and C). In School B the students exclusively:

- Referred to their drawing as "doodling"
- Believed no opportunities existed until high school age
- Had little awareness of venues exhibiting art in their town
- Had not enrolled in activities outside of school
- Had very few art supplies at home
- Had no books about art or showing famous artwork (with the exception of a watercolor demonstration that came with a kit)

The majority of students in Schools A and C located in western Montana:

- Talked about their work as drawing or art
- Believed opportunities were generally available through school or the community to showcase art, if desire and time permitted
- Had an awareness of several galleries and summer offerings for art
- Had enrolled in private lessons outside of school for art and other talent areas
- Had art supplies at home
- Had at least one art book

Some of these differences may relate to regional characteristics associated with eastern and western Montana where they are situated. These regional characteristics can be best understood by providing a brief synopsis, to help the reader better understand the state dynamic.

Eastern Montana is comprised of expansive open space, with long distances between towns, and lower population density. This results in smaller networks to which

people belong; making family and close friends the primary social community—especially for adolescents without driver's licenses. As a significantly agricultural region, the population remains fairly stable, with family farms spreading across miles, in many cases. However, rich in natural resources, eastern Montana has experienced temporary population fluctuations related to oil, natural gas, coal, and platinum, and palladium extraction. Montana State University at Billings (MSU-B) (affiliated with one of the two state university systems) and the private college, Rocky Mountain College in Billings, are the two primary higher education institutions, offering degrees through the Master's level, with several community colleges and a tech college spread across the region. Some of the recreation opportunities include water sports in lakes and the Yellowstone and Missouri Rivers, "mining" agates, hunting upland birds, antelope, and deer, and retreating to an unspoiled landscape that provides hiking trails and some of Montana's largest state parks whose wind-twisted rock formations astound visitors.

Western Montana is home to many vibrant towns situated in closer proximity to one another, allowing for a greater variety of options related to social interaction. The majority of the state's forested land, several Rocky Mountain ranges, crystal-clear blue-ribbon trout streams, pristine lakes, abundant wildlife, and the recreational lure of the great outdoors brings the voluntary expatriates from the crowded cities of Washington, Oregon, California, as well as from international locales. The tourism industry is substantial and high-technology employers include two integrated biomedical/biohazard research facilities and a photonics hub (employing world-class scientists). Two major university systems—Montana State University and the University of Montana, (with its nationally-recognized football team)—support many four-year institutions (some of

which offer doctoral programs), community colleges, and technical schools. Western Montana is a treasure-trove of gems including sapphires. Income is derived primarily from employment in the universities, research, manufacturing, timber, ranching, and service industries [big game hunting and fishing, hospitality, and tourism], as well as construction. It is notable however, that income for the two western communities in the study was between eight and 10% *lower* per household than income in the eastern Montana community that was represented in the study.

To a great extent, the implications identified by this study are well aligned with the previous research of both Csikszentmihalyi et al., (1997) and Clark and Zimmerman, (1988); however, illuminate current conditions which demand particular attention in an effort to cultivate talent among artistically gifted youth.

The following are considerations for practice that would help increase the likelihood that artistic talent will be developed:

1. Art programs in the schools are often the only opportunity a student has, to engage in the practice of their art talent, but in Montana art programs are not created equal. Middle school art teachers in Montana are not required to have a special endorsement in art. Allowing advanced middle school students to enroll in a high school art class during school hours would be a way to take advantage of the deeper content knowledge of the high school teacher, avoid scheduling disruptions, and open an avenue for artistically gifted middle schoolers to develop their talent. Additionally, providing art teachers with a background in giftedness could help them appropriately differentiate for high ability in their classes, when other options were unavailable.

2. Rural schools can avoid the scheduling and budgetary constraints by partnering with business entities in their local community to avail students of strong place-based mentoring, apprenticeship, and internship opportunities that encourage productive output related to their talents and needs of the community. Building this synergy would not only enhance the strength-building potential of the talent for the individual student, but offer local businesses a service which would enhance their growth and help sustain the rural community.

3. More relevant and creative use of digital technology in classrooms could bring benefits of combined individual strengths training and experiential learning related to skills needed for future jobs state-wide. Today's high-tech job market is rapidly growing (eight times faster than any other industry in the state of Montana) yet the number of students graduating high school who can fill those jobs is still unsatisfactory to meet the demand. If rural students were given the opportunity to utilize the technology already provided in their school classrooms, in combination with their artistic talent to create tangible outcomes, the benefits could be seen at multiple levels. A quoted passage from Chapter 2 bears repeating:

> *If we are serious about leading in the area of STEM, then we have to get serious about making the connection with others more efficiently in both depth and time. Cycling through the spatial-functional-technical wheel is true for architecture, engineering, science, invention and design. It's a learned paradigm…Art is the key to achieving our cultural "Moore's Law" of technical achievement [and]….[i]f we are serious about ideas and technology, then we must be serious about making connections that infect people with ways that challenge their*

perception of their own limits so they dare to venture into the unknown, to toy with the dangerous if only in their mind….Being able to synthesize ideas into three and four dimensions (time sequencing) and the power of visualization emerged [for me] directly from drawing. Even now, I make a point of drawing freehand every day. There is a link there that is fundamental to unlocking creative skill and tapping into the process of discovery (Badenoch, personal communication, January 23, 2014).

