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Teacher Perceptions Regarding the Purpose of K-12 Education

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TEACHER PERCEPTIONS REGARDING THE PURPOSE OF K-12 EDUCATION

by

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This study explored the perceptions of teachers regarding the purposes of K-12 education and the influence of belief sources on their perceptions. Purposes of K-12 education and the ways in which they have changed over time are topics for which researchers are concerned (Carpenter, 2005; Labaree, 2013). Addressing this concern, there is existing literature focused on understanding purposes through K-12 school mission statements (Schafft & Biddle, 2014; Stemler & Bebell, 2012), and a multitude of reflections regarding what K-12 education purposes should be (Biesta, 2015; Macallister, 2016; Robinson & Aronica, 2014). Less is known regarding what frontline K-12 education practitioners (teachers), believe about K-12 education purposes and from where their beliefs orginate. Such knowledge is needed to better understand which purposes are implemented at the school and classroom levels, processes for which teachers have an outsized influence (Weatherly & Lipsky, 1977).

The study used a quantitative, non-experimental design and collected data with an online survey instrument. The sample consisted of 423 teachers recruited from two Midwestern states. Participants were nearly equally divided between elementary, middle, and high school teachers while over half (54.1%) taught in suburban school districts and a vast majority (83.5%) had at least 11 years of teaching experience. The survey asked participants to rate the importance of 11 education purposes twice; first, based on their ideals and second, based on what they experienced in their schools. Participants were also asked to rate the influence of 14 belief

sources on their ideal importance ratings. Data was analyzed using descriptive statistics, ANOVA, MANCOVA, multivariate regression, and non-parametric tests.

Results showed that, for both ideal and experience-based importance, teachers rated providing a safe and nurturing environment significantly higher than any other purpose, followed by fostering cognitive development. Teachers rated 10 of the 11 purposes as at least moderately important, based on their ideals. Results also showed that teachers rated their own teachers or role models as significantly more influential as a source of their purpose beliefs than any other belief source, followed by life's daily routines, and immediate family or associates. There were scarce differences in teacher importance ratings based on school level, school locale, or teaching experience, although elementary teachers tended to rate emotional development as more important than their middle and high school colleagues.

These findings add a valuable element, the perceptions of K-12 teachers, to the existing educational purpose literature. This study offers insight into the education purposes that teachers perceive to be most important, and the sources that influence K-12 teacher beliefs. Implications of these results include a call for more clarity in purpose from education policymakers and the potential for more targeted educational change strategies.

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CHAPTER 1

INTRODUCTION

What is the purpose of education? Leading thinkers throughout history have offered answers. Philosopher Immanuel Kant, in his 1803 lectures, spoke broadly about the aims of education as a pursuit for human happiness, "…for with education is involved the great secret of the perfection of human nature… This opens out to us the prospect of a happier human race in the future" (Kant, 2004, p. 4). In order to achieve such an ideal, Kant saw the role of formalized schooling as having three phases: nurturing, discipline, and instruction. It was through these phases that one might learn to reason with opposition, indicating that Kant viewed the skill of reason as a key to happiness. A key challenge, though, to achieving education's ultimate aim was that of the sovereign state, which Kant believed would always view school as a tool for achieving its own ambitions.

Only a few years before Kant's lectures, Thomas Jefferson, in a letter to James Madison, wrote that the purpose of education was to preserve the freedoms of democracy, "Above all things I hope the education of the common people will be attended to; convinced that on their good sense we may rely with the most security for the preservation of a due degree of liberty" (Jefferson, 1787). Jefferson was less concerned with the happiness of the human race than he was with preserving the democracy that he helped build. It was through the education of the masses and not only the elites, Jefferson believed, that democracy would be protected.

Additional historical influences on the purposes of school include the works of philosophers such as John Dewey. Thought by many to be the most significant thinker of his era, Dewey added his own opinions about the purpose of education to the historical record when he wrote in 1916, "The inclination to learn from life itself and to make the conditions of life such that all will learn in the process of living is the finest product of schooling" (Dewey, 2009, p.

91). For Dewey, school was about learning through experience and experiencing learning throughout life.

Just as Kant, Jefferson, and Dewey viewed purposes of education differently, the conflict between the many purposes of education would endure. The United States, over the past century, has vacillated between a system of schooling designed to (a) provide a fair and equal education for all, (b) sort and order children based on criterion, and (c) give families unique and unequal opportunities (Epple et al., 2002; Labaree, 1997b; Nunn et al., 2007). The degree to which one purpose has been emphasized over others has been influenced by many factors including economic trends, public policy, and consumer influence (Labaree, 2013).

Background

Of the many purposes of K-12 education throughout US history, researchers have noticed a de-emphasis on cultural and civic education in favor of economic preparedness in K-12 schools over the past few decades. These observations are based on studies of federal policy (Labaree, 1997b, 2011, 2013, 2014; National Commission on Excellence in Education [NCEE], 1983; No Child Left Behind [NCLB], 2002; U.S. Department of Education [USDE], 2009; Every Student Succeeds Act [ESSA], 2015), local-level school choice trends (Lubienski & Lee, 2016; Lubienski & Lubienski, 2006; Raywid, 2006), and political rhetoric (Carpenter, 2005; Carpenter & Hughes, 2011). Concurrently, educational thinkers have discussed what the purposes of K-12 education should be, with an increased emphasis on social development and personal fulfillment for students in schools (Bass, 1997; Biesta, 2009, 2012, 2015; Macallister, 2016; Robinson & Aronica, 2014; White, 2007). There is evidence that suggests schools all across the US have given increased attention to social and emotional learning (Goleman, 2008; Hoffman, 2009); currently 30 states and the District of Columbia have laws that encourage or require social and emotional learning or character education (Gabriel et al., 2019). Is this trend an indication that

schools are ignoring policymakers' push toward economic preparedness in favor of personal and social development? Or is this simply a new strategy that schools hope will help students perform well on tests?

Neither the trends that sociologists observe, nor the ideals that philosophers posit necessarily reveal much about K-12 school-level purposes. It is reasonable to assume that changes in policy at the state or federal level would influence the educational purposes of practitioners within K-12 schools. Similarly, it is reasonable to assume that K-12 schools are influenced by leading educational thinkers, many of whom speak at K-12 schools and write books that K-12 educators consume. Emphases on qualifications and economic preparedness, as noted by sociologists, and emphases on social development and personal fulfillment may indeed produce widely different student outcomes. Such a possibility urges an analysis of the internalized purposes of K-12 practitioners at the school level. One way to conduct this type of analysis is to consider K-12 school mission statements.

There are two ways that organizations use the term *mission statement*. Some organizations define mission statement as a proclamation of mission, vision, values, and philosophy while others see its sole function as describing the intended goals of the organization (Allison, 2017). In short, mission statements are intended to capture the aims of an organization (Abrahams, 1999, 2007; Angelica, 2001; Verma, 2009), which can offer clarity to its constituents (Keeling, 2011). Analyses of company mission statements have revealed that certain components of mission statements are linked with better company performance (Khalifa, 2011; Williams, 2008), and that the statement itself may help to shape and guide the organization (Vizeu & Matitz, 2013).

Increased government oversight, and inter-school competitiveness brought on by choice policy initiatives (Mack, 2016), have made it important for schools to communicate an attractive

message to constituents. In schools, mission statements have been shown to be a reliable source of data and are regarded by local practitioners as a valuable tool for communicating core values (Stemler et al., 2011). Partly due to requirements from major school accreditation agencies, nearly every school in the United States has created a mission statement (Stemler & Bebell, 2012). This makes the mission statement a viable option for comparison between schools. There may be no better way to understand how the ideas of many school constituencies have coalesced than by studying the school's mission statement. Stemler and Bebell (2012) state it in this way

> After a decade of research involving many different studies of school mission statements (Stemler & Bebell, 1999; Bebell & Stemler, 2004; Stemler et al., 2011), we are convinced that a school's own mission statement provides an accessible and meaningful window for further exploration of the purpose of school. (p. 10)

And what have school mission statements revealed about the purposes of K-12 schools? Stemler et al. (2011) list 11 themes used to classify high school mission statements, a slightly modified version of the original classification developed inductively by Stemler and Bebell (1999), which looked at elementary, middle, and high school mission statements as well as collegiate mission statements. This list of themes has been used to analyze hundreds of mission statement in the United States (Stemler & Bebell, 2012). Over the past decade, K-12 school mission statement analysis has become a common addition to numerous research studies.

Problem Statement

Partly due to an increase in the online availability of K-12 school mission statements, in addition to local and state requirements to make them publicly available, there have been many recent studies involving K-12 school mission statement analysis (Chapple, 2015; Craft et al., 2009; Gurley et al., 2015; Levine et al., 2019; Lubienski & Lee, 2016; Schafft & Biddle, 2014; Stemler et al., 2011). So, analyzing mission statements as a means to uncover the practitioner

perspective about purposes of education would seem to be a promising enterprise. Not only are school mission statements more commonplace than ever before, but they are nearly always conveniently posted online. However, the glow of mission statements has been tarnished a bit by conflicting results. While there seems to be relative consensus on the many broad themes that K-12 mission statements may include, there does not seem to be agreement on the *primary* purposes of K-12 education. Studies show a predominant focus on student academic achievement (Craft et al., 2009; Lubienski & Lee, 2016; Schafft & Biddle, 2014, Stemler et al., 2011), or civic development (Levine et al., 2019; Stemler et al., 2011), or even emotional development (Chapple, 2015; Stemler et al., 2011). Mission statement analysis can reveal relative uniformness within and between schools (Lubienski & Lee, 2016; Schafft & Biddle, 2014), but can also vary greatly within and between school levels (Stemler & Bebell, 1999).

Perhaps more importantly, there is evidence to suggest that what is written in mission statements do not always embody the true nature of the organization (Desmidt et al., 2011; Dunaway et al., 2012), and rarely include essential components of a well written mission statement (King et al., 2012). School leaders admit that the primary reason they have a mission statement at all is to fulfill a bureaucratic requirement and the mission statement development process is often led by school board members or district leaders (Stemler et al., 2011). In a survey of 80 educational leadership students about the lasting impact of guiding statements such as mission statements, over half reported that mission statements had little to no impact on their practice as educators, confirming what others have claimed (DuFour et al., 2008; Gurley et al., 2015; Watkins & McCaw, 2007).

In summary, the true value of school mission statements, that is, the likelihood that mission statements capture purposes that are the consistent focus of the teachers within schools seems to be dependent on factors that are difficult or even impossible to capture by analyzing

mission statements alone. Indeed, Stemler et al. (2011) after extensive K-12 school mission statement analyses conclude, “Future research should consider…how the values articulated by school mission statements are manifest in day-to-day practice” (p. 415).

Researchable Problem

So, it may be sensible to focus less on school mission statements themselves and more in how a school’s mission is carried out. Truly, it is the carrying out of any mission or policy that is the most important part (Kim, 2012). “By the time a policy is carried out, it can be co-opted and molded to the purposes of the implementers” (Carpenter & Hughes, 2011, p. 11). Policies that are ripe to be changed during implementation are those that are service-oriented rather than automated, those that are applied to workers who already have many responsibilities, and those that lack committed resources such as time, training, and funding (Weatherly & Lipsky, 1977). Mission statements of K-12 schools, while perhaps not policy per se, check all three of these boxes. Indeed, examples of de facto policy that differ from stated policy have been documented in the areas of special education (Weatherly & Lipsky, 1977), school formation (Datnow et al., 2001), school accountability, and common standards (Coburn et al., 2016). It follows that the primary problem here is not that purposes of education are unknown. As noted above, we have a good idea of the general purposes that schools are working toward, and there are many. Rather, the primary problem is that we have little information about how frontline practitioners perceive of and implement the many missions of K-12 education.

There is no doubt that K-12 teachers are the most interesting school constituency to consider when concerned with frontline practitioners in K-12 education. Teachers make up the largest share of employees in any given school (Loeb, 2016) and spend the most time in contact with students compared to other adults in schools (Bureau of Labor Statistics, 2014). It is students, of course, who play an outsized role in determining the perceptions of success at any

given school. They take the tests, attend the school or not, and graduate with a degree or not, the measurements that mostly or wholly factor into school efficacy (ESSA, 2015). Accordingly, we ought to give a healthy amount of attention to what the teachers of these students say are the most important aims of school.

Studies Addressing the Problem

Studies that investigate teacher beliefs, attitudes, or perceptions about the purpose of education are in short supply. Anderson and Rodway-Macri (2009) found some indication that K-12 school administrators think that the purpose of education should include more emphasis on teaching the whole child, including social identity development, rather than an exclusive focus on academic achievement. Tangential to teacher perceptions about the purpose of education are results from surveying teachers about social and emotional learning (Editorial Projects in Education, 2015) education reform (Editorial Projects in Education, 2017b), and political perceptions (Editorial Projects in Education, 2017a). The Center on Education Policy (2016) reported on teacher perceptions about the teaching profession in general, standards and assessments, testing time, and teacher evaluation. While understanding teacher views on these topics may reveal something about what teachers think about purposes of education, and these views are no doubt colored to some degree by teachers' purpose beliefs, surveys of this kind are simply not explicit enough about purposes of education.

There is a fair amount of research about the influences on teacher beliefs about education. Researchers have found reason to suggest that teacher beliefs, attitudes, and perceptions are influenced by aspects of the school for which he or she works, including relationships with colleagues and principals (Cady & Reardon, 2007; Evers & Bacon, 1994; Price, 2012). Nearly synonymous to studies about the influences on teacher perceptions are studies about the origins of teacher beliefs (Collinson, 2012; Salo et al., 2015). Collinson (2012), through an extensive

literature review and corresponding research study, revealed specific sources of teachers' values and beliefs.

Still other studies have looked at the impact of teacher beliefs on school improvement or pedagogical decisions (Dunaway et al., 2012; Holtz, 2009). Of course, mission statement analysis (Chapple, 2015; Craft et al., 2009; Gurley et al., 2015; Levine et al., 2019; Lubienski & Lee, 2016; Schafft & Biddle, 2014; Stemler et al., 2011) and studies of practitioner discourse (Anderson & Rodway-Macri, 2009; Stemler et al., 2011) have shed light on what teacher perceptions about the purpose of education might be, although a more direct approach may be warranted.

Literature Deficiency Statement

School mission statement analysis has revealed lists of the many purposes that schools, or rather those individuals who created said mission statements, aimed to accomplish. There has not yet been a study that has asked K-12 teachers to consider an established list of K-12 education purposes, such as the one from Stemler et al. (2011) and rate the importance of each purpose. While we know a fair amount about the origin of teacher perceptions about a variety of topics (Cady & Reardon, 2007; Collinson, 2012; Evers & Bacon, 1994; Price, 2012; Salo et al., 2015), we have known little about the origin of beliefs that impact teachers' perceptions of purposes of education. This study helps to resolve these gaps in the literature.

Significance of Study

Data on teachers' perceptions about the purposes of K-12 education could influence the conversation around policy measures at the local and state levels. It also could reveal the extent to which the changing political and rhetorical landscape in education observed by sociologists is being internalized by teachers. Understanding the perceptions that schoolteachers have about purposes of education should matter to many. Teachers are the main practitioners. They have an

outsized role in the attempt to fulfill purposes of education. While building principals and other school administrators may have a larger influence than teachers on issues such as schedule, classroom resources, systems and processes, curriculum, etc., the success or failure of those choices still comes down to the efficacy of the classroom teacher. The views that teachers hold about purposes of education and the factors that impact those views are valuable to understand for policymakers and school reform activists alike. Results could compel those with institutional influence to change course or reaffirm the current direction. Disaggregating the data could also reveal important differences among teacher groups and lead to more targeted, thoughtful policy both at the local and state levels. Additionally, knowing the purposes of education that teachers hold could impact school effectiveness as commitment to a shared mission is a leading indicator of school success (Stemler & Bebell, 2012).

Determinations about school quality is one possible policy topic that could also be impacted. Currently, much of what is reported about school quality is an expression of student achievement scores or graduation rates (Schneider, 2017). While student achievement scores and graduation rates may align nicely with some purposes of K-12 education, they may not reveal much about others. It is plausible that illuminating the teacher voice in the area of education purpose could impact the political discussion around school quality determinations.

Purpose Statement and Research Questions

The purpose of my study was to ascertain the perceptions of K-12 teachers about the primary purposes of education, and to analyze the effects of belief sources on such perceptions. Specifically, this study examined how K-12 teachers rate the importance of various purposes of education, both ideal and experience-based, using an established list of K-12 purposes collected and adapted over years of mission statement analysis (Stemler et al., 2011). This study also examined the sources of K-12 teacher beliefs that impact their purpose of education ratings using

an established list of K-12 teacher belief sources (Collinson, 2012). My study adds an important missing element, K-12 teachers' perceptions, to the literature about the purposes of education. The following research questions articulate the aims of this study:

1. For each item within an established list of K-12 education purposes, how do K-12 teachers rate:
    (a) its *ideal* level of importance; and
    (b) its *actual* level of importance based on what they experience at their school?
2. To what extent are there differences between K-12 teachers' ideal ratings of education purpose importance, and their actual experience-based ratings?
3. From an established list of sources for beliefs about K-12 education purposes, how do K-12 teachers rate these as influencing their ratings regarding the ideal level importance of each purpose?
4. How do these two sets of purpose ratings and the ratings regarding sources of beliefs differ as broken down by the demographic categories of school level, school locale, school type, and teacher experience?
5. After controlling for demographic variables, to what extent do K-12 teachers' ratings of belief sources predict their level of importance ratings of:
    (a) ideal K-12 purposes of education; and
    (b) actual experience-based K-12 purposes of education?

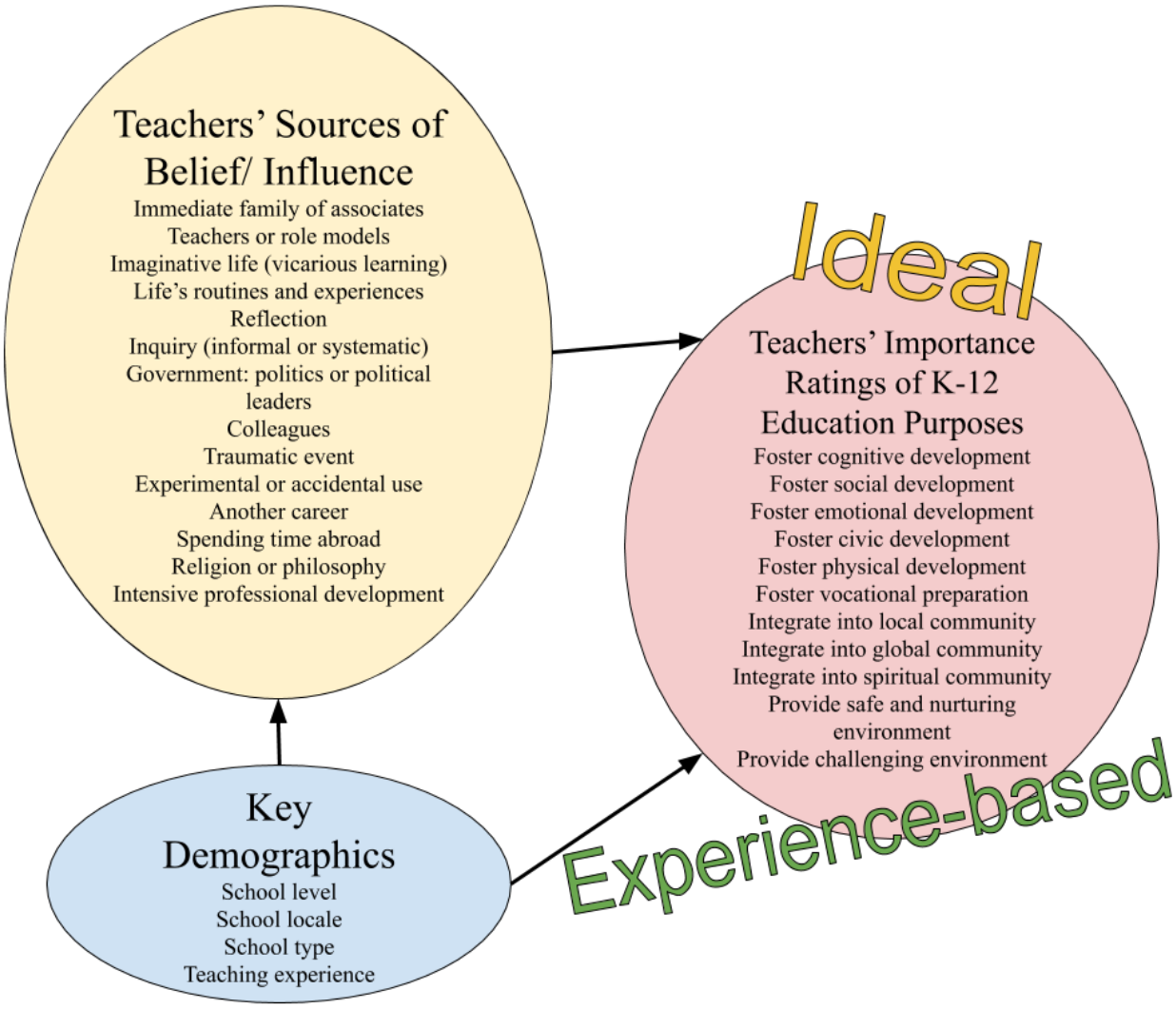
Conceptual Framework and Narrative

Figure 1 shows the conceptual framework for my study. The study explored the potential relationships between teacher perceptions about the purposes of K-12 education and key demographics as well as sources of teacher beliefs. At the bottom left is a bubble representing key demographic information of participants. These were the control variables for my study,

including: (a) school level, defined as elementary, middle, or high school, (b) school locale, defined as urban, suburban, or rural, (c) school type, defined as traditional public, public charter, or private, and (d) teaching experience, defined as the number of years spent teaching K-12, rounded to the nearest whole number.

Figure 1

Grostic's (2020) Conceptual Framework



The bubble at the right represents teachers' importance ratings of the 11 purposes of K-12 education, specifically those collected and refined by Stemler et al. (2011) during school mission statement analyses. Stemler et al. have analyzed hundreds of mission statements from K-12

schools of all types from across the United States to determine the 11 purposes used in my study. These were the dependent variables in my study. Overlaid on top of the importance ratings bubble are the words ideal and experience-based. Participants were asked to rate both their ideal level of importance for each purpose and their experience-based level of importance for each purpose separately while completing the survey instruments used in my study. The use of the word ideal was intended to provoke thoughts about the types of purposes that teachers desire in their schools, whether currently present or not. The word experience-based was intended to elicit thoughts about the purposes that are being actualized in schools, whether they are ideal or not.

The top left bubble represents the 14 sources of teacher beliefs from Collinson (2012). These served as the independent variables for part of my study and the dependent variables for part of my study. Collinson reviewed extant literature about the sources of teacher attitudes, values, and beliefs, and interviewed a sample of teachers about their attitudes, values, and beliefs. Through content analysis of literature and interviews, Collinson claimed there were 14 sources of teacher beliefs. Participants in my study were asked to think about their ideal purposes of K-12 education when answering questions about sources of belief.

