

HIGH SCHOOL TEACHERS' PERCEPTIONS OF GIFTEDNESS, GIFTED EDUCATION,
AND TALENT DEVELOPMENT

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In the field of gifted education, there is little research on the perceptions of high school teachers of the gifted about giftedness, good gifted education practices, and the nature and needs of gifted learners. The purpose of this study was to form a deeper understanding of how those educators who guide gifted learners out of high school and into adulthood perceive giftedness and gifted education. This qualitative study, conducted in two phases, took place in a large suburban school district with three large high school systems and was focused on the responses of high school teachers to assess their attitudes, feelings, and opinions about the nature and needs of gifted learners using a grounded theory model of analysis. Data collected from the 11 participants in the first phase of the analysis was combined with that collected from the 13 participants in phase two and validated throughout with continual comparison through memoing. Participants reported a general lack of engagement with scholarly work in the gifted education field as well as a dependence on the school district for effective training in classroom practice. Evidence also suggested a view of giftedness among the participants as an inherent quality of some people who needed to be properly trained in the instructional environment. Implications from this study suggest further research, both qualitative and quantitative, needs to focus on clarifying the perception of giftedness among high school teachers as well as how the delivery of effective training to those teachers can be implemented.

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HIGH SCHOOL TEACHERS'S PERCEPTIONS OF GIFTEDNESS, GIFTED EDUCATION, AND TALENT DEVELOPMENT

Evidence continues to support gifted education programs as a necessary part of the educational structure (Reis & Renzulli, 2010), and giftedness may manifest in a variety of forms (Dai & Chen, 2014; Konstantopoulos, Modi, & Hedges, 2001). As such, the field continues to struggle over definitions for seemingly simple but, in fact, very complex terms such as *gifted*, *giftedness*, and *gifted education*. However necessary debate and discussion at the researcher level may be, it could potentially lead to confusion and frustration for teachers as they seek to provide the best possible services to their students. In gifted education, competing ideas, approaches, and policies potentially result in confusing and contradictory curriculum models adopted by local school systems, especially in the current climate of high-stakes accountability testing (Moon, Brighton, & Callahan, 2003). At the high school level competing priorities may be compounded as teachers of gifted students work to satisfy the requirements of Advanced Placement or International Baccalaureate standards to satisfy (Kyburg, Hertberg-Davis, & Callahan, 2007). High school gifted education is potentially affected by contested definitions, vague policies, and research-to-practices gaps (Ambrose, VanTassel-Baska, Coleman, & Cross, 2010; Dai & Chen, 2014). Few studies have taken a deeper look at the unique perspectives of high school teachers in gifted education programs and how their gifted education practices might be affected by the struggle to define giftedness and the complications for quality gifted education practice associated with it.

Gifted Education in High School

Competing Conceptions of Giftedness

Experts in the field of gifted education do not agree on what it means to be gifted (Ambrose, et al., 2010). However, there are definitions that exist that are designed to guide gifted instruction. Both national and state education agencies and organizations define giftedness. The National Association of Gifted Children defines gifted individuals as those who demonstrate outstanding levels of aptitude (e.g., exceptional ability to reason and learn) or competence (e.g., documented performance or achievement in top 10% or less) in one or more domains. Domains include any structured area of activity with its own symbol system (e.g., mathematics, music, language) and/or set of sensorimotor skills (e.g., painting, dance, sports) (NAGC, n.d.). The state of Texas, where the current study was conducted, defines a gifted and talented student as “a child or youth who performs at or shows the potential for performing at a remarkably high level of accomplishment when compared to others of the same age, experience, or environment and who: (a) exhibits high performance capability in an intellectual, creative, or artistic area; (b) possesses an unusual capacity for leadership; or (c) excels in a specific academic field” (Texas Education Agency, 2009, p. 18).

Researchers have also sought to offer guidance to classroom educators on the nature and needs of the gifted. Perhaps the most widely cited, copied, and adapted model in all of gifted education is Renzulli's (1978) three-ring conception of giftedness. This conception defines giftedness as the intersection of above-average ability, creativity, and task commitment, with the construct of creativity further summarily defined as original ideas or products of value in a particular context. Renzulli (2005) has continuously updated and clarified

his model, and it has been influential in many others that stress creativity as a special component of giftedness due to the place creativity holds in classroom education and how high school teachers often describe its importance.

Monks and Katzko (2005) modify Renzulli's (1978) more universal three-ring model and place it in a context of family, peers, and, most importantly for teachers, school. They also modify Renzulli's (1978) focus on performance to one of potential for performance in the gifted identification process. While they point out that giftedness is a term that can mean more than one thing, along the lines of the paradigms described by Dai and Chen (2014), any programming model for gifted learners should adhere to three guiding principles: (a) grounding in a theoretically based model of giftedness, (b) high methodological standards, and (c) accounting for identification difficulties related to social preconceptions such as those of women and minorities. Dai and Chen (2014) further point out that many gifted programs do not meet those criteria. This problem no doubt adds to the confusion with gifted education (Carman, 2011; Coleman, 2014) reported by many high school teachers, especially as it relates to gifted identification (Schroth & Helfer, 2008; Siegle, Moore, Mann, & Wilson, 2010), and research supported practices for gifted education such as ability grouping and academic acceleration (Siegle, Wilson, & Little, 2013).

Cross and Coleman (2005) suggest a straightforward solution to the problems identified by Monks and Katzko (2005), redefine giftedness. They argue giftedness is a combination of advanced development and creativity, that it is clearly developmental in nature, and that, while it begins as potential, it must evolve into performance and achievement in recognizable domains. This talent development model, they argue, is a more effective means of delivering

gifted services but not often used by school systems who assess gifted students based on potential. Gordon and Bridgall (2005) are critical of the giftedness-as-performance model in their research. They argue such a model, one that does not account for potential in identification and placement, is inherently biased against those students who struggle with poverty, language barriers, or institutionalized discrimination, a concern shared by educators in several studies (Bianco, Harris, Garrison-Wade & Leech, 2011; Hargrove & Seay, 2011; de Wet & Gubbins, 2011).

Borland (2005) goes a step beyond most of his colleagues in the field and argues gifted education would be better were schools to abandon the label of giftedness altogether. He argues the attempt to label a thing that is so unclear in its definition has led to a situation in school systems where gifted education is largely ineffective, of questionable validity, and a misuse of resources. Instead, he argues for individualized education for all students similar to the differentiation paradigm of gifted education (Dai & Chen, 2014; Peters, Mathews, McBee, & McCoach, 2013).

All of this has the potential to be very confusing for educators who may not be aware of the definitional debates and disagreements in the field. As a result, they may not be prepared to adapt their thinking about giftedness. Any of these models could form the basis for gifted programming with no guarantee of consistency from one school to the next. Teachers often report their training in gifted education comes from the professional development within their schools (Siegle, *et al.*, 2010; Siegle, *et al.* 2013), and those schools may define giftedness differently than the teachers themselves had been trained to conceptualize it.

Policies and Practices for Gifted Education

Policies and practices influence the structure of high school classrooms, and those policies and practices may be related to the perceptions of gifted education held by high school teachers. While a complete analysis of those policies and practices are beyond the scope of the current study, existing research identifies some factors relevant to understanding high school teachers' perceptions.

Baker's (2001) analysis of gifted education programs in the United States and in Texas revealed several disparities in the field, especially in terms of funding and program access for low socioeconomic students. Baker (2001) identified a national trend of consistent underrepresentation of Hispanic students in gifted programs and suggested those students in the lowest socioeconomic quartile are far less likely to participate in gifted programs. He further identified a radical disparity in funding for gifted programs based on school district-level resources and community economic characteristics. Kettler, Russell, and Puryear (2015) argue this is likely attributable to the fact that, despite a widespread belief in the power of federal and state education mandates, gifted education policy and spending decisions are made at the district (and often campus) level, translating to spending without oversight in many cases. A consistent lack of funding for gifted services in some schools, or the underrepresentation of groups within them, has the potential to convince some educators that those are normal or acceptable outcomes and not problems in need of correction.

Public policy may affect gifted education programs in other ways. Despite wide-spread general agreement about the value of ability grouping in gifted education, Fiedler, Lange, and Winebrenner (2002) reported pervasive myths about ability grouping, including a persistent

belief that it is the same as tracking, a practice that may have been detrimental to students who are Black, Hispanic, and/or economically disadvantaged and may have contributed to their exclusion from some school programs. At the same time ability grouping was being criticized, the demand for standardized testing and education reform was rising (Moon et al., 2003), placing demands on gifted classroom practice for one-size-fits-all methodologies under the pressure to prepare students for state-level examinations.

Teacher Perceptions of Giftedness

Existing studies on teachers' perceptions of giftedness and gifted education are sparse. What research that does exist has been organized and classified into three related categories for the purposes of this study: *assumptions*, referring to thoughts on giftedness and gifted education held by pre- and early-service teachers, *attitudes* referring to those thoughts about giftedness and gifted education held by in-service teachers as opposed to those of pre- or early-service teachers detailed above, and *practices*, referring to tools and procedures for serving gifted learners.

Assumptions

Carman (2011) presented pre- and early-service teachers with common stereotypes about gifted students related to gender, ethnicity, age, various talents, and "nerdiness." She found a majority of participants held stereotypical assumptions of gifted learners in four or more of the five aforementioned categories examined, attributable to a lack of experience with actual gifted learners or training in gifted education. Good training has been shown to be vital in servicing gifted learners, especially in the social and emotional aspects of those services (Rizza & Morrison, 2002).

Experience, or at least expertise derived from it, has also been shown to be an important factor in the identification of gifted learners. Experienced teachers favored the use of factors such as individual expression, ongoing assessment, multiple identification criteria, and contextual variables when determining placement for gifted services (Brown, Renzulli, Gubbins, Siegle, & Zhang, (2005). Schroth and Helfer (2009) echoed that finding, suggesting teachers in general, and those with gifted experience especially, were more likely to support an expanded definition of giftedness than that held by school officials and administrators, though even gifted educators were hesitant in some cases to embrace talent in less traditional areas as evidence of the need for gifted services. The trend toward broader views of giftedness may be a growing one. In a survey distributed to teachers across eight states, responses suggested there was broad acceptance of the fact that IQ testing alone could not correctly identify gifted learners who were culturally, linguistically, and/or economically diverse (de Wet & Gubbins, 2011).

Attitudes

Studies have found that factors of socioeconomic status, academic strength, and student interests were all important to teachers making recommendations for gifted identification, but more likely to impact recommendations from more experienced educators (Siegle, et al., 2010). Studies have also shown the ethnicity of teachers themselves can be a factor influencing gifted referrals as experienced White teachers were aware of many of the outside-of-school variables that can confound placement for Black students, but they were not as aware of the inside-the-school variables as were Black teachers (Hargrove & Seay, 2011).

Experienced teachers of the gifted have also expressed frustrations with the growth of standardized testing. Participants in Mendoza's (2006) study, all teachers of gifted students,

voiced concerns that federal and state mandates were severely impeding what they saw as their ability to correctly serve gifted learners. This, they felt, was not only a product of time constraints created by test preparation, but also a product of changes to curriculum models which were becoming overly standardized for the sake of test performance yet were detrimental to the gifted and their unique learning needs.

Studies have identified three predictors in attitudes of educators about giftedness and gifted education: training or experience in gifted education, training or experience in special education, and self-perceptions as gifted (McCoach & Siegle, 2007). Findings further support training or experience in gifted education as the best predictor of positive attitudes toward giftedness and that teachers with more experience in gifted education are more likely to self-identify as gifted themselves. This, coupled with the fact that some research suggests the best teachers of the gifted are gifted individuals themselves (Rosemarin, 2014), raises some interesting but as yet unexplored questions for the field. There may also be a caution to experienced educators of the gifted who impose their own negative affects with overly simplistic labels of gifted learners as misfits or outside-the-box personalities (Geake & Gross, 2008).

Practices

Despite acceleration and ability grouping being two of the most empirically supported interventions in the field of gifted education, those practices are often not used effectively in practice because teachers and schools are generally not supportive of them (Missett, Brunner, Callahan, Moon, & Azano, 2014). Studies have offered further insight as to why this may be the case, especially in terms of acceleration via grade-skipping, as school systems worry about

disruption to the age-level model schools use and teachers often express concerns about the social well-being of students who participate in grade-skipping, despite no evidence it is detrimental to them (Siegle, et al., 2013). This belief without support among teachers may also contribute to the underrepresentation of girls (Bianco et al., 2011), second language learners (Harris, Plucker, Rapp & Martinez, 2009), and ethnic minorities (Schroth & Helfer, 2008) in gifted programs because teacher referrals are the primary means in which students are identified for possible placement.

Research Questions

The purpose of the current study was to examine the level of understanding of giftedness among high school teachers of the gifted as the basis for further research on that and related topics. Those understandings included not only a basic definition of giftedness among high school teachers of the gifted, but also how those definitions affect classroom practices for gifted learners at the secondary level and how they are altered by teachers' experiences with gifted education at the secondary level. Using a qualitative, interpretive framework rooted in a constructivist approach to grounded theory research, the following research questions guided the inquiry through all phases of current research and analysis:

RQ1: How do high school teachers of the gifted perceive giftedness?