4. Most importantly, mindsets must change with regard to talent development. Counselors and parents are conditioned to encourage rural students to focus on academic courses which are perceived to lead to better-paying, more secure careers. Rather than spending school time focused on gaining proficiency across the board, we should be looking at ways to grow the talent we have for the betterment of the individual and society. The current need for art and design thinking which can offer creative and innovative solutions to the world's challenges speaks to the importance of recognizing and developing art talent, and makes this attitude change critical.

Implications for Future Research

Studies about artistically gifted students are limited, especially with regard to understanding adolescents in rural environments. Additional research needs to be conducted to understand adolescents' perspectives related to their artistic talent, lifestyle and community opportunities. Three limitations were encountered in this study a) the inadvertent omission of digital or web-based art or design as one area of high ability as a criteria for referral; b) an unintended emphasis on traditional art forms in the screening questionnaire which was reflected in student responses; and c) a gender imbalance

resulting in female preference among participants which may have been reflected in findings; and should be considered when conducting future research. However, this study brought to light a particularly important gap in research related to talent development that needs to be investigated: the factor of time.

Future research dedicated to exploring an increased allotment of time adolescents have to spend on individual areas of strength in school, (where they spend approximately half of their waking hours per day) would offer potential to:

1) Discover latent talent

2) Inspire educational reform that is relevant to today's needs

3) Offer solutions to the talent development dilemma

Additionally, studies that explore the connection of passion to other factors of artistic talent might provide insight to help improve the talent experience, and encourage long-term commitment in adolescents.

Conclusion

In this era of fast-changing, highly globalized commercialization of ideas, study findings confirmed some of the positive aspects of previous research about artistic talent, while painting an entirely new representation of the social, political, and educational landscape that affects the development of artistic talent today. The current climate in education does not support the building of individual strengths even though local, state, and international conditions demand it.

Montana Visual Arts Standards for students were just revised in 2015. Working as a team member to accomplish the re-writing of standards was exciting, however soon proved frustrating when direction provided by the State Superintendent of Schools was to

eliminate standards above the level of "proficient." This leaves to chance, any differentiation of instruction that might accommodate above average artistic talent. This, in view of the fact that Montana teachers overall, have inadequate training in any form of giftedness and twice-exceptionality, is discouraging. Moreover Common Core State Standards (NGA, 2013), although no longer mandated, are incentivized by federal funding that rural districts can seldom turn down. Teachers feel bound to spend class time on meeting benchmarks allowing little time for creative pursuits. It was also disheartening to hear from the adolescents that they were so busy with school and other life responsibilities that they could not spend adequate time on their art.

With all of the communication possibilities that currently exist, it was interesting to find that students were still generally unaware of the art-related activities in their communities. It is hoped that this is due more to their age, narrow focus on what impacts them personally, and on a lack of initiative to seek out those kind of opportunities, and potentially, parents' beliefs that being well-rounded was more important than fine-tuning skills in one area (as is common among parents in rural Montana). The comforting finding was that students did believe parents and/or family provided sufficient encouragement and support to keep them motivated in their talent area.

On another positive note, the University of Montana has hired a full time endowed chair professor who will begin training pre-service teachers in the area of gifted education. This may further an awareness of the needs of bright and talented students and allow for greater accommodation for them within their schools, across the state of Montana. On the other hand, the awareness provided through university courses may not extend to artistic giftedness. Several new efforts taking place in the state help this

researcher remain hopeful that mindsets can be changed with regard to the development of talent: a) Montana State University is opening the door to STEAM programming across its business, math, engineering and art departments, which offers opportunity for collaboration to extend those benefits to K-12 schools; b) political aspirants are laying out plans to reduce the number of regulations that have kept a stranglehold on innovative solutions; and c) Montana has ranked number one for three years running, for the number of start-up companies per capita; and d) the high tech industry leaders' demand for job-ready students combined with the promise of high wages, offers incentive to look differently at what the function of schooling should be.

Montana is home to a myriad of natural resources which help drive the economy and sustain communities. Yet, the least cultivated resource in Montana is the most valuable: the potential of our youth. Howard Gardner, author of *Frames of Mind*, may have said it best in his review of Csikszentmihalyi, Rathnude and Whalen's book *Talented Teenagers* (1997): "For a society concerned about survival, no issue is more important than the cultivation of its talented young, no outcome more devastating than the loss of talented individuals."