Methods Overview

My study employed an online survey in order to capture multiple quantitative variables from a convenience sample of K-12 teachers from two Midwestern states. In my current role as a technology integration coach, I have access to the emails of roughly 3,600 teachers from multiple school districts in these two Midwestern states. Surveys were sent to the email list and posted on social media in order to allow for the broad distribution of the instrument. The survey consisted of three categories that include questions pertaining to purposes of education, sources of belief, and key demographic information. Descriptive statistics, ANOVAs, correlations, and a multivariate regression model were used to analyze the data.

Chapter 1 Closure

Sociologists have observed the changing educational landscape and how that landscape seems to be altering the purposes of K-12 education (Carpenter, 2005; Carpenter & Hughes, 2011; Labaree, 1997a, 1997b, 2011, 2013, 2014; Lubienski & Lee, 2016). Philosophers have ideated about what K-12 school should be in our current age (Bass, 1997; Biesta, 2009, 2012, 2015; Didau, 2019; Macallister, 2016; Robinson & Aronica, 2014; White, 2007). Politicians and corporate leaders have pushed for a more qualified and marketable American populous (ESSA, 2015; Labaree, 1997b, 2011, 2013, 2014; NCEE, 1983; NCLB, 2002; Trujillo, 2013; USDE, 2009). With such wide-ranging perspectives, it is difficult to know what messages make it through to the local education practitioners, namely teachers. Indeed, teachers seem to be receiving mixed messages. School mission statements help to reveal the purposes that teachers may be implementing but can be contradictory (Chapple, 2015; Craft et al., 2009; Levine et al., 2019; Lubienski & Lee, 2016; Schafft & Biddle, 2014, Stemler et al., 2011), poorly made (Desmidt et al., 2011; King et al., 2012; Stemler et al., 2011), or ignored (Dunaway et al., 2012).

Teachers play a major role in the education of students (Loeb, 2016). Thus, understanding the purpose of education perceptions of teachers is paramount, for such understanding may provide clarity and actionable information for politicians, practitioners, and families alike. It would be especially interesting and impactful to understand the sources of teacher beliefs as they relate to teachers' purpose of education beliefs. That is, what levers have or have not been pulled that lead to teachers preferring some purposes of education over others? Understanding as much as possible about teachers' purpose of education perceptions and the sources of their beliefs could impact policy around incentives, change initiatives, and school quality determinations. The results outlined in chapter 4 contributed to the purpose of education conversation.

CHAPTER 2

LITERATURE REVIEW

Many of the ideas mentioned in Chapter 1 deserve a deeper discussion. This review of the literature will cover a fair amount of ground. It will begin with a look at the history of the purposes of education using a societal structure (Labaree, 1997a, 1997b, 2011, 2013, 2014) and a political rhetoric structure (Carpenter, 2005; Carpenter & Hughes, 2011). Then, I will discuss the current primary purposes of education. This part will focus on the many possible primary purposes and will structure the discussion within the following themes: building knowledge, care for self and others, and care for systems. It is important to note that mission statement analyses will feature prominently in this part of the discussion. As noted earlier, there are reasons to be skeptical about the impact that mission statements have on schools and educators. The intent of this discussion, however, is to lay out the possible primary purposes of education, for which mission statements serve nicely.

Following a thorough discussion of historical and current purposes of education will be a discussion about why teachers' perceptions about K-12 education purposes matter. This discussion will be structured around the ideas of de facto policy and implementation theory. Finally, the sources of teacher beliefs will be discussed using analysis of Collinson (2012), which divides beliefs between childhood and adulthood.

Historical Purposes of K-12 Education

Understanding the current purposes of K-12 education tells only part of the story. The larger story comes from positioning current purposes within an historical framework. Have the purposes of K-12 education changed? If so, to what extent have they changed? Labaree (1997a, 1997b, 2011, 2013, 2014), Carpenter (2005), and Carpenter and Hughes (2011) each offer an

historical analysis that will help frame the discussion to follow about the current purposes of education.

Societal Structure Purposes

Democratic equality, social efficiency, and social mobility, a three-pronged purpose of education categorization developed by Labaree (1997a, 1997b, 2011, 2013, 2014), describes perceptions of educational purpose from multiple perspectives. Democratic equality is about building a better society and takes the perspective of the citizen. From this view, education should provide a common experience that produces a citizenry ready to defend the republic against class, division, and self-interest. The commonness of education, in this context, also refers to equal access to an education and equal treatment for students. The perspective assumes that the citizenry is interested in building and preserving a fair and equal democracy. Examples of this perspective can be seen in K-12 subjects such as social studies, government, civics, and American history (Labaree, 1997b).

Social efficiency is about producing a skilled and stratified workforce and takes the perspective of the taxpayer. Public education, through this lens, is a justifiable expenditure, even for citizens without children in schools, when it produces human capital that meets the social and occupational needs of society. One clear example of the social efficiency perspective is the rise of vocational courses in schools which intend to teach a subset of students specific in-demand skills that will add value to society. These kinds of educational pathways, a hallmark of the social efficiency category, runs counter to the democratic equality perspective. However, there are examples of overlap between these two categories. The rise in academic rigor for all students so that they may be prepared for productive employment, a direct result of the social efficiency movement, is consistent in nature with the democratic equality view (Labaree, 1997b).

Social mobility is about acquiring credentials that can be traded for wealth and status and takes the perspective of the individual consumer. This view of education is in many ways the opposite of democratic equality. Instead of education as a public good with a political basis, the social mobility view sees education as a private good with a market basis. Individuals, in this context, can and should be able to choose the schools where they are educated, and those consumer choices should be driven by market competition, not government (Labaree, 2011). The overlap between social efficiency and social mobility is that both perspectives see stratification in a market economy as a reality, i.e., citizens fulfill different and necessarily unequal societal and occupational roles. The difference between these two perspectives is that while social efficiency views stratification as a means to fulfill collective needs, social mobility views stratification as a means to fulfill individual needs (Labaree, 1997b). Table 1 summarizes the three purpose of education categories outlined above.

Table 1

Summary of Education Purpose Categories (Labaree, 1997b)

Category	Goal	Perspective	Indicator(s)
Democratic Equality	Improving society	Citizen	Equity, emphasis on teaching civics
Social Efficiency	Skilled and stratified workforce	Taxpayer	Emphasis on vocational courses
Social Mobility	Acquiring credentials for trade	Consumer	School choice, vouchers, emphasis on credentials

According to Labaree (1997a, 1997b, 2011, 2013, 2014), the purpose of education has shifted from a predominant focus on democratic equality and social efficiency to one that prioritizes social mobility. If indeed the social mobility perspective has been emphasized over democratic equality and social efficiency, one would expect public support for education to

erode (Labaree, 1997a). This point can be sharpened by viewing public education from the individual consumer perspective, whether or not the consumer has children in school: why should my tax dollars go toward the education of others? The rise of vouchers systems, charter schools, and school choice policy in the United States could be evidence that a shift away from democratic equality and social efficiency toward social mobility has taken hold (Labaree, 2014). One might also predict that increased emphasis on social mobility would promote credentialing in favor of more well-rounded measures of educational attainment (Labaree, 1997a).

Since the release of A Nation at Risk (NCEE, 1983), both major political parties at the federal and state levels have sought to bring greater governmental accountability standards onto schools. Through mandatory standardized testing in grades 3-8 and 11, these accountability policies are focused on measuring school efficacy based on student knowledge in select subjects like math and reading (credentialing) – see NCLB (2002), Race to the Top (RTTT) (USDE, 2009) and Every Student Succeeds Act (ESSA, 2015), while largely ignoring the development of students in social studies, science, and the arts, subjects that can be associated with the democratic equality perspective (Labaree, 1997b). Requiring that all students submit to standardized tests could be viewed as a policy consistent with the democratic equality category. Standardized test results can also be used to sort and order students and schools (social efficiency) and can give advocates of school choice ammunition for the argument that certain schools are ineffective so parents must be able to choose another school for their children without having to move (social mobility).

There is reason to be concerned if education continues to trend in the direction of social mobility, as Labaree (2011) defines it. Private and charter schools, the beneficiaries of vouchers and school choice policy, do not always show the student achievement advantages that many claim, particularly after controlling for student demographics and school location (Lubienski &

Lubienski, 2006) and charter schools may also intensify the problem of racial segregation in schools (Lubienski & Lee, 2016). In a recent survey of 1,122 educators, 79% indicated they do not support government paying for private school tuition, i.e., vouchers (Educator Political Perceptions, 2017). The most recent reauthorization of the Elementary and Secondary Education Act of 1965, ESSA, which replaces the widely disparaged NCLB, does little to curb the trend of credentialing through annual standardized tests. ESSA, like NCLB and RTTT before it, requires annual testing of all students in Grades 3-8 and 11 in math and reading. ESSA does allow states to determine their own measures of individual school progress whereas NCLB defined progress narrowly on test scores. However, ESSA requires the majority of the school progress be gauged by measures like test scores and graduation rates (Darrow, 2016). This type of emphasis reduces analyses of learning to quantifiable bites and restricts the aims of school (Trujillo, 2013).

Perhaps most importantly, when viewing their education through the lens of social mobility, students learn to value the credential over the knowledge and skills attained. If the real value is in acquiring credentials or status, then students may do whatever it takes to acquire them, whether or not that involves learning content or developing skills (Labaree, 1997b).

Political Rhetoric Purposes

The historical analysis conducted by Carpenter (2005) and Carpenter and Hughes (2011) focused on the rhetoric of United States Presidents and State Governors, respectively. Inductive content analysis of 72 State of the Union and Innauguration speeches by 29 Presidents dating back to George Washington was used to create four broad themes of education purpose: economic efficiency, self-realization, human relationship, and civic responsibility.

Economic efficiency refers to the idea that a market-based economy functions best with an educated populous making informed and somewhat predictable decisions. Carpenter (2005) explicitly connects the purpose of economic efficiency to educational policies that focus on

increased school and teacher accountability, school-choice systems, and content standards. The purpose of self-realization is about school supporting students in the cultivation of individual abilities, a sense of self, passions and interests as well as a student's place in his or her community. The human relationship purpose focuses on commonalities in the human condition, social ideals, and how to live life in a community. Civic responsibility is about the development of democratic and civic character and instilling a sense of civic responsibility in students (Carpenter, 2005). Then, these four categories were used deductively on the same 72 presidential addresses and 358 gubernatorial State of the State addresses between 2001-2008 to quantify the frequency of each education purpose category.

Results from analyzing presidential addresses tells a compelling story of changing purposes. From 1790 to 1900, presidents defined education by its civic purpose 45 times while mentioning the economy as a purpose of education only three times, human relationship three times, and self-realization twice. Starting in 1900 and through the early years of President George W. Bush, these frequencies shifted. Civic purposes were mentioned as purposes of education 22 times while the economy was mentioned 45 times, human relationship five times, and self-realization seven times. The shift is more pronounced when dating back to the President Reagan years, an appropriate marker since *A Nation at Risk* was released during the Reagan presidency. During that time civic responsibility was mentioned as a purpose of education just once while economic efficiency was mentioned a whopping 19 times (Carpenter, 2005).

Analysis of gubernatorial addresses between 2001-2008 capture a similar picture at the state level. There were 560 education purpose mentions between the four categories during that span of time. Economic efficiency dominated state governor mentions, collecting over 348 mentions (~62%), while self-realization was mentioned 150 times (~27%), civic responsibility 40 times (~7%), and human relationship 22 times (~4%) (Carpenter & Hughes, 2011). Taking

the presidential and gubernatorial data together, it becomes clear that the highest offices in the land believe that the primary purpose of education is one of economic efficiency. It is also clear from the presidential data that this was not always the case.

Current Purposes of K-12 Education

The following will lay out the many possible primary purposes of K-12 schools. Sources for this discussion include mission statement analyses, surveys, public policies, and ideas from current philosophers and leading thinkers. The intention is to consider all the possible *primary* purposes of education. The focus on primary purposes of education is important because this study is less interested in all the many purposes of education that exist (which is well-established empirically), and more interested in the dominant purposes that may drive the actions of school practitioners, namely teachers.

The criteria by which a purpose has been deemed one that could be primary to practitioners depends on the source. In studies of mission statements, if a purpose was noted in over 50% of mission statements or it was one of the top three most frequently occurring purposes in the study, it was included as a possible primary purpose. Similarly, in surveys if a purpose was noted by over 50% of respondents or it was one of the top three most frequently occurring purposes in the survey, it was included as a possible primary purpose. Any purpose reasonably gleaned from public policies is also considered a possible primary purpose. Likewise, purposes of education that come from reasonably well-known philosophers, authors, or thinkers are up for consideration. While these criteria are somewhat arbitrary, the following discussion is intended to be a thorough, if not exhaustive, account of the current K-12 purpose of education landscape.

It is important to offer a disclaimer about purposes of education that involve religion. Studies that examine faith-based private schools unsurprisingly find that cultivating religiosity in students is a major purpose of those schools (Boerema, 2006; Zandstra, 2012). However, studies

of non-faith-based schools find that purposes involving religion are either non-existent or nearly non-existent (Chapple, 2015; Craft et al., 2009; Stemler et al., 2011; Weiss & Priderit, 1999). As of 2012, 11% of PreK-8 students attended faith-based schools in the United States (Zandstra, 2012). Still, due to the overwhelming influence of one single variable (faith-based) on religion as a primary purpose of a school, the religious purpose will not be discussed in this section. Another potential outlier that should be noted is that of physical well-being. A study of 421 high school mission statements across 10 states revealed that the most frequent theme in Colorado mission statements is a safe and nurturing environment (Stemler et al., 2011). Appearing in 62% of the Colorado school mission statements studied, it far outpaced the average and rank of the other nine states' school mission statements, which noted safe and nurturing environments just 28% of the time. This anomaly may have something to do with the school shooting at Columbine High School in Littleton, Colorado, which occurred 12 years prior to the publishing of the study. As worthy a purpose as physical well-being may be, it simply did not appear frequently enough in studies or the ideas of leading thinkers to be included in my discussion in this section. Perhaps physical well-being is taken for granted as a primary purpose of K-12 schools. Whatever the reason, it will not be noted beyond this point.

Purposes of education have been grouped by broad theme for the following discussion. This should not be interpreted as a conflation of two or more purposes, but rather as a organizational decision. The possible primary purposes of education will be discussed using the following themes: a) building knowledge, which includes academic and cognitive purposes, b) care for self and others, which includes social, emotional, and self-realization purposes, and c) care for systems, which includes civic, community, vocational, and economic purposes.

Building Knowledge

Knowledge-building, in this case, refers to academic achievement, cognitive development, or activities that allude to building knowledge such as high-stakes tests or most measures of school effectiveness. It is possible that terms such as these, whether found within school mission statements or in the ideas of philosophers and leading thinkers, could occur in reference to other purposes. For example, academic achievement language may in fact be in reference to job training, credentialing, or acquiring status. However, unless explicitly stated, it is impossible to discern the writers' intent. Furthermore, it is possible for building knowledge to be viewed as a worthy goal in and of itself. Therefore, the purposes that fall within this theme will be treated as standalone.

Mission Statements

A pervasive theme among studies that analyze school mission statements is academic achievement. Weiss and Priderit (1999) looked at 304 Southeastern Michigan public school mission statements, 202 from elementary schools, 56 from middle schools, and 46 from high schools. Language about encouraging academic learning was found in 87% of the mission statements, by far the most frequently occurring theme. Charter school mission statements in Southeastern Michigan reveal a similar story. Lubienski and Lee (2016) analyzed the mission statements of 155 Detroit charter schools and found that 70% of them mentioned academics, more than any other theme. School performance does not seem to influence the prevalence of academics in mission statements. Mission statement analysis of 49 high-performing Texas elementary schools and 35 low-performing Texas elementary schools found that academic success was the most frequently occurring theme in both types of schools (Craft et al., 2009). Mission statement analyses of wider samples of schools reveal more evidence of knowledge building as a primary purpose of education. In three related studies, including elementary

schools, middle schools, high schools, and colleges from 10 states, mission statements revealed that cognitive development was one of the most frequently occurring themes regardless of school location, i.e., urban, suburban, or rural; or school type, i.e., public, private, charter, or vocational (Stemler & Bebell, 1999, 2012; Stemler et al., 2011). A study of all available 480 Pennsylvania school district mission statements found that academic outcomes was the most frequently occurring theme, appearing in 49% of all mission statements (Shafft & Biddle, 2014). When disaggregating the data by school district location, the same study revealed that academic outcomes was the second most frequent theme for city schools, appearing in 50.0% of mission statements while citizenship appeared in 57.1%, as well as rural schools, appearing in 45.5% of mission statements while community ties appeared in 46.1%.

Mission statement analyses from other countries tell a similar story. Chapple (2015) looked at mission statements of 150 elementary schools from Japan and 150 elementary schools from New Zealand. The cognitive/academic theme was most frequent in Japanese mission statements, appearing in 35% while it was the second most frequent theme in New Zealand mission statements, appearing 30% of the time. Finally, a study of 308 Australian school mission statements found 88% of them mentioned academic achievement (Allen et al., 2018).

Philosophers and Leading Thinkers

The idea that building knowledge is an important purpose of education is not confined to mission statements. Even those attempting to reform schools in some form believe that building knowledge should be a primary goal of schools. Schneider (2017) created a new school evaluation model based on the belief that the current model over-emphasizes high-stakes test scores. Still, Schneider writes that schools should be evaluated, among other purposes such as civic engagement and emotional health, on how well they promote academic learning. Dintersmith (2018) thinks that the current purpose of K-12 education in the United States is to

sort and order students rather than developing human potential. The purposes that Dintersmith proposes include building knowledge that is deep and retained by students. To convince teachers to focus on a smaller number of important objectives than is the norm, Stuart (2018) posits that the purpose of K-12 education is to promote the long-term flourishing of students through, among other tactics, knowledge-building practices.

In several essays, Biesta (2009, 2012, 2015) proposes that the purpose of education should be about qualifying, socializing, and subjectifying students. In qualifying students, schools should cultivate knowledge, skills, and understandings in students. Macallister (2016) goes further along the knowledge-building theme, writing that schools should do more than qualify students, they should also teach students to think for themselves. According to Didau (2019) knowledge-building ought to be the primary purpose of K-12 education because it may be the best method for fulfilling other purposes of education, namely preparing children for employment, developing children's character, and transmitting culture.

Policy

Of course, public policy can also reveal the current purposes of education. NCLB (2002) made testing in mathematics and language arts mandatory for all students in grades 3-11. This call for testing continues with RTTP (USDE, 2009) and ESSA (2015). School effectiveness ratings, teacher evaluation, and student credentialing depend, to some degree, on how students perform on these tests, which arguably incentivizes schools to focus on building knowledge over all other purposes of education (Labaree, 2013; Schneider, 2017). It could also be argued that high-stakes testing reduces the purpose of education to helping students achieve high test scores, which relates to but is not necessarily the same as building knowledge (Trujillo, 2013). It should be noted that in a survey of 3,328 educators, 81% noted that they believe students spend too much time taking mandated tests (Center on Education Policy, 2016). This result gives yet more

credence to the idea that academic success could currently be a primary purpose of K-12 education.

Care for Self and Others

Care for self and others refers to those purposes of education that cultivate skillsets in students about relating to other people or improving some aspect of themselves. Social and emotional learning has become a topic of interest in schools. The Collaborative for Academic, Social, and Emotional Learning (CASEL) defines social and emotional learning with the following five components: a) self-awareness, which is about recognizing emotions and their influence; b) self-management, which involves regulating emotions, managing stress, and setting goals; c) social awareness is about adopting different perspectives and understanding social and cultural norms; d) relationship skills involves communication, negotiating conflict, and cooperation; and e) responsible decision-making, which is about making decisions based on realistic consequences, safety, and social norms (Editorial Projects in Education, 2015). A recent survey about social and emotional learning indicated that teachers believe teaching these skillsets are important. Out of 562 teachers surveyed, 80% strongly agree that social and emotional learning can reduce discipline issues, 76% strongly agree that it can improve climate, and 77% strongly agree that it can improve student achievement (Editorial Projects in Education, 2015). In addition to social and emotional learning, care for self and others also refers to the concept of self-realization. As noted earlier, self-realization is about the cultivation of individual abilities, a sense of self, passions and interests as well as a student's place in his or her community (Carpenter, 2005). Finally, care for self and others refers to the development of character skills such as conscienciousness, perseverence, and self-confidence.

Mission Statements

Many of the mission statement analyses that indicated building knowledge may be a primary purpose of education also indicate that care for self and others is a priority for schools. In a study of 304 Southeastern Michigan school mission statements, social skills appeared in 53%, and self-esteem appeared in 51%, frequencies that were second and third, respectively (Weiss & Priderit, 1999). Stemler and Bebell (1999) in a study of 267 elementary school, middle school, high school, and college mission statements, found the theme attitude, values, and emotions appeared more than any other theme in elementary mission statements (81%) and high school mission statements (52%) while it was tied for most appearances in middle school mission statements (76%). In a study that included mission statements from 421 high schools across 10 states, the theme of emotional development appeared in 55%, second only to civic development, which appeared in 58% of mission statements (Stemler et al., 2011). Stemler and Bebell (2012) also studied the mission statements of 111 schools that spanned a variety of types (i.e., public, charter, parochial, vocational, magnet, and more) and found that emotional development was the most frequent theme across all school types, appearing in 66% of mission statements. In a study of all 173 Kentucky school district mission statements, researchers found the percentage of students that scored proficient or better in both reading and mathematics was significantly higher in districts that mentioned student support in its mission statement (Ingle et al., 2020). Student support, in the study, fell underneath the broader theme of school environment, indicating that the type of support school districts intended to provide went beyond simple academic help.

Care for self and others is also a focus in other countries. Allen et al. (2018) found that mental health promotion appeared in 66.2% of the 308 Australian school mission statements studied, second only to academic achievement (88%). Emotional development was also the most

frequently found theme in 150 New Zealand school mission statements, appearing 44.9% of the time, and the second most frequent theme in 150 Japanese school mission statements, appearing 30.5% of the time (Chapple, 2015).

Other Empirical Studies

Results from a wide range of sources adds to the data above. Goleman (2008) looked at over 233,000 student evaluations and concluded that when students receive intentional social and emotional instruction, they show improvements in class discipline, attendance, liking school, bullying, and student achievement. Canadian administrators might not be surprised by those conclusions. In a qualitative study of four Canadian school districts, administrators advocated for a well-rounded educational curriculum that includes helping students cultivate values, personal development, and social identity development (Anderson & Rodway-Macri, 2009). Rutter and Maughan (2002) looked at school effectiveness research since the 1970s and found strong evidence for the role of school in affecting behavior and social interaction.

Still other education constituencies have indicated that care for self and others may be a primary purpose of K-12 education, including teachers and state governors. In a survey of 562 teachers, 48% reported that social and emotional learning received too little attention in their school (Editorial Projects in Education, 2015). Mentioned earlier, Carpenter and Hughes (2011) analyzed US gubernatorial addresses between 2001 and 2008 and found that self-realization gained 27% of all purposes of education mentioned by governors, second only to economic mentions (62%). Finally, Mindful Schools is a nonprofit in the United States that helps teachers develop and teach the skill of mindfulness, defined as the ability to pay attention in the present moment. There is some evidence that mindfulness can help students regulate emotions and have more self-awareness. Mindful Schools also claims to have trained over 50,000 educators in mindfulness practices (Mindful Schools, n.d.).