RQ2: What assumptions, attitudes, and feelings do high school teachers of the gifted have about gifted education?

Methods

The current study took place in two phases, each following the four basic steps of the analytic process in grounded theory. Originated in the 1960s by Glaser and Strauss (1999), grounded theory seeks to unify the precise methodology of positivism with the contextual

factors of pragmatism. Grounded theory stresses an intellectual separation from existing theory so as to allow the explanation for a phenomenon or interaction to emerge organically from collected data in an inductive fashion (Creswell, 2013). It emphasizes the coding of textual data to identify abstracts or concepts of potential interest or that might contribute to the creation of a descriptive theory (Yin, 2014). Grounded theory was chosen because of its usefulness in research where there are gaps in existing literature (Charmaz, 2006; Creswell, 2013), in this case the shortage of research on the perceptions of giftedness among high school teachers. Research of this type begins the construction of a theoretical underpinning that can then be challenged, altered, and improved upon through subsequent research conducted in whatever method would then be most appropriate (Strauss & Corbin, 1990). The current study followed the constructivist approach to grounded theory championed by Charmaz (2006), echoing Glaser (1992) who argue that the commonly used methods of Strauss and Corbin (1990) force data into preconceived categories for analytical purposes, thus undermining the value of grounded theory. Research in the current study followed the design shown in Figure 1 which was designed in two phases so as to authenticate and verify the trustworthiness of any potential research results from the collected data.

Phase 1

Participants

An open-ended survey on various aspects of gifted education practice was distributed to 22 high school teachers of the gifted in a large suburban school district of which 7 chose to respond. The respondents averaged 11 years in the classroom with service ranging from 1-31 years of experience.

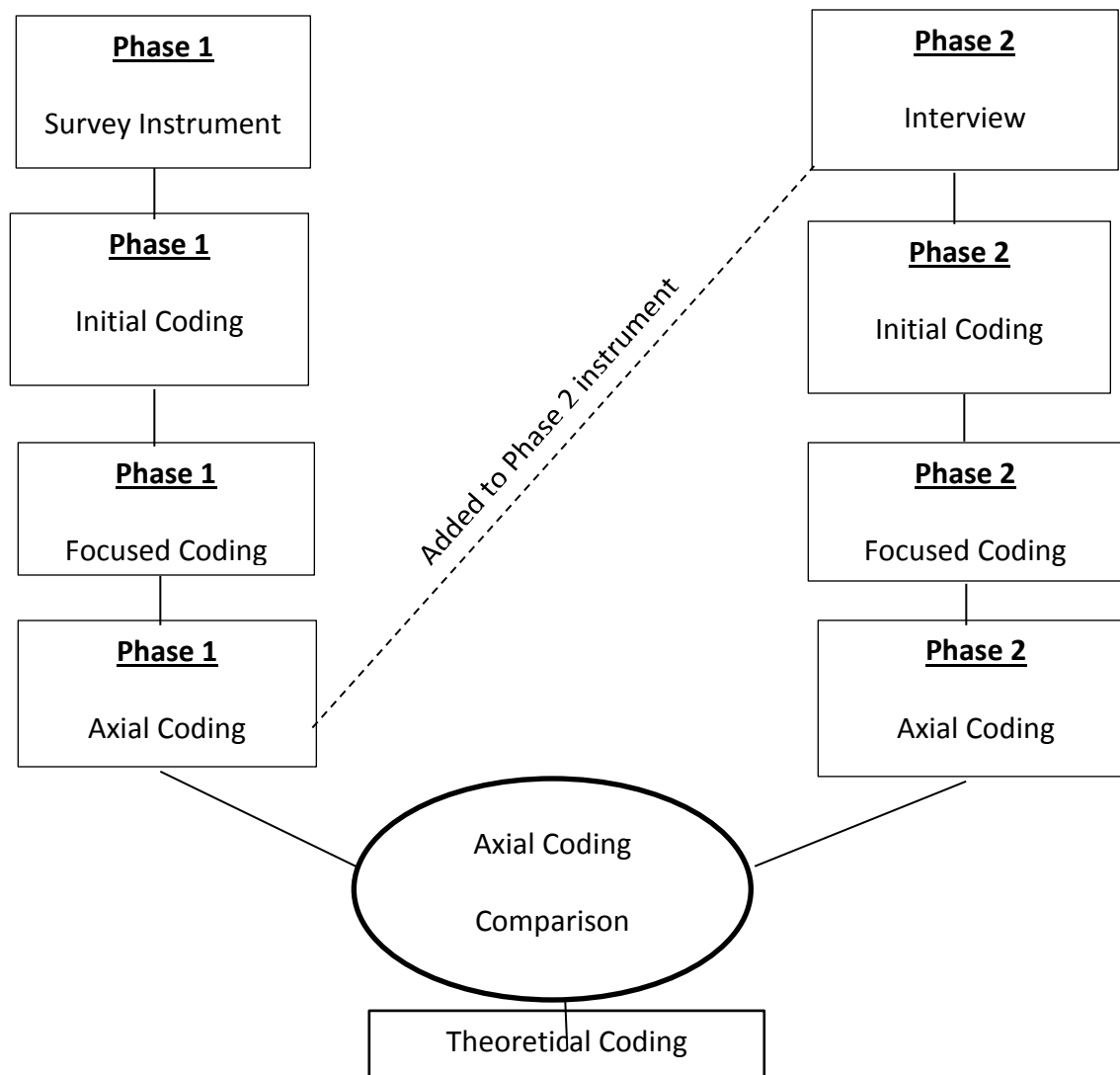


Figure 1. Research design of the current study. The process of coding is delineated for purposes of clarity. Phase one axial coding is added to the Phase 2 instrument and also compared with Phase 2 axial coding for purposes of saturating the concepts of the study. This acts as a means of authentication and verifying trustworthiness before theoretical coding takes place.

Most ($n = 4$) possessed a Master's degree or higher in terms of their own education. Only one of the respondents possessed a state level teacher's certification for gifted and talented education, though the participating district has its own gifted and talented training

requirements whether said certification is possessed or not. More than half ($n = 4$) of the respondents also reported that they had been identified gifted learners during their own schooling. The participants in the study were all employees of the participating district, a large suburban school system with a reputation for quality education servicing an affluent, middle-class community. As the participants were all part of a relatively small population of teachers in a specialized program, identifying characteristics such as age and gender were not reported as it could potentially be used to identify the participants in some way.

Data Collection

An open-ended survey of 10 questions was administered by the participating district and responses were shared with the researchers in the current study (see Appendix 1). Responses were collected electronically and analyzed for larger themes following the aforementioned framework. The survey took approximately 20 minutes to complete. All participants remained anonymous.

Analysis

The survey responses of all the high school teachers of the gifted who completed the survey were coded in a line-by-line fashion to gain familiarity with the data. This step of the process, initial coding, is where the researcher familiarizes him or herself with what the data simply says and what it seems to suggest. In the case of the current study, this revolved around questions of how the participants perceived giftedness and gifted education practice. The desired result is that initial coding creates first impressions of the data. This matters a great deal moving forward because first impressions often represent the initial assumptions and

biases of the researcher and this step helps to minimize their effects in later steps of the analysis process (Glaser & Strauss, 1999).

The next step in the process was focused coding, wherein the initial data categorization was organized into themes that emerge across the responses from participants. This phase is not unlike thematic analysis as it is often used to conduct large-scale reviews of existing literature (Braun & Clarke, 2006). Its purpose is to identify general commonalities in the responses of participants about questions regarding their perceptions of giftedness.

Lastly for Phase 1 was axial coding. In this process, the emerging thematic categories are organized into sub-categories so as to start putting dissected data back together in a coherent and orderly fashion (Strauss & Corbin, 1990). The desired result here was the generation of themes generally represented in the survey responses so those themes could then be added as necessary items at the end of the semi-structured interview protocol for Phase 2.

Phase 2

Participants

Thirteen participants were recruited from the gifted education program in the same district as in Phase 1. Twenty-two high school teachers of the gifted were asked to volunteer, and the 13 participants were those that agreed. The participants averaged 17 years of classroom teaching experience, with a range of service of 1-31 years. Sampling was designed to allow for variables such as demographics and individual campus culture across the participating district's three high school systems, but to control for variables such as school spending, administrative policies, and differences in educational purpose and philosophy as dictated by the upper levels of leadership and how all those variables might affect teacher perceptions. It is

important to note that it is impossible to know whether some of the participants in Phase 1 were also participants in Phase 2 as no identifying information was gathered at any time to insure the anonymity of the participants.

Data Collection

Participants provided in-depth responses to a series of 17 questions and subsequent follow-up questions through a semi-structured interview process (see Appendix 2). Interviews were conducted at the participant's school in hopes of making the participant as comfortable as possible with the interview process in the hopes of eliciting the most candid responses to the interview questions. Interviews were recorded in audio form for later transcription, with memo writing by the researcher throughout the interview process. Each interview lasted approximately 30 minutes.

Instrument

The 13 participants were interviewed following a semi-structured protocol and their responses audio recorded and transcribed for analysis. As a form of data triangulation, a portion of the semi-structured interviews were designed to address the themes identified in Phase 1 of the study (Charmaz, 2006).

Analysis

The semi-structured interview responses were subjected to the same coding structure detailed above. Once axial coding was complete in Phase 2, the emergent themes from both phases were compared. This type of comparison is sometimes referred to as saturating a concept (Strauss & Corbin, 1990) and is used as a means of authentication and verification of the trustworthiness of the research findings in a fashion similar to how a quantitative study

might be compared to other studies of a similar nature for purposes of validity and reliability. This then led to the final, unifying process of both phases of the research, theoretical coding, which occurred in an attempt to identify what the data conveyed about the environment and context in which it was collected (Glaser, 1992).

It is important to note that axial and theoretical coding are fluid concepts created by competing schools of thought in grounded theory that can be used in concert with one another in research situations such as the current one, but that in some cases might act to preclude one another in the analysis process. Charmaz (2006) recommends an analysis wherein the researcher goes into the process favoring neither and allows the data to speak for itself. This approach to grounded theory seems to be the one favored by those who have used it to study teacher perceptions in areas other than giftedness. For example, topics as broad as how school mealtimes affect learning (Satoko, Gray, & Goodell, 2015) and how teachers of foreign languages maintain their proficiency (Valmori & De Costa, 2016) have been studied using grounded theory, and they seem to generally agree on Charmaz's (2006) advice to let the data speak for itself rather than deciding up front on an approach to final coding.

Memoing

Vital to all portions of the analysis process was the practice of memo writing, or memoing, which takes place throughout the research process (Khalifa, 2012). Because grounded theory is inductive in nature and the methodology of the study may change throughout the course of the research (Murphy, 2008), it is vital for the researcher to keep detailed memos of the process, context, analysis, and his or her own thoughts on the study as it progresses from start to finish (Charmaz, 2006). These memos represent not only the

systemization of the data but, as Thornberg (2012) suggests, are also a vital secondary source of data in the analysis phase of the study. For the current study, memoing began with the initial conceptual question of how high school teachers conceptualize giftedness. It continued through the initial review of the literature and was vital in the development of the research questions of the current study. During the analysis phase of the study, the initial memos were consulted to identify any biases on the part of the researcher that might affect the reporting of data. This analysis was conducted following the same grounded theory model as that used on the Phase 1 and Phase 2 data itself.

Results

Phase 1

Following the prescribed grounded theory methodology, the first step of the analysis was the initial coding of the Phase 1 open-ended survey data. This step, as mentioned before, was designed to gain familiarity with the data, and the researcher purposefully avoided looking at the responses at all until the time came for this analysis. Again, it is important to stress that this phase of analysis happens quickly because it is designed to capture initial assumptions and biases that could affect later analysis. Memo-writing was conducted throughout to capture the initial thoughts of the researchers as well as how those thoughts on the data might have evolved as the study progressed.

Eight different observations were made about the data during initial coding (see Table 1). Line-by-line analysis of the survey responses was conducted, and observations were made using the overall research questions for the study as a guideline. As the survey responses were read, a tabulation was created and added to each time a response addressed certain key points

about giftedness or gifted education of particular interest to the current research, namely those responses to individual questions that addressed perceptions about the nature of giftedness or best practices associated with it. At this step of coding, analysis only focused on frequency and not on the exact perceptions of respondents about the topics being addressed. Referral back to memos made during the design of the current study and those recorded while the initial coding was conducted confirmed that the creation of the codes were consistent with the desired objectives in the current research.