EPILOGUE:

The Future of Talent in Montana

Changing mindsets will not happen quickly. Therefore, in an effort to answer the call for talent in the State of Montana, this researcher, (as a 30-year veteran educator, board member of the statewide gifted education association, extended family member of students in Montana schools, and community leader observant of the current complacency regarding talent development), identified the need and initiated planning for a community-based solution to the talent development dilemma: a space that will offer middle and high school students a collaborative environment for flexing their creative muscle.

Innovate! will provide pathways for 300-400 youth to develop critically-needed innovative and entrepreneurial skills. With the support of area mentors and businesses, the venue will host basic skills training and hands-on, design-oriented projects in areas such as art, electronics, robotics, and advanced manufacturing. The goal is to cultivate talent potential, and entrepreneurship and career opportunities beyond those available in the school environment or currently not available within the region. Included will be introductory summer workshops and a school-year structure whereby participants follow individual interests as they progress from basic skills classes into mentored experimentation. Mentorships will foster personal commitment and relationships, and various public events will specifically target creative and entrepreneurial sectors of the community to help create an incubator aspect that is absent from other area activities. Exhibitions and the summer program will serve to increase broad community awareness and support. Ultimately, the program intends that external relationships would translate to sponsorships, internships, product orders, and career opportunities (including startup

companies). It is expected this model, once evidence of success can be shown, will be customizable to the needs of other rural communities.

Art is not a thing; It is a way

-Elbert Hubbard

Appendix A: **Researcher as Instrument Statement**

Researcher's Note: In this personal statement, and in my study, the term *art* rather than contemporary term *visual arts*, refers to those media that comprise the experiences associated with the art studio environment, because *personally*, I remain steadfast to the traditional use and understanding of the term.

AS AN ARTIST

The empty canvas beckons my paintbrush to make its first stroke; the lump of grey clay calls to me to begin shaping the form that will be its purpose, the world around me draws me in, with the anticipation of symbolizing it in whatever medium speaks to me at the moment. Art in all of its modes of visual representation, provides for me a method for expressing what I feel, communicating what I know, interpreting what I observe.

As an artist, art appreciator, and art educator, it is not only my own knowing and expressing that is important, but the desire to understand how the opportunity to develop art talent might impact the lives of others. It is the illuminating of art as the empowering of the individual to see in different ways, rather than an ability to merely present what is seen that provides the allure. As a proponent of and advocate for art as an integral part of a truly comprehensive education and life, I bring to any investigation a bias, in that sense; through my pre-determined belief that art holds the key to bringing benefits to individuals and to society in ways that no other discipline can, and my willingness to hold suspect, all attempts to refute that belief.

My interest in art began as a toddler, according to accounts passed along by my parents. Being provided simply a writing instrument and blank sheet of paper occupied me for an interminable amount of time experimenting with shapes, length and breadth of

strokes, and combinations of hand movements, and preferred patterns that became my "signature style." Attempts to encourage my musical development via piano lessons soon were replaced with the recognition that it was my visual art ability that required developing. Encouraged and supported with the materials to pursue my insatiable desire to scribble on things, I continued to represent my world on paper—or the walls, or the sidewalk, or my shoes! By the time I was eleven, my dad had enrolled in night classes at the local college, in order to gain a more formal art foundation so that he could in turn help me develop my talent. Crediting him for both the genetic impetus for my love of art, and his dedication and mentorship in helping me pursue it, I believe that without his supportive guidance, my talent and interest might have waned. In high school, my continued interest in making art was the motivator for completing core classes in a hurry and satisfying the graduation credit requirements, so that I could enroll in blocks of art time allowing me to work without interruption for three to four school hours per day.

My true style didn't emerge until long after I had graduated and had begun looking at my art through a lens of individuality. The message was ubiquitous that a "real" artist achieves a style that is both recognizable and preferably, marketable, in one particular medium. In my constant attempts to force that, I lost years of enjoyable satisfaction from the art *process*, because I was focused on the product. At one point, having gained confidence in myself in my adult years, I realized that it was not at all what was important; and I have become at peace with my "style" of not having a style, and working with equally satisfying results in a variety of mediums. Reflecting back on my many years in the graphic art world, I created logos, brochures and architectural elevations that all had to be "accepted" by the client (therefore subject to receiving

compensation) that oftentimes did not represent the design I had intended, but rather a compromise between good design and the need to be paid. Later, I could afford to stick to my own principles of good design and refuse to compromise those for monetary compensation. It felt good to be at that point. But that also relies on a certain level of confidence. My friend said you don't become a real artist until after age 55—because when you're young you don't have the right focus or purpose for what you do. I think he was right about that too. He continued to age 95, (when the world lost an amazing, freely nonconforming and highly talented artist), to produce enviable art in a very prolific fashion (see: http://www.wilderutopia.com/landscape/urban-art/art-of-bill-ohrmann-gentle-rancher-voice-for-the-wild/)