Philosophers and Leading Thinkers

There are several ideas related to care for self and others that current philosophers and leading educational thinkers posit. One of these ideas is about the socialization of students. MacMurray (2012) advocates for an emotion education for every student, one that supports them in feeling and acting for the sake of others. MacMurray believes that people only fully exist when they relate to others that are different from them. Macallister (2016) believes that socializing students is fundamental while Papastephanou (2005) puts it in terms of cultivating non-competitive subjectivities, which is all about removing biases toward those that are different. Connected to the idea of socialization is that of learning specific skillsets that will support students in communicating ideas and relating to others. Wagner (2008) discusses seven "survival skills" that students will need to order to be prepared for life after K-12 education. These skills include the ability to communicate effectively and collaborate with others, something Wagner and Dintersmith (2015) reiterate are needed for career and citizenship. Claxton et al. (2016), in a discussion about the importance of soft skills and dispositions, advocate for teaching collaboration and interdependent thinking. Stuart (2018) writes that in order for students to flourish long-term, they must be able to apply their knowledge through speaking and listening, writing, and argumentation.

As noted above, MacMurray (2012) promotes an emotion education. While he alluded more to social emotions such as empathy and less to personal emotions such as happiness and self-esteem, there are leading thinkers who support a more personal emotional education. As noted earlier, one study found that a majority of Australian school mission statements in the sample noted mental health promotion as a purpose of education (Allen et al., 2018). Hari (2018), in a deep dive about anxiety and depression, writes that these negative mental states can be mitigated through a feeling of connection with others. Hari offers the technique of social

prescribing, or compelling interactions between people suffering with similar feelings of anxiety and depression, as an effective intervention because it often causes people to learn to care for and support each other. Schneider (2017) believes social and emotional health of students should be one metric used to evaluate school effectiveness. There are entire US states that agree. The Kentucky and Massachusetts Supreme Courts, in defining what constitutes an adequate education, include the development of "sufficient self-knowledge and knowledge of his or her mental and physical wellness" (Stemler & Bebell, 2012, p. 7), and the Florida constitution enshrines the development of emotional, social, and regulatory capacities for early childhood education in its state constitution (Stemler & Bebell, 2012).

There is much written about the idea of self-realization as a possible primary purpose of education. Many years ago, Adler (1982) proposed that the first objective of education should be to provide opportunities for students' personal development, which was all about making something of themselves and their lives. MacIntyre (2013) writes that a major aspect of personal development is the ability to think for oneself. Others write about the importance for students to develop a sense of purpose in life (Robinson & Aronica, 2014; Yang, 2018), while Dintersmith (2018) uses the term agency, which is defined as students owning their own learning, and becoming self-directed and intrinsically motivated. Beista (2009, 2012, 2015) takes self-realization a step further in offering that a core purpose of education should be the subjectification of students. Subjectification refers to the idea of being on individual, including the qualities that make one unique, i.e., individual values and beliefs.

The idea of schools supporting students in their development of values leads us to a connected but new idea, which is character education. Noddings (2013) writes that schools should prioritize an education around what constitutes a good life and help students develop wisdom and a sense of morality. White (2007) agrees and writes that schools should cultivate a

practical wisdom in students, which is defined by thinking rationally, managing desires, and balancing risk-taking with caution. Yet another definition of character education comes from Tough (2012) who writes that a character education is about developing conscientiousness, grist, and self-control. At this point, one could be forgiven for believing that a character education sounds well and good but may be challenging to teach and evaluate. In fact, these skills are malleable and objective character inventories based on performance task behaviors can measure character skills such as conscientiousness, perseverance, sociability, and curiosity (Heckman et al., 2014).

Care for Systems

The final grouping of possible primary purposes of K-12 education is care for systems. This includes cultivating an interest in community, civics, and the economy. While overlap exists between socialization and care for systems, the distinction here is that while socialization is about learning individual skills that will help while interacting with others, care for systems is about an understanding and interest in how larger societal systems work and how they can be affected.

Studies and Policy

One aspect of care for systems is caring for the local or larger community. Levine et al. (2019) analyzed health outcomes of 270 students from 120 K-8 Chicago schools. Researchers found that health outcomes were significantly better for students of color from schools that mentioned diversity in the school's mission statement than students of color from schools that did not mention diversity in the school's mission statement. This interesting result promotes the idea that valuing community has a positive effect on students. A study of 84 elementary schools in Texas found that the theme of educating all appeared in 49% of school mission statements, second only to the academic success theme (Craft et al., 2009). Finally, Allen et al. (2018) found

that 57.5% of school mission statements out of 308 schools in Australia included promoting school belonging as an aim of the school.

Developing a sense of civic-mindedness is another aspect of care for systems. In a study of 421 high school mission statements spanning 10 states, civics was mentioned more than any other theme (Stemler et al., 2011). Schafft and Biddle (2014) in studying all Pennsylvania school district mission statements found that developing citizenship was noted as a purpose of education in 44% of mission statements, second only to academics. Khodadad (2011), in promoting civic education, found that 55 teacher candidates became more civic-minded through issues-centered education, an approach that uses controversial topics to generate inspection and discussion.

Economics is another aspect of care for systems. Interestingly, few school mission statements note the economy at all, and the few that do typically use the word vocation (Stemler & Bebell, 2012). Even so, looking at policy and political rhetoric, one can see that a well-trained work force to support the economy is a possible primary purpose of education. As noted earlier, recent presidential addresses have focused nearly entirely on the economy when mentioning purposes of education (Carpenter, 2005) as have recent gubernatorial addresses (Carpenter & Hughes, 2011). Most believe that the requirement of regular high-stakes student testing, found in recent federal legislation, including NCLB, RTTT, and ESSA, was passed with the economy in mind. The theory goes that a knowledgeable student populous will enter the workforce more career ready (Darrow, 2016). There is evidence to suggest that such thinking is sound. Breton (2013) studied the economies of 61 countries and found that the return on educational investment was significantly higher in less educated countries than highly educated countries, suggesting that education of students has a direct impact on the economy.

Philosophers and Leading Thinkers

Baldacchino (2008), in a review of John Dewey's claims about democracy, proposes that in order to live a good and moral life one must learn from all aspects of life. This brings to mind the idea of learning from and within a community. Striking a similar tone, Papastephanou (2005) advocates for the value of cosmopolitanism, which at its basis is about being open to other cultures. In what initially rings of disagreement to the idea of learning from community and other cultures, Bass (1997) argues that the purpose of education is to preserve society, including its culture, values, and beliefs. Bass goes on to claim that the preservation of society requires that society change, and in better understanding the way society currently is, one can better affect positive change. Others write that a primary purpose of education is to teach students to act for the common good and make the world a better place, to affect positive change (Dintersmith, 2018; Macallister, 2016). Yang (2018) makes a slightly different plea for caring about community. The increase of automation and artificial intelligence may change economies and the way people work, so taking care of people and community will not only be vital for the community, but for one's sense of purpose.

Connected to but slightly different from caring for community is the idea of civic engagement. They both elicit thoughts of groups of people working toward common goals. The difference is that civic engagement includes threads of governance or democracy while community is more about culture and social norms. There is no shortage of current philosophers and leading thinkers who proclaim that schools should prepare students for citizenship within a democracy (Adler, 1982; Dintersmith, 2018; Robinson & Aronica, 2014; Wagner, 2008; Wagner & Dintersmith, 2015; White, 2007). Schneider (2017) goes a bit further by proposing that school evaluation should, in part, be based on how well they teach students about civic engagement, and, perhaps more importantly, how its students engage civically. Schneider believes that a high-

stakes test about civics is not enough, but that student portfolios and performance tasks should be used as well. Biesta (2007) goes further yet. He writes that schools should do much more than prepare students for democracy, that they should act out democracy in all its conditions.

There is also a fair amount of opinions about the economic purpose of K-12 schools. White (2007) writes that a primary purpose of education should be about contributions to the economy, that students must be prepared to add to the economy rather than being a drag on it. The skills mentioned earlier by Wagner (2008) and others (Dintersmith, 2018; Wagner & Dintersmith, 2015) are declared to be just as valuable for the future careers of students as for their social interactions. Robinson and Aronica (2014) argue the point differently. They point out that publicly funded schools must show a return on that investment and that the best way to do that is to prepare students to contribute to the economy. Finally, Adler (1982) writes that education should prepare students for their work life much more directly. He argues that the last two years of high school should introduce students to the world of work through internships, job-shadowing, or employment.

The Importance of Primary Purposes

It is reasonable for one to believe it is fine that schools serve many purposes and we need not worry which purposes are primary. Noted earlier, emphasizing Labaree's (1997b) idea of social mobility over democratic equality may create an educational system in which students strive more to gain a credential than they do to build knowledge and cultivate skills. Is hunting for credentials, status, and individualism really a problem? Carpenter (2005), using the political rhetoric structure, offers this retort

> the de-emphasis of noneconomic purposes carries with it the potential of perpetuating a citizenry committed to self above all, shrugging off responsibilities inherent in a free society. Considering the breakdown of social capital (Putnam 2000), the disengagement

> of youth (Chideya 1997), students' lackluster knowledge of civics (Manzo 2001), and endemic voter apathy (Piven and Cloward 2000), such a dynamic may be in contemporary evidence. (p. 288)

It may be worthwhile to reiterate the earlier point that emphases on academic achievement found in mission statements and public policy may be code for economic purposes. Labaree (2011, 2014) makes the argument explicitly, but one's own intuition can serve as a guide. The logic for this argument is as follows. There is a fairly straightforward connection between the civic purpose and perpetuating democracy. Social and emotional purposes connect to developing persons and social relationships. What is the academic purpose for? Surely it is possible that this purpose comes with the value of knowledge building as its own goal in mind. It is entirely possible, though, that academic purposes are the easiest to offer credentials for, which in turn makes it easier to hire workers and organize economies.

Stated Policy vs De Facto Policy

While this study recognizes that state and federal policy may influence teacher perceptions about the purpose of education, the careful consideration of educational policy is not a focal point. Still, the interpretation of such educational policy by teachers is important as it reveals the need to move beyond the study of written mission statements and consider teacher perceptions about educational purpose.

There is a difference between stated policy and de facto policy. This is a well-documented phenomenon. Common examples are readily accessible. When driving down the road, a sign may read "Speed Limit 55 MPH." This is the stated policy, which has no doubt gone through the proper channels from idea to proposal to adoption by a governing body to implementation in the form of a road sign. A speed limit of 55 miles per hour is only the de facto policy, however, if good-faith drivers believe a citation will be given for driving at speeds above

it. Commonly the de facto speed limit is closer to 60 miles per hour when the stated policy is 55. Enough good-faith drivers believe they will only risk a citation when driving above 60 miles per hour. Here is another example from my experience as a parent: My wife and I have told our children that they must clear their own dishes after a meal lest they receive a negative consequence of some kind. This is our stated policy. For many reasons, mostly due to a lack of monitoring and follow-through by my wife and myself, the de facto policy is much less a requirement that my children clear their own dishes and more a suggestion. Myriad more examples exist in most every aspect of life.

Street-Level Bureaucrats

Weatherly and Lipsky (1977) explain that there are typically three factors at play when stated policies and de facto policies differ. First, the policy is service-oriented. In other words, a person on the ground is responsible for executing the policy rather than some form of automatic execution. The speed limit example above is one that is service-oriented. A police officer must make the determination whether a certain speed deserves a citation. Weatherly and Lipsky call public servants responsible for policy execution "street-level bureaucrats" (p. 172). Among these street-level bureaucrats are police officers, judges, social workers, and teachers. Position the speed limit policy against a policy that increases the fine for speeding by $10. Since the fine amount is essentially automated, i.e., the police officer issuing the citation has no say in the fine amount, the stated policy is the de facto policy. The same is true for other policies that can be automatically executed.

The second factor at play involves the number of occupational responsibilities the public servant has (Weatherly & Lipsky, 1977). If the number is high enough to make it difficult to perform them all, the public servant will naturally prioritize and make sacrifices. Consider, again, the police officer who has far more than speed limit policies to enforce. It is

understandable that a typical officer might consider a driver traveling at 5 miles per hour over the speed limit to be less dangerous to society than someone committing any number of infractions such as domestic disturbances, petty theft, violent crimes, etc. Enforcing a slightly different de facto speed limit than the stated one is even understandable when considering only driving infractions. Running red lights or stop signs, driving recklessly, or driving without properly working lights are all arguably more dangerous to society than traveling 60 miles per hour in a 55 mile per hour zone.

The third factor to consider when stated and de facto policies differ is the level of support the policy has in the form of committed resources such as time, training, and funding (Weatherly & Lipsky, 1977). For example, if police forces were suddenly doubled, all police officers were trained on how and where to recognize speeding, and officers were given enough time to issue citations, it is likely that the de facto speed limit would be much closer to the stated speed limit. Absent that level of support, and understanding how many other laws in addition to speed limit that police officers are responsible for enforcing, it becomes clearer why some de facto policies are different than the original stated policies.

Examples

K-12 educators are public servants with many occupational responsibilities and, at times, a lack of resources, so it should be no surprise that stated policies and de facto policies sometimes differ in K-12 schools. Weatherly and Lipsky (1977) first shed light on this phenomenon when studying the Special Education Law in Massachusetts, Chapter 766, passed in 1972 and implemented in 1974. The overarching goals of the law were three-fold. First, to increase assessments of students thought to have special needs using a team of professionals and including students' parents. Second, to provide individualized support to students with special needs based on thorough assessments. Third, to reduce the stigma that students with special

needs felt by placing them in mainstream classrooms more often and special classes less often. The law received broad support, state commitments for funding, new field manuals detailing the procedural expectation, and local schools had two years to plan for its implementation. Despite these efforts, the de facto policy became far different than the stated policy.

Looking at Chapter 766 through the lens of the three factors described above, one can understand why. First, the policy relied on public servants rather than automation. The field manuals, perhaps a good faith attempt at automating procedures rather than leaving decisions up to local special education practitioners, were found to be confusing, non-specific, and unhelpful. The manuals were received so poorly that they were nicknamed the "Red Devil" (Weatherly & Lipsky, 1977). Second, the occupational responsibilities for the special education practitioners charged with implementing the new policy were numerous. These teachers and special education coordinators were expected to organize teams that would contribute to student assessments, lead assessment meetings, create individual student plans based on assessment results, carry out the newly created plans, and involve the students' parents along the way. All of this was in addition to the normal daily responsibilities of being a special education practitioner. Third, resources designed to for Chapter 766 were sparse. The unhelpful field manual mentioned above was part of a lack of training for both special education and mainstream teachers. The funding earmarked for supporting the law turned out to be insufficient and slow to arrive, and special education practitioners simply did not have enough time to implement the many facets of the new law. In the end, the de facto policy called the Special Education Law in Massachusetts, Chapter 766, failed to meet its overarching goals. Too few assessments took place, or they were routinized and generic, parents often signed blank forms, and mainstream teachers recommended students with behavior issues for team assessments instead of students with special learning needs (Weatherly & Lipsky, 1977).

Consider the example of California's single gender public school initiative. In 1997, then Governor Pete Wilson drafted legislation to create a pilot of single gender public schools (Datnow et al., 2001). Three million dollars over two years were earmarked to help these pilot districts create their single gender schools. The intent of the legislation was to provide choice to parents in response to the idea that gender bias was commonly at play in traditional public schools. The money earmarked was for startup costs only. After two years, the schools were expected to operate within their normal school budgets while additional money was to be spent on expanding the program. That was the stated policy. Datnow et al. (2001) found the de facto policy to be different. After observing classes and talking to key stakeholders in each of the six districts that were awarded the single gender funds, they found no evidence that gender bias was addressed in the new single gender schools. Instead, a multitude of evidence was found that districts, while establishing single gender schools, used the funds to address other challenges in their communities such as low achievement, deteriorating buildings, poverty, and violence. When funding ran out after two years, which was always the intent, five of the six districts chose to end their single gender schools.

Bearing in mind Wavery and Lipsky's (1977) three factors that contribute to street-level bureaucrats, we can see why the de facto single gender policy differed from the stated policy drafted by Governor Wilson. First, the single gender policy was, in part, service oriented. It relied on the public servants at the school level to set the visions and intentions of the single gender schools. Interestingly, the part of the policy that was more or less automated, i.e., districts needed to create single gender schools in order to receive state funds, happened as intended. That part of the stated policy was not changed. Second, the number of occupational responsibilities of the public servants was high. Indeed, each school had many challenges they hoped to overcome and used state funds toward those goals instead of explicitly combatting gender bias (Datnow et

al., 2001). Third, the single gender policy, while it did not lack in funding support, did not provide gender-bias training or much guidance for the pilot school districts. We can imagine a scenario in which the single gender schools would have sustained much longer if training was provided to school staffs and additional stipulations were put in place in order to receive state funding.

There may be no better examples of the impact of street-level bureaucrats in K-12 schools than the common standards and school accountability movements. While both movements are connected in many ways, most recently within the RTTT (USDE, 2009) and ESSA (2015) federal legislation, it is worthwhile to consider them separately. The common standards movement began in earnest after the release of *A Nation at Risk* (1983), which called for more rigorous expectations of learning in America's schools. From there many states and content associations, such as the National Council of Teachers of Mathematics (NCTM) began to establish specific content guidelines (Coburn et al., 2016). Federal legislation, specifically Goals 2000, enticed states to begin adopting common sets of content standards that all schools in their states would teach. The movement continues through the present day as nearly every state in the country has adopted some form of common content standards. In an analysis of common standards research, Coburn et al. (2016) found that the standards movement has had minimal impact on classroom instruction. Teachers, the street-level bureaucrats in this case, have often morphed innovative curricula into traditional instruction, adopting surface-level changes such as manipulatives and student grouping over in-depth changes such as classroom discourse. All in all, observational studies have found little difference in the way teachers instruct as a result of common standard reforms.

School accountability was ramped up with the passage of NCLB (2002), which required schools to meet adequate yearly progress goals using student testing measures, and continued

through RTTT and ESSA. In this case, Coburn et al. (2016) found few positive results and many negative ones. Since these school accountability measures mandated yearly testing of students in mathematics and reading, there have been some small achievement gains in those subject areas. Many other subjects became marginalized, including social studies and the arts. Schools also increased the time spent on teaching test-taking skills over learning content. In some cases, schools have attempted to game the school measurement systems through shifting schedules and cheating.

Both the common standards and school accountability movements align with the factors of street-level bureaucrats. These policies are reliant on public servants for implementation, these public servants have a high number of occupational responsibilities, and support for implementation in the form of training, time, and funding, has often been lacking. Such factors led many school practitioners to construct these policies in ways that confirmed their pre-existing beliefs or focused on the simpler parts of the reforms (Coburn et al., 2016). There is more evidence from a recent survey that suggests teachers may adapt education policy. Large majorities of 3,328 teachers surveyed reported that their voices were not factored into the decision-making process at the district (76%), state (94%) or national (94%) levels (Center on Education Policy, 2016). The same survey found 46% of teachers thought that policies from the state or district level that got in the way of teaching was a major challenge and about a third of teachers noted constantly changing demands placed on students and teachers.

Implementation Theory

There is a connection to be made between street-level bureaucrats and implementation theory. Implementation theory has historically utilized two distinct models: top-down and bottom-up (Kahoutek, 2013). The top-down model is marked by centralized authority, command and control leadership, and policy compliance. The bottom-up model builds policy off

interpersonal observations of on-the-ground actors. Importantly, the bottom-up model was born out of a recognition that top-down policy implementation was often ineffective, with local actors bending stated policies toward local wants and needs. In other words, the bottom-up implementation theory was created from observing street-level bureaucrats. Further, there is now a belief that the bottom-up implementation model is preferred in cases for which local actors know the needs better than centralized policymakers, causing many centralized policymakers to edit stated policy after policy adaptations are observed at the local level (Kahoutek, 2013).

Interventions

While there are times when adapting a stated policy is preferred as noted above, there is no question that the street-level bureaucrat phenomenon can also present a challenge for policymakers. Certain interventions have been shown to affect the degree to which a stated policy is adapted, and these interventions seem to link directly to two of Weatherly and Lipsky's (1977) three factors of street-level bureaucrats. The first intervention is bottom-up implementation theory, noted above (Kahoutek, 2013). This way of implementing policy connects with Weatherly and Lipsky's first factor, that street-level bureaucrats are public servants. As public servants, they are likely to adapt policy based on existing beliefs or implement only the surface-level aspects of the stated policy (Coburn et al., 2016).

The next intervention comes from variation theory. One of the foundational elements of variation theory is that the way in which a policy is experienced is important and these experiences vary (Tan, 2009). Specifically, variation theory measures the variation within experiences rather than the differences between, allowing for a deeper understanding of the differences related to each other. Such a deep understanding can provide guidance on how to influence the ways in which a policy is experienced. Variation theory links nicely with Weatherly and Lipsky's third factor, that of support and resources. In understanding how an

experience of policy can be influenced through variation theory, training support may well be designed. For example, perhaps a policy is best rolled out at a certain time of year or using a certain method to create a preferable experience.

The last intervention is called boundary spanning. Honig (2006) described boundary spanners as those employees that reach beyond the normal boundaries of their occupational role in order to aide in the communication of a new policy or the transition to a new policy. An example of a boundary spanner would be when central-office personnel in a school district spend time in schools with staff when new policies are expected to be implemented. They may answer questions, monitor progress, or support staff in the roll out. Boundary spanners represent an investment of time and funds into the successful implementation of a new policy which connects with the third factor of street-level bureaucrats.

All three of the interventions described above could be viewed as recognition that school practitioners, or public servants more broadly, are the embodiment of any given stated policy as they aim to mitigate the underlying factors that create the street-level bureaucrat phenomenon. In other words, these interventions seem to admit that school practitioners, namely teachers, are the de facto policy.

Sources of Teacher Beliefs

To this point, I have made the case that we ought to care to know what the street-level bureaucrats in schools, namely teachers, believe the primary purposes of school to be. It follows, then, that we become interested in the sources of teachers' beliefs about the purposes of school. Such insight not only can help us understand why specific beliefs about the purposes of education are held, but also could provide useful information about affecting such beliefs. It must also be noted that the beliefs teachers hold, including about the purposes of education, impact the

pedagogical decisions they make (Holtz, 2009). For these reasons, it is important to explore where teacher beliefs come from.

Collinson (2012) has compiled a worthwhile analysis of extant literature about the sources of teacher beliefs and has deepened the conversation by conducting a qualitative study of 81 teachers about the sources of their beliefs. Beliefs were found to have come from 14 sources, six of which included examples that came most often from childhood while the remaining eight sources generally included examples from adulthood. Table 2 lists the belief sources, divided into the time of life when the source was likely formed. While most of the sources are easy to understand, an extra note may be needed in order to explain experimental or accidental use. This source refers to an action of doing, when a teacher's intentional or unintentional act alters his or her beliefs. For example, one teacher explained a change in belief based on being asked to substitute for a teacher who taught a different subject (Collinson, 2012).