Table 1

Themes Identified during Phase 1 Initial Coding

Themes	Frequency	Description
Intelligence	5	Inherent intelligence
Ability	2	Trainable or domain specific
Creativity	2	Divergent thinking or problem solving
Teacher Awareness	8	General teacher knowledge of giftedness
Advocacy	2	Needs of the needs of the gifted
Programming	4	District choices made for gifted education
Choice	4	Student choice in classroom assignments
Research Knowledge	8	Engagement (or lack thereof) with research in the larger gifted field

The eight initial codes were then analyzed for commonality during the second step of analysis, focused coding. During focused coding, the objective is to identify themes that are emergent in the data. By searching for commonalities in the eight observations from the initial coding, focused coding then produced four emerging themes centered around perceptions

about giftedness, gifted education practice, and the understanding of giftedness among teachers of the gifted (see Table 2). To draw these four emergent themes from the data, responses were studied more closely to ascertain the feelings and beliefs of the respondents on the topics in questions.

Table 2

Themes Identified during Phase 1 Focused Coding

Themes	Description
Inherent Giftedness	Giftedness as an inherent quality of individuals
Classroom Differentiation	The difficulty of providing quality instruction for gifted learners
Training and Programming	District curriculum and servicing for gifted learners and how teachers are prepared for it
Advocacy for the Gifted	Teachers working to raise awareness for the needs of gifted learners

The initial codes of intelligence, ability, and creativity were re-examined for a deeper understanding of participants' beliefs about the nature of giftedness. One participant described giftedness as, "certain topics/skills/subjects/concepts come easily to a person," implying at least some belief in giftedness manifesting in a domain-specific manner. Another participant responded that gifted was, "the ability to see a problem and to use external resources to attain a solution," implying a belief in giftedness as some measure of creative thinking. However, analysis of the Phase 1 data indicated a preference among the respondents for conceptualizing giftedness as "natural ability" [survey participant] or as "being endowed with extra abilities" [survey participant], language that lends itself to a conceptualization of giftedness that is, as

one respondent phrased it, based in “native intelligence” [survey participant]. For this reason the first of the focused codes generated during this step of coding was about the nature of giftedness as an inherent quality and not one that could be trained.

The second focused code for Phase 1 analysis focused on classroom differentiation, as the survey respondents reflected a strong belief that some degree of “student choice and flexibility” [survey participant] was essential in good gifted education practice. Respondents also noted that allowing for this choice and flexibility was a challenge because of time constraints and the variety of demands placed on instructors of the gifted related to working with a special population of students.

The third focused code for Phase 1 focused on training and programming for gifted education. Starting from the initial codes of Teacher Awareness, Programming, and Research Knowledge, survey responses were re-examined for insight into how high school teachers of the gifted learned what they knew about giftedness and gifted education. Respondents expressed a general sense of feeling like “valued participants in our local programs” [survey participant], but they often expressed frustration with either their own lack of knowledge about giftedness or that of their working colleagues. Adding to this was the almost complete lack of engagement by survey participants with any scholarly works from the larger field of gifted education, with only one participant responding that he or she read, “at least one scholarly work a month on the subject of giftedness.”

The final focused code for Phase 1 dealt with advocacy for the gifted. Respondents to the Phase 1 survey felt they had a duty to “help gifted students understand who they are” [survey participant], or to “grow in all aspects of their life” [survey participant]. This type of

language seems to imply a strong belief in teachers as trainers of gifted students for their own self-advocacy. Responses seem to suggest that this training of self-advocacy extends beyond the realm of curriculum and learning for most of the respondents and is focused more on students as complete human beings. “It is imperative that I as an educator help my students in every area of growth,” one participant responded, echoing a sentiment expressed by most participants.

In the final step of analysis for Phase 1, the emergent themes from the focused coding process were subjected to axial coding. During axial coding, the four themes (see Table 3) were formulated into direct statements that were then added to the Phase 2 collection instrument (see Appendix 2). The following direct thematic statements emerged from the entirety of the Phase 1 analysis: (a) Giftedness, or being gifted, refers to certain natural abilities that some people are just born with, (b) Differentiating instruction for individualized learning is the most difficult part of gifted education, (c) The formal knowledge of giftedness among teachers and the [participating] district’s programming for it are both inadequate to the task of gifted education, and (d) Teachers are the most important advocates for gifted students and their needs. This step of coding was designed to produce clear statements about what the Phase 1 data seems to suggest. Those statements could then be authenticated by comparison with the findings from the Phase 2 analysis, an essential part of the constant comparison at the center of grounded theory research and a necessary precaution for any study dealing with a relatively small population and sample size.

Table 3

Themes Identified during Phase 1 Axial Coding

Giftedness, or being gifted, refers to certain natural abilities that some people are just born with.

Differentiating instruction for individualized learning is the most difficult part of gifted education.

The formal knowledge of giftedness among teachers and the district's programming for it are inadequate to the task of gifted education.

Teachers are the most important advocates for gifted students and their needs.

Phase 2

Participants in Phase 2 were interviewed in a semi-structured interview process following a script (see Appendix 2) that included 17 questions, four of which were designed as responses to axial codes identified in Phase 1 analysis. These questions were included in the Phase 2 instrument as a means of authentication of the analysis and as a measure of the trustworthiness of the overall data analysis. It should also be noted that an additional response item was added to the Phase 2 data instrument: *The best instructors of the gifted are gifted people themselves*. This item was added because the responses to the Phase 1 survey indicated a high number of the participating district's instructors of the gifted were gifted people themselves. While that was not an initial focus of the current study, identifying any underlying assumptions that that might create on the part of participants is important in the construction of a theoretical framework for this and further studies (Charmaz, 2006) and illustrates the ability of this type of research to adapt to the realities of research findings throughout the research process.

Eleven observations were recorded on the nature and characteristics of the data during the initial coding of Phase 2 (see Table 4). This followed the same line-by-line approach as that employed in Phase 1 of the data and results were tabulated in the same fashion. Analysis was again guided by the overall research questions of the current study which focused analysis on perceptions of giftedness and gifted education practice among the participants in Phase 2 of the study. The initial coding yielded similar codes to those found in Phase 1, though with an increased quantity and specificity most likely attributable to the more in-depth format of the data collection for Phase 2.

Table 4

Themes Identified during Phase 2 Initial Coding

Themes	Frequency	Description
Intelligence	33	Inherent intelligence central to giftedness
Teacher Training	25	The quality of training and how it affects practice
Equity	16	Time and resources committed to gifted learners
Creativity	19	Giftedness connected to divergent thinking
Choice	25	Student choice in classroom assignments
Teacher Qualifications	17	Skills or expertise that gifted instructors should possess
Programming	19	District choices made for gifted education

(table continues)

Table 4 (cont.).

Themes	Frequency	Description
Boredom	15	Gifted students reaction to less engaging curriculum
Research Knowledge	21	Engagement (or lack thereof) with research in the larger gifted field
Advocacy	28	Working for the needs of the gifted
Ability	28	Giftedness is trainable or domain specific

The 11 initial codes were then analyzed for commonalities during focused coding. Focused coding identified seven themes emerging from the Phase 2 data regarding beliefs about various aspects of giftedness and gifted education centered on the participants' perceptions about those things (see Table 4). To draw these seven emergent themes from the data, responses were studied more closely to ascertain the feelings and beliefs of the respondents on the topics in question.

Table 5

Themes Identified during Phase 2 Focused Coding

Themes	Description
Inherent Giftedness	Giftedness is inherent, but needs training to reach its full potential
Instructional Time	A lack of instructional time is the biggest impediment to good gifted education practice
The Role of the Teacher	The social and emotional aspects of teaching are the most important aspects of gifted education

(table continues)

Table 5 (cont.).

Themes	Description
Teacher Advocacy	The teacher is the most important advocate for gifted learners
Need for Increased Advocacy	Advocacy would be more effective if parents and students knew how to do it themselves
Teacher Training	Better training leads to a more complete understanding of the nature and needs of the gifted
Gifted Teachers of Gifted Students	Gifted teachers understand the social and emotional aspects of giftedness better

As in Phase 1, the initial codes of intelligence, ability, and creativity were re-examined for a deeper understanding of participants' beliefs about the nature of giftedness. While the participants had differing opinions of giftedness as, "a component of IQ or intelligence" [interview participant], or as "operating outside the norm" [interview participant], respondents all stated giftedness was an inherent quality that some people naturally possessed. One participant stated, "I do think giftedness...It's something you are born with. If you are truly gifted, I think that's innate."

Analysis also shows that all the respondents also reported that giftedness was a quality that had to be properly trained to reach its full potential. One participant's response to being directly asked if giftedness was an inherent quality that did not require any training offered a response that best encapsulates those of all the participants in Phase 2. "No. If we don't foster it, it can be lost." Another participant added, "I think we can foster improvement in any student," echoing another sentiment expressed by all the participants in the study.

The second focused code for Phase 2 dealt with classroom instructional time. One participant put it succinctly, “I wish I had more hours in the day. My kids get so caught up in the higher order of thinking, that I often feel like I have rushed through important content. Or vice versa. We get into content and lose the big idea.” All interview participants echoed that sentiment in some fashion, with a concern often being that gifted students will become bored and not engaged with their assignments if they are not properly challenged.

The third focused code from Phase 2 dealt with the role of the teacher. None of the Phase 2 participants reported that content mastery or classroom management or other essential skills of an effective educator were unimportant, but all of their responses focused more on the social and emotional components of teaching. One participant reported, “My job is to let them be themselves so that they feel like they have an environment where they can say anything.” Another reported that the function of gifted instruction was about, “getting out of their way so they can grow.” Statements like these, common throughout the interviews, imply a belief in the growth of the student as an individual and not just as a student of the subject matter being taught. Many respondents also reported that much of their job was as a *de facto* counselor to their students. One participant reported when asked what his or her students would say if they were asked what they needed him or her most for, “To listen to us.”

The fourth and fifth focused codes for Phase 2 both dealt with teacher advocacy for the gifted. The responses echo the sentiment from the Phase 1 data that teachers are the most important advocates for the gifted. Often, the respondents reported that this was a necessity rather than an ideal. One participant stated, “Parents know their kids the best, but they simply do not know how to navigate the school system.”

The need for teacher training was frequently present in the survey responses and was the basis for the sixth focused code for Phase 2. Participants all agreed that all teachers needed more and better training in gifted education. They expressed frustration about the general indifference to giftedness and gifted education in the school environment. “There is this sneering judgment from the rest of the school,” one participant stated. “Like the don’t believe that giftedness is even a thing.”

The final focused code for Phase 2 dealt with the idea of gifted people as the best instructors of the gifted. It was added to the interview instrument because approximately half of the respondents in both Phase 1 ($n = 4$) and Phase 2 ($n = 6$) self-reported as being identified as gifted. When asked directly if the best teachers of the gifted were gifted people themselves, one respondent stated, “That’s absolutely true. It sounds elitist, but it is true.” While not all respondents felt as strongly, there was general consensus among the participants, whether gifted or not, that gifted people themselves were, “better advocates for the gifted kids because they sort of understand them better” [interview participant].

In the third step of analysis, axial coding, the emergent themes from focused coding were formulated into seven direct statements on the nature of giftedness and gifted education (see Table 6). During the Phase 1 analysis, this was done so that the statements could be added to the Phase 2 data collection instrument as a means of authentication and verifying trustworthiness in terms of the Phase 1 data analysis. For the Phase 2 axial codes, the direct statements serve a similar function, saturating the concepts being analyzed, though in this case as a direct means of comparison between the themes identified by the Phase 1 instrument and those from the more nuanced instrument in Phase 2 wherein respondents had the ability to

provide more thorough responses to the researcher’s questions about various aspects of giftedness and gifted education practices at the secondary level. For purposes of clarity, the resulting axial codes for Phase 1 (see Table 3) and Phase 2 (see Table 6) are compared below.

Table 6

Themes Identified During Phase 2 Axial Coding

Giftedness is an innate ability that requires training and development to achieve its full potential.

A lack of time for instruction and lesson planning is the biggest impediment to effective gifted instruction.

The job of the teacher is to move beyond content.

Teachers are the most important advocates for gifted students and their needs.

Teacher advocacy for the gifted is a necessary measure because parents and students lack the expertise to do it themselves.

Experience with gifted learners leads to an understanding that the social-emotional aspects of teaching are the most important ones.

Gifted people as teachers have a more natural affinity for making personal connections with gifted learners.

Axial Coding Comparison

A comparison of the axial coding from both the Phase 1 and Phase 2 data analysis (supplemented by memoing as necessary) provides the most direct way to illustrate the findings of this study (see Table 7). This approach also serves to most clearly address the two research questions posited by the study. The first of those questions asked *How do high school teachers of the gifted perceive giftedness?*

Table 7

Side-by-Side Comparison of Axial Coding (Phase 1 and Phase 2)

Phase 1	Phase 2
Giftedness, or being gifted, refers to certain natural abilities that some people are just born with.	Giftedness is an innate ability that requires training and development to achieve its full potential.
Differentiating instruction for individualized learning is the most difficult part of gifted education.	A lack of time for instruction and lesson planning is the biggest impediment to effective gifted instruction.
The formal knowledge of giftedness among teachers and the district's programming for it are inadequate to the task of gifted education.	Experience with gifted learners leads to an understanding that the social-emotional aspects of teaching are the most important ones. The job of the teacher is to move beyond content.
Teachers are the most important advocates for gifted students and their needs.	Teachers are the most important advocates for gifted students and their needs. Teacher advocacy for the gifted is a necessary measure because parents and students lack the expertise to do it themselves. Gifted people as teachers have a more natural affinity for making personal connections with gifted learners.