AS A TEACHER

I began college as an art major, and switched to a K-12 education/art focus when I returned to college after a 10-year hiatus, with the determination that I could make a difference in both realms. Twenty-five plus years of teaching experience has meant twenty-five plus years of *learning* along with my students. Teaching art gave me the opportunity to get to know art from a different side, and appreciate more, both the little nuances and blatant messages that stem from it. My students taught me to understand —and *do*—batik, pottery, and abstract painting! They helped me stretch my limits, and gave me the reason to do art every day, right alongside them. They motivated me, inspired me and joined me in relishing the cathartic element in creating art, and the passion for developing beyond appreciably "good ability" to talent that was both personally and publicly worthwhile. It is for them that I pushed hard to assure that the gallery and workshop opportunities would be part of the culture in our little town, and worked hours I

didn't believe I had, to promote avenues for young artists to exhibit outside of the school walls; to develop themselves as artists, not just someone who "does art." It was for them that I read everything I could on effective art classrooms and creativity as a component of the art studio setting and later, the importance of talent development as a means of personal growth, and potential social contributions. For them, I evolved in my teaching style, my curriculum choices, and my perspective on how we should be looking at talent and what we can do to assure that it is not wasted and lost. And it is because of those students that I am here today, seeking to become a better teacher, a better researcher, a better proponent and advocate (for developing art talent in artistically gifted youth), and as what I now know to be *an authentic artist*, true to my own creativity, so that I can help serve the needs of other potential and budding artists in a way that enhances not only their art experiences, but their lives. I hope the impact is phenomenal, and for some it will be. For others, I hope it gives them a taste of what developing their art can and does do, and opens their minds to at least appreciating art for more than its aesthetic value—for its practical and essential role in all aspects of human life.

AS A COMMUNITY ART ADVOCATE

An active participant in preserving and illuminating what art has to offer to the public, I have served in grass roots efforts to establish venues for exhibition, discourse, and education in the art realm. I have offered my home as a space for gathering artists for the purpose of developing mentorships, modeling, and camaraderie for those who endeavor to practice, learn, or simply discover the art experience, and grow those experiences through continued support. It has been an ongoing pursuit to delineate visual art from "the" arts in order to return to it the distinction Leonardo da Vinci and others of

that time frame gave to drawing, painting, and sculpture. Photography has since joined the ranks of a distinctly visual art, rather than trade or craft (in art circles in rural Montana, at least)

AS A RESEARCHER

Since entering the doctoral program, and spending much of my time researching about the field of art, I have almost no time to actually DO art. But I have learned an enormous amount too, about philosophies, theories, methods, and styles that accompany artistic research. The narrative that we generate is, like the symbolic representation on canvas, metaphorical, and a painterly version of what we know about the world of art and how it affects people, through their eyes and experiences, and through ours as the researcher. But in researching art, and artistic endeavors, the investigator has a unique position as a participating observer. The perspective then, that is provided in the written narrative after all the "data" are collected, is colored by the investigator's comprehension of the information that was gathered through the eyes of the participants involved in the research, and the choice the investigator makes in the representation thereof. It is symbolically the same as choosing a pigment color and deciding how to place the brush strokes on the canvas. The choices depend upon the individual holding the brush and the quality and richness of the pigment that will be the purveyor of some knowledge.

EXPECTATIONS FOR FINDINGS

Although I feel I know artistically gifted students well, and I believe I understand what drives some of them to persist in the expressive medium that art provides, I will fairly and accurately report whatever will result from the research regarding their perceptions about their personal art talent and its impact on their lives. While I expect

that the perceptions of artistically gifted students will be positive in terms of the importance of encouragement in developing their talent, I also expect to find varying levels of the demonstration of artistic expression among them in both school and community contexts (including the home). However, as a researcher, I realize that we can neither predict nor presume to know what might result from our research. That is what makes the stories we tell so important.

The one thing I hope I do *not* discover is that students feel their talent—even if is unappreciated or unvalued by their community—is not worth pursuing. My hope is that their personal art talent can somehow continue to positively impact the students themselves as they mature and grow to be adults, and the potential they now have can become developed talent that impacts the world, even if only in some small part, in some small way.

The work of art must seize upon you, wrap you up in itself and carry you away. It is the means by which the artist conveys his passion. It is the current which he puts forth which sweeps you along in his passion

-Pierre-Auguste Renoir

Appendix B-Referral Criteria for Sample Pool

MEMO: Referral criteria for artistically gifted middle school students

TO: Individual professional artists, art teachers, parents, and students.