Table 2

Sources of Teacher Beliefs (Collinson, 2012)

Time of Life	
Childhood	Adulthood
Immediate family or close associates	Experimental or accidental use
Life's daily routines and experiences	Intensive professional development
Teachers and role models	Colleagues
Religion or philosophy	Reflection
Trauma	Another career
Imaginative life	Inquiry
	Government: Politics or political leaders
	Spending time abroad

The qualitative portion of the Collinson (2012) study found that seven of the belief sources were cited by over half of the teachers interviewed, led by immediate family or close associates (95%), life's daily routines and experiences (77%), teachers and role models (70%), and followed by experimental or accidental use (68%), intensive professional development

(67%), colleagues (65%), and religion or philosophy (54%). It would seem that childhood, most especially family, plays an outsized role in shaping teacher beliefs. Clearly, though, beliefs are not fixed during adulthood, as three adult sources appear in over half of teacher interviews giving credence to the idea that teacher beliefs can be affected.

Influences from Childhood

Some evidence exists that corroborates the notion that much of what teachers believe about education is formed during childhood. Cady and Rearden (2007) surveyed 47 K-8 preservice teachers enrolled in a methods course. Participants were asked to complete knowledge statements about mathematics and science. Participants were also asked about the sources of their beliefs about mathematics and science. Nearly all the participants (96%) indicated that mathematics teachers from childhood influenced his or her beliefs about mathematics. Childhood elementary teachers were seen as having a positive impact on mathematics beliefs while high school teachers were seen as having a negative impact on beliefs. Holtz (2009) agrees that teachers' beliefs about knowledge and pedagogy often come from the ways in which teachers themselves learned best. More evidence about pedagogical beliefs comes from a study comparing Chinese pre-service teachers with pre-service teachers from the United States. When asked about the sources of their current pedagogical beliefs, "personal learning experiences from childhood" was the belief source most frequently indicated by both Chinese (39%) and US (42%) respondents (He et al., 2011). These examples fit nicely into Collinson's (2012) list of childhood belief sources, specifically life's daily routines and teachers and role models.

These findings are not altogether surprising. Decades ago, Bandura (1977) formulated social learning theory based in part on experiments that revealed the power of adult modeling in children. The ways in which adults model aggressive or non-aggressive behavior affects the behaviors of observing children. Bandura's experiments were mostly about how we act, not

necessarily about what we believe. However, the link between belief and behavior is intuitive. It is likely that children who act aggressively after watching an adult act with aggression are doing so, in part, because of a belief that was strengthened when they observed the aggressive adults. Indeed, irrational behaviors can likely be connected to irrational beliefs (Holtz, 2009). More recently, Dweck's (2006) research on mindset shows that not only can beliefs about one's capability to learn be formed during childhood, these beliefs can actually be fixed during childhood. It follows that teachers who establish a belief about knowledge or pedagogy during childhood could indeed continue to hold that belief well into his or her teaching career.

Influences from Adulthood

While childhood is a time ripe for establishing beliefs about knowledge and how children learn, not all beliefs about education are formed during childhood. In one study 95 student-teachers and 92 experienced teachers were asked about their teaching practice beliefs. While results were similar in many ways, the group of student-teachers put more emphasis on practices that helped students acquire facts and rules than the group of experienced teachers (Salo et al., 2015). On the same survey, student-teachers put less emphasis than experienced teachers on ability-appropriate tasks. Salo et al. (2015) surmise that student-teachers had formed their beliefs about teaching practice based on how they themselves were taught in their youth, consistent with findings detailed above. The experienced teachers, according to Salo et al. may have answered differently based on the teaching experiences that they had already amassed. In a study of 455 K-12 teachers enrolled in a graduate program, White (1990) hypothesized that the beliefs teachers held about teaching practice likely came from their methods instruction during their teacher education programs. While it is possible that the teachers' beliefs about teaching practice may have come from their childhood experiences rather than pre-service instruction, White, at the time, noticed a shift in philosophy during the years preceding his study. Therefore, there was

reason to suspect that these graduate-level teachers had acquired their beliefs not from childhood, but from their teacher education programs. Considered together, the Salo et al. and White studies give credence to the idea that teacher beliefs can be formulated during adulthood, both during teacher training and thereafter.

The environments in which K-12 teachers practice seem to affect their beliefs about teaching and education as well. Evers and Bacon (1994) surveyed teachers from 16 high and low performing elementary schools from an urban environment. The survey asked teachers to give their perceptions about seven components of effective schools. The perceptions of teachers from high performing schools were significantly different than the perceptions of teachers from low performing schools for each of the seven components. The strongest differences between teachers from the two groups of schools existed on the safe and orderly environment component as well as the instructional leadership component. For each component, teachers from high performing schools felt more strongly about its importance than teachers from low performing schools. Jenkins's (2011) qualitative study about teaching philosophy and practice adds to the conversation about the impact of environmental context on teacher beliefs. Jenkins interviewed 10 experienced teachers and found that their beliefs about teaching philosophy and teaching practice were influenced by their interactions with learners and their day-to-day learning context. These studies may suggest that the teaching environment impacted the teachers' beliefs about effective school components, consistent with Collinson's (2012) reflection, professional colleagues, experimental or accidental use, or other adulthood belief sources.

Two more studies tangential to teacher beliefs may add to the discussion. An investigation about the relationship strategies that school principals use to relate to their teachers found that teacher attitudes about satisfaction, cohesion, and commitment strongly correlated with these relationship strategies (Price, 2012). While attitudes are not the same as beliefs, this

study shows the effect that influences in adulthood can have on a teacher's mind. Further evidence comes from Dunaway et al.'s (2012) survey of 322 teachers, which revealed 30% believed that discussing the mission and vision of the school before establishing school improvement plans either had little impact on said plans or was a waste of time. In the same survey, zero percent of school principals felt the same way, perhaps revealing the influences of colleagues and experiences in adulthood on educator beliefs, considering most school principals begin their careers as teachers themselves.

Teachers form beliefs about educational philosophy, pedagogy, and learning both in childhood and into adulthood, indicating that teacher beliefs about the purposes of education are influenceable to some degree. This should come as no surprise. Dweck (2006) indicates that people may hold a growth mindset within one context and a fixed mindset within another. The good news is that Dweck's work indicates that fixed mindsets may be affected by environmental factors meaning school leaders and fellow staff members may be able to impact the currently held beliefs of others.

Chapter 2 Closure

It should be clear by now that numerous opinions and analyses of purposes of education exist. A historical look at K-12 educational purpose in the United states may use a societal structure (Labaree, 1997a, 1997b, 2011, 2013, 2014) or a political rhetoric structure (Carpenter, 2005; Carpenter & Hughes, 2011). Current opinions about primary purposes of education vary so widely that it becomes difficult to draw conclusions. Are schools primarily about building knowledge? Are they primarily for perpetuating democracy? For training a work force? A common default may be to look to public policy. This default stance may lead us astray, however, because stated policy is often different from de facto policy. The way in which local practitioners, namely teachers, implement policies may ultimately be what matters most.

Therefore, understanding teacher perceptions about the purposes of education are critical. Perhaps equally critical is an understanding of how teacher beliefs are formed and how they can be affected. This study aims to begin collecting those teacher opinions and discovering the sources of their beliefs.

CHAPTER 3

METHODOLOGY

The purpose of my study was to ascertain the perceptions of K-12 teachers about the primary purposes of education, and to analyze the effects of belief sources on such perceptions. Specifically, this study examined K-12 teachers' ratings of importance regarding the purposes of education, using an established list of K-12 purposes collected and adapted over years of mission statement analysis (Stemler et al., 2011). This study also examined the sources of K-12 teacher beliefs that influenced their K-12 education purpose importance ratings, using an established list of the sources of K-12 teacher beliefs (Collinson, 2012). This study has added an important missing element, K-12 teachers' perceptions, to the literature about education purposes. The following research questions articulated the aims of this study:

1. For each item within an established list of K-12 education purposes, how do K-12 teachers rate:
    (a) its *ideal* level of importance; and
    (b) its *actual* level of importance based on what they experience at their school?
2. To what extent are there differences between K-12 teachers' ideal ratings of education purpose importance, and their actual experience-based ratings?
3. From an established list of sources for beliefs about K-12 education purposes, how do K-12 teachers rate these as influencing their ratings regarding the ideal level of importance of each purpose?
4. How do these two sets of purpose ratings and the ratings regarding sources of beliefs differ as broken down by the demographic categories of school level, school locale, school type, and teacher experience?

5. After controlling for demographic variables, to what extent do K-12 teachers' ratings of belief sources predict their level of importance ratings of:
    (a) ideal K-12 purposes of education; and
    (b) actual experience-based K-12 purposes of education?

Research Design, Approach, and Rationale

This study used a non-experimental, correlational design to answer the research questions. According to Keppel and Wickens (2004), non-experimental refers to analyzing natural populations. Correlational research design is used when the researcher wants to explain the changes in one variable from changes in other variables (Creswell, 2008). The non-experimental, correlational design fits this study as my intention was to measure the relationships among variables in the current K-12 teacher population. The independent variables were teachers' ratings of influence regarding sources of belief. The control variables were school level, school locale, school type, and teacher experience. The dependent variables were teachers' importance ratings regarding the purposes of education. A survey was used to collect quantitative data. Quantitative research aims at examining the relationships between variables (Creswell, 2014), which matches my research questions nicely. This study employed an online survey in order to capture multiple quantitative variables from a natural population. The survey was cross-sectional in nature, meaning it surveyed participants at one point in time (Creswell, 2014).

This research adopted a postpositivist worldview for the purposes of this study. According to Creswell (2014), the postpositive approach is a framework in which researchers attempt to determine effects based on causes. It is characterized by theory verification, empirical measurement, and an assumption of subjective reality. This worldview fit my study due to its attempt to explain teacher perceptions based on underlying factors and use subjective empirical data to reach conclusions.

Population and Sample

The population for this study included K-12 teachers for whom I had contact information and teachers in my professional social media network. K-12 refers to classroom teachers within a school district from any of grades kindergarten (K) through 12th grade. A stratified random sampling of all K-12 teachers in the U.S. would be the ideal way to obtain a representative sample of the above population (Creswell, 2014); however, access and participant response rate were mitigating factors in the sampling procedure. Therefore, the K-12 teachers for whom I had contact information and the teachers in my professional online network were targeted. This was a form of convenience sampling (Creswell, 2008). Due to concerns over response rate for this online survey, it was sent to all teachers who I have had professional contact with over the past seven years, which yields an email list of 3,610. This list included teachers from different school levels, school locales, school types, and a wide range of teaching experience. All teachers on this list taught for schools from two Midwestern states when their email was collected. Links to access the survey were also posted to various social media platforms, which likely yielded additional respondents from locations other than these two Midwestern states. The sample for this study was the collection of teachers from the population of my professional contacts and professional social media network who participated in the survey instrument.

A multivariate regression model was created with the collected data, so a multiple regression formula was used to calculate the desired sample size for my study. In the formula, I used a medium effect size ($f^2 = .25$), a p-value of 0.05, a statistical power of 0.8, and both 3 and 14 predictor variables based on the expected possible amount of belief source constructs after exploratory factor analysis. Based on these calculations, I needed at least 48-86 responses to my survey. While multivariate regression is the primary desired analysis, research question four lent itself to testing for differences between the interactions of multiple groups, such as school level

and school type. A formula for factorial multiple analysis of variance (MANOVA) was used to determine the desired sample size for this type of analysis. In the formula, I used a medium effect size ($f^2 = .25$), a p-value of 0.05, a statistical power of 0.95, three groups and 14 measurements. Based on this calculation, I needed at least 280 responses to my survey in order to use factorial MANOVA tests.

Instrumentation

My researcher-created survey consists of five parts (Appendix A). It has a section aimed at measuring ideal purposes of education perceptions, a section for measuring belief sources that influence ideal purposes of education perceptions, a section aimed at measuring experience-based purposes of education perceptions, a section aimed at understanding what accounts for differences between ideal and experience-based perceptions, and a section to collect demographic information. The word ideal is meant to indicate what teachers desire to be true about K-12 education purposes, while experience-based is meant to indicate what teachers believe is actually occurring regarding education purposes. The main reason for including sections on both ideal and experience-based purposes is that differences between the two sets of perceptions may exist, and for at least two separate reasons. Ball (2003) talks about the state of education creating "performativity" in educators, the act of forgoing beliefs in order to comply and perform. This indicates that teachers may not act on their ideal purpose of education beliefs in favor of complying with a stated school mission. Alternatively, Weatherly and Lipsky (1977), reveal that teachers can act as street-level bureaucrats, ignoring stated policy in favor of what is practical or familiar.

Following the consent agreement, the first question that participants answered was one about their current role at their school. It asked them to choose the option that best describes their primary role. Possible answer choices were teacher, administrator, or support staff. If a

participant chose administrator or support staff, the survey administration tool, Qualtrics (2020), skipped them to the end of the survey. If a participant chose teacher, they continued onto the rest of the survey instrument. The goal of this question was to filter out any potential participants that were not teachers or did not identify as teachers. I chose not to include other school roles such as instructional coach as an answer choice because there can be wide variability in the duties of such a role from one school instructional coach to another. Instructional coaches can be full time teachers that also coach peers, full time coaches that rarely set foot in a classroom, or anything in between. Consequently, this first survey question compelled participants to consider their primary role and select an answer based on how each of them identifies. In the end, any participant who identified primarily as a teacher was included in my study.

This researcher-developed survey was pilot tested with several professionals of the type that would be receiving the survey. Based on their input, several revisions were made to help with content validity. All revisions involved word choices within the survey to relieve minor confusion. Purpose and belief items included in the survey came from established lists that have not previously been adapted for survey research. Accordingly, the need to revise certain items to ensure clear intention of meaning was not altogether unexpected.

Ideal Purposes of Education

To measure teacher perceptions about the ideal purposes of education, one question was created using the 11 purposes of education developed by Stemler et al. (2011) from many studies of school mission statements. Stemler et al. have compiled perhaps the most comprehensive empirical view of the purposes of education to date, making these themes a fitting basis for understanding teacher perceptions about the purposes of education, both ideal and experience-based within their school.

Eight of the Stemler et al. (2011) purpose themes were used within the survey exactly as written. The other three purposes involved the phrase “integrate into” and required a minor addition of the word “students.” For example, the theme “integrate into local community” was revised to “integrate students into local community.” These changes were designed to mitigate any potential confusion about the meaning of each phrase. Stemler et al. are clear that the intention of the phrase is the integration of students as shown from the both the mission statement examples used and the explanation offered by the researchers.

Respondents were asked to rate the importance of each of these 11 purposes of education based on their subjective ideals using a 6-point Likert scale. Creswell (2008) suggests that Likert scale data can be considered interval, making it possible to perform multivariate regression, which is one way that I answered research question number five. The 6-point Likert scale is ideal for comparison between items for a few reasons. It is important to consider the type of data analyses that a researcher would like to perform when deciding how many points to include in a scale (Johnson & Morgan, 2016). One of my aims was to analyze the differences between purposes of education, making items with a tight range of scale point options (i.e., 2-4 scale points) less desirable. Too many scale point options may present problems as well. Research by Dawes (2008) indicates that respondents use, on average, over 50% of the scale points on 5-7 scale point items but use 40% or less of the scale points on items with more than 7 scale points, indicating that respondents have a difficult time differentiating between scale points when presented with too many options. In general, taking item reliability, ability for respondent discrimination, and respondent preference into account, it seems that 5-7 scale points represent the Likert scale sweet spot (Johnson & Morgan, 2016). Therefore, I used 6 scale points, which eliminates the neutral response that some 5 and 7-point scales include, yet still offers enough

variability without so large an amount that respondents may struggle to differentiate between scale points.

Sources of Belief

I used Collinson's (2012) sources of teacher values and attitudes as a basis for measuring belief sources that influenced respondents' ideal K-12 purpose of education perceptions. Of the 14 original sources (see Figure 1), four were modified slightly in order to add needed explanation or clarification. Collinson names one source "Imaginative life," but goes on to define imaginative life as "vicarious learning from real or fictional characters" (p. 337). My survey item includes the definition in parentheses in order to help respondents understand the meaning of the belief source.

A second source was modified from "Reflection" to "Reflection on beliefs" because Collinson (2012) makes note of just how similar reflection and inquiry may seem and therefore differentiates the terms by defining reflection as the act of thinking about one's held beliefs. A third source was modified from "Trauma" to "Traumatic event(s)" for use in my survey. I made this decision based on the explanation of the source. Collinson's examples of trauma were recalled from the participants' past, not from participants' current circumstances. This is not to say that such events did not have lasting effects on participants. The mere fact that participants recalled such events makes it likely that they had a lasting effect. It may be true that using "Trauma" in my survey coupled with the detailed examples that Collinson provided was the best way to explain the term. However, for a survey item that appears within a list of 13 other items it was not desirable to include examples that may consume valuable space. My concern with using "Trauma" by itself was that it would be misinterpreted to mean a current experience, while "Traumatic event(s)" was likely to not be misinterpreted in that way.

Lastly, “Experimental or accidental use” required the most explanation for use in my survey. Collinson (2012) defines the source as the act of doing something that changes values or attitudes and goes on to give examples that refer to the act of experimenting. In order to capture the essence of the belief source, I used on my survey “Experimenting (having done something intentional or unintentional that altered beliefs).” This represents the largest modification of any source from Collinson’s original list. Dropping the “accidental use” part of the source was not a decision that I made lightly. Collinson’s original naming may be confusing on its own, and in the form of a survey, participants did not have the benefit of reading the detailed explanation of the source. In the end, including “accidental use” risked a misunderstanding of the belief source.

Respondents were asked to indicate the extent to which they agreed that each belief source influenced their ideal K-12 purposes of education perceptions using a 6-point Likert scale. The same considerations applied here as for the rating scale that measures K-12 teachers’ perceptions about the purposes of education. In this case, the intention was to gauge the strength of agreement or disagreement that certain belief sources were influential.

Experience-Based Purposes of Education

To measure teacher perceptions about experience-based purposes of education, the same question was posed to respondents as was posed to measure their ideal purposes of education perceptions. The difference lied in the framing of the questions. For this question, respondents were asked to consider the purposes of education that they experience within their classrooms at the schools for which they teach. Posing this identical question with different framing was designed to allow me to compare ideal perceptions and experience-based perceptions of the purposes of education. This comparison also served as a test of sorts for the idea of teachers as street-level bureaucrats.

To understand participants' reasons for any major differences in their ideal and experience-based perceptions, an open-ended question was posed asking participants to write out what they think might account for such differences. Open-ended questions give respondents an opportunity to express their views and can produce unanticipated answers (Johnson & Morgan, 2016). These answers added a depth or a richness to the results of my study.

Demographic Information

The final block of questions in the survey asked respondents questions to help me understand key demographic information. Included were questions about school level (elementary, middle, or high), school locale (urban, rural, or suburban), school type (traditional public, public charter, or private), and years of K-12 education experience, rounded to the nearest whole number of years. This information helped me describe my sample and served as control variables.

Data Collection Procedures

After obtaining Human Subjects Institutional Review Board (HSIRB) approval from Western Michigan University (Appendix B), I began participant recruitment. My survey was made using Qualtrics (2020), an online survey creation program. Information regarding the study including a link to the survey was sent via email. In my role as a K-12 instructional coach, I have compiled a list of 3,610 educator email addresses, 3,235 from one Midwestern state and 375 from a second Midwestern state. I sent these 3,610 emails from my Western Michigan University Outlook email account. This account allowed 500 addresses per email and 2,000 daily email limits, so I was able to send each batch of emails over two days. It is common for these kinds of large batch emails to be blocked by school district firewall software. In this case, since these email addresses were previously utilized for professional communication by me, the concern about firewall capture was not as high. Still, I utilized an email merge feature within Microsoft

Excel that is connected to my Western Michigan University account that sent each invitation individually, thus mitigating the risk of a firewall blocking an email due to it having 500 addressees. This process took two days due to the 2,000 daily email limitation.

My email to potential participants included a short overview of the study and a link to the introduction of the survey (Appendix C). It also included a message of gratitude and the chance to win one of five $20 Amazon gift cards, randomly drawn, if they completed the survey. This tactic helps to emphasize the importance of the survey and increase possible responses (Dillman et al., 2009). One reminder email was sent two weeks after the initial email, giving recruits one more week to participate in the study. Information was also posted to Facebook, Twitter, and LinkedIn (Appendix D) on the same date the initial email was sent. To safeguard against repeat responses, Qualtrics (2020) allows researchers to end the survey when a respondent attempts to take the survey more than once. While it may still be possible for a respondent to take the survey more than once using a different device, the setting on Qualtrics made repeat responses less likely.

The link provided in the email and social media posts took participants to the introduction page of the survey. The introduction included instructions on how to complete the survey and information about informed consent, including what was asked of participants and that there was no risk to them if they chose to participate. Also included were potential benefits of the study, a promise of confidentiality, their rights as participants, and my contact information (Western Michigan University Office of Research and Innovation, 2020).

To protect survey participant data, Qualtrics (2020) allows the researcher to anonymize responses. This means that no identifying information such as name, email address, or IP Address is collected unless it is requested within the survey instrument. Since I did not ask for such identifying information, this setting ensured participant data remained anonymous.

Qualtrics (2020) collects data in a way that is easily transferred into the Statistical Package for the Social Sciences (SPSS) software. This is the software that was used for the data analysis phase. As mentioned earlier, the survey was pilot tested in order to improve the survey format and estimate the average time it would take participants to complete it (Creswell, 2008). To conduct pilot testing, the survey was given to five teachers from one of the Midwestern states used for this study.

Data Analysis

The survey data was analyzed using SPSS software to understand descriptive statistics, relationships between the variables, and used multivariate regression analyses in order to develop a statistical model to predict the purposes of education perceptions based on belief sources. Table 3 shows the analysis used for each of my research questions, and the corresponding constructs and survey items.

Research Questions 1 and 3

It is first important to understand the data before running any inferential analyses. My first research question sought to understand teachers' perceptions about purposes of education. Survey items 2 and 4 yield ratings of importance for each of the 11 purposes based on teachers' ideals and teachers' experience, respectively. My third research question sought to understand sources of teachers' beliefs that influenced their ratings of ideal purposes of education. Survey item 3 produces ratings of agreement or disagreement for each of 14 sources of belief. The ratings for ideal purposes of education, experience-based purposes of education, and sources of belief from survey items 2-4 were described and summarized using descriptive statistics that include frequencies, means, and standard deviations (Johnson & Morgan, 2016). To test for differences between the sub-items for ideal purposes of education, the sub-items for experience-based purposes of education, and the sub-items for sources of belief, one-way repeated-measures

ANOVA were used with post-hoc pairwise comparisons using Bonferroni corrections. This multiple comparison correction controlled for type 1 error while testing for sub-item differences (Gravetter & Wallnau, 2017).