This question, perhaps more straightforward than the second, is addressed by the first axial code generated for both the Phase 1 and Phase 2 data analysis. The code for Phase 1, conducted with an open-ended survey instrument, shows a very strong predilection among the respondents for what could be characterized as a gifted child paradigm of giftedness as identified by Dai and Chen (2014). Consultation with the initial research memos identifies an

assumption by the researcher that the gifted child paradigm would most likely be favored by participants in the study simply because it is the longest serving one in gifted education.

However, a comparison between the Phase 1 axial codes and the Phase 2 axial codes (see Table 7), generated from data collected through long-form, semi-structured interviews, show a more nuanced position from high school teachers of the gifted. While all the interview participants expressed a belief that giftedness was an innate quality that some people are born with and that could not be taught to those without it, all also stated that that natural gift had to be developed through proper training or education for it to reach its maximum potential. All respondents were also quick to state that they felt traditional views of giftedness as an aspect of intelligence were too restrictive and that high levels of ability in other areas, such as the creative arts and sports, should be considered as expressions of giftedness when schools are making the decision to place students for gifted services.

In this way, the participants in Phase 2 of the current study echoed a view of giftedness more in line with the talent development paradigm of giftedness. Talent development, while not necessarily denying the presence of innate natural ability, concerns itself far more with the development of high level ability, whether intelligence or otherwise, for maximum achievement (Dai & Chen, 2014). It is most often associated with the 3-ring model of giftedness proposed by Renzulli (1978) which sees the construct as the intersection of high-level ability, creativity, and task commitment.

It is important to note that none of the participants in the study used the language of the discipline in referring to their beliefs about giftedness as either gifted child or talent development, or even as a paradigm, but rather expressed views on the construct that aligned

with those terms as they are used in the larger research field. In fact, an absence of knowledge about the larger field of gifted education was a notable phenomenon identified in the current study. Most of the participants in both phases freely admitted that they did not read any research or literature on giftedness or gifted education. Despite many of them being veteran teachers, and an average service with gifted learners of 11 years, only two of the 13 participants in the Phase 2 interviews could name a single scholar or work in gifted education research (both referenced Gardner and his theory of multiple intelligences).

Instead, the respondents reported that training from the participating district was the primary source of the knowledge and information that informed their classroom practices. It is here that the results of the study address the second research question posited by the study: *What assumptions, attitudes, and feelings do high school teachers of the gifted have about gifted education?*

Axial coding for Phase 1 of the study shows that responding teachers felt very clearly that teachers' knowledge of giftedness *and* the programming of the participating district for it were both inadequate. However, the Phase 2 analysis revealed a more nuanced opinion on the part of the participants in that portion of the study. Most respondents felt that while teachers lacked appropriate knowledge of giftedness and how to service it, they were far more forgiving of district efforts than the participants in Phase 1. Phase 2 participants often expressed frustration with some practices in the participating district such as identification procedures for gifted services, but felt that the participating district was an enthusiastic supporter of and believer in gifted education, which they felt was the single biggest factor in quality gifted programming from an administrative level. Their beliefs focused far more heavily on teacher

themselves moving beyond curriculum and content and becoming more engaged with the social and emotional aspects of giftedness, which they felt needed to be served more appropriately in the school environment.

To the larger question of attitudes, assumptions, and feelings, the Phase 2 participants expressed other ideas that differed from the Phase 1 data. For example, in Phase 1 the respondents reported that effective differentiation was the most difficult part of good gifted instruction. However, the Phase 2 respondents reported that the larger problem is a lack of instructional and planning time, either for differentiation or anything else. The more experienced among the Phase 2 participants reported a far more comfortable proficiency with effectively differentiating for their gifted learners in the planning and instructional time allotted to them. Those more experienced respondents in Phase 2 expressed frustration with the ability to engage depth and complexity elements in their lesson plans more frequently because of the demands of content coverage associated with the nature of their courses, all of which were tied to Advanced Placement or International Baccalaureate standards at the secondary level.

A final way that the Phase 1 and Phase 2 participants differed slightly was on the place of teacher advocacy for the needs of the gifted. Phase 1 participants reported that teachers were the best advocates for the gifted and their needs. While not refuting that directly, the Phase 2 participants offered a more nuanced position. Phase 2 analysis shows that respondents agreed that teachers were the most important advocates for the gifted, but they also said that that was not an ideal situation. Instead, they felt that teachers had to be advocates for the gifted because parents, who they felt should be the greatest advocates, simply did not know how to do that advocacy very well due to a lack of expertise on the nature and needs of the

gifted and a lack of knowledge about how to navigate the sometimes complicated nature of the school system itself.

Theoretical Coding

After comparison of the axial codes for the Phase 1 and Phase 2 analysis, and triangulation with memoing done throughout the study, it was determined that four theoretical codes emerged from the existing study (see Table 8). Theoretical coding is the final step of grounded theory analysis, when and if the results of a study warrant it, and is meant to explain something about the data in the context in which it was collected (Glaser, 1992). The first of these themes centers on the beliefs about the nature of giftedness among high school teachers of the gifted. The more in-depth responses of the Phase 2 interviews suggest a more nuanced understanding of the nature of giftedness and what servicing it requires among teachers than the more abbreviated responses in the Phase 1 instrument can convey.

Table 8

Emergent Theories from the Current Study

The view of giftedness among high school teachers of the gifted is difficult to classify under current paradigms in the field.

Programming and instruction needs to be re-designed for more effective secondary gifted education.

The social-emotional aspects of teaching the most important aspects of quality secondary gifted education.

Parents, teachers, and students need to be more effective advocates for quality secondary gifted education.

The second theoretical code to emerge from this current study has to do with the current state of programming and instruction. Both Phase 1 and Phase 2 participants expressed

frustration with the current state of their educational practices for the gifted. While they differed on what the exact source of those frustrations might be, all of their responses clearly suggested that time was the commodity that they felt they needed more than anything else.

The third theoretical code to emerge from the current study had to do with the social and emotional aspects of teaching gifted learners. Few respondents in either phase of the study reported a struggle with advanced content or classroom management, for example, but many in both phases reported that they felt their work really had to focus on the mentoring and advocacy elements of educating the gifted at the secondary level. Whether that was guiding students to a larger worldview or helping them cope with the unique social and emotional needs often associated with giftedness, many respondents reported that it was those sorts of tasks that occupied more of their time than more traditional classroom tasks.

The fourth theoretical code to emerge from the current study was on the nature of advocacy for the needs of gifted learner. Respondents in the Phase 1 study felt that teachers were the most important advocates. The Phase 2 participants agreed with that feeling; they saw it as a necessity because the nature of the school system was such that it made it extremely difficult for parents and students to advocate for the needs of gifted learners, leaving teachers as the only intermediaries who both understood the nuances of gifted identification, placement and servicing and who knew students well enough to help them through it.

Discussion

From the perspective of the constructivist approach upon which this study was built, the purpose of grounded theory research is to create a theoretical framework in a situation where there are gaps in the existing knowledge and research, in this case the beliefs about giftedness

among high school teachers of the gifted, and from which future research could arise (Charmaz, 2006). That is to say, this type of research is better designed to posit questions for further research than it is to answer them in a deductive fashion. As such, the four theoretical codes identified in this study are presented herein as actionable research questions (see Table 9) with the sincere hope that they form the basis of future research that affirms or challenges the findings of the current analysis. Note that the discussion following each point is meant to provide a context for each question and what factors might need to be accounted for in future research designs that hope to answer those questions.

Table 9

Emergent Theories from the Current Study posed as Research Questions

Do high school teachers of the gifted favor a gifted child or talent development paradigm of gifted education?

How could programming and instruction be re-designed for more effective secondary gifted education?

Are the social-emotional aspects of teaching the most important aspects of quality secondary gifted education?

How might parents, teachers, and students be more effective advocates for quality secondary gifted education?

Paradigm of Gifted Education

Do high school teachers of the gifted favor a gifted child or talent development paradigm of gifted education? The current study reveals two key factors that may need to be addressed in further research. First, high school teachers of the gifted may believe one way or the other in regards to a gifted paradigm but simply lack the exposure to research-based writing to express that in the commonly used language of the field. Second, the attitudes about

the nature of giftedness may express a practical approach to understanding the construct that is being missed by the current state of research in the field.

On the surface, it may seem shocking that all of participants in the current study seem so under versed in gifted education research and theory. However, the field itself is divided on even the most fundamental aspects of what it means to be gifted. Dai and Chen (2014) identify three major paradigms of giftedness in their work that illustrate a debate in the field over whether giftedness is an inherent quality or something that can be taught or developed. Participants in the current study lacked formal knowledge of that debate. However, when given the chance to explain their thoughts on giftedness, as they were in Phase 2 of the current study, their thinking is far more nuanced than it may appear in cursory surveys or questionnaires.

It might be prudent for the field moving forward to consider the practitioners whose work the research in the field is supposed to support and inform. The preceding literature review, and the very methodology of the current study, are based on the lack of research-based evidence about the perceptions of the people who guide gifted learners through high school and into adulthood. Logic would dictate that their expertise, or perhaps lack thereof, should be of some concern to the larger field of gifted education. If so little is known about their perceptions of giftedness, then it is entirely possible that they at the practitioner level have some insight that may be valuable to researchers and theorists as we seek better understanding and clarity in regards to the nature and needs of the gifted.

Programming and Instruction

How could programming and instruction be re-designed for more effective secondary gifted education? A fascinating development between the two phases of the current study was

the difference in beliefs about the most difficult aspects of effective gifted education. Phase 1 participants felt that differentiation was the most difficult aspect of gifted instruction, although the exact meaning of what was somewhat nebulous. However, Phase 2 responses suggest that it is not because of differentiation practices for individualized learning themselves, but because the struggle to have time either in instruction or planning for many of those practices, such as project- or problem-based learning. All of the participants in the current study taught courses tied to AP or IB standards, a common practice in secondary gifted education, and the demands of those programs, along with the requirements to meet the constantly changing and sometimes unclear state standards identified by Moon, Brighton, and Callahan (2003) create significant demands on instructional and planning time. This, in turn, makes it difficult for teachers to try new or improved instructional practices that might be more beneficial for their gifted learners.

The current study also identifies a consistent frustration with a lack of training time and experiences offered by the participating district. Participants freely admitted that they were heavily reliant on the district for quality training and information on the implementation of gifted services. The reliance of educators on district training for the understanding of giftedness (Siegle & McCoach, 2007), gifted practices (Siegle, *et al.*, 2010), and even the basics of gifted referral (Shcroth & Helfer, 2008) are well documented in the literature. What is noticeably absent are studies that focus on educational leaders and administrators and their knowledge of giftedness. This suggests that future studies may need to focus not only on classroom instructors but also on those who guide gifted programming and what expertise they have and how they effectively pass it on to those at the classroom level.

Social-Emotional Aspects of Giftedness

Are the social and emotional aspects of teaching the most important aspects of quality secondary gifted education? As the data collection and analysis proceeded, a trend that emerged was the correlation between teacher experience with the gifted and an increased focus on the social-emotional elements of teaching. All participants in the current study felt that they had to move beyond the content requirements of their course to develop their gifted learners as a means of expanding the students' understanding of themselves and the world in which they live. More experienced participants in the study clearly saw the mentorship and one-on-one bonding elements of teaching as the most vital and important part of quality gifted education. They felt that gifted students needed them more at the secondary level as friends, mentors, and *de facto* counselors than as deliverers of content. Current research certainly shows the connection between teaching experience and a better understanding of giftedness (Carman, 2011; Geake & Gross, 2008; McCoach & Siegle, 2007; Schroth & Helfer, 2009), but the exact ways in which the role of the teacher of the gifted shifts at the secondary level has yet to be addressed by the field and would be an interesting and insightful course for further research.

Related to this, perhaps, was the question posed to Phase 2 participants in regards to whether gifted people themselves were the best teachers of the gifted. Rosemarin (2014) also posed this question in her research with mixed results in terms of student achievement in the classroom. However, respondents in the current study focused more on personal connections and mentorship in how they answered. Not all respondents self-identified as gifted people, but those that did felt that the gifted themselves were the best instructors of gifted learners. They

were joined in this belief by those teachers with the most experience with gifted learners, whether gifted themselves or not. The respondents all felt that the most important aspect of gifted education at the secondary level was in the social-emotional aspects of teaching, that gifted high school students needed their teachers as mentors and guides more than as content masters. The participants in the current study felt that it was logical, then, that gifted people would naturally understand those aspects of gifted learners better than their non-gifted peers. They were also quick to clarify that being gifted alone was not enough and that like any teacher, gifted people who enter the classroom need training and expertise in vital aspects of the job such as pedagogical skill and content mastery.