FOR: Research study to investigate influences on artistic talent development

Dear Referent:

Thank you for taking the time to consider those who appear to have natural artistic ability or show outstanding talent in an area of visual art. The following will be the criteria I would like for you to use when listing students for referral:

- Your belief that this individual exhibits outstanding talent in visual art when compared with others of their age, experience, or environment who require services and activities not ordinarily provided by schools in order to fully achieve their potential contribution to self and society
  (TAKEN FROM: Definitions provided for gifted education the U. S. Department of Education (ED 1993), & Montana Office of Public Instruction (MT OPI, 2008, Appendix II *School Laws of Montana*, Part 9, 20-7-201).

- Additionally, you may observe the following, which should be considered in conjunction with, not isolation from other characteristics of talent: passion for art; obsessive participation in drawing and other artistic expressions; above-average knowledge of art works, masters and art periods; expresses interest in visiting art galleries/museums; wanting to "be an artist," known by friends and peers as being artistic; called upon to do or help with the artwork for school/community events and productions; signs that this person is a visual learner-draws to understand, perceives the world more figuratively (visually, conceptually) than most.

For questions or further information, please contact me.

Appreciatively,
Gayle Roege

Appendix C- Informed Consent-Parents of participants

PERSONAL INTERVIEW
Parent of Participant Informed Consent Form
College of William & Mary

The general nature of this study related to *the beliefs of artistically gifted middle school students about their artistic talent and its development in both school and community contexts* conducted by Gayle Roege (25-year veteran Art /Gifted Ed teacher in Montana) has been explained to me. I understand that my child,_____ , will be asked to answer questions in one or more informal interviews relating to his/her beliefs about his/her artistic talent, artistic expression and development of their talent in an effort to find out which factors appear to help students develop their individual talents.

My child's participation in the interview (s) should take about 1 hour each, for a total of approximately 2 hours. A potential follow-up conversation or request in writing for clarification of intent based on interview statements may be necessary and would require less than 15 minutes. At the end of the study, my child will be debriefed in a short session.

I understand that my child's identity and responses will be confidential (*"Confidential" indicates that subjects' identities and responses will be known to the investigator but will not be divulged)* and that my child's name will not be associated with any reported results of this study. I know that he/she may refuse to answer any question asked and that my child may discontinue participation at any time without penalty of any kind.

I also understand that any incentive (gift, treats) offered for participation will not be affected by my child's responses or by exercising any of his/her rights. I have been assured that there are no potential risks of participation in this project.

My signature below signifies my child's voluntary participation in this project, and that I have received a copy of this consent form.

_____ _____

Date Print Name of child

_____

Signature of Parent or Legal Guardian

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 2015-07-20 AND EXPIRES ON 2016-07-20.

Appendix D. Part I. Student Interest survey

Protocol (Questionnaire)

Section A

1. How often do you do things related to your art talent?

__a. every day (5 pts)

__b. once or twice a week

__c. more than once a month

__d. less than once a month

__e. never

2. How would you compare your interest in art now to two years ago?

__a. became more interested

__b. interest remains unchanged

__c. became less interested

3. How would you compare your skills now to two years ago?

__a. improved

__b. same

__c. worse

4. How would you compare the challenge of art now to two years ago?

__a. more challenging

__b. not sure

__c. less challenging

5. Do you think that you will continue with your interest in art through high school?

__a. yes

__b. not sure

__c. no

6. Do you think you will continue with your art as:

__a. an interest in college yes (5 pts) no maybe

__b. a major in college yes (3 pts) no maybe

Section B

	Seldom	Occasionally	Frequently	Always
7. Create art at home				
8. Like to visit art gallery/museum/exhibit/event				
9. Like to exhibit artwork				
10. Asked by others to do art work				
11. Use spending money to buy art supplies				
12.Ask for help to improve art skills				

Section C

	Seldom	Occasionally	Frequently	Always
13. I like to draw				
14. I ____believe draw well				
15. I enjoy making things				
16. I like to use clay				
17. I like to do special art projects				
18. I like to paint/ use color				
19. I ___believe I paint well				
20 I enjoy designing things				