Table 3

Crosswalk Table

Variable/Construct	Items	Analysis
RQ1 For each item within an established list of K-12 education purposes, how do K-12 teachers rate: a) its *ideal* level of importance; and b) its *actual* level of importance based on what they experience at their school?		
11 ideal purposes; 11 experience-based purposes	2: a-k 4: a-k	Descriptive statistics, ANOVA, Friedman test
RQ2 To what extent are there differences between K-12 teachers' ideal ratings of education purpose importance, and their actual experience-based ratings?		
11 ideal purposes; 11 experience-based purposes	Items noted above 5	Repeated-measures Bonferroni t-test, Wilcoxon Signed Rank test, Frequencies, Themes
RQ3 From an established list of sources for beliefs about K-12 education purposes, how do K-12 teachers rate these as influencing their ratings regarding the ideal level of importance of each purpose?		
14 belief sources	3: a-n	Descriptive statistics, ANOVA, Friedman test
RQ4 How do these two sets of purpose ratings and the ratings regarding sources of beliefs differ as broken down by the demographic categories school level, school locale, school type, and teacher experience?		
IVs: School level, School locale, School type, Teaching experience DVs: 11 ideal purposes; 11 experience-based purposes; 14 belief sources	6 – 9 Items listed above	Pearson correlation, MANCOVA, Independent-samples Kruskal-Wallis test
RQ5 After controlling for demographic variables, to what extent do K-12 teachers' ratings of belief sources predict their level of importance ratings of: a) ideal K-12 purposes of education and b) actual experience-based K-12 purposes of education?		
IVs: 14 belief sources DVs: 11 purposes	Items noted above	Exploratory factor analysis, Multivariate regression

Due to differing opinions regarding whether Likert scale data should best be treated as interval data or ordinal data (Johnson & Morgan, 2016), it should be noted that the Friedman Test, a non-parametric alternative to the one-way repeated-measures ANOVA, was also used to test for differences between the sub-items for ideal purposes of education, the sub-items for experience-based purposes of education, and the sub-items for sources of belief.

Research Question 2

My second research question sought to understand differences between teachers' perceptions of their ideal purposes of education and teachers' perceptions of their experience-based purposes of education. This was a repeated-measures design in which participants' perceptions regarding level of importance were measured twice for each of 11 purposes of education, once for ideal ratings of importance and once for experience-based ratings of importance. The repeated-measures t-test examines differences between two measures of a single sample (Gravetter & Wallnau, 2017). This repeated-measures t-test was used to examine differences between ratings of ideal purposes and ratings of experience-based purposes for each of 11 purposes of education. The Bonferroni correction was used post-hoc to control for false positives in the data.

To measure the degree to which each pair of purposes are correlated, the Wilcoxon Signed Rank test was used. This non-parametric test offered an additional way to compare ratings of ideal purpose of education importance and experience-based purpose of education importance. Due to varying opinions within the survey literature regarding the preferred treatment of scale data as either categorical or interval, using multiple types of inferential tests such as t-test and chi-square offers added protection to the efficacy of my analysis (Johnson & Morgan, 2016).

Responses to the open-ended question were categorized to better understand participants' reasoning for rating ideal purposes differently than experience-based purposes. Since it was possible that many participants decided not to answer this question, results were reported using frequencies and anecdotes (Morgan & Johnson, 2016).

Research Question 4

My fourth research question sought to understand group differences in ratings of importance regarding purposes of education and group differences in ratings of influence regarding belief sources by school level, school locale, school type, and years of teaching experience. Pearson's correlation test was used to compare teaching experience with the dependent variables (Johnson & Morgan, 2016). Analysis of variance (ANOVA) was used to evaluate mean differences between two or more groups. To test for differences in ideal importance ratings, experience-based importance ratings, and influential belief source ratings by school level, school locale and school type, my study used factorial multiple analysis of co-variance (MANCOVA) with pairwise comparison post-hoc analysis using teaching experience as the covariate (Gravetter & Wallnau, 2017). Multiple non-parametric Independent-samples Kruskal-Wallis tests with Bonferroni adjustments were utilized due to differing opinions regarding the type of data that Likert scales yield (Johnson & Morgan, 2016). This test is often used with ordinal data and will provide an alternative to the between-subjects parametric tests above.

It was possible that some demographic groups would either be too unbalanced to conduct sound statistical analysis or have too few participants to make statistical analysis practically interesting. For example, in a scenario in which a hypothetical 300 participants were to complete my survey, but only 5 were from private schools, analyzing group differences by school type would become unreasonable and uninteresting. This is exactly what happened for the

demographic variable school type. Therefore, some statistical analyses were not completed. Still, collecting demographic information from participants yielded possibility of analyzing some group differences while allowing me to describe the sample.

Research Question 5

Research question five sought to determine the extent to which ratings of belief sources predict ratings of purposes of education for both ideal perceptions and experience-based perceptions. Exploratory Factor Analysis (EFA) was used to determine whether sub-items could be loaded together into a construct, which can simplify multivariate regression analyses (Johnson & Morgan, 2016). Multivariate regression analysis was used to determine correlations between the independent variables and the dependent variables, ultimately yielding predication functions (Mendenhall & Sincich, 2012).

Limitations and Delimitations

Limitations should be identified prior to conducting the study so that the researcher can mitigate any weaknesses as much as possible (Creswell, 2014). One key limitation of this study is the sampling method. Convenience sampling is not as ideal as a stratified random sampling in a study such as this. It may be that certain characteristics exist in the participants who are recruited or who choose to complete the survey that are not representative of the population, thus making it difficult to generalize the results.

Another key limitation is the potential for single source bias, which can occur when both the independent and dependent variables are collected from a single source and is more common on self-report surveys such as mine (Baugh et al., 2006). The danger of single source bias is that the researcher assumes a genuine relationship exists between variables when one is not present. In the case of my study, both the belief sources and purposes of education perceptions will be collected from the same respondents making this study susceptible to single source bias.

There are also some clear delimitations in this study. The sample of respondents was recruited from only two Midwestern states. This decision was made for reasons of email address availability and convenience in order to increase the likelihood of response. The study is also delimited in the demographic-related independent variables. Respondents were asked questions about the schools for which they teach and the number of years that they have been an educator, but they were not asked about their gender, race, or ethnicity. The decision to focus on gathering information about school demographics rather than personal demographics was based on the differences between schools found in the mission statement literature (Chapple, 2015; Craft et al., 2009; Lubienski & Lee, 2016; Schafft & Biddle, 2014; Stemler et al., 2011), in order to reduce the number of constructs involved in the data analysis, and out of a concern that the teachers recruited here may not differ meaningfully enough to make collecting personal demographic information worthwhile.

Another key delimitation regarding the demographics of my study relates to the decision to not include outcome variables of schools such as student academic achievement scores or graduation rates. While possible that significant differences in ratings of purposes of education could be found between schools of differing academic achievement levels or graduation rates, these types of outcome variables are influenced by a multitude factors, including ones such as income level that do not necessarily align with the goals of my study. Thus, revealing such differences, while interesting, was determined to offer limited value for the effort needed to collect such data and connect to participants.

Chapter 3 Closure

Chapter 3 summarizes the adopted worldview, instrument, and data collection procedures that were used in the study. Statistical procedures that were utilized to analyze the data collected were offered. The data analysis, including descriptive statistics, correlations, and regressions

used to address the proposed research questions outlined in chapter 1 were described. A detailed description of the sample and population was also offered, and limitations and delimitations were discussed.

CHAPTER 4

RESULTS

The purpose of my study was to determine the perceptions of K-12 teachers about the primary purposes of education, and to analyze the effects of belief sources on such perceptions. To address my five research questions, K-12 teachers were recruited to participate in an online survey (Appendix A).

Emails were sent to 3,610 K-12 teachers from two Midwestern states. Social media was also employed to invite K-12 teachers to participate. Of the email addresses included in recruitment, 437 were returned. There are a variety of possible reasons these emails never made it through, including but not limited to: a) the recipient left the school or district, b) the school or district firewall blocked the email, and c) the name, and thus the email address, of the recipient changed due to a significant life event. One reminder email was sent two weeks after the initial email, with the same number (437) of emails returned. To promote participation, recruits were informed of the opportunity to enter a drawing for one of five $20 Amazon gift cards upon completion of the survey.

Out of the more than 3,000 recruits, 613 took the survey and 403 entered email addresses into a secure form to enter the random giveaway. Five winners were identified using a random number generator function and Amazon gift cards were emailed to the winners.

Sample Description

The response rate for the survey is difficult to ascertain due to the use of social media in recruitment. Using 613, the number of participants that began the survey, and 3,183, the number of emails that made it through to a recipient's inbox, would yield a 19% response rate. There were 113 surveys that were begun but left unfinished and another 77 that were completed by an administrator or support staff person. These 190 surveys were not included in the analysis. The

completed surveys included 22 for which not all survey items were answered. These were left in the analysis as respondents were informed during the consent process of the option to skip items that they were uncomfortable with. Additionally, two respondents chose not to answer the questions about school level, locale, and type, while four respondents left blank the question about teaching experience in years. In the end, 423 participant surveys were included in my analyses.

Table 4

Respondent School Level, School Locale, School Type, and Teaching Experience

Descriptor	Frequency	%
School Level		
Elementary	146	34.5
Middle School	111	26.2
High School	164	38.8
Missing	2	0.5
School Locale		
Urban	53	12.5
Rural	139	32.9
Suburban	229	54.1
Missing	2	0.5
School Type		
Traditional Public	395	93.4
Public Charter	10	2.4
Private	16	3.8
Missing	2	0.5
Teaching Experience		
1-10 Years	66	15.6
11-20 Years	175	41.4
21+ Years	178	42.1
Missing	4	0.9

Note: $n = 423$

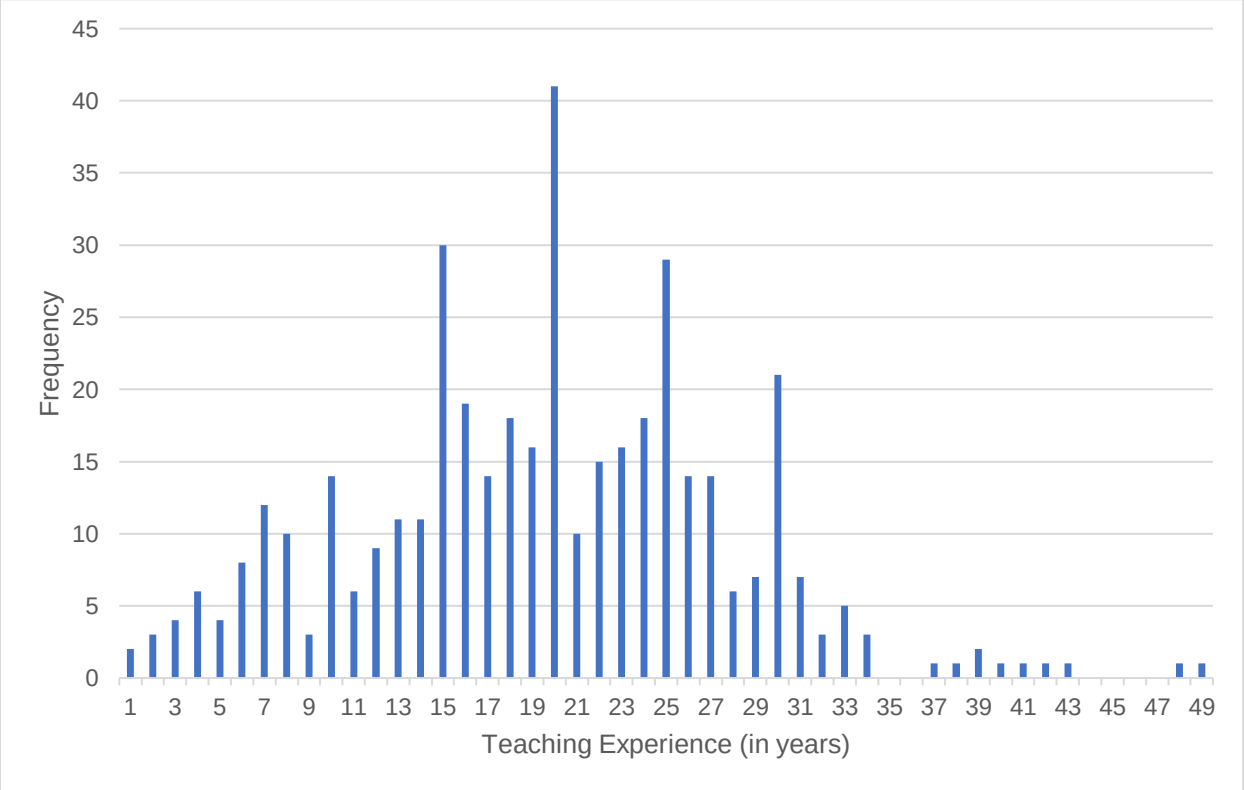
The frequency and percentage of participants were broken down by school level, school locale, school type, and teaching experience (Table 4). A plurality of participants taught in high schools (38.8%), while a majority taught in suburban schools (54.1%) and a vast majority taught in traditional public schools (93.4%). Teaching experience was collected in an open response

format in which respondents were asked to indicate their number of years taught, rounded to the nearest whole year. The frequencies of teaching experience responses revealed a relatively normal distribution of experience (see Figure 2), while the minimum and maximum teaching experience was 1 year and 49 years, respectively. The modal and median teaching experience was 20 years while the mean was 19.4 years.

Teaching experience responses were also fit into three commonly used categories as an additional way to describe the sample. A slight plurality of respondents had 21 or more years of teaching experience (42.1%) while only 15.6% of respondents had 10 years of teaching experience or less.

Figure 2

Frequencies of Respondent Teaching Experience

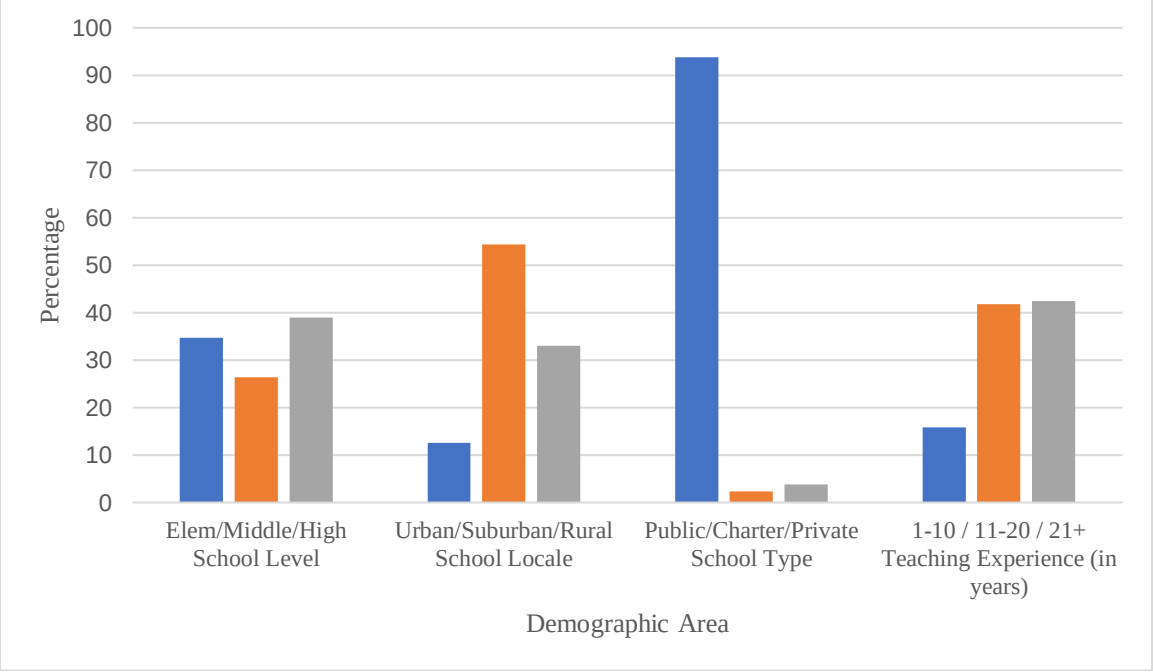


Note: n = 419

As can be seen in Figure 3, the school level of respondents was relatively evenly distributed between elementary, middle, and high schools, with at least 25% of respondents in each category. School locale, while less evenly dispersed among urban, suburban, and rural, had at least 12.5% of respondents in each category. The school type of respondents saw the largest discrepancy between categories with only 2.4% (n = 10) coming from public charter schools and 3.8% (n = 16) from private schools. While it is possible for small subgroups to reveal significant results within some tests, such results bring with them large degrees of error and low practical significance (Gravetter & Wallnau, 2017). Therefore, school type was not included as a variable in the analyses below.

Figure 3

Percentage of Respondent School Level, School Locale, School Type, and Teaching Experience



Note: n = 423.

Results by Research Question

The five research questions for my study sought to understand: a) the perceptions of K-12 teachers regarding the ideal importance and actual importance of an established list of purposes

of education, b) the perceptions of K-12 teachers regarding sources of beliefs when considering their ideal purposes of education, and c) the relationships between these perceptions, broken down by school level, school locale, and teaching experience.

Research Question 1

The first research question aimed to understand K-12 teacher perceptions regarding the ideal importance of each of 11 purposes of education and the actual importance of the same 11 purposes based on the experience of each teacher at his or her school. Survey respondents were asked to rate the level of importance for each purpose of education using a 6-point Likert scale, from (1) not at all important to (6) extremely important.

Ratings of Ideal Importance

Table 5 shows the descriptive statistics for respondents' ideal level of importance ratings. Results have been arranged from highest to lowest mean. The three purposes with the highest average ratings of ideal importance were provide safe and nurturing environment (M = 5.75, SD = .592), foster cognitive development (M = 5.48, SD = .748), and foster social development (M = 5.36, SD = .809). The two purposes with the lowest average ratings of ideal importance were integrate students into spiritual community (M = 2.85, SD = 1.485) and foster physical development (M = 4.43, SD = 1.052).

Table 5

Teacher Ratings of Ideal Level of Importance for K-12 Education Purposes

Ratings of "ideal" level of importance for each purpose of K-12 education	Not at all Important (1) % (n)	Slightly Important (2) % (n)	Somewhat Important (3) % (n)	Moderately Important (4) % (n)	Very Important (5) % (n)	Extremely Important (6) % (n)	N	Mean SD
Provide safe and nurturing environment	0.2 (1)	0.2 (1)	0.9 (4)	1.4 (6)	17.3 (73)	79.7 (337)	422	5.75 .592
Foster cognitive development	0.5 (2)	0.5 (2)	0.7 (3)	5.7 (24)	34.5 (146)	57.9 (245)	422	5.48 .748
Foster social development	0.5 (2)	0.2 (1)	1.9 (8)	9.2 (39)	36.4 (154)	51.5 (218)	422	5.36 .809
Foster emotional development	0.5 (2)	0.7 (3)	1.9 (8)	8.3 (35)	41.6 (176)	46.8 (198)	422	5.31 .821
Provide challenging environment	0.0 (0)	0.7 (3)	2.8 (12)	16.1 (68)	52.0 (220)	28.1 (119)	422	5.04 .788
Foster civic development	0.5 (2)	1.7 (7)	3.5 (15)	18.4 (78)	48.0 (203)	27.2 (115)	420	4.95 .910
Foster vocational preparation	1.2 (5)	1.4 (6)	5.4 (23)	19.6 (83)	44.2 (187)	27.7 (117)	421	4.88 1.000
Integrate students into local community	0.5 (2)	1.4 (6)	6.4 (27)	21.3 (90)	48.9 (207)	21.0 (89)	421	4.81 .922
Integrate students into global community	0.7 (3)	2.4 (10)	6.9 (29)	21.3 (90)	44.2 (187)	24.3 (103)	422	4.79 1.010
Foster physical development	1.4 (6)	3.3 (14)	11.3 (48)	31.4 (133)	39.2 (166)	13.0 (55)	422	4.43 1.052
Integrate students into spiritual community	24.3 (103)	21.0 (89)	19.1 (81)	20.8 (88)	9.5 (40)	5.0 (21)	422	2.85 1.485

A one-way repeated-measures ANOVA was used to test for significance across purposes for participants' ratings of ideal importance. The assumptions of normality and sphericity were both violated. The Shapiro-Wilks statistics for each purpose were significant, indicating the

distribution for each purpose was significantly different than the normal distribution (Table 6). Measures of skewness and kurtosis also indicate that many of the purpose distributions do not follow a normal distribution. According to Field (2011), skewness and kurtosis measures of ±1 are preferable when testing for normality. However, normality becomes easier to violate and less important as sample sizes increase Field (2011). With a large sample for this one-way repeated-measures ANOVA (N = 413), the violation of normality is not as much a concern as it is an observation.

Table 6

Normality Statistics for Ratings of Ideal Purposes

	Shapiro-Wilks (*df* = 413)		Skewness		Kurtosis	
Purpose	Statistic	*P*	Statistic	*SE*	Statistic	*SE*
Provide safe and nurturing environment	.467	.000*	-3.460	.119	16.932	.237
Foster cognitive development	.671	.000*	-2.095	.119	7.378	.237
Foster social development	.732	.000*	-1.612	.119	4.144	.237
Foster emotional development	.734	.000*	-1.658	.119	4.524	.237
Provide challenging environment	.820	.000*	-.779	.119	1.023	.237
Foster civic development	.825	.000*	-1.100	.119	2.045	.238
Foster vocational preparation	.832	.000*	-1.152	.119	1.975	.237
Integrate students into local community	.847	.000*	-.907	.119	1.314	.237
Integrate students into global community	.854	.000*	-.956	.119	1.119	.237
Foster physical development	.888	.000*	-.723	.119	.678	.237
Integrate students into spiritual community	.907	.000*	.354	.119	-.875	.237

Note: *Statistically significant at p<.001

Since sphericity was also violated according to Mauchly's test, W (54) = .084, p < .001, the Greenhouse-Geisser correction was used to test for a within-subjects effect (Laerd Statistics, n.d.). The one-way repeated-measures ANOVA showed a significant within-subjects effect, F (6.120, 2522.009) = 374.263, p < .001. As stated in Chapter 3, the non-parametric Friedman Test was also used as an alternative to the one-way repeated-measures ANOVA. This test of within-subjects ranks also showed a significant within-subjects effect, $x^2(10) = 1639.97$, p < .001.

Post hoc testing using the Bonferroni adjustment for multiple comparisons revealed many significant pairwise comparisons (Table 7). The means of three purposes, provide safe and nurturing environment, foster physical development, and integrate students into spiritual community, were all significantly different from each of the other 10 purposes. The purposes with the least number of significant differences, foster civic development and foster vocational preparation, had means that were significantly different from six of the other purposes.