There are currently few studies (Rosemarin, 2014) that deal with the question of whether gifted people make the best teachers of the gifted or not. The current study suggests that future research in this area might be beneficial to the field. It also suggests, however, that any study that deals with such a topic would need to delineate what is meant by better, and in what aspects of the craft, when comparing gifted teachers and their non-gifted peers in terms of their effectiveness as classroom instructors of gifted students at the secondary level.

Gifted Advocacy

How might parents, teachers, and students be more effective advocates for quality secondary gifted education? The role of the teacher as advocate for the needs of the gifted also varied in its specificity from Phase 1 of the current study into Phase 2. Respondents on the Phase 1 instrument felt that teachers were the best advocates for gifted students. Participants in the Phase 2 analysis saw their role in it as perhaps a necessary evil in place of more ideal solutions that involved students and parents more fully. Parents of the gifted sometimes lack

the ability or understanding to effectively advocate for the needs of gifted learners, either because they do not understand their own child's giftedness and its manifestations or because they do not understand how to navigate the school system in terms of things like gifted identification and placement for services. Current research suggests that this is especially true for English language learners (Harris, Plucker, Rapp & Martinez, 2009), twice exceptional learners (Rizza & Morrison, 2002; Schultz, 2012) female gifted learners (Bianco *et al.*, 2011), and gifted minority students (Hargrove & Seay, 2011).

Participants in the current study suggested that a possible solution to that problem would be for the school system to assume the responsibility of training students who are gifted, or who show gifted potential, and their parents on how to effectively work within the school system in terms of gifted advocacy. Further research would be required on the effectiveness or feasibility of such a suggestion. Before it became the basis for more widespread programming and spending decisions within the gifted education system at the secondary level, studies would need to demonstrate what result such a practice might yield for the benefit of gifted learners.

Limitations and Future Directions

Grounded theory is well suited to studies that address gaps in existing research literature. It was chosen as a methodology for the current study because there is a gap associated with high school teachers' perceptions of giftedness and gifted education. Addressing this gap is not without limitations.

An obvious limitation for a study of this nature is that created by the dearth of research regarding the perceptions of giftedness among high school teachers of the gifted. In addition, a

study of this type has a relatively small number of respondents due to the time-consuming nature of the data collection design. Future research should consider the employment of member checking of the Phase 2 results with the Phase 2 participants to further verify the trustworthiness of the findings.

A further limitation is created by the fact that school systems simply do not employ a large population of teachers specialized in the education of the gifted, even large suburban ones like the current study's participating district. A small population could also create a situation where there is a commonality in many responses because the participants may very well have known each other prior to the current and shared their ideas on the subject matter addressed herein or attended many of the same trainings in the participating district. This small population could also potentially create a situation where some of the respondents to the Phase 1 instrument are the same as those in the Phase 2 instrument and the demands of participant anonymity and confidentiality would make that impossible to know. Future research seeking to replicate the results of the current study should exercise caution in generalizing the findings herein to other school systems or settings. In fact, a fascinating vein of research would be the comparison of the current study's findings to those using the same methodology in a different educational setting.

As such, the results of the current study should be read with caution. Grounded theory is an inductive approach to research design intended to empirically identify emergent theories that can then be tested with other designs. The theoretical framework suggested by the current study and the questions derived from it should be viewed as the recommendations for further research that they are intended to be.

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Appendix 1

Open-ended Survey Questions from Participating District

Open-Ended Questions

For this section of the survey, the questions are open-ended. It is important that you answer the questions honestly and thoughtfully in your own words.

1. In your own words, define what it means to be gifted and talented.
2. In your own words, describe the role of the educator in teaching gifted learners.
3. What, in your opinion, are the most essential practices for the effective education of gifted and talented children? Please be as specific as possible.
4. In your own words, describe what you see as your most important role in the education of gifted learners.
5. What do you feel is your purpose and place as a gifted instructor within the district's larger program for the education of the gifted?
6. How often do you read books or scholarly works on the subject of G/T?
7. What specific books or materials have been especially important to you in formulating your
8. understanding of giftedness and why?
9. Explain what you think is the role of the educator in the social/emotional development of the gifted learner.
10. How prepared do you feel to effectively service special populations of gifted students (minority, low SES, twice exceptional learners, ELLs, etc.) and what would help you do that work better?
11. What is your biggest weakness in terms of understanding or educating gifted learners?

Appendix 2

Semi-structured Interview Script for Data Collection

1. In your own words, can you define giftedness?
 - a. Can you elaborate (common phrases may be things like *creative* or *outside-the-box*)?
 - b. Can you provide an example?
2. In your own words, what does it mean to be gifted?
 - a. Can you elaborate?
 - b. Can you provide an example?
3. What, do you think, are the biggest struggles facing gifted students today?
 - a. Can you elaborate?
 - b. Can you think of an example with one of your own students?
4. What do you think is the general level of understanding of giftedness among your working peers?
 - a. Can you elaborate?
 - b. Can you think of a time when you saw this on display in the school environment?
5. What practices do you think would be more effective for your classroom should they be adopted by your district?
 - a. Could you be more specific?
 - b. What makes you feel that this would be an improvement?
6. What practices or policies in regards to gifted education do you think your district should abandon?

- a. Can you elaborate?
 - b. What makes you feel that this practice or policy is ineffective?
- 7. What is a practice or procedure in regards to the gifted that you feel your district really gets right?
 - a. Why do you say that?
 - b. Why do you favor that practice or procedure?
- 8. What is something the district definitely needs to improve upon in terms of the gifted program?
 - a. Can you be more specific?
 - b. Can you think of an example of the consequences of this policy?
- 9. In your own words, describe what you see as your most important role in the education of gifted learners?
 - a. Can you elaborate?
 - b. Can you think of an example where this was part of your own work with gifted students (seek specific anecdote)?
- 10. What are your biggest frustrations as an instructor of the gifted?
 - a. Can you be more specific?
 - b. Can you give an example of a time where you faced this and how you dealt with it?
- 11. If I asked your gifted students, what do you think their frustrations would be with the gifted program?
 - a. What makes you think so?

- b. Can you give an example?
- 12. What are your favorite works or writings in the area of giftedness?
 - a. Can you think of a specific writer or scholar?
 - b. What attracts you to his or her work?
- 13. Describe your thoughts on the following statement: *Giftedness, or being gifted, refers to certain natural abilities that some people are just born with.*
 - a. Why do you agree or disagree?
 - b. What about the statement do you particularly like or dislike?
- 14. Describe your thoughts on the following statement: *Differentiating instruction for individualized learning is the most difficult part of gifted education.*
 - a. Why do you agree or disagree?
 - b. What about the statement do you particularly like or dislike?
- 15. Describe your thoughts on the following statement: *The formal knowledge of giftedness among teachers and the district's programming for it are both inadequate to the task of gifted education.*
 - a. Why do you agree or disagree?
 - b. What about the statement do you particularly like or dislike?
- 16. Describe your thoughts on the following statement: *Teachers are the most important advocates for gifted students and their needs.*
 - a. Why do you agree or disagree?
 - b. What about the statement do you particularly like or dislike?

17. Describe your thoughts on the following statement: *The best teachers of the gifted are gifted people themselves.*

- a. Why do you agree or disagree?
- b. What about the statement do you particularly like or dislike?

HIGH SCHOOL TEACHERS' PERCEPTIONS OF GIFTEDNESS: A SYSTEMATIC REVIEW

The field of gifted education has long struggled with issues of definition for seemingly simple but, in fact, very complex terms such as *gifted*, *giftedness*, and *gifted education*. Add to this the closely related and equally complex constructs of *intelligence* and *creativity* and it is no great surprise that researchers, theorists, and practitioners within the field often struggle to explain to policy-makers, parents, and sometimes even students the importance of the field to those it services. Within the field, the problem of giftedness, used here in the general sense to refer not only to programming but also to those individuals said programming serves, understanding is further complicated by variables such as the limitations of current science to understand the mind and how it works. Additionally, widespread differences among researchers in the field go beyond programming and service models and actually amount to paradigmatic differences in the understanding of giftedness and gifted education practice (Dai & Chen, 2014).

Debate and discussion is necessary at the research level but is often confusing and frustrating for the classroom instructor as he or she seeks to provide the best possible services to his or her students in the face of competing ideas and research. The confusion and frustration is often compounded by federal, state, and local mandates that seemingly change from one place to the next and the often confusing and contradictory curriculum models adopted by local school systems in the age of high-stakes standardized testing (Moon, Brighton, & Callahan, 2002). High school teachers of the gifted also usually have the requirements of Advanced Placement or International Baccalaureate standards that they must satisfy for the

courses they offer to their gifted learners (Hertberg-Davis & Callahan, 2008; Kyburg, Hertberg-Davis, & Callahan, 2007; Schmitt & Goebel, 2015).

Existing research contains few studies in regards to the knowledge and understanding of the nature and needs of gifted students among high school teachers. This makes the current study of particular import for two reasons. The first is the knowledge gap this creates about the perceptions and expertise of those educators who guide gifted learners out of high school and into college and adulthood. The second is a suggestion from the research that the negative perceptions of educators can have a detrimental effect on school-wide practices in regards to placement for gifted services (Schroth & Helfer, 2009; Siegle, Moore, Mann, & Wilson, 2010), especially as it relates to gender (Bianco, Harris, Garrison-Wade, & Leech, 2011) and race (Hargrove & Seay, 2011), and research-supported best practices for gifted learners such as acceleration (Missett, Brunner, Callahan, Moon, & Azano, 2014) and ability grouping (Fiedler, Lange, & Winebrenner, 2002).

Using systematic review methodology (Khan, Kunz, Kleijnen & Antes, 2003), the current study sought to examine empirical research on the thoughts, feelings, and perceptions of high school teachers about the nature of giftedness and gifted education. The preliminary review began with the overarching question: How do high school teachers understand the concept of giftedness? Preliminary analysis identified a series of closely related themes that led the initial question to be refined into three research questions that guided the review:

RQ1: How do high school teachers of the gifted perceive giftedness?

RQ2: What assumptions, attitudes, and feelings do high school teachers of the gifted have about gifted education?

Background

Operationalizing what is meant by the terms *gifted* or *giftedness* is a frequent concern in the research and practice of gifted education (Subotnik, Olszewski-Kubilius, & Worrell, 2011). Paradigmatic differences have led to such a variety of conceptual models (Borland, 2005; Cross & Coleman, 2005; Gordon & Brigdall, 2005; Monks & Katzko, 2005; Renzulli, 2005; Runco, 2005) that they have yet to ever even be counted (Borland, 2005). Despite the vast array of competing ideas, Monks and Katzko (2005) offer the practical advice to school systems to choose a theoretical model in which to ground their programming, though several studies show little thought given to that advice (Carman, 2011; Coleman, 2014; de Wet & Gubbins, 2011; Rizza & Morrison, 2002; Schroth & Helfer, 2008; Schroth & Helfer, 2009; Siegle et al., 2010; Siegle, Wilson, & Little, 2013).

Prior research also identified a general lack of knowledge among teachers about the nature and needs of gifted children (Bianco et al., 2011; Brown, Renzulli, Gubbins, Siegle, & Zhang, 2005; Geake & Gross, 2008; Schroth & Helfer, 2009), especially among pre- and early-service educators (Carman, 2011) when compared to more experienced educators (de Wet & Gubbins, 2011; Schroth & Helfer, 2008). While much of that same research suggested training and experience with gifted learners improves upon that body of knowledge among teachers (McCoach & Siegle, 2007; Siegle et al., 2010), studies also show a hesitation among even experienced teachers to embrace some research-supported practices, especially ability grouping (Missett et al., 2014) and academic acceleration (Siegle, McCoach & Shea, 2014; Siegle et al., 2013).

Those problems are considerable and perhaps related, but the larger issue identified by the current study is a lack of research. To date there is a shortage of research about the perceptions of giftedness among high school teachers of the gifted. The field simply knows very little about those individuals who finish the instruction of gifted learners in the K-12 education system and what affect their perceptions might have on the quality of that education or the development of gifted learners as they enter adulthood.

Methods

The current study used a systematic review methodology for the review of the research literature. Systematic review as described by Khan, Kunz, Kleijnen, and Antes (2003) follows five basic steps. First, a clear question is stated, though this question might be refined as the analysis continues. Then relevant research is identified by a broad search of the relevant research field. The third step is to then assess the quality of the research studies identified based on clear study selection criteria. The evidence from the studies is then summarized and analyzed for commonalities and is finally interpreted by the researchers as part of the research report.

Search Parameters

The current search for literature encompassed the fields of education, educational psychology, and psychology. Electronic databases searched included Academic Search Complete, ERIC, and psycINFO. Each search was limited to empirical studies published in peer-reviewed journals. Searches were performed against article abstracts and supplemental searches were performed against article titles to ensure the most thorough collection of research possible. The database search concluded in July, 2016.