Appendix D Part II Results

Talent Commitment																								
Section	**A. Talent Self-assessment**								**B. Art Behaviors**							**C. Activity Involvement**									**Overall**
Question	**1**	**2**	**3**	**4**	**5**	**6a**	**6b**	**subtot**	**7**	**8**	**9**	**10**	**11**	**12**	**subtot**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**subtot**	
Points	5	5	3	3	5	5	3	29	4	4	4	4	4	4	24	4	4	4	4	4	4	4	4	32	85
Name																									
Lilac	4	5	3	3	5	3	2	25	4	2	2	3	2	3	16	4	3	4	2	2	3	2	4	24	65
E.J.	5	5	3	1	5	3	2	24	3	2	3	2	2	1	13	4	3	4	3	4	4	3	4	29	66
R.F.	5	4	2	0	5	3	0	19	2	1	3	1	1	3	11	3	2	2	1	3	4	2	4	21	51
Rose	5	5	3	1	3	3	0	20	4	2	3	2	2	2	15	4	3	4	4	4	4	5	4	32	67
Daisy	4	5	3	3	5	2	0	22	3	2	2	2	3	3	15	4	4	4	4	3	4	3	4	30	67
Patricia	4	5	3	3	5	2	0	22	3	2	2	3	2	2	14	3	2	3	4	3	4	2	3	24	60
Cross Sec																									
Mean	4.5	4.8	2.8	1.8	4.7	2.7	0.7	22.0	3.2	1.8	2.5	2.2	2.0	2.3	14.0	3.7	2.8	3.5	3.0	3.2	3.8	2.8	3.8	26.7	62.7
Ratio	0.90	0.97	0.94	0.61	0.93	0.53	0.22	0.76	0.79	0.46	0.63	0.54	0.50	0.58	0.58	0.92	0.71	0.88	0.75	0.79	0.96	0.71	0.96	0.83	0.74

Appendix E. Individual Interview Protocol

Unstructured Interview GUIDE

Questions are intended to *guide* the interview, rather than structure it. Some questions may be answered in other contexts, or within other responses.

Part 1 Personal Experiences

Views of Self

Introduction preceding questions:
I'd like to give you an opportunity to tell me about yourself; who you are, what is important to you, how you see yourself.

1. How would you describe yourself?
2. What do you like/dislike about yourself?
3. What activities are most important to you?
    a. do you consider yourself artistic?
    b. do you believe you have a greater ability in art than your friends?
    c. do you believe others see you as being artistic?

Personal Influences

Now I have some questions about what made you the person you are now, the influences that have shaped your personality, your experiences, and your plans. I'd like you to start as far back as you can remember and tell me about influences you remember over your life, until now. You can take your time in thinking about this.

4. What are some of the things that influenced you?
5. Which things stand out the most?
6. Why do you think they stand out in your memory more than other things?
7. Did any of these influences trigger or catalyze an interest in art?
8. Is there a time that you can remember, when you believe your interest in art was catalyzed…that is, cemented as a significant part of who you are and how you function?

Future Expectations/Goals/Challenges

9. In your present life, what would you say your most important goal is?
10. What do you see as the main challenges facing you in the next few years?
    (Note: students will be probed for academic, occupational, and personal goals

Commitment to Talent

11. Why did you come to see this as being the most important goal/challenge for your future?
12. Discussion: Refer to Student Interest Survey (Appendix D) items 1-20, Ex: You said on the questionnaire that you_____; can you tell me more about that?

13. Are you willing to work hard to develop your talent even when there are challenges?
14. Do you believe being praised motivates you to work harder to improve your talent?

Home, Family, & Friends

15. Can family members find a quiet place at home to think?
16. Is it hard to find privacy, and be alone, escape into your own world, and to immerse yourself in your art?
17. When you get into something you really feel like doing, are you often interrupted by having to perform other family obligations?
18. Is your home hectic, or disorderly?
19. Is there a studio-like atmosphere somewhere in your home?
20. Are there illustrated books in your home? Are any of these books specifically about art?
21. Do you enjoy looking at/reading books?
22. Are you encouraged at home by parents or siblings, to do your art?
23. Who has encouraged you the most?
24. Are any other family members talented in or interested in art? Who?
25. How distractable are you when you are doing art? (do you ever do something where your concentration is so intense your attention is undivided and you become unaware of things going on around you-noise, time passing by, being hungry, tired, missing an appointment, or being uncomfortable or in pain?)

Talent Development

Understanding personal talent

26. I know you are particularly involved in art. Is there anything else you are as interested in as much ?
27. Can you tell me how long you have been interested in art?
28. How did you first get interested in art?
29. When/Have you started any formal training in art?
30. What was/is that training? Were/are there any particular good times and bad times that you remember?
31. Currently, how do you feel about your interest in art?
32. When do you enjoy [doing] your art the most?
33. Do you think that you will continue with your art throughout high school? Why or why not?
34. Do you plan to major in some aspect of art in college? (Design, architecture, advertising (graphic art), illustration (books, journals, educational materials, etc.), fine art (drawing, painting, sculpture, photography)…
35. What role do you think art will play in your life?

Present Interests

36. Is there a particular medium that you typically use when doing your art?

37. Why do you think you use this medium the most?
    a. Is this the medium you feel you are the most skilled in?
    b. Why do you believe you are best at this medium?
38. Does receiving praise or rewards or awards for a particular medium or style keep you from trying new things for fear of not doing them as well?