Table 7

Post Hoc Results for Within-Subjects Ideal Purpose Ratings

Purposes	M	Difference in Means										
		1	2	3	4	5	6	7	8	9	10	11
1. Provide safe and nurturing environment	5.75	---	**.26****	**.39****	**.44****	**.70****	**. 81****	**. 86****	**. 93****	**.95****	**1.30****	**2.89****
2. Foster cognitive development	5.48	**-.26****	---	.13	**.17***	**.44****	**.55****	**.60****	**.67****	**.69****	**1.04****	**2.63****
3. Foster social development	5.36	**-.39****	-.13	---	.05	**.31****	**.42****	**.47****	**.54****	**.56****	**.91****	**2.50****
4. Foster emotional development	5.31	**-.44****	**-.17***	-.05	---	**.26****	**.37****	**.42****	**.49****	**.52****	**.86****	**2.45****
5. Provide challenging environment	5.05	**-.70****	**-.44****	**-.31****	**-.26****	---	.11	.16	**.23***	**.25****	**.60****	**2.19****
6. Foster civic development	4.94	**-.81****	**-.55****	**-.42****	**-.37****	-.11	---	.05	.12	.14	**.49****	**2.08****
7. Foster vocational preparation	4.89	**-.86****	**-.60****	**-.47****	**-.42****	-.16	-.05	---	.07	.09	**.44****	**2.03****
8. Integrate students into local community	4.82	**-.93****	**-.67****	**-.54****	**-.49****	**-.23***	-.12	-.07	---	.02	**.37****	**1.96****
9. Integrate students into global community	4.80	**-.95****	**-.69****	**-.56****	**-.52****	**-.25****	-.14	-.09	-.02	---	**.35****	**1.94****
10. Foster physical development	4.45	**-1.30****	**-1.04****	**-.91****	**-.86****	**-.60****	**-.49****	**-.44****	**-.37****	**-.35****	---	**1.59****
11. Integrate students into spiritual community	2.86	**-2.89****	**-2.63****	**-2.50****	**-2.45****	**-2.19****	**-2.08****	**-2.03****	**-1.96****	**-1.94****	**-1.59****	---

Notes: **p<.01; **p<.001*

Ratings of Experience-Based Importance

Table 8 shows the descriptive statistics for respondents' ratings of the actual level of importance regarding each purpose as they experience it in their school. Results have been arranged from highest to lowest mean. The three purposes with the highest average ratings of ideal importance were provide safe and nurturing environment (M = 5.35, SD = .845), foster cognitive development (M = 5.03, SD = .906), and foster emotional development (M = 4.71, SD = 1.116). The two purposes with the lowest average ratings of ideal importance were integrate

students into spiritual community (M = 2.20, SD = 1.376) and integrate students into global community (M = 3.65, SD = 1.252).

Table 8

Teacher Ratings of Experience-Based Level of Importance for K-12 Education Purposes

Ratings of "actual" level of importance for each purpose of K-12 education as experienced by respondents	Not at all Important (1) % (n)	Slightly Important (2) % (n)	Somewhat Important (3) % (n)	Moderately Important (4) % (n)	Very Important (5) % (n)	Extremely Important (6) % (n)	N	Mean SD
Provide safe and nurturing environment	0.5 (2)	0.5 (2)	2.4 (10)	9.2 (39)	34.0 (144)	52.2 (221)	418	5.35 .845
Foster cognitive development	0.0 (0)	1.2 (5)	4.7 (20)	17.5 (74)	41.4 (175)	33.6 (142)	416	5.03 .906
Foster emotional development	0.2 (1)	3.3 (14)	12.1 (51)	20.8 (88)	34.3 (145)	27.7 (117)	416	4.71 1.116
Foster social development	0.2 (1)	2.1 (9)	12.3 (52)	24.3 (103)	38.1 (161)	22.0 (93)	419	4.65 1.039
Provide challenging environment	0.5 (2)	3.1 (13)	10.6 (45)	27.2 (115)	38.5 (163)	18.2 (77)	415	4.58 1.039
Integrate students into local community	2.1 (9)	11.3 (48)	21.3 (90)	27.7 (117)	25.5 (108)	11.1 (47)	419	3.97 1.255
Foster civic development	0.7 (3)	12.1 (51)	24.1 (102)	33.1 (140)	18.9 (80)	9.7 (41)	417	3.88 1.171
Foster physical development	2.1 (9)	11.8 (50)	19.4 (82)	35.9 (152)	24.3 (103)	5.2 (22)	418	3.85 1.143
Foster vocational preparation	3.1 (13)	14.2 (60)	21.7 (92)	26.5 (112)	24.8 (105)	8.7 (37)	419	3.83 1.284
Integrate students into global community	2.8 (12)	17.5 (74)	24.3 (103)	28.4 (120)	18.9 (80)	7.1 (30)	419	3.65 1.252
Integrate students into spiritual community	43.0 (182)	22.9 (97)	14.7 (62)	10.2 (43)	5.7 (24)	2.6 (11)	419	2.20 1.376

Table 9

Normality Statistics for Ratings of Experience-Based Purposes

	Shapiro-Wilks (df = 413)		Skewness		Kurtosis	
Purpose	Statistic	*P*	Statistic	*SE*	Statistic	*SE*
Provide safe and nurturing environment	.729	.000*	-1.659	.121	3.918	.241
Foster cognitive development	.836	.000*	-.842	.121	.495	.241
Foster emotional development	.877	.000*	-.633	.121	-.307	.241
Foster social development	.887	.000*	-.545	.121	-.196	.241
Provide challenging environment	.889	.000*	-.619	.121	.209	.241
Integrate students into local community	.929	.000*	-.229	.121	-.640	.241
Foster civic development	.926	.000*	.034	.121	-.621	.241
Foster physical development	.919	.000*	-.334	.121	-.352	.241
Foster vocational preparation	.930	.000*	-.204	.121	-.709	.241
Integrate students into global community	.933	.000*	-.004	.121	-.705	.241
Integrate students into spiritual community	.811	.000*	1.031	.121	.128	.241

Note: *Statistically significant at p<.001

A one-way repeated-measures ANOVA was used to test for significance across purposes for participants' ratings of ideal importance. The assumption of normality was mostly met. The Shapiro-Wilks statistics for each purpose were significant, indicating the distribution for each purpose was significantly different than the normal distribution (Table 9). However, measures of skewness and kurtosis fell in an acceptable range for all purposes except provide safe and nurturing environment, indicating the other 10 purposes' distributions were normally shaped. Despite the Shapiro-Wilks statistics, the measures of skewness and kurtosis combined with a

large sample for this one-way repeated-measures ANOVA (N = 409) indicate that normality is not a concern.

Like the ratings of ideal importance ANOVA, sphericity was violated for this experience-based importance ratings ANOVA according to Mauchly's test, W (54) = .268, p < .001. The Greenhouse-Geisser correction was one again used, showing a significant within-subjects effect, F (7.936, 3237.869) = 362.151, p < .001. The non-parametric Friedman Test confirmed a significant within-subjects effect, $x^2(10) = 1852.241$, p < .001.

Table 10

Post Hoc Results for Within-Subjects Experience-Based Purpose Ratings

Purposes	M	Difference in Means										
		1	2	3	4	5	6	7	8	9	10	11
1. Provide safe and nurturing environment	5.35	---	**.32****	**.64****	**.69****	**.77****	**1.38****	**1.47****	**1.51****	**1.52****	**1.70****	**3.16****
2. Foster cognitive development	5.03	**-.32****	---	**.32****	**.37****	**.45****	**1.06****	**1.15****	**1.19****	**1.20****	**1.38****	**2.83****
3. Foster emotional development	4.71	**-.64****	**-.32****	---	.05	.13	**.74****	**.84****	**.88****	**.88****	**1.07****	**2.52****
4. Foster social development	4.66	**-.69****	**-.37****	-.05	---	.08	**.69****	**.78****	**.82****	**.83****	**1.01****	**2.47****
5. Provide challenging environment	4.58	**-.77****	**-.45****	-.13	-.08	---	**.61****	**.70****	**.74****	**.75****	**.93****	**2.39****
6. Integrate students into local community	3.97	**-1.38****	**-1.06****	**-.74****	**-.69****	**-.61****	---	.10	.13	.14	**.33****	**1.78****
7. Foster civic development	3.88	**-1.47****	**-1.15****	**-.84****	**-.78****	**-.70****	-.10	---	.04	.04	**.23***	**1.68****
8. Foster physical development	3.84	**-1.51****	**-1.19****	**-.88****	**-.82****	**-.74****	-.13	-.04	---	.01	.19	**1.64****
9. Foster vocational preparation	3.83	**-1.52****	**-1.20****	**-.88****	**-.83****	**-.75****	-.14	-.04	-.01	---	.19	**1.64****
10. Integrate students into global community	3.65	**-1.70****	**-1.38****	**-1.07****	**-1.01****	**-.93****	**-.33****	**-.23***	-.19	-.19	---	**1.45****
11. Integrate students into spiritual community	2.19	**-3.16****	**-2.83****	**-2.52****	**-2.47****	**-2.39****	**-1.78****	**-1.68****	**-1.64****	**-1.64****	**-1.45****	---

Notes: **p<.01; **p<.001*

Post hoc testing using the Bonferroni adjustment for multiple comparisons revealed many significant pairwise comparisons between the experience-based ratings of importance (Table 10). The means of three purposes, provide safe and nurturing environment, foster cognitive development, and integrate students into spiritual community, were all significantly different from each of the other 10 purposes. The purposes with the least number of significant differences, foster physical development and foster vocational preparation, had means that were significantly different from 6 of the other purposes.

Research Question 2

The second research question sought to determine the extent to which there were differences between teacher perceptions regarding the ideal importance and teacher perceptions regarding the experience-based importance of each of the 11 purposes of education. A repeated-measures t-test and its non-parametric alternative, the related-samples Wilcoxon signed rank test, were performed to test for differences between each pair of importance ratings. Answers to the open-response question, "If your 'ideal' and 'actual' education purpose importance ratings were quite a bit different, what do you think accounts for such differences?" (Appendix A), were themed and tabulated.

Statistical Tests

The repeated-measures t-test paired each ideal importance ratings with its corresponding experience-based importance rating. The t-test revealed that the mean of each ideal importance rating was significantly different from the mean of its corresponding experience-based importance rating (Table 11). The differences of three pairs, integrate students into global community, foster civic development, and foster vocational preparation, had large effect sizes, according to Cohen's d. The remaining eight pairs all had differences with moderate effect sizes. Also, the difference all ran in the same direction. That is, the mean ideal importance rating of

each purpose was always higher than the mean of its corresponding experience-based importance rating.

Table 11

Repeated-Measures T-Test of Ratings of Ideal Purposes and Experience-Based Purposes

Item	N	Ideal	Exp.-Based	Mean Diff.	95% C.I.		t	p	Effect size
		Mean SD	Mean SD		Lower	Upper			
Integrate students into global community	418	4.79 1.010	3.65 1.252	1.144	1.014	1.273	17.371	.000*	1.002
Foster civic development	416	4.94 .911	3.88 1.173	1.065	.936	1.193	16.296	.000*	1.009
Foster vocational preparation	417	4.89 1.000	3.83 1.284	1.055	.919	1.191	15.275	.000*	.921
Integrate students into local community	417	4.81 .922	3.98 1.254	.832	.710	.955	13.367	.000*	.754
Foster social development	419	5.36 .808	4.65 1.039	.706	.595	.817	12.506	.000*	.763
Integrate students into spiritual community	418	2.84 1.487	2.19 1.378	.648	.510	.787	9.180	.000*	.453
Foster emotional development	416	5.32 .813	4.71 1.116	.603	.480	.727	9.631	.000*	.625
Foster physical development	417	4.43 1.047	3.85 1.144	.580	.466	.695	9.972	.000*	.529
Provide challenging environment	415	5.06 .775	4.58 1.039	.480	.369	.590	8.494	.000*	.524
Foster cognitive development	415	5.49 .732	5.03 .906	.453	.362	.544	9.804	.000*	.559
Provide safe and nurturing environment	418	5.75 .593	5.35 .845	.395	.308	.481	8.966	.000*	.548

Notes: *Statistically significant at p<.001; Effect size calculated using Cohen's d formula

Table 12

Related-Samples Wilcoxon Signed Rank Test of Ideal Purposes & Experience-Based Purposes

Related Item	N	Ideal Mean SD	Actual Mean SD	No. of Pos. Diff.[a]	No. of Neg. Diff.[a]	No. of Ties	Test Stat.[b]	p
Integrate students into global community	418	4.79 1.010	3.65 1.252	277	29	112	-13.326	.000*
Foster civic development	416	4.94 .911	3.88 1.173	264	33	119	-12.685	.000*
Foster vocational preparation	417	4.89 1.000	3.83 1.284	253	37	127	-12.481	.000*
Integrate students into local community	417	4.81 .922	3.98 1.254	244	46	127	-11.385	.000*
Foster social development	419	5.36 .808	4.65 1.039	227	38	154	-10.901	.000*
Foster physical development	417	4.43 1.047	3.85 1.144	207	55	155	-9.025	.000*
Foster cognitive development	415	5.49 .732	5.03 .906	169	37	209	-8.997	.000*
Foster emotional development	416	5.32 .813	4.71 1.116	190	51	175	-8.988	.000*
Provide safe and nurturing environment	418	5.75 .593	5.35 .845	145	25	248	-8.708	.000*
Integrate students into spiritual community	418	2.84 1.487	2.19 1.378	181	62	175	-8.572	.000*
Provide challenging environment	415	5.06 .775	4.58 1.039	175	57	183	-8.007	.000*

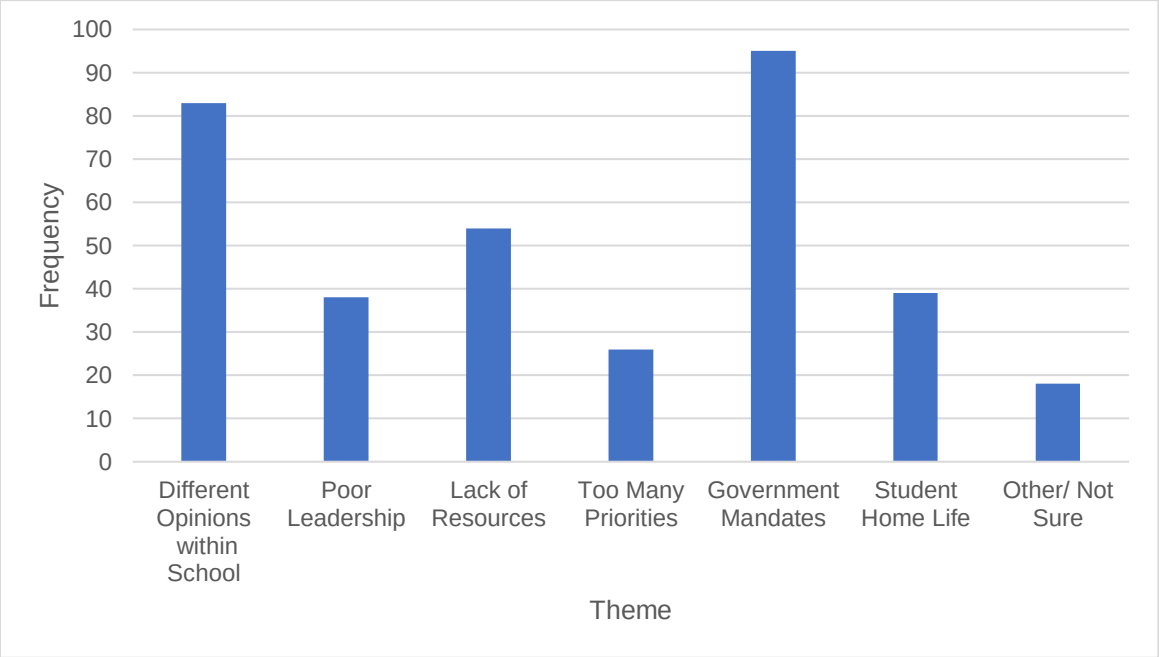
Notes: *Statistically significant at p<.001; [a]Based on subtracting experience-based rating from ideal rating; [b]Test statistic is based on negative ranks.

The non-parametric related-samples Wilcoxon signed rank test was used as an alternative to the repeated-measures t-test since Likert scales such that I used technically yield ordinal data and are occasionally analyzed with non-parametric tests (Johnson & Morgan, 2016). Results of the Wilcoxon test are consistent with the repeated-measures t-test, revealing a significant

difference between each pair of purpose ratings (Table 12). This test also shows the number of participants that rated each experience-based purpose higher, lower, or the same as its corresponding ideal purpose. For example, 277 participants rated the ideal importance of integrate students into global community higher than the experience-based importance, the most of any pair of ratings.

Figure 4

Frequency of Response Themes



Note. This figure shows the frequency of response themes for what accounts for differences in ideal and experience-based education purpose importance ratings.

Open-Ended Responses

Out of 423 completed participant surveys, 310 answered the open-ended question, “If your "ideal" and "actual" education purpose importance ratings were quite a bit different, what do you think accounts for such differences?” (Appendix A). There were several themes within the open-ended responses (See Figure 4). Many participant responses gave multiple reasons in their answer; consequently, many responses were associated to more than one theme. The theme

with the highest number of responses was government mandates, represented in nearly a third of all open-ended responses (n = 95), meaning these participants ascribed at least one real or perceived government mandate to the reason their ratings of experience-based importance were different than their ratings of ideal importance. Different opinions within their school was the theme with the second highest number of responses (n = 83). To better articulate the meaning of each theme, Table 13 gives an example(s) of participant responses for each theme.

Table 13

Participant Examples for Each Open-Ended Response Theme

Theme	Example(s)
Different Opinions	"What is ideal for me is not necessarily so for my colleagues."
Poor Leadership	"Lack of administration leading us that way."
Lack of Resources	"Funding; availability of resources; community involvement"
Too Many Priorities	"Schools have too much on their plates to be able to do everything"
Government Mandates	"State standardized tests. Instead of preparing and teaching students to succeed in life, teachers are bound to teaching to the test."
Student Home Life	"Education today is so based on teachers raising kids. Parents need a bigger role than several take." "Difficult home life."
Other	"Also technology and in hand devices were not a normal daily occurrence and that has changed the make up and development of a child's brain." "For 'ideals' I was thinking more about K-12 as a whole and my 'actual' is a K-5 school."

Research Question 3

The third research question sought to understand teacher perceptions regarding the level of influence that each of 14 established sources of beliefs had on ratings of the ideal importance of education purposes. Survey respondents were asked to rate the level of influence for each of 14 sources using a 6-point Likert scale, from (1) not at all influential to (6) extremely influential.

Table 14 shows the descriptive statistics for respondents' level of influence ratings. Results have been arranged from highest to lowest mean. The 4 sources with the highest average ratings of influence were teachers or role models (M = 5.17, SD = .833), life's daily routines and experiences (M = 4.93, SD = .939), immediate family or associates (M = 4.81, SD = 1.206), and inquiry (informal or systematic) (M = 4.71, SD = .953). The 3 sources with the lowest average ratings of influence were prior career (M = 3.34, SD = 1.603), government: politics or political leaders (M = 3.39, SD = 1.338), and imaginative life (vicarious learning from real or fictional characters) (M = 3.61, SD = 1.369).

A one-way repeated-measures ANOVA was used to test for significance across belief sources for participants' ratings of influence. The assumption of normality was partially met. The Shapiro-Wilks statistics for each source were significant, indicating the distribution for each source was significantly different than the normal distribution (Table 15). However, measures of skewness and kurtosis fell in an acceptable range for each belief source except for three, indicating the other 11 belief source distributions were normally shaped. Taking the Shapiro-Wilks statistics and the measures of skewness and kurtosis into account, along with a large sample for this one-way repeated-measures ANOVA (N = 413), normality should not be concerning.

Table 14

Teacher Ratings of Influence of Belief Sources on Ideal K-12 Purpose Ratings

Ratings of influence on "ideal" K-12 purposes of education ratings	Not at all Influential (1) % (n)	Slightly Influential (2) % (n)	Somewhat Influential (3) % (n)	Moderately Influential (4) % (n)	Very Influential (5) % (n)	Extremely Influential (6) % (n)	N	Mean SD
Teachers or role models	0.2 (1)	0.7 (3)	3.1 (13)	11.6 (49)	46.1 (195)	38.3 (162)	423	5.17 .833
Life's daily routines and experiences	0.9 (4)	0.9 (4)	4.7 (20)	18.2 (77)	47.5 (201)	27.7 (117)	423	4.93 .939
Immediate family or associates	2.6 (11)	2.4 (10)	8.3 (35)	18.9 (80)	34.0 (144)	33.6 (142)	422	4.81 1.206
Inquiry (informal or systematic)	0.5 (2)	1.4 (6)	8.5 (36)	24.8 (105)	44.9 (190)	19.1 (81)	420	4.71 .953
Reflection on beliefs	0.7 (3)	2.1 (9)	9.7 (41)	27.2 (115)	40.0 (169)	19.6 (83)	420	4.64 1.019
Colleagues	0.5 (2)	3.1 (13)	10.4 (44)	25.3 (107)	44.0 (186)	16.8 (71)	423	4.60 1.014
Traumatic event(s)	4.7 (20)	9.9 (42)	12.1 (51)	20.3 (86)	27.9 (118)	24.8 (105)	422	4.32 1.458
Experimenting (having done something intentional or unintentional that altered beliefs)	3.3 (14)	6.6 (28)	10.6 (45)	35.0 (148)	34.3 (145)	10.2 (43)	423	4.21 1.174
Travelling, serving, studying, or working abroad	8.5 (36)	7.8 (33)	14.2 (60)	29.1 (123)	27.4 (116)	12.8 (54)	422	3.98 1.419
Intensive post-certification professional development over a period of time	5.4 (23)	10.6 (45)	15.1 (64)	31.9 (135)	26.0 (110)	10.9 (46)	423	3.95 1.328
Religion or philosophy	11.1 (47)	12.1 (51)	19.1 (81)	22.2 (94)	23.6 (100)	11.3 (48)	421	3.70 1.513
Imaginative life (vicarious learning from real or fictional characters)	9.5 (40)	14.4 (61)	15.6 (66)	32.6 (138)	22.5 (95)	5.4 (23)	423	3.61 1.369
Government: politics or political leaders	8.0 (34)	22.0 (93)	19.1 (81)	28.6 (121)	17.7 (75)	4.5 (19)	423	3.39 1.338
Prior career	22.5 (95)	10.4 (44)	11.6 (49)	27.2 (115)	22.9 (97)	5.4 (23)	423	3.34 1.603

Table 15

Normality Statistics for Ratings of Belief Sources

Belief Source	Shapiro-Wilks (*df* = 413)		Skewness		Kurtosis	
	Statistic	*P*	Statistic	*SE*	Statistic	*SE*
Teachers or role models	.790	.000*	-1.220	.120	2.335	.240
Life's daily routines and experiences	.822	.000*	-1.172	.120	2.543	.240
Immediate family or associates	.834	.000*	-1.142	.120	1.129	.240
Inquiry (informal or systematic)	.869	.000*	-.719	.120	.728	.240
Reflection on beliefs	.885	.000*	-.603	.120	.271	.240
Colleagues	.876	.000*	-.730	.120	.468	.240
Traumatic event(s)	.888	.000*	-.636	.120	-.559	.240
Experimenting (having done something intentional or unintentional that altered beliefs)	.887	.000*	-.786	.120	.453	.240
Travelling, serving, studying, or working abroad	.904	.000*	-.592	.120	-.372	.240
Intensive post-certification professional development over a period of time	.917	.000*	-.491	.120	-.356	.240
Religion or philosophy	.922	.000*	-.272	.120	-.918	.240
Imaginative life (vicarious learning from real or fictional characters)	.916	.000*	-.368	.120	-.717	.240
Government: politics or political leaders	.930	.000*	-.051	.120	-.872	.240
Prior career	.882	.000*	-.246	.120	-1.246	.240

Note: *Statistically significant at p<.001

Like the ANOVAs for ratings of ideal and experience-based importance, sphericity was violated for this ANOVA according to Mauchly's test, W (90) = .158, p < .001. The Greenhouse-Geisser correction was one again used, showing a significant within-subjects effect, F (10.211,

4206.738) = 126.373, $p < .001$. The non-parametric Friedman Test confirmed a significant within-subjects effect, $x^2(13) = 1318.968$, $p < .001$.