Search Terms

Search terms were compiled in a multi-stage process. First, an informal list of synonyms and terms related to giftedness was compiled and each used as the keyword for a preliminary search of the literature where it was determined that most of the terms produced the same search results. The initial search showed that the terms *gifted*, *gifted and talented*, and *gifted education* produced the best results in terms of identified literature and that using each of the terms separately produced enough difference in the results to justify using all three terms as *and/or* keywords for the search. Table 10 lists the number of articles found in each database and displays the search limiters for each. Once the list from each database was compiled, the identified literature was visually scanned for duplicates and to ensure that each article met the criteria for inclusion.

Table 10

Search Parameters and Initial Results

Search Terms	Database	Search Limiters	Hits
gifted OR gifted and talented OR gifted education	Academic Search Complete	Peer Reviewed Journal Publication Type: Academic Journal Publication Years: 2000-2016 Subject: Teachers	59
gifted OR gifted and talented OR gifted education	ERIC	Peer Reviewed Journal Publication Type: Academic Journal Publication Years: 2000-2016 Subject: Teacher Attitudes	113
gifted OR gifted and talented OR gifted education	PsychInfo	Peer Reviewed Journal Publication Type: Academic Journal Publication Years: 2000-2016 Subject: Teacher Attitudes	38

Inclusion Criteria

Due to the relatively small number of articles in the larger literature related to the current research topic, all articles identified by the search terms and limiters were included as long as they met certain criteria. First, the article had to come from a peer-reviewed journal and be available for public consumption in electronic form. Second, it had to have been published between 2000 and 2016 to represent the current attempt to identify recent trends in the field on the current topic of research. Third, the article had to be related to the perceptions of secondary teachers. For the sake of thoroughness, articles were included under this third criterion if the subjects in the study were a mix of elementary and secondary educators. Also included were articles where the primary topic of study was something such as public policy or student perceptions of gifted programs or teachers that were closely related to the perceptions of high school teachers of the gifted. This brought the number of articles from the systematic review to 31 (see Table 12).

Data Analysis

Data were analyzed using the qualitative method of thematic analysis to identify patterns within the selected literature. A thematic analysis as described by Braun and Clark (2006) proceeds through six phases. First, researchers must become familiar with the data. In the current study, familiarity with the data was accomplished during the analysis for the inclusion criteria. Second, initial codes were generated for the data extraction process. Initial codes were developed to extract key data around the variables of policy and practice affecting gifted education, perceptions of gifted students about gifted programs and the teachers within them, and the perceptions of teachers of the gifted about the nature and needs of the gifted.

This third extraction variable, representing the bulk of the included literature, was further subdivided into extraction variables of assumptions (those beliefs about giftedness among pre-and early-service teachers), attitudes (beliefs about giftedness among more experienced in-service teachers), and practices (the beliefs of teachers of the gifted about what are best instructional practices). Identifying and refining themes was the work of the next three phases; (a) searching for themes, (b) reviewing themes, and (c) defining themes. Finally, a clear statement of the themes was compiled. Final themes were generated following Braun and Clark's (2006) definition of a theme as an element that "captures something important about the data in relation to the research questions and represents some level of patterned response or meaning within the data set" (p. 82).

Results

The articles reviewed for this study ranged in publication from 2000 to 2016 in an attempt to capture relatively current research on secondary teachers' perceptions of giftedness. The included articles were all published in English, with the majority of the research coming from the United States. The systematic review process identified a number of major themes which are summarized in Table 11. The initial step of the thematic analysis involved familiarization with the data by reading and examining the research studies through the current inclusion criteria. The second step was the coding of identified research into broad categories of policy and practice affecting gifted education, perceptions of gifted students about gifted programs and the teachers within them, and studies that dealt directly with the perceptions of teachers of the gifted about the nature and needs of the gifted.

Table 11

Themes Extracted with Prevalence in Reviewed Studies

Theme	Prevalence
Training or experience with the gifted affects how teachers perceive giftedness.	22
Teachers perceive public policy as uneven in the support of and guidance for gifted programs.	3
Classroom practices in gifted programs vary, but all perceived to need considerable support to implement by teachers.	6
Absent proper training, teachers sometimes perceive research-supported best practices as detrimental to gifted learners.	3

The third step involved the creation of extraction variables as it related to the identified research. Common to all of the research were the recurring themes of teacher training and experience and their effect on perceptions of giftedness, and the effect of these perceptions on practice. These extraction variables were coded as *assumptions*, referring to those untrained beliefs of pre- and early-service teachers, *attitudes*, referring to those beliefs about giftedness among more experienced in-service teachers, and *practices*, referring to those behaviors towards gifted education influenced by the aforementioned assumptions and attitudes. Their application to the data in the refinement process led to the identification of the following major themes.

Major Themes

Training or experience with the gifted affects how teachers perceive giftedness. Twenty-two of the reviewed papers highlighted the differences between pre- and early-service teachers

compared to more experienced teachers of the gifted or between those who specialize in gifted education versus other school personnel. In general, training or experience with gifted learners was shown to be the most important factor in determining the attitudes about giftedness among teachers of the gifted (Carman, 2011; Evans, Bickel, & Pendarvis, 2000; Geake & Gross, 2008; McCoach & Siegle, 2007; Schroth & Helfer, 2009).

Training in the nature of giftedness, or lack thereof, affected the gifted referral process (Brown et al., 2005). Siegle et al. (2010) echo the importance of training and suggest that this training not only helped to deepen teacher understanding of inside-school variables such as academic achievement and how it relates to giftedness, but also how outside-school variables such as socioeconomic status and how it can impact gifted manifestation. Further research shows that training and experience with gifted learners and the variety of their unique experiences has a profound impact on the correct placement and services for gifted students who are culturally and linguistically diverse learners (deWet & Gubbins, 2011), English language learners (Harris, Plucker, Rapp & Martinez, 2009), twice exceptional learners (Rizza & Morrison, 2002; Schultz, 2012) female gifted learners (Bianco et al., 2011; Willard-Holt, 2008), and gifted minority students (Hargrove & Seay, 2011).

Schroth and Helfer (2008) suggest the problem of a lack of training could have broader implications than just the ineffective practices of any one teacher. Teacher referrals of students for gifted services is a common tool in proper screening. However, their study showed a persistent lack of regard for the teacher referral as part of gifted identification screening among a variety of school personnel, including teachers and administrators, with the exception of

trained gifted specialists who valued them greatly and saw them as essential for proper placement of gifted students for services.

Training or experience with gifted children was also shown to affect such things as the willingness to believe popular misconceptions about giftedness (Fiedler et al., 2002), public policy relating to gifted and talented education (Mendoza, 2006), and the job satisfaction and effectiveness of those who teach the gifted (Coleman, 2014; Rosemarin, 2014; Siegle et al., 2014). This importance of training or experience for teachers of the gifted was reinforced by the attitudes of gifted learners about their own educational experiences who reported far more rewarding and meaningful gifted learning experiences in high school when their teachers were well versed in not only the academic needs of gifted learners (Hertberg-Davis & Callahan, 2008) but in the social and emotional aspects of giftedness as well (Schmitt & Goebel, 2015).

Teachers perceive public policy as uneven in the support of and guidance for gifted programs. Some of the included research studies addressed the issues of public policy and its effects on gifted programming. Previous studies of national and state-wide data have shown radical disparity in funding for and access to quality gifted programming (Baker, 2001; Kettler, Russell, & Puryear, 2015). The studies identified in the current study show teachers generally mistrust education mandates such as *No Child Left Behind*. Mendoza (2006) interviewed several teachers of varying degrees of experience, and it was felt by all that the one-size-fits-all mandates of that accountability legislation would be detrimental to special populations, such as gifted children, because it would not take into account the unique needs of their learning and the time and instructional methodology associated with it.

Increased state and federal demands for standardized testing were also shown to be of particular concern to classroom teachers of the gifted. Moon et al. (2002) found teachers generally felt those state and federal demands were a distraction from effective classroom instruction and they were especially detrimental to effective gifted instruction and the proper allocation of classroom instructional time. Similarly, Casey and Koshy (2013) demonstrated teacher perceptions could be swayed in favor of education policy reforms when said policy was perceived as inclusive and beneficial for gifted learners. Their study of classroom instructors of the gifted in the United Kingdom showed teachers over a period of time were generally accepting of government reform measures in gifted education when the policy enacted by the government took into account the thoughts, feelings, attitudes and opinions of experienced classroom educators and of gifted learners themselves as well as the results of action research conducted in the classroom environment by educators.

Classroom practices in gifted programs vary, but all are perceived to need considerable support to implement by teachers. Six of the articles included for review dealt with teacher beliefs about the need for school-level support of classroom practices for the gifted. With the increased push for meaningful STEM education, teachers expressed frustration with campus-level technology services they felt were vital for the effective research and independent study of specific topics of interest among their gifted learners (Besnoy, Dantzler, & Siders, 2012). The usefulness of those services relied heavily on adequate computer access and reliable internet connectivity, something the participants in the study felt they sometimes lacked for their classroom environments.

High school teachers expressed frustration with the reliance on Advanced Placement (AP) courses as the gifted education program (Kyburg et al., 2007). The reliance on undifferentiated AP courses as the “go-to” solution for gifted learners is a common solution for schools that struggle with gifted funding and programming. But the more experience with gifted learners a teacher has, the more likely he or she will express dissatisfaction with this approach as a means of service for gifted learners. Teachers who work with gifted learners need effective training and support to implement differentiation strategies that shape classroom experiences to the needs of gifted learners, regardless of the level of curriculum.

School-within-a-school models were positively received by gifted learners and teachers, but both expressed some concern over the relationship between the gifted program and the larger campuses on which they were housed (Matthews & Kitchen, 2007). Inquiry-based learning was seen as effective but often curtailed by campus level demands to devote instructional time to standardized testing (Oppong-Nuako, Shore, Saunders-Stewart & Gyles, 2015).

Perceptions of the school environment itself was also an important factor in perceptions of effective gifted programming among teachers. Siegle, McCoach, and Shea (2014) demonstrated that the perceptions of the school environment as a place of meaningful learning that fosters self-efficacy was shown to aid both teacher job satisfaction and student success. Further, Young and Balli (2014) showed those same perceptions among teachers and students and the effect it had on teacher perceptions and practices with gifted learners could act as a meaningful contributor to school choice decisions made by parents of the gifted.

Teachers sometimes perceive research-supported best practices as detrimental to gifted learners. Three articles identified for inclusion in this study dealt with teacher attitudes towards practices well supported by research in the larger field of gifted education. There was a persistent hesitation to embrace practices of ability-grouping (Missett et al., 2014) and acceleration (Siegle et al., 2013) among even experienced teachers of the gifted. Fiedler et al. (2002) identify several myths about ability grouping and the perceptions that come with it because, as they point out, it is sometimes seen as a form of “tracking” by some teachers, a practice that fell out of favor through misuse in the 1990s, despite the large body of research (and the law in many places) that support ability grouping as a proven practice for servicing gifted learners. Siegle et al. (2013) conducted similar research on the practice of academic acceleration. Despite the general acknowledgment of acceleration as a best practice for gifted education with no documented detriments for students, many teachers expressed concerns about the social and emotional well-being of gifted children accelerated into classes with older students.

Missett et al. (2014) demonstrated perceptions of the nature and needs of gifted learners and research-supported practices for them among teachers could be improved with proper teacher training. Central to this change in perception was an understanding by educators of formative assessment and how it could be used in an on-going way to help students reach their full potential. Their research showed that educators were much more likely to perceive both ability grouping and acceleration in a more favorable way if they had had proper training in formative assessment procedures and the relationship between those assessments and the proper application of ability grouping and acceleration procedures.

Discussion

How teachers understand the concepts of giftedness and gifted education is important because teacher perceptions may have an effect on educational practices for gifted learners. For instance, several studies suggested that teachers' negative or inaccurate perceptions of giftedness or gifted programs can have a detrimental effect on school-wide practices in regard to placement for gifted services (Schroth & Helfer, 2009; Siegle et al., 2010) especially as it relates to gender (Bianco et al., 2011) and race (Hargrove & Seay, 2011), and research-supported best practices for gifted learners such as acceleration (Missett et al., 2014) and ability grouping (Fiedler et al., 2002).

The field of gifted education struggles to agree on what it means to be gifted (Borland, 2005). However, there are some models and definitions that are perhaps more relevant to the perceptions of high school teachers of gifted learners than teachers at other levels (Borland, 2005; Cross & Coleman, 2005; Gordon & Brigdall, 2005; Monks & Katzko, 2005; Renzulli, 2005; Runco, 2005). As the current review indicates, little is known about high school teachers' perceptions of giftedness and gifted education or how those perceptions might affect generally agreed upon practices for gifted learners in a classroom environment (Russell, 2015). Existing studies that have reported on these perceptions point to potential inconsistencies and even possible inhibiting beliefs.