School

39. Are you taking an art class in school? Why/why not?
40. What things in your school do you find especially encouraging of your talent?
41. What kinds of opportunities do you have to be grouped with others who share your interest in art?
42. In what ways can you demonstrate your talent/exhibit your art at school?
43. Do you believe teachers and administrators that you do not have classes with express interest in/or do not notice your art talent? Why do you think that? What do they do that demonstrates that?
44. Does the fact that someone might not acknowledge your talent make any difference in how much time you devote art?
45. What things discourage/inhibit your talent?
46. What kinds of things at school encourage you to stay interested in and do your art? (Either in or outside of school)
47. What kinds of things would you like to see happening at your school that would help you better develop your art talent?

Community

48. Does your community have art galleries/museums**?**
49**.** Is there visible art around your community in places besides in the galleries**?**
50. What kinds of activities/events *are* offered in your rural community that you believe are especially encouraging of your art talent?
51. Do you feel that this is enough to encourage a variety of art talent?
    a. If yes, are you involved in those activities?
    b. If no, what else do you believe the community should be doing?
52**.** What opportunities are there for you to work with a professional artist in your talent area?

Appendix F. Researcher Field Notes/Memos/Observations Guide

(to assist in reflexive and accurate reporting of data)

1. Context/setting/situation where observation takes place

2. Who is there, who is involved, what is their role?

3. Specific observation purpose in this instance
    a. using artistic expression in different contexts
    b. indications of passion related to personal artistic expression
4. Conditions of observation
    a. constraints/freedom of interaction
    b. accessibility to participants
5. Unusual events/disruptions/noteworthy behavior

6. Duration of observation

7. Notes about impressions, general feeling of comfort/discomfort being in situation, level of interaction, willingness of participants to share, anything that prevented thorough or quality observation

Appendix G. (Clark & Zimmerman, 1997)

Project Arts: Student's Interests & Abilities Form

Name_____ Room_____ Grade_____
Date_____

Personal Interest and Ability Inventory

	Always	Most Always	Sometimes	Seldom	Never
1. I like to sing					
2. I sing well					
3. I like to listen to *music*					
4. I play instruments					
5. I like to draw					
6. I draw well					
7. I like to make things					
8. I like to use clay					
9. I like to do special projects					
10. I finish projects I start					
11. I like to paint					
12 I paint well					
13. I like to make designs and use color					
14. I like science					
15. I like history					
16. I like studying					
17. I like teaming about other countries					
18. I like to take things apart					
19. I am good at putting things					
20. I like to be out of doors					
21. I like to study plants					
22. I like to study nature					
23. I like animals					
24. I like sports					
25. I read a lot					
26. I read well					
27. I write poems					
28. I like to try new things					

Appendix H. (Clark & Zimmerman, 1997)

Project Arts: Parent Evaluation Form
NAME OF STUDENT
ADDRESS
HOMEROOM TEACHER

The Visual Arts **Program needs <u>your</u> help** in identifying students with special abilities in the arts. Please put a check in the column that best describes your child. All information you provide will be held in strictest confidence.

	Seldom	Occasionally	Frequently	Almost Always
Creates art work at home				
Wants to visit exhibitions, art museums, or craft shows				
Likes to share his/her art work				
Is asked by others to do art work				
Is interested in how things look in the home and community				
Uses spending money to buy art supplies or books				
Admires the art work of others				
Seeks help to improve his/her art work				

Additional Comments*

Signature of Parent/Guardian Date

Column Weight 1 3 3 4 Column Total: Grand total

Appendix I. (Csikszentmihalyi et al., 1997)

APPENDIX 3.8

Summary of questions relating to flow experience (Study Phase 2)

A. Flow Descriptions

Subjects rate each of four experiences for *(a)* if they experience it; *(b)* which activity most often provides it; *(c)* how often generally [1 = *few times a year/7 = few times a day]; (d)* how often in four specific settings (alone, with family, with friends, and with classmates).

1. Do you ever do something where your concentration is so intense, your attention so undivided and wrapped up in what you are doing that you sometimes become unaware of things you normally notice (for instance, other people talking, loud noises, the passage of time, being hungry or tired, having an appointment, having some physical discomfort)?
2. Do you ever do something where your skills have become so "second nature" that sometimes everything seems to come to you "naturally" or "effortlessly," and where you feel confident that you will be ready to meet any new challenges?
3. Do you ever do something where you feel that the activity is worth doing in itself? In other words; even if there were no other benefits associated with it (for instance, financial reward, improved skills, recognition from others, and so on), you would still do it?
4. Do you ever do something that has provided some unique and very memorable moments — for which you feel extremely lucky and grateful — that has changed your perspective on life (or yourself) in some way?