Table 16

Post Hoc Results for Within-Subjects Belief Sources Ratings

Purposes	M	Difference in Means													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Teachers	5.18	---	**.23***	**.37****	**.46****	**.53****	**.57****	**.87****	**.98****	**1.20****	**1.22****	**1.48****	**1.57****	**1.77****	**1.84****
2. Daily routines	4.95	**-.23***	---	.14	**.24***	**.30****	**.35****	**.64****	**.75****	**.97****	**.99****	**1.25****	**1.34****	**1.55****	**1.61****
3. Family	4.81	**-.37****	-.14	---	.10	.17	.21	**.50****	**.61****	**.84****	**.86****	**1.11****	**1.20****	**1.41****	**1.47****
4. Inquiry	4.72	**-.46****	**-.24***	-.10	---	.07	.11	**.41****	**.51****	**.74****	**.76****	**1.02****	**1.11****	**1.31****	**1.38****
5. Reflection	4.65	**-.53****	**-.30****	-.17	-.07	---	.04	**.34***	**.45****	**.67****	**.69****	**.95****	**1.04****	**1.24****	**1.31****
6. Colleagues	4.61	**-.57****	**-.35****	-.21	-.11	-.04	---	**.30***	**.40****	**.63****	**.65****	**.91****	**1.00****	**1.20****	**1.26****
7. Trauma	4.31	**-.87****	**-.64****	**-.50****	**-.41****	**-.34***	**-.30***	---	.11	**.33***	**.35***	**.61****	**.70****	**.90****	**.97****
8. Experi-menting	4.20	**-.98****	**-.75****	**-.61****	**-.51****	**-.45****	**-.40****	-.11	---	.23	.25	**.50****	**.59****	**.80****	**.86****
9. Travelling	3.98	**-1.20****	**-.97****	**-.84****	**-.74****	**-.67****	**-.63****	**-.33***	-.23	---	.02	.28	**.37****	**.57****	**.64****
10. PD	3.96	**-1.22****	**-.99****	**-.86****	**-.76****	**-.69****	**-.65****	**-.35***	-.25	-.02	---	.26	**.35***	**.55****	**.62****
11. Religion	3.70	**-1.48****	**-1.25****	**-1.11****	**-1.02****	**-.95****	**-.91****	**-.61****	**-.50****	-.28	-.26	---	.09	.29	**.36***
12. Vicarious	3.61	**-1.57****	**-1.34****	**-1.20****	**-1.11****	**-1.04****	**-1.00****	**-.70****	**-.59****	**-.37****	**-.35***	-.09	---	.20	.27
13. Politics	3.41	**-1.77****	**-1.55****	**-1.41****	**-1.31****	**-1.24****	**-1.20****	**-.90****	**-.80****	**-.57****	**-.55****	-.29	-.20	---	.07
14. Prior career	3.34	**-1.84****	**-1.61****	**-1.47****	**-1.38****	**-1.31****	**-1.26****	**-.97****	**-.86****	**-.64****	**-.62****	**-.36***	-.27	-.07	---

Notes: **p<.03; **p<.001*

Post hoc testing using the Bonferroni adjustment for multiple comparisons revealed many significant pairwise comparisons between the belief source ratings of influence (Table 16). One source, teachers or role models, was significantly different from each of the other thirteen belief

sources. The source with the least number of significant differences, religion or philosophy, still had means that were significantly different from nine of the other belief sources.

Research Question 4

The fourth research question aimed to understand the extent to which there were differences in ideal importance, experience-based importance, and belief source influence ratings when broken down by school level, school locale, school type, and teacher experience. Mentioned earlier, the vast majority of respondents taught at traditional public schools; therefore, the school type variable was no longer compelling enough to include in analyses. To start, a Pearson correlation test was performed on teacher experience and all 36 importance rating and influence rating variables. Significant correlations were found between teaching experience and eight variables, including the ideal importance of foster cognitive development, $r = .089$, $p = .05$, ideal importance of provide challenging environment, $r = .135$, $p < .01$, experience-based importance of foster emotional development $r = .108$, $p < .05$, experience-based importance of foster physical development $r = .099$, $p < .05$, experience-based importance of provide safe and nurturing environment $r = .141$, $p < .01$, influence of inquiry (formal or systematic), $r = .121$, $p < .05$, influence of traumatic event(s), $r = .112$, $p < .05$, and influence of religion or philosophy, $r = .101$, $p < .05$. All eight of the significant correlation coefficients represent a weak, positive relationship with teaching experience, meaning as teaching experience increases among sample participants, the average rating of each variable also increases.

Ideal Importance Ratings

A two-way multiple analysis of covariance (MANCOVA) was used to test for group differences on ideal importance ratings after controlling for teaching experience. The dependent variables used for this test were the ideal importance ratings of the 11 purposes of education. The independent variables were school level and school level, and the covariate was teaching

experience. The assumption of homogeneity of covariances was violated according to Box's test, $F(462, 42210.304) = 1.414$, $p < .001$, Box's M = 749.071, as was the assumption of homogeneity of variance according to Levin's test for two of the dependent variables, integrate students into local community, $F(8, 399) = 3.286$, $p = .001$, and provide safe and nurturing environment, $F(8, 399) = 4.236$, $p < .001$. Therefore, the results should be treated with caution.

Results of the MANCOVA revealed there was a statistically significant difference between the school level groups on the combined dependent variables after controlling for teaching experience, $F(22, 776) = 2.267$, $p = .001$, Wilks' $\Lambda = .883$, partial $\eta 2 = .060$. There was no statistically significant difference between the school locale groups on the combined dependent variables after controlling for teaching experience, $F(22, 776) = .720$, $p = .822$, Wilks' $\Lambda = .960$, partial $\eta 2 = .020$, nor was there a statistically significant difference between the interaction of school level and school locale on the combined dependent variables after controlling for teaching experience, $F(44, 1486.346) = 1.069$, $p = .352$, Wilks' $\Lambda = .888$, partial $\eta 2 = .029$.

The significant difference between the school level groups on the combined dependent variables required follow up testing. First, a test of between-subjects effects for school level groups on each of the 11 dependent variables found significant differences in school level group means for foster emotional development, $F(2) = 7.749$, $p < .001$, partial $\eta 2 = .037$, foster social development, $F(2) = 6.107$, $p < .005$, partial $\eta 2 = .030$, and foster physical development, $F(2) = 5.634$, $p < .005$, partial $\eta 2 = .028$, meaning there were significantly different ratings of ideal importance for these three purposes based on the school level of the participant after controlling for teaching experience (Table 17).

Table 17

School Level Effects on Ideal Importance Ratings of Education Purposes

Purpose	df	Mean Square	*F*	Sig	Partial Eta Squared
Provide safe and nurturing environment	2	.305	.957	.385	.005
Foster cognitive development	2	.594	1.137	.322	.006
Foster emotional development	**2**	**4.882**	**7.749**	**.000****	**.037**
Foster social development	**2**	**3.905**	**6.107**	**.002***	**.030**
Provide challenging environment	2	.355	.587	.557	.003
Integrate students into local community	2	.767	.897	.408	.004
Foster civic development	2	.064	.079	.924	.000
Foster physical development	**2**	**5.930**	**5.634**	**.004***	**.028**
Foster vocational preparation	2	.893	.906	.405	.005
Integrate students into global community	2	.056	.056	.946	.000
Integrate students into spiritual community	2	.964	.434	.648	.002

Notes: **p<.005; **p<.001*

Next, pairwise comparisons of school level group means were found for each of the three dependent variables found to have significant between-subjects effects (Table 18). The elementary school group (M = 5.491, SE = .076) rated the ideal importance of foster emotional development significantly higher than the high school group after controlling for teaching experience (M = 5.077, SE = .078, p = .001). Likewise, the middle school group (M = 5.407, SE = .104) rated the ideal importance of foster emotional development significantly higher than the high school group after controlling for teaching experience ($p < .05$). The elementary school group (M = 5.523, SE = .077) rated the ideal importance of foster social development

significantly higher than the high school group after controlling for teaching experience (*M* = 5.154, *SE* = .078, *p* < .005). Finally, the elementary school group (*M* = 4.646, *SE* = .099) rated the ideal importance of foster physical development significantly higher than the high school group after controlling for teaching experience (*M* = 4.181, *SE* = .100, *p* < .005).

Table 18

Pairwise Comparisons of School Level for Select Ideal Importance Ratings After Controlling for Teaching Experience

Ideal Purpose	School Level 1	School Level 2	Mean Diff (1 – 2)	Std Error	Sig
Foster emotional development	Elementary	High	.414	.109	.001**
	Middle	High	.330	.129	.033*
Foster social development	Elementary	High	.369	.110	.003**
Foster physical development	Elementary	High	.466	.141	.003**

Notes: **p<.05; **p<.005*

The non-parametric independent-samples Kruskal-Wallis test was used as an alternative to the school level post-MANCOVA analysis previously done. This test is potentially helpful for two reasons. First, as was previously stated, there is some debate as to how Likert scale data should be treated in statistical testing, either as interval data or as ordinal data (Johnson & Morgan, 2016). Second, the assumptions for the Kruskal-Wallis are less restrictive than for the MANCOVA, namely that samples are independent, and distributions have the same basic shape. While certain MANCOVA assumptions were violated, the Kruskal-Wallis assumptions are easily met.

Results of the independent-samples Kruskal-Wallis test on school level across the ideal importance rating variables were comparable to the results from the parametric tests above. An important difference is that teaching experience could not be included as a covariate for the Kruskal-Wallis test, although teaching experience was not a significant covariate based on the

two-way MANCOVA. Significant differences in school level group means were found for foster emotional development, $H(2) = 17.637$, $p < .001$, foster social development, $H(2) = 10.005$, $p < .05$, and foster physical development, $H(2) = 11.195$, $p < .005$, meaning there were significantly different ratings of ideal importance for these three purposes based on the school level of the participant. Pairwise comparisons using the Bonferroni correction for multiple tests were made to discover for which school levels were there significantly different ratings across the three ideal importance rating variables (Table 19). The elementary school group ratings of the ideal importance of foster emotional development were significantly different than the high school group, $p < .001$. The elementary school group ratings of the ideal importance of foster social development were significantly different than the high school group, $p < .01$. Lastly, the elementary school group ratings of the ideal importance of foster physical development were significantly different than the high school group, $p < .01$.

Table 19

Kruskal-Wallis Pairwise Comparisons of School Level for Select Ideal Importance Ratings

Ideal Purpose	School Level 1	School Level 2	Test Statistic	Std Error	Std Test Statistic	Sig
Foster emotional development	Elementary	High	52.631	12.562	4.190	.000**
Foster social development	Elementary	High	39.417	12.479	3.159	.005*
Foster physical development	Elementary	High	44.022	13.158	3.346	.002*

Notes: **p<.01; **p<.001*

Experienced-Based Importance Ratings

A two-way multiple analysis of covariance (MANCOVA) was also used to test for group differences on experience-based importance ratings after controlling for teaching experience. The dependent variables used for this test were the experience-based importance ratings of the 11 purposes of education. The independent variables were school level and school level, and the covariate was teaching experience. The assumption of homogeneity of covariances was violated

according to Box's test, $F(462, 41445.962) = 1.292$, $p < .001$, Box's M = 685.753, as was the assumption of homogeneity of variance according to Levin's test for two of the dependent variables, integrate students into spiritual community, $F(8, 397) = 2.111$, $p = .034$, and foster physical development, $F(8, 399) = 3.237$, $p = .001$. Again, the results should be treated with caution.

Results of the MANCOVA revealed there was a statistically significant difference between the school level groups on the combined dependent variables after controlling for teaching experience, $F(22, 772) = 2.339$, $p = .001$, Wilks' $\Lambda = .879$, partial $\eta 2 = .062$. There was also a statistically significant difference between the school locale groups on the combined dependent variables after controlling for teaching experience, $F(22, 772) = 2.218$, $p = .001$, Wilks' $\Lambda = .885$, partial $\eta 2 = .059$. There was not a statistically significant difference between the interaction of school level and school locale on the combined dependent variables after controlling for teaching experience, $F(44, 1478.694) = 1.305$, $p = .088$, Wilks' $\Lambda = .864$, partial $\eta 2 = .036$.

School Level Follow Up Testing. The significant difference between the school level groups on the combined dependent variables required follow up testing. A test of between-subjects effects for school level groups on each of the 11 dependent variables found significant differences in school level group means for six of the variables: a) foster cognitive development, $F(2) = 6.521$, $p < .005$, partial $\eta 2 = .032$, b) foster social development, $F(2) = 4.192$, $p < .05$, partial $\eta 2 = .021$, c) foster emotional development, $F(2) = 7.047$, $p = .001$, partial $\eta 2 = .034$, d) foster physical development, $F(2) = 3.977$, $p < .05$, partial $\eta 2 = .020$, e) provide safe and nurturing environment, $F(2) = 3.446$, $p < .05$, partial $\eta 2 = .017$, and f) provide challenging environment, $F(2) = 4.474$, $p < .05$, partial $\eta 2 = .022$, meaning there were significantly different

ratings of ideal importance for these six purposes based on the school level of the participant after controlling for teaching experience (Table 20).

Table 20

School Level Effects on Experience-Based Importance Ratings of Education Purposes

Purpose	Df	Mean Square	*F*	Sig	Partial Eta Squared
Provide safe and nurturing environment	**2**	**2.397**	**3.446**	**.033***	**.017**
Foster cognitive development	**2**	**5.167**	**6.521**	**.002***	**.032**
Foster emotional development	**2**	**8.424**	**7.047**	**.001****	**.034**
Foster social development	**2**	**4.368**	**4.192**	**.016***	**.021**
Provide challenging environment	**2**	**4.672**	**4.474**	**.012***	**.022**
Integrate students into local community	2	.014	.009	.991	.000
Foster civic development	2	2.292	1.678	.188	.008
Foster physical development	**2**	**5.033**	**3.977**	**.020***	**.020**
Foster vocational preparation	2	3.569	2.297	.102	.011
Integrate students into global community	2	1.622	1.078	.341	.005
Integrate students into spiritual community	2	1.896	1.013	.364	.005

Notes: **p<.05; **p<.005*

Next, pairwise comparisons of school level group means were found for each of the three dependent variables found to have significant between-subjects effects (Table 21). The elementary school group (M = 5.503, SE = .082) rated the ideal importance of provide safe and nurturing environment significantly higher than the high school group after controlling for teaching experience (M = 5.214, SE = .080, $p < .05$). The elementary school group (M = 5.288, SE = .088) rated the ideal importance of foster cognitive development significantly higher than

the high school group after controlling for teaching experience (M = 4.850, SE = .085, p = .001). The elementary school group (M = 5.041, SE = .108) rated the ideal importance of foster emotional development significantly higher than the middle school group after controlling for teaching experience (M = 4.553, SE = .144, p < .05). Likewise, the elementary school group rated the ideal importance of foster emotional development significantly higher than the high school group after controlling for teaching experience (M = 4.510, SE = .105, p = .001). The elementary school group (M = 4.927, SE = .101) rated the ideal importance of foster social development significantly higher than the high school group after controlling for teaching experience (M = 4.537, SE = .098, p < .05). The elementary school group (M = 4.828, SE = .101) rated the ideal importance of provide challenging environment significantly higher than the middle school group after controlling for teaching experience (M = 4.348, SE = .134, p < .05). Finally, the elementary school group (M = 4.043, SE = .111) rated the ideal importance of foster physical development significantly higher than the middle school group after controlling for teaching experience (M = 3.595, SE = .148, p < .05).

Table 21

Pairwise Comparisons of School Level for Select Experience-Based Importance Ratings After Controlling for Teaching Experience

Ideal Purpose	School Level 1	School Level 2	Mean Diff (1 – 2)	Std Error	Sig
Provide safe and nurturing environment	Elementary	High	.289	.115	.037*
Foster cognitive development	Elementary	High	.438	.123	.001**
Foster emotional development	Elementary	Middle	.488	.180	.021*
	Elementary	High	.531	.151	.001**
Foster social development	Elementary	High	.390	.141	.018*
Provide challenging environment	Elementary	Middle	.480	.168	.014*
Foster physical development	Elementary	Middle	.488	.185	.048*

Notes: **p<.05; **p<.005*

The non-parametric Kruskal-Wallis test was once again used as an alternative to the school level post-MANCOVA analysis previously done. Again, teaching experience could not be included as a covariate for the Kruskal-Wallis test. Results of the independent-samples Kruskal-Wallis test on school level across the ideal importance rating variables show more significant differences than the parametric tests above. Significant differences in school level group means were found for the same six dependent variables, plus one more: a) foster cognitive development, $H(2) = 21.167$, $p < .001$, b) foster social development, $H(2) = 14.415$, $p = .001$, c) foster emotional development, $H(2) = 19.256$, $p < .001$, d) foster physical development, $H(2) = 9.198$, $p < .05$, e) provide safe and nurturing environment, $H(2) = 19.880$, $p < .001$, f) provide challenging environment, $H(2) = 12.665$, $p < .005$, and g) foster vocational preparation, $H(2) = 15.420$, $p < .001$, meaning there were significantly different ratings of experience-based importance for these seven purposes based on the school level of the participant.

Pairwise comparisons using the Bonferroni correction for multiple tests were made to discover for which school levels were there significantly different ratings across the seven experience-based importance rating variables (Table 22). The elementary school group ratings of the experience-based importance of foster cognitive development were significantly different than the middle school, $p < .01$, and the high school group, $p < .001$. Elementary school group ratings of the experience-based importance of foster social development were significantly different than the middle school, $p < .05$, and the high school group, $p = .001$. The elementary school group ratings of the experience-based importance of foster emotional development were significantly different than the middle school, $p < .05$, and the high school group, $p < .001$. For the experience-based importance ratings of foster physical development, the elementary school group ratings were significantly different than the high school group ratings, $p < .01$. The elementary school group ratings of the experience-based importance of provide safe and

nurturing environment were significantly different than the middle school, $p < .05$, and the high school group, $p < .001$. For the experience-based importance ratings of provide challenging environment, the elementary school group ratings were significantly different than the middle school group ratings, $p = .001$. Lastly, for the experience-based importance ratings of foster vocational preparation, the elementary school group ratings were significantly different than the high school group ratings, $p = .001$, and the middle school group ratings were significantly different than the high school group ratings, $p < .05$.

Table 22

Kruskal-Wallis Pairwise Comparisons of School Level for Select Experience-Based Importance Ratings

Ideal Purpose	School Level 1	School Level 2	Test Statistic	Std Error	Std Test Statistic	Sig
Foster cognitive development	Elementary	Middle	42.767	14.234	3.005	.008*
	Elementary	High	58.181	12.929	4.500	.000**
Foster social development	Elementary	Middle	35.463	14.555	2.436	.044*
	Elementary	High	49.144	13.209	3.721	.001*
Foster emotional development	Elementary	Middle	40.156	14.617	2.747	.018*
	Elementary	High	56.978	13.201	4.316	.000**
Foster physical development	Elementary	High	40.045	13.288	3.014	.008*
Provide safe and nurturing environment	Elementary	Middle	38.134	13.690	2.786	.016*
	Elementary	High	54.546	12.427	4.389	.000**
Provide challenging environment	Elementary	Middle	51.406	14.454	3.556	.001*
Foster vocational preparation	Elementary	High	-50.499	13.464	-3.751	.001*
	Middle	High	-39.195	14.535	-2.697	.021*

Notes: **p<.05; **p<.001*

School Locale Follow Up Testing. The significant difference between the school locale groups on the combined dependent variables also required follow up testing. A test of between-subjects effects for school level groups on each of the 11 dependent variables found one significant difference in school level group means, for integrate students into global community,

$F(2) = 6.201$, $p < .005$, partial $\eta 2 = .030$, meaning there were significantly different ratings of experience-based importance for this purpose based on the school level of the participant after controlling for teaching experience (Table 23).

Table 23

School Locale Effects on Experience-Based Importance Ratings of Education Purposes

Purpose	df	Mean Square	*F*	Sig	Partial Eta Squared
Provide safe and nurturing environment	2	.303	.436	.647	.002
Foster cognitive development	2	1.655	2.089	.125	.010
Foster emotional development	2	.827	.692	.501	.003
Foster social development	2	.472	.453	.636	.002
Provide challenging environment	2	.420	.402	.669	.002
Integrate students into local community	2	1.170	.738	.479	.004
Foster civic development	2	.091	.067	.935	.000
Foster physical development	2	1.336	1.055	.349	.005
Foster vocational preparation	2	4.062	2.614	.075	.013
Integrate students into global community	**2**	**9.333**	**6.201**	**.002***	**.030**
Integrate students into spiritual community	2	1.423	.760	.468	.004

Note: **p<.005*

Pairwise comparisons of school locale group means were found for integrate students into global community. The rural group ($M = 3.341$, $SE = .107$) rated the experience-based importance of integrate students into global community significantly lower than the urban group ($M = 3.976$, $SE = .191$, $p < .05$) and the suburban group ($M = 3.743$, $SE = .083$, $p < .05$) after controlling for teaching experience.

As before, the non-parametric independent-samples Kruskal-Wallis test was used as an alternative to the school level post-MANCOVA analysis previously done. Results of the independent-samples Kruskal-Wallis test on school level across the experience-based importance rating variables found significant differences in school locale group means for integrate into global community, $H(2) = 17.637$, $p < .001$, meaning there were significantly different ratings of experience-based importance for this purposes based on the school locale of the participant. Pairwise comparisons using the Bonferroni correction for multiple tests were made to discover for which school locales there were significantly different ratings for integrate into global community. The rural group ratings of the experience-based importance of integrate into global community were significantly different than the urban group, $p < .05$, and the suburban group, $p < .005$.

Belief Source Influence Ratings

Another two-way multiple analysis of covariance (MANCOVA) was used to test for group differences on belief source influence ratings after controlling for teaching experience. The dependent variables used for this test were the belief source influence ratings of the 14 sources of belief. The independent variables were school level and school level, and the covariate was teaching experience. The assumption of homogeneity of covariances was violated according to Box's test, $F(735, 41582.877) = 1.191$, $p < .001$, Box's M = 1050.137, as was the assumption of homogeneity of variance according to Levin's test for two of the dependent variables, life's daily routines and experiences, $F(8, 399) = 2.018$, $p = .043$, and traumatic event(s), $F(8, 399) = 2.197$, $p = .027$. The results should be treated with caution.