Monks and Katzko (2005) observed that giftedness is a term that can mean more than one thing, but that any programming model for gifted learners should adhere to three guiding principles: (a) grounding in a theoretically based model of giftedness, (b) high methodological standards, and (c) accounting for identification difficulties related to social preconceptions such

as those of women and ethnic minorities. They further point out that many gifted programs do not meet those criteria, a problem that no doubt adds to the sometimes unclear perceptions of gifted education reported by many high school teachers. This is a particular problem because, as the research included herein has shown, training and experience with gifted learners is vital to the proper servicing of those learners. The reality is that teachers often receive their training through the school system in some fashion (Brown et al., 2005; Cross & Coleman, 2005). Therefore, a lack of purpose in programming or the lack of a clear theoretical underpinning as to the purpose of gifted education could have serious implications for what is prioritized in terms of on-going teacher training as well as for teachers' understanding of their role in the gifted identification process and how essential that it is.

Training and experience is also vital in terms of understanding the social and emotional aspects of educating the gifted. For example, the classic stereotypes of gifted children as intellectuals or "nerds" were widely present in the assumptions of less experienced teachers (Carman, 2011), though the field has long ago abandoned those stereotypes and even shown them to be unfounded in many instances (Brown et al., 2005). This suggests that experience with or training in gifted education seems to provide educators with a more well-rounded understanding of giftedness, how it manifests, and what it might look like when it does.

Caution must be urged, however, as it can be shown that even experienced teachers of the gifted develop stereotypes about giftedness that can be detrimental to the experience of gifted learners who do not fit the mold that those stereotypes can create. This is especially true for those who might treat training and experience as synonyms when they are not. It is entirely possible for educators to have years of *experience* with gifted learners in their classrooms, but

never to have been properly trained in how to correctly service them. These educators, then, have only their own experiences to draw on for understanding of these students. For example, it is not difficult to envision a scenario in which a teacher in a mixed ability classroom might have seen several misplaced or improperly serviced gifted learners “act out” or disturb the learning environment of their on-level peers because they were not appropriately stimulated by the lesson. From this, the teacher might naturally develop a stereotype of gifted students as disruptive or not committed to school and learning. Or perhaps a teacher in a similar situation has had gifted students who were advanced in their school work and were able to help or tutor the other students in the classroom who did not grasp the material as well. From this, he or she develops the belief that all gifted learners are academically gifted and best suited to learning situations where they assist their struggling peers. Neither is a complete picture of giftedness and how it might manifest, and both serve as a detriment to a gifted child in that environment who does not fit the teacher’s anecdotally formed stereotypes (Geake & Gross, 2008).

The aforementioned attitudes about acceleration are another excellent example of how even experienced teachers of the gifted can fall into unfounded beliefs about gifted education. Given the sometimes very advanced academic skills of very young gifted children who might need to be grade accelerated into a classroom environment with students several years older than they are, and in the absence of training based on research that shows the evidence that supports it (Siegle et al., 2013), it is not difficult to imagine how a teacher might see the practice as less than ideal because school systems are almost universally structured to cluster children with their age-level peers.

Ability grouping is a more obvious way in which experienced teachers of the gifted

might benefit from training that confirms it as a best practice for gifted learners. In a mixed ability classroom, for example, it would be very easy to allow a gifted learner to become a kind of “second teacher” to his or her non-gifted peers by grouping the gifted learner with them in a mixed-ability group (Missett et al., 2014). And indeed, positive experiences may result for the class as a whole, but research has generally shown that the gifted learner’s own educational needs are not met by that arrangement and that point may be lost on an educator who lacks the training to understand it.

Experience or training with giftedness and gifted learners, then, can be shown to create improvements for the field in three ways. First, training or experience translates into better classroom practices and can be shown to do so even for teachers with years of classroom service. Second, though less represented in the literature, training and experience seem to result in better teacher engagement with a gifted education assignment and the work associated with it (Siegle et al., 2014). Finally, training and experience provide educators with a much more meaningful understanding of the role of the teacher in the gifted identification process.

High School Teachers of the Gifted

The current analysis shows that a special concern must be given to understanding the concerns and frustrations of high school teachers of the gifted in regards to the public policies and practices that influence the structures of their classrooms. And while a complete analysis of those policies and practices are far beyond the scope of the current review, a few relevant points reflected in teacher self-reports are worth mentioning.

Teachers expressed frustration with a number of issues related to standardized testing,

finance, policy directives, and those who make policy directives. And while all of this has the potential to create unclear guidelines for the gifted classroom (Kyburg et al., 2006; Moon et al., 2002), the evidence does not suggest that teachers are necessarily resistant to broad policy changes in regards to gifted policy. As Casey and Koshy's (2013) work suggests, teachers of the gifted are far more likely to perceive public policy changes as worthwhile when those policies are formulated with the meaningful input of both gifted learners and their teachers. This is an emerging area in the literature, but as the field moves forward there are exciting implications to the idea of research that focuses on the role of teachers of the gifted and how they can be purposefully engaged in shaping public policy decisions for gifted education.

Limitations

Some clear limitations and gaps in the knowledge were identified in the current study. First, there was little or no research that dealt with the understanding of gifted theory or conceptual models among teachers of the gifted. This makes it very difficult to analyze teacher understandings of giftedness because it is difficult to ascertain if researchers and practitioners are even speaking the same language when giftedness comes up for discussion. The second closely related limitation is the lack of research on teacher perceptions of giftedness in the broader sense. To date, there is a lack of research in the area of high school teachers' perceptions of giftedness.

Implications

The purpose of the current study was to conduct a systematic review of the research literature to identify how high school teachers of the gifted understood the concept of giftedness. That analysis suggests that the existing research in the field identifies some key

points in the understanding of this conceptualization and those related to it.

First, the data suggests a clear difference in the perceptions of giftedness among pre- and early-service teachers, identified herein as assumptions, and the perceptions of their more experienced peers, referred to in this study as attitudes. This clearly implies that meaningful training in research-supported best practices is an essential part of the appropriate programming for and servicing of gifted learners.

Second, the current study shows that the assumptions and attitudes of teachers of the gifted have a clear effect on the practices those teachers implement in the classroom environment. Further, the research shows that this effect on practice is a detrimental one when there is a lack of understanding about the nature and needs of giftedness.

The review also identified some intriguing avenues for further research. First, there is a need for studies that deal with the conceptual and theoretical understandings of giftedness among high school teachers. It will be difficult moving forward in the field to bridge the gap between research and practice if professionals cannot be certain that they are communicating about similar concepts when discussing giftedness. Second, there is a clear need for more studies dealing with research-based best practices for gifted classrooms. This research also requires an analysis of why some practitioners might be hesitant to embrace those practices and what steps the field may need to take to facilitate their dissemination. Third, there is a need for research dealing with the frustrations among instructors of the gifted in regards to gifted education. What exists in the literature suggests a general disapproval among teachers in regards to public policy affecting gifted education, but it is unclear what further specific issues facing the gifted classroom might be contributing to that frustration as well.

Table 12

Summary of Reviewed Articles

Author/Year	Purpose	Country	Grade Level	Research Design	Methods	Major Findings
Besnoy, K., Dantzler, J., & Siders, J. (2012)	To determine how and when educators of the gifted employ classroom technology	USA	Secondary	Cross-sectional	Survey	Technology most frequently used by teachers in a gifted classroom environment to support independent research and study. For technology implementation to be effective, teachers need meaningful support from school system.
Brown, W., Renzulli, J., Gubbins, E., Siegle, D., & Zhang, W. (2005)	To determine the assumptions underlying gifted identification	USA	Elementary /Secondary	Cross-sectional	Survey	Teachers generally favored broader definitions and criteria for identifying giftedness, especially gifted educators in urban areas.
Bianco, M., Harris, B., Garrison-Wade, D., & Leech, N. (2011)	To identify the presence of gender bias in gifted referrals	USA	Elementary/ Secondary	Mixed Methods	Group interviews/ χ^2 analysis	The gifted referral process is significantly influenced by gender of the student. Teachers more likely to refer males described in the same fashion as females. Bias present in the language of respondents that suggested a “boys will be boys” mindset.
Carman, C. (2011)	To determine assumptions about giftedness among pre- and early-service teachers	USA	Elementary/ Secondary	Mixed methods	Group interviews/ χ^2 analysis	Both pre- and early-service teachers held stereotypical views of gifted kids in at least 4 of 6 categories.
Casey, R., & Koshy, V. (2013)	To determine the effect of recent policy changes on G/T teaching practices in the UK	UK	Secondary	Longitudinal	Multiple surveys	Shifting policy led to better identification and servicing of gifted learners, especially among low SES students, from 1996 to 2011. Action research and student voices were essential in producing the change.
Coleman, L. (2014)	To record the emotional experiences of a teacher of the gifted	USA	Secondary	Case study	Observation Interviews	The excitement and intellectual stimulation of the G/T classroom was more rewarding for the subject of the study.
de Wet, C., & Gubbins, E. (2011)	To determine beliefs about CLED gifted students among in-service teachers	USA	Secondary	Cross-sectional	Survey/ Factor Analysis	Teachers broadly supported the inclusion of CLED students in G/T, though states that mandated G/T services seemed to increase that receptiveness.
Evans, R., Bickel, R., & Pendarvis, E. (2000)	To determine beliefs about talent as either innate or trained	USA	Elementary/ Secondary	Cross-sectional	Survey/ Factor Analysis	Parents, students, and teachers share a belief in innate talent and hard work. Teachers more likely to believe in formal schooling as an essential element in talent development.

Author/Year	Purpose	Country	Grade Level	Research Design	Methods	Major Findings
Fiedler, E., Lange, R., & Winebrenner, S. (2002)	To address common myths about giftedness	USA	Not reported	Cross-sectional	Meta-analysis	Myths about ability-grouping persist despite a large body of research supporting the practice.
Geake, J., & Gross, M. (2008)	To explore the negative effects on students of teacher attitudes about the gifted	UK/Aus	Secondary	Cross-sectional	Survey	Teachers held persistent beliefs about G/T kids as high cognitive, social misfit, anti-social leaders, but did not necessarily see that as a bad thing. The stereotypes may be detrimental to gifted learners who fit into a more traditionally academic model of giftedness.
Hargrove, B., & Seay, S. (2011)	To determine teacher perceptions of barriers to black males participating in G/T programs	USA	Secondary	Cross-sectional	Survey	Both white and black teachers were cognizant of outside-of-school barriers to black male participation in G/T programs, but black teachers were far more likely to recognize inside-the-school barriers to those students as well.
Harris, B., Plucker, J., Rapp, K., & Martinez, R. (2009)	To examine the potential complications of identifying G/T English language learners	USA	Secondary	Case study	Interviews Secondary data analysis	The barriers to ELL participation in G/T are widespread and include curriculum and programming designs, state-level policy and support, assessment practices, parental involvement, and lack of proper staff training on manifestations of giftedness.
Hertberg-Davis, H., & Callahan, C. (2008)	To examine G/T students' attitudes about AP/IB courses and the teachers who teach them	USA	Secondary	Cross-sectional	Questionnaire Interviews	G/T students in AP/IB courses prefer less lecture-heavy coursework and more independent work to accommodate their learning styles. G/T students see AP/IB as essential for college entrance.
Kyburg, R., Hertberg-Davis, H., & Callahan, C. (2007)	To determine the effectiveness of AP/IB courses for gifted minorities	USA	Secondary	Case study	Observation / Interview	Key factors to nurturing talented minorities include a belief in the success of minority students and successful scaffolding to make up for educational deficits.
Matthews, D., & Kitchen, J. (2007)	To determine the effectiveness of school-within-a-school gifted programs for G/T	Canada	Secondary	Case study	Questionnaire	Both teachers and students reported a high degree of satisfaction within school-within-a-school models, but also expressed concerns about the relationship between the program and the larger campus.
McCoach, D., & Siegle, D. (2007)	To determine what factors predict teacher attitudes towards G/T	USA	Secondary	Cross-sectional	Survey	Training or experience with gifted learners was the most predictive factor of positive attitudes toward gifted learners and programs.
Mendoza, C. (2006)	To determine teacher attitudes about the effects of No Child Left Behind on G/T	USA	Secondary	Cross-sectional	Interview	Teachers reported that the increased demand for standardized testing had become a significant distraction from meaningful G/T instructional time.