B. Flow Scale (Mayers, 1978)

Subjects rate the intensity of the eleven experiences below in the following activity situations: their primary flow activity; most challenging school subject; favorite activity; being with family; watching IN; doing homework.

1. I get involved
2. I clearly know what I am supposed to do
3. I feel I can handle the demands of the situation
4. I tend to get bored doing it
5. I would do it even if I didn't have to
6. I feel cheerful
7. I feel good about myself
8. I get distracted
9. I feel strong
10. It is important to me

11. It makes me feel anxious

C. Personal Interests Survey

The following questions were designed to assess each teenager's level of commitment to talent development. Each student received a questionnaire with her or his talent area(s) circled. Students assessed their talent areas by placing the number of each talent in the blank next to the appropriate response.

(1 Math 2 Science 3 Music 4 Athletics 5 Art)

1. How often do you do things related to the areas circled right now? a every day

___ b once or twice every week

___ c more than once a month

___d less than once a month

___e never

2. How would you compare your interest in (the areas circled) now to two years ago?

___a become more interested

___b interest remains unchanged

___c become less interested

3. How would you compare your skills in (the areas circled) now to two years ago?

___a improved

__ b the same

__ c worse

4. How would you compare the challenge of (the areas circled) now to two years ago?

___ a more challenging

___b interest remains unchanged

___ c. less challenging

5. Do you think that you will continue with (the areas circled) (current juniors) through high school? (current seniors) in college?

___a yes

___ b not sure

___ c no

6. Do you think that you will continue with (the areas circled) as:

__ a an interest in college Yes No Maybe

__ b a major in college Yes No Maybe

Appendix J: Alignment of Participant Responses to Code Categories

THEMES/ PRIMARY CODES/sub-codes	Eastern MT Participants			Regional	Western MT Participants			Regional	Total
	EJ	RF	Rose	Freq	Lilac	Daisy	Patricia	MT Freq	Freq
RESEARCH QUESTION 1									
EXPERIENCE OF TALENT									
Reflecting on early art experiences	x	x	x	7	x	x	x	6	13
negative	x	x		2				0	2
parent	x	x		2	x		x	2	4
sibling		x		1		x		1	2
extended family	x			1		x		1	2
event	x			1		x	x	2	3
Emotional Experience		x	x	6	x	x	x	4	10
feel good		x		1					1
enjoyment		x	x	2		x		1	3
escape		x		1					1
calm		x	x	2	x		x	2	4
validation				0	x			1	1
Motivation	x	x	x	5	x	x	x	4	9
from self	x	x		2	x			1	3
from encouragemt	x	x	x	3	x	x	x	3	6
Passion	x		x	2	x		x	2	4
Understanding personal talent	x	x	x	3	x	x	x	3	6
Locating self on spectrum	x	x	x	3	x	x	x	3	6
Habits	x	x	x	15	x	x	x	12	27
openness				0	x		x	2	2
practice	x		x	2				0	2
uncertainty		x		1					1
focus						x		1	1
disorganization		x	x	2	x			1	3
perfectionism	x	x	x	3	x	x		2	5
others' visions	x		x	2	x			1	3
alone time	x	x		2	x		x	2	4
medium	x	x	x	3	x	x	x	3	6
Expressive Voice of Art	x	x	x	4	x			4	8
visual thinking	x			1			x	1	2
exhibiting	x	x	x	3	x	x	x	3	6
Family Support	x	x	x	9	x	x	x	10	19
space	x	x	x	3	x	x	x	3	6
supplies	x	x	x	3	x	x		2	5
books	x	x	x	3	x	x	x	3	6
leeway					x		x	2	2
Current Commitment to Art		x	x	11	x	x	x	12	23
"flow"		x		1	x		x	2	3
choosing art	x	x	x	3		x	x	2	5
persistence		x		1	x		x	2	3
goal-setting	x	x	x	3	x	x	x	3	6
expected comm.	x	x	x	3	x	x	x	3	6
RESEARCH QUESTION 2									
TIME									
Time	x	x	x	5	x	x	x	5	10
balancing	x	x	x	3	x	x	x	3	6
rural life	x		x	2		x	x	2	4
OPPORTUNITY									
Conditions Which Encourage/Inhibit	x	x	x	25	x	x	x	20	45
school	x	x	x	3	x	x		2	5
individuals	x	x		2	x	x		2	4
events	x	x	x	3	x	x	x	3	6
wishes	x	x	x	3	x			1	4
community	x	x	x	3	x	x	x	3	6
recognition	x	x		2		x		1	3
events	x	x	x	3	x	x	x	3	6
mentors	x	x	x	3	x		x	2	5
internet	x	x	x	3	x	x	x	3	6

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