Results of the MANCOVA revealed there was a statistically significant difference between the school level groups on the combined dependent variables after controlling for teaching experience, $F(28, 770) = 1.906$, $p < .005$, Wilks' $\Lambda = .875$, partial $\eta 2 = .065$. There was

no statistically significant difference between the school locale groups on the combined dependent variables after controlling for teaching experience, $F(28, 770) = .950$, $p = .540$, Wilks' $\Lambda = .934$, partial $\eta 2 = .033$, nor was there a statistically significant difference between the interaction of school level and school locale on the combined dependent variables after controlling for teaching experience, $F(56, 1499.741) = .908$, $p = .667$, Wilks' $\Lambda = .878$, partial $\eta 2 = .032$.

The significant difference between the school level groups on the combined dependent variables required follow up testing. First, a test of between-subjects effects for school level groups on each of the 14 dependent variables found significant differences in school level group means for one variable, traumatic event(s), $F(2) = 8.554$, $p < .001$, partial $\eta 2 = .041$, meaning there were significantly different ratings of belief source influence for traumatic event(s) based on the school level of the participant after controlling for teaching experience (Table 24).

Next, pairwise comparisons of school level group means were found for traumatic event(s). The elementary school group ($M = 4.491$, $SE = .138$) rated the belief source influence of traumatic event(s) significantly higher than the high school group after controlling for teaching experience ($M = 3.843$, $SE = .140$, $p < .005$). Likewise, the middle school group ($M = 4.701$, $SE = .189$) rated the belief source influence of traumatic event(s) significantly higher than the high school group after controlling for teaching experience ($p = .001$).

Table 24

School Level Effects on Belief Source Influence Ratings of Education Purposes

Purpose	df	Mean Square	*F*	Sig	Partial Eta Squared
Teachers or role models	2	.289	.413	.662	.002
Life's daily routines and experiences	2	.666	.822	.440	.004
Immediate family or associates	2	.362	.245	.783	.001
Inquiry (informal or systematic)	2	2.404	2.775	.064	.014
Reflection on beliefs	2	.802	.817	.442	.004
Colleagues	2	.126	.126	.882	.001
Traumatic event(s)	**2**	**17.699**	**8.554**	**.000***	**.041**
Experimenting (having done something intentional or unintentional that altered beliefs)	2	.462	.335	.716	.002
Travelling, serving, studying, or working abroad	2	4.053	1.987	.138	.010
Intensive post-certification professional development over a period of time	2	2.186	1.261	.285	.006
Religion or philosophy	2	3.428	1.500	.224	.007
Imaginative life (vicarious learning from real or fictional characters)	2	.306	.165	.848	.001
Government: politics or political leaders	2	1.228	.694	.500	.003
Prior career	2	1.809	.695	.499	.003

Notes: **p<.005; **p<.001*

The results of the non-parametric independent-samples Kruskal-Wallis test found significant differences in school level group means for inquiry (informal or systematic), $H(2) = 8.558$, $p < .05$, and traumatic event(s), $H(2) = 9.620$, $p < .01$, meaning there were significantly different ratings of influence for these two belief sources based on the school level of the participant. Pairwise comparisons using the Bonferroni correction for multiple tests were made

to discover for which school levels were there significantly different ratings across the two belief source variables (Table 25). The elementary school group ratings of the influence of inquiry (informal or systematic) were significantly different than the middle school group, $p < .05$. The high school group ratings of the influence of traumatic event(s) were significantly different than the elementary school group, $p < .05$, and the middle school group, $p < .05$.

Table 25

Kruskal-Wallis Pairwise Comparisons of School Level for Select Belief Source Influence Ratings

Belief Source	School Level 1	School Level 2	Test Statistic	Std Error	Std Test Statistic	Sig
Inquiry (informal or systematic)	Elementary	Middle	-41.873	14.400	-2.908	.011*
Traumatic event(s)	Elementary	High	33.645	13.493	2.493	.038*
	Middle	High	40.069	14.572	2.750	.018*

Note: **p<.05*

Research Question 5

The fifth and final research question sought to determine, after controlling for school level, school locale, and teaching experience, the extent to which ratings of belief source influence predict ratings of importance regarding purposes of education for both ideal importance and experience-based importance. The first step was to determine whether any of the 11 purpose ratings, for both ideal importance and experience-based importance, and any of the 14 belief source ratings could be loaded together into underlying constructs. Exploratory Factor Analysis (EFA) was the method used, which examines relationships between a set of items to determine the number of constructs the items are measuring (Johnson & Morgan, 2016). Then, multivariate regression analysis was used to determine the extent to which the underlying constructs of belief source influence predict the underlying constructs of both ideal importance and experience-based importance of education purposes.

Exploratory Factor Analysis

As was mentioned, EFA is a method used to discover underlying constructs, or factors, among many items. There are a variety of ways to conduct EFA and researchers must make many subjective decisions, weighing different data points, when determining a final set of factors (Laerd Statistics, n.d.). The following will give a brief overview of the typical standards used in EFA before detailing the EFA processes used within this study.

The first decision a researcher must make is the method of extraction. Principle Axis Factoring (PAF) is the most common method used and has the advantages of having no distributional assumptions to check, and it is possible to always acquire results (Johnson & Morgan, 2016). The disadvantage with PAF is that there are no criteria given to aid researchers in factor selection, making it necessary to obtain other data. PAF is the method of extraction used in this study.

Much of the evidence researchers use to determine underlying factors revolves around eigenvalues, or the amount of variation explained by a factor. The number of eigenvalues in a set is always equal to the number of items in the set, and the cumulative variance explained by all the eigenvalues is always 100%. First, researchers may use the Kaiser-criterion, which states that for a factor to be selected it must have an eigenvalue greater than 1, meaning the factor explains more variation than a single item in the set, certainly reasonable guidance. The Kaiser-criterion also suggests that the number of factors selected should collectively explain more than 50% of the total variance of the set of items. A related piece of evidence researchers may use is the scree plot, or the plot of all eigenvalues in the set. When inspecting the scree plot, researchers look for where the plot begins to level off or where a sharp elbow is present, which indicates remaining eigenvalues explain smaller and smaller portions of the total variance in the set (Johnson & Morgan, 2016).

Another data point that can be helpful in factor selection is the result of a parallel analysis, which is a comparison between the eigenvalues real data and the mean of eigenvalues from many simulations of random data with the same number of variables and cases. The result of a parallel analysis will show the number of real eigenvalues that are more extreme than then eigenvalues from random simulations. A more extreme eigenvalue indicates that a factor explains more variance than would random chance (Johnson & Morgan, 2016). For this study, 1000 simulations were used for the parallel analyses.

A fourth piece of evidence that a researcher can use for factor selection is the reproduced residual matrix. This matrix represents the amount of unexplained variance left in the set after factor selection. The factor model that produces the smallest reproduced residuals is certainly one to be considered. Common EFA guidance suggests the reproduced residual matrix should contain fewer than 5% of residuals greater than |0.05| (Johnson & Morgan, 2016).

The final data to inspect when selecting factors during an EFA are the factor loadings, or the strength of the relationship between an item and an underlying factor. The goal is to achieve a simple structure for the factor model, meaning each item has a high loading onto one factor and low loadings on all other selected factors. A simple structure is also achieved when each factor loads onto at least three items in the set (Laerd Statistics, n.d.). A common standard is for each item to have a factor loading of at least .4, which indicates the factor explains 16%, or $.4^2$, of the variance in the item responses (Johnson & Morgan, 2016).

There is one more important component to EFA, which is the method of rotation. While the method of rotation is not evidence, it can make the evidence more clearly seen. There are many different types of rotation, including orthogonal rotations and oblique rotations (Laerd Statistics, n.d.). The major difference between the two types is that orthogonal rotations, by definition, create correlations between underlying factors that are equal to zero. The standard

when conducting EFA is generally to utilize an oblique rotation and consider the correlations between factors. Oblique rotations that produce small correlations between factors may be justification to use orthogonal rotations (Johnson & Morgan, 2016). While factors are likely to be somewhat correlated, lower correlations between factors are evidence that distinct factors are more orthogonal in nature.

Exploratory Factor Analysis of Ideal Importance of Purpose Ratings. The first EFA was done on the 11 variables regarding ideal importance ratings of education purpose. To start, a parallel analysis was done using 1,000 simulations of random data, revealing four factors with real eigenvalues that were more extreme than the mean of the simulated eigenvalues. Then, six EFAs were done to determine the best model to select (Table 26). The eigenvalues, and therefore the scree plots, were the same for each of the six EFAs. Visual inspection of the scree plot clearly showed a distinct bend after just one eigenvalue. Cumulative variance explained, rotation methods, reproduced residuals, rotated factor loadings, and factor correlations changed from certain models, as well as a slight change in extraction method.

There was not a model that met all the ideal criteria. The extraction methods for models one, two, and three each called for the same three factors to be selected. These factors had eigenvalues greater than one, which cumulatively explained 59% of the variance in the set of item responses. The reproduced residual matrix for these models revealed a higher than ideal percentage of residuals above |.05| (12%). Perhaps more importantly, rotated factor loadings for models one, two, and three, while all slightly different, showed that two items (model one) or five items (models two and three) failed to load strongly enough onto one of the three factors. The factor correlations of the oblique rotations were low to moderate, indicating some level of correlation, suggesting that oblique rotations were preferable over orthogonal rotations.

Table 26

Exploratory Factor Analyses of Ideal Importance of Purpose Ratings

EFA Model	Extraction Method	Cumulative Variance Explained	Rotation Method	Scree Plot	Reproduced Residuals	Rotated Loadings (> .4)	Factor Correlations
Model # 1	PAF, eig > 1 3 factors	59.08%	Varimax	1 factor	12% > |.05|	F1 = 3 items F2 = 3 items F3 = 3 items (2 items left)	n/a (orthogonal rotation)
Model #2	PAF, eig > 1 3 factors	59.08%	Promax	1 factor	12% > |.05|	F1 = 3 items F2 = 1 items F3 = 2 items (5 items left)	Moderate (all > .549)
Model #3	PAF, eig > 1 3 factors	59.08%	Direct Oblimin	1 factor	12% > |.05|	F1 = 3 items F2 = 1 items F3 = 2 items (5 items left)	Low - Moderate (all > .408)
Model #4	PAF, 4 fixed 4 factors	67.46%	Varimax	1 factor	0% > |.05|	F1 = 3 items F2 = 4 items F3 = 2 items F4 = 2 items	n/a (orthogonal rotation)
Model #5*	**PAF, 4 fixed 4 factors**	**67.46%**	**Promax**	**1 factor**	**0% > |.05|**	**F1 = 3 items F2 = 4 items F3 = 2 items F4 = 2 items**	**Low - Moderate (all > .244)**
Model #6	PAF, 2 fixed 2 factors	49.56%	Promax	1 factor	30% > |0.5|	F1 = 3 items F2 = 5 items (3 items left)	Moderate (> .685)

Note: *This model was selected

Models four and five offered more ideal data in some respects while not completely meeting preferred selection criteria for factor loadings. Both models used an adjusted extraction method, forcing four factors to be selected by PAF. This was for two reasons. First, as was noted earlier, parallel analysis suggested the inspection of four factors. Second, the rotated factor loadings for the three factors of models one, two, and three failed to load onto at least two items,

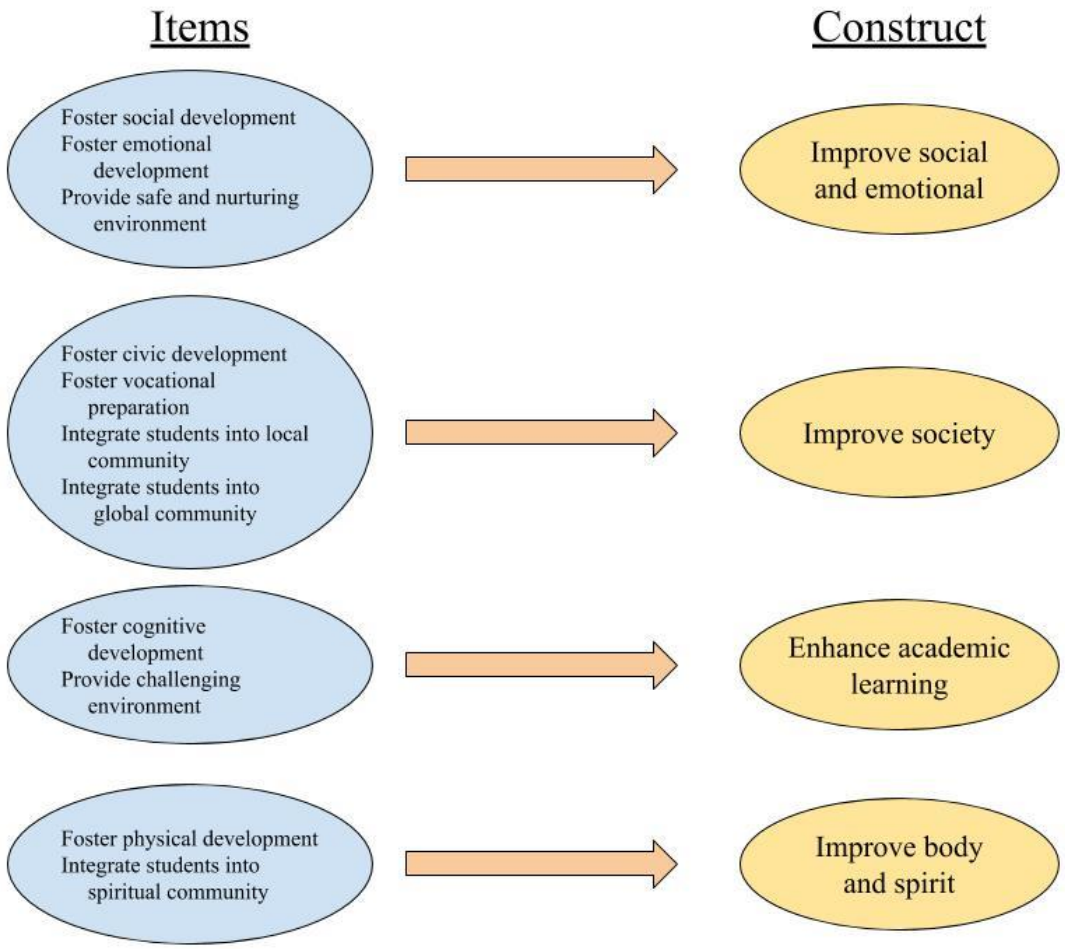
so it was prudent to inspect a different number of factors. The orthogonal varimax rotation was used for model four and the oblique promax rotation was used for model five, which once again showed mostly moderate correlations between the selected factors. This offered confirmation that the oblique rotation was the preferable rotation method, indicating model five was preferable over model four. On the plus side, the percentage of reproduced residuals greater than |.05| was zero for model five, the percentage of cumulative variance explained was 67.46%, and all 11 items met the minimum loading criteria (greater than .4) to load onto one of the four factors. Unfortunately, two of the four factors were loaded onto by just two items. Consequently, though model five seemed preferable to models one, two, and three, one more model was explored.

Model six used PAF and forced just two factors to be selected, mainly to ensure that model five was indeed the best model to select. Model six failed to meet the selection standards in three respects: a) it explained just under 50% of the cumulative variance in the set of items, b) 30% of reproduced residuals were greater than |.05|, and c) two items did not load strongly enough onto one of the two selected factors. Therefore, model five was the model that best met the selection criteria and was selected.

Figure 5 shows the individual items that loaded onto each of the four factors, or constructs, and includes names for each construct based on the combined meaning of the items involved. The factor scores for these constructs were found by summing the individual item ratings using the listwise deletion method, meaning if a rating was missing from any of the individual items, the entire case was excluded. This was the same deletion method used for each conducted EFA above. While there are many methods for calculating factor scores, the sum method is the most common (Johnson & Morgan, 2016).

Figure 5

Underlying Constructs for Ideal Importance Ratings of Educational Purpose



Exploratory Factor Analysis of Experience-Based Importance of Purpose Ratings.

The second EFA was done on the 11 variables of experience-based importance ratings of education purpose. Once again, a parallel analysis was done using 1,000 simulations of random data, revealing four factors with real eigenvalues that were more extreme than the mean of the simulated eigenvalues. Six EFAs were done to determine the best model to select (Table 27). The eigenvalues, and therefore the scree plots, were the same for each of the six EFAs. Visual inspection of the scree plot clearly showed a distinct bend after two eigenvalues, and there were

two eigenvalues greater than one, evidence that a two-factor model might have been the best fit for the set of items.

Table 27

Exploratory Factor Analyses of Experience-Based Importance of Purpose Ratings

EFA Model	Extraction Method	Cumulative Variance Explained	Rotation Method	Scree Plot	Reproduced Residuals	Rotated Loadings (> .4)	Factor Correlations
Model # 1	PAF, eig > 1 2 factors	54.84%	Promax	2 factors	18% > |.05|	F1 = 5 items F2 = 5 items (1 item left)	Moderate (> .691)
Model #2*	**PAF, eig > 1 2 factors**	**54.84%**	**Varimax**	**2 factors**	**18% > |.05|**	**F1 = 5 items F2 = 6 items**	**n/a (orthogonal rotation)**
Model #3	PAF, 4 fixed 4 factors	70.14%	Promax	2 factors	1% > |.05|	F1 = 4 items F2 = 3 items F3 = 2 items F4 = 1 item (1 item left)	Low - Moderate (all > .319)
Model #4	PAF, 4 fixed 4 factors	70.14%	Varimax	2 factors	1% > |.05|	F1 = 4 items F2 = 3 items F3 = 2 items F4 = 1 item (1 item left)	n/a (orthogonal rotation)
Model #5	PAF, 3 fixed 3 factors	62.69%	Promax	2 factors	5% > |.05|	F1 = 5 items F2 = 3 items F3 = 2 items (1 item left)	Low - Moderate (all > .244)
Model #6	PAF, 3 fixed 3 factors	62.69%	Varimax	2 factors	5% > |.05|	F1 = 5 items F2 = 3 items F3 = 2 items (1 item left)	n/a (orthogonal rotation)

Note: *This model was selected

While none of the six models met the preferable conditions of all the selection criteria, models two through six each failed to meet just one. Each of models one, three, four, five, and six included one item that failed to load strongly enough onto one of the selected factors. These

models collectively included two, three, and four factors and both orthogonal and oblique rotations. Model two was the only model for which each of the 11 items loaded sufficiently onto one of the two selected-for factors. Model two, which used an orthogonal rotation, did have a higher than ideal percentage of residuals above |.05| (18%) in its reproduced residual matrix and the factor correlations for model one would suggest an oblique rotation might be preferable. Despite these factors, model two was selected due to its simple structure. It had two factors, fulfilling the Kaiser-criteria and scree plot inspection, with all items loading onto one of the factors.

Figure 6

Underlying Constructs for Experience-Based Importance Ratings of Educational Purpose

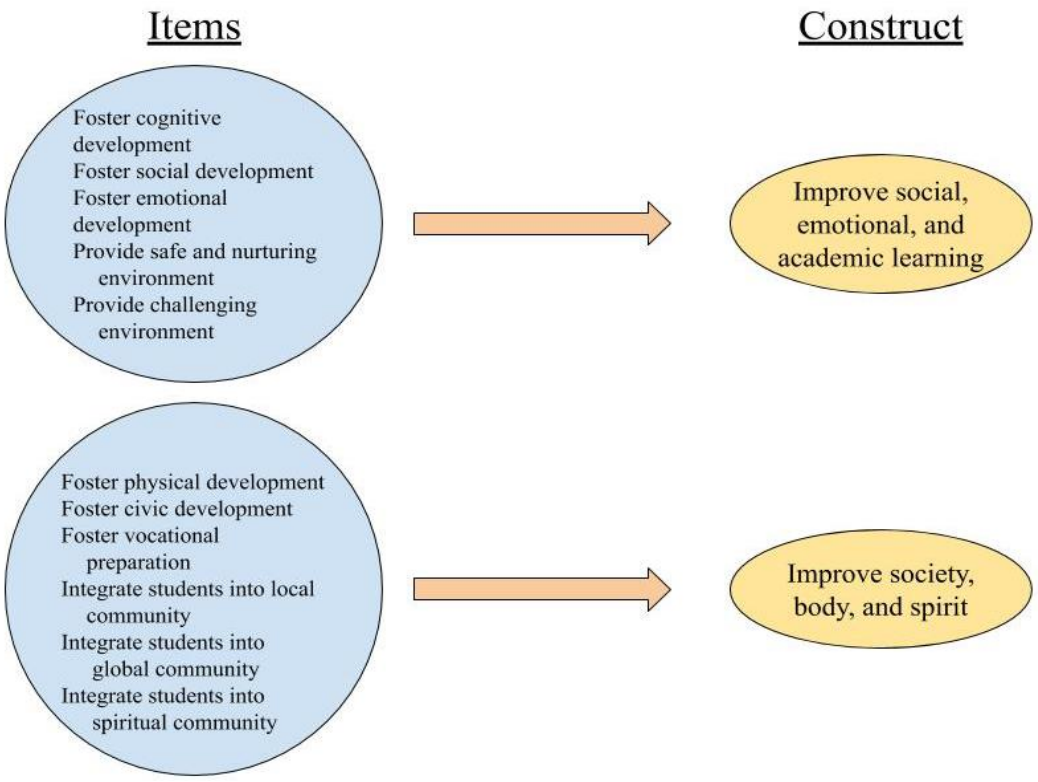


Figure 6 shows the individual items that loaded onto the two constructs and includes names for each construct based on the collective meaning of the items involved. Once again,

factor scores for these constructs were found by summing the individual item ratings using the listwise deletion method.

Exploratory Factor Analysis of Influence of Belief Source Ratings. The third EFA process was conducted using the 14 variables of influence ratings of belief sources. Again, a parallel analysis was done using 1,000 simulations of random data, revealing five factors with real eigenvalues that were more extreme than the mean of the simulated eigenvalues. Eight EFAs were done to determine the best model to select (Table 28). There were four factors with eigenvalues greater than one. Visual inspection of the scree plot clearly showed a distinct bend after two eigenvalues.

Models were conducted for a four-factor selection due to the Kaiser-criteria, and a five-factor selection due to parallel analysis, each with one orthogonal rotation and one oblique rotation, for a total of four models. When none of the resulting models showed a strong fit, four more models were conducted, two with a three-factor selection, one with a two-factor selection, and one with a six-factor selection. As Table 28 shows in detail, none of these eight models conform in an ideal way to the selection criteria standards. Therefore, the results here and for the ensuing multivariate regression should be viewed with an abundance of caution.

The best model, and the one selected, was model two. This model achieved close to all of the selection criteria standards with one glaring weakness, that of the rotated factor loadings. Three items did were not sufficiently strong to load onto one of the four factors. To make this model an acceptable one, the factor loading minimum standard needed to be reduced from .4 to .3, a decision that created the reality of a factor accounting for as little as 9% of the variance in the item. Even then, one of the four factors loaded with only two items, below the common standard for factor loadings.

Table 28

Exploratory Factor Analyses of Influence of Belief Source Ratings