Author/Year	Purpose	Country	Grade Level	Research Design	Methods	Major Findings
Missett, T., Brunner, M., Callahan, C., Moon, T., & Azano, A. (2014)	To examine teacher beliefs about acceleration, ability-grouping, and formative assessment	USA	Secondary	Descriptive	Observations/ Interviews	Teachers and school systems hesitate to embrace ability-grouping and acceleration. The effective implementation of formative assessment practices increases the acceptance of these practices.
Moon, T., Brighton, C., & Callahan, C. (2002)	To determine the effects on gifted education created by the increased demand of standardized testing	USA	Elementary/ Secondary	Descriptive	Survey/ Focus group	Standardized testing contributes to teachers abandoning effective G/T practices and instructional time in favor of test-oriented curriculum.
Oppong-Nuako, J., Shore, B., Saunders-Stewart, K., & Gyles, P. (2015)	To determine the extent of inquiry learning in gifted education classroom environments	USA/ Canada	Secondary	Descriptive	Interviews	Results suggest that inquiry-based learning is most prevalent in Humanities-type environments and that one-size-fits-all curriculum inhibits inquiry based learning
Rizza, M., & Morrison, W. (2002)	To identify the effects of stereotypes about gifted students with disabilities	USA	Secondary	Cross-sectional	Survey	Teachers with less training in 2E are more likely to identify disabilities before giftedness, perhaps missing giftedness entirely.
Rosemarin, S. (2014)	To determine if gifted students are best instructed by gifted teachers	Israel	Secondary	Cross-sectional	Meta-analysis	The few studies on the subject differ, but skills attributed to good teachers of the gifted are also typical characteristics of the gifted.
Schmitt, C., & Goebel, V. (2015)	To document the attitudes of G/T students towards their educational experience	USA	Secondary	Case study	Interviews/ Focus groups	Students reported that their best experiences were with teachers who knew them well, suggesting that the social and emotional engagement of teachers with gifted learners is an important part of instruction.
Schroth, S., & Helfer, J. (2008)	To determine beliefs of teachers about gifted identification	USA	Secondary	Cross-sectional	Survey	G/T teachers, administrators, and regular teachers agreed on multiple measures for gifted identification, but gifted teachers placed more value in teacher referrals than the other groups.
Schroth, S., & Helfer, J. (2009)	To determine teachers' conceptions of giftedness in relation to academic talent	USA	Secondary	Cross-sectional	Survey	Educators in general tend to support traditional models of giftedness but were more hesitant to embrace models with less traditional concepts of giftedness than were instructors of the gifted.
Schultz, S. (2012)	To the examine the experience of twice exceptional students in G/T classrooms	USA	Secondary	Descriptive	Interviews	2E students struggle with systematized AP-for-GT models, but this is minimized by school culture aspects of positivity and support in the form of scaffolding and individualized tutoring time.

Author/Year	Purpose	Country	Grade Level	Research Design	Methods	Major Findings
Siegle, D., McCoach, D., & Shea, K. (2014)	To determine if Siegle's Achievement Orientation Model could be used to predict G/T teacher job satisfaction	USA	Secondary	Cross-sectional	Survey	Results suggest that the self-perception areas of the AOS related to meaningfulness, self-efficacy, and environmental perception were not only predictive of student success but also of teacher job satisfaction in gifted education environments.
Siegle, D., Moore, M., Mann, R., & Wilson, H. (2010)	To determine which factors influence teacher nominations among in-service and pre-service teachers	USA	Secondary	Cross-sectional	Checklists/Vignettes	Factors of student interests, SES, and areas of academic strength influence teacher perceptions and nominations. In-service teachers were more likely to identify a student as gifted than pre-service teachers.
Siegle, D., Wilson, H., & Little, C. (2013)	To examine the attitudes of G/T teachers about academic acceleration	USA	Secondary	Cross-sectional	Survey	Whether urban, rural, or suburban teachers of and school systems hesitate to implement grade-skipping and early kindergarten entrance due to concerns for the social and emotional well-being of the advanced student despite no evidence that suggests either of these practices are detrimental.
Willard-Holt, C. (2008)	To examine messages conveyed to gifted girls about career choices	USA	Secondary	Cross-sectional	Interviews	Gifted teachers, perhaps in an attempt to counter larger societal gender bias, display a tendency to attempt to dissuade gifted girls from pursuing careers as classroom teachers.
Young, M.H., & Balli, S.J. (2014)	To examine the perspective of parents on G/T programs	USA	Secondary	Descriptive	Interviews	Despite the better performance of gifted magnet schools, parents were more likely to keep children in community schools if they felt that their child had a significant student-teacher relationship with a gifted instructor.

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APPENDIX
EXTENDED METHODS SECTION

Phase 1

Participants

The current study took place in two phases (see Figure 1). In the first phase, seven high school teachers responded to an open-ended survey. The respondents averaged 11 years in the classroom with gifted learners and most ($n=4$) possessed a Master's degree or higher in terms of their own education. Only one of the respondents possessed a state level teacher's certification for G/T, though the participating district has its own G/T training requirements whether said certification is possessed or not. More than half ($n=4$) of the respondents also reported that they had been identified gifted learners during their own schooling. All of the respondents were white, female, and ranged in age from 25-55.

Data Collection

Data was collected in two phases. In the first phase, responses to an open-ended survey administered by the participating district were gathered and analyzed for larger themes (see Appendix 1). All participants remained anonymous and the survey data was de-identified when delivered from the participating district.

Analysis

The current study made use of two data collection instruments. The first was a survey administered by the participating district to all of its gifted instructors in the fall of 2016. The survey consisted of 20 questions, with 10 of the items being constructed responses to elicit a participants' perspectives in their own words to questions about various aspects of gifted education. The participating district agreed to share the results of the survey with the researcher as de-identified secondary data, and the results were analyzed using a grounded

theory approach that identified themes to be included in the second instrument (see Table 1), a series of semi-structured interview questions.

Data was analyzed in two phases and both phases employed a grounded theory approach. Originated in the 1960s by Glaser and Strauss (1999), grounded theory seeks to unify the precise methodology of positivism with the contextual factors of pragmatism. Grounded theory stresses an intellectual separation from existing theory so as to allow the explanation for a phenomenon or interaction to emerge organically from collected data in an inductive fashion (Creswell, 2013). It emphasizes the coding of textual data to identify abstracts or concepts of potential interest or that might contribute to the creation of a descriptive theory (Yin, 2014). In the current study, the potential commonalities were those of the aforementioned assumptions, attitudes, and practices of high school teachers of the gifted.

Grounded theory was chosen because of its usefulness in research where there are gaps in existing literature (Charmaz, 2006; Creswell, 2013). The current study dealt with such a gap—the shortage of research on the perceptions of giftedness among high school teachers. By approaching the study in this way, research begins the construction of a theoretical underpinning that can then be challenged, altered, and improved upon through subsequent research conducted in whatever method would then be most appropriate (Strauss & Corbin, 1990). In short, the grounded theory approach is not the way in which questions are answered deductively. Rather, it is the way in which researchers begin to understand what questions to ask in that fashion.

Analysis in the current study followed the constructivist approach to grounded theory championed by Charmaz (2006), echoing Glaser (1992). This approach argues some aspects of

the commonly used methods of Strauss and Corbin (1990) force data into preconceived categories for analytical purposes, thus undermining the value of grounded theory itself and the relative strength qualitative methods have over quantitative ones for research of this type as methods and assumptions regarding analysis can change throughout the course of the research. This constructivist approach to grounded theory stresses analysis must account for the context in which the research is conducted, in this case the school system itself, its inner workings, and the community it serves. Analysis for the current study took place in two phases, each following the 4 basic steps of the analytic process in grounded theory.

In Phase 1, the open-ended survey responses of all the high school teachers of the gifted who completed the survey were collected as de-identified secondary data from the participating district. Data was then coded in a line-by-line fashion to gain a familiarity with the data and then categorically for further analysis. This step of the process has several sub-steps recommended by Charmaz (2006) for the accurate identification of phenomena or theoretical framework. The first was initial coding, where the researcher familiarizes him or herself with what the data simply says and what it seems to suggest. In the case of the current study, this revolved around questions of how the subjects perceive giftedness and how the environment in which they teach might affect that perception.

It is important, and perhaps counterintuitive, that researchers work quickly during this phase and remain very simple in the analysis. The desired result is that initial coding creates first impressions of the data. This matters a great deal moving forward because first impressions often represent the initial assumptions and biases of the researcher and this step helps to minimize their effects in later steps of the analysis process (Glaser & Strauss, 1999). It

is also vital that the researcher do extensive memoing during this phase to capture his or her own thoughts on the data for later analysis.

The next step in the process was focused coding, wherein the initial data categorization is organized into themes that emerge across the responses from participants. This phase is not unlike thematic analysis as it is often used to conduct large-scale reviews of existing literature (Braun & Clarke, 2006). Its purpose is to identify the commonalities that exist across studies, except here it is the search for general commonalities in the responses of participants about questions regarding their perceptions of giftedness.

Next in the analysis for Phase 1 was axial coding. In this process, the emerging thematic categories are organized into sub-categories so as to start putting dissected data back together in a coherent and orderly fashion (Strauss & Corbin, 1990). The desired result here was the generation of themes generally represented in the survey responses so those themes could then be added as necessary items at the end of the semi-structured interview protocol for Phase 2.

Phase 2

Participants

In the second phase, 13 participants recruited from the gifted education program in the same district, a large suburban school system in North Texas. All participants were high school teachers in the gifted program and represented the participating district's three different high schools. All high school teachers of the gifted were asked to volunteer for participation, and the 13 participants were those that agreed to participate. The participants averaged 17 years of classroom teaching experience, with a range of service of 1-31 years. Sampling was designed to

allow for variables such as demographics and individual campus culture, but to control for variables such as school spending, administrative policies, and differences in educational purpose and philosophy as dictated by the upper levels of leadership and how all of those variables might affect teacher perceptions. It is important to note that it is impossible to know whether some of the participants in Phase 1 were also participants in Phase 2 as no identifying information was gathered at any time to insure the anonymity of the participants. The participants in the study were all employees of the participating district and part of a relatively small population of teachers in a specialized program, so it was determined by the researchers that identifying characteristics such as age and gender would not be reported as it could potentially be used to identify the participants in some way.

Data Collection

In the second phase of the study, participants provided in-depth responses to a series of questions through a semi-structured interview process (see Appendix 2). Interviews were conducted at the participant's school to make the participant as comfortable as possible with the interview process in the hopes of eliciting the most candid responses possible to the interview questions. Interviews were recorded in audio form, with memo writing by the researcher throughout the interview process.

Instrument

The 13 participants in the second phase of the study were all high school teachers of the gifted to create a stratified sample representing the participating district's three high schools. These subjects were interviewed following a semi-structured protocol and their responses audio recorded and transcribed for analysis. As a form of data triangulation, a portion of the

semi-structured interviews were designed to address the themes identified in Phase 1 of the study (Charmaz, 2006).

Analysis

Analysis for Phase 2 followed the same basic format as that in Phase 1. First, the semi-structured interview responses were collected and transcribed and then subjected to the initial coding process. Again, this part of the analysis process was conducted quickly so as to capture the researcher's first impressions of the data. Then the data underwent focused coding to identify emerging patterns of response in the interview responses. Next, the interview responses underwent axial coding to identify organizing themes in the Phase 2 data.

Once axial coding was complete in Phase 2, the emergent themes from both phases were compared. This type of comparison is sometimes referred to as saturating a concept (Strauss & Corbin, 1990) and is used as a means of authentication and verifying the trustworthiness of the research findings in a fashion similar to how a quantitative study might be compared to other studies of a similar nature for purposes of validity and reliability. This then led to the final, unifying process of both phases of the research, theoretical coding, which occurred in an attempt to identify what the data conveyed about the environment and context in which it was collected (Glaser, 1992), though what emerged is most likely not a theory in the way that term is used in the larger scientific community.

It is important to note that axial and theoretical coding are fluid concepts created by competing schools of thought in grounded theory that can be used in concert with one another in research situations such as the current one, but that in some cases might act to preclude one another in the analysis process. Charmaz (2006) recommends an analysis wherein the

researcher goes into the process favoring neither and allows the data to speak for itself and this approach to grounded theory seems to be the one favored by those who have used it to study teacher perceptions in areas other than giftedness. Topics as broad as how school mealtimes affect learning (Satoko, Gray, & Goodell, 2015) and how teachers of foreign languages maintain their proficiency (Valmori & De Costa, 2016) have been studied using grounded theory, and they seem to generally agree on Charmaz's advice to let the data speak for itself rather than deciding up front on an approach to final coding.

Memoing

Vital to all portions of the analysis process, and indeed the entire research project when using a grounded theory model, is the process of memo writing. Memo writing, or memoing, takes place throughout the research process and is even sometimes used as a method of data collection in and of itself (Khalifa, 2012). Because grounded theory is inductive in nature and the methodology of the study may change throughout the course of the research (Murphy, 2008), it is vital for the researcher to keep detailed memos of the process, context, analysis, and his or her own thoughts on the study as it progresses (Charmaz, 2006). These memos represent not only the systemization of the data but, as Thornberg (2012) suggests, are also a vital secondary source of data in the analysis phase of the study as the researcher revisits his or her earlier memos, applying the same coding practices as he or she did to the collected data to identify trends or themes that might suggest some type of bias or assumption that could possibly alter the final analysis in the study.

For the current study, memoing began with the initial conceptual question of how high school teachers conceptualize giftedness. It continued through the initial review of the

literature and was vital in the development of the research questions of the current study. Memo-writing, itself part of the methods associated with this study, proved vital in refining those methods into a clear approach to the analysis of the data to be gathered. And of course, the insight provided by the analysis of the memoing done during the data collection and analysis itself helped to provide more authentic and carefully examined findings in the final results of the study. The combination of both phases of data collection and analysis and these memos led to the theoretical codes generated for the study (see Table 8).

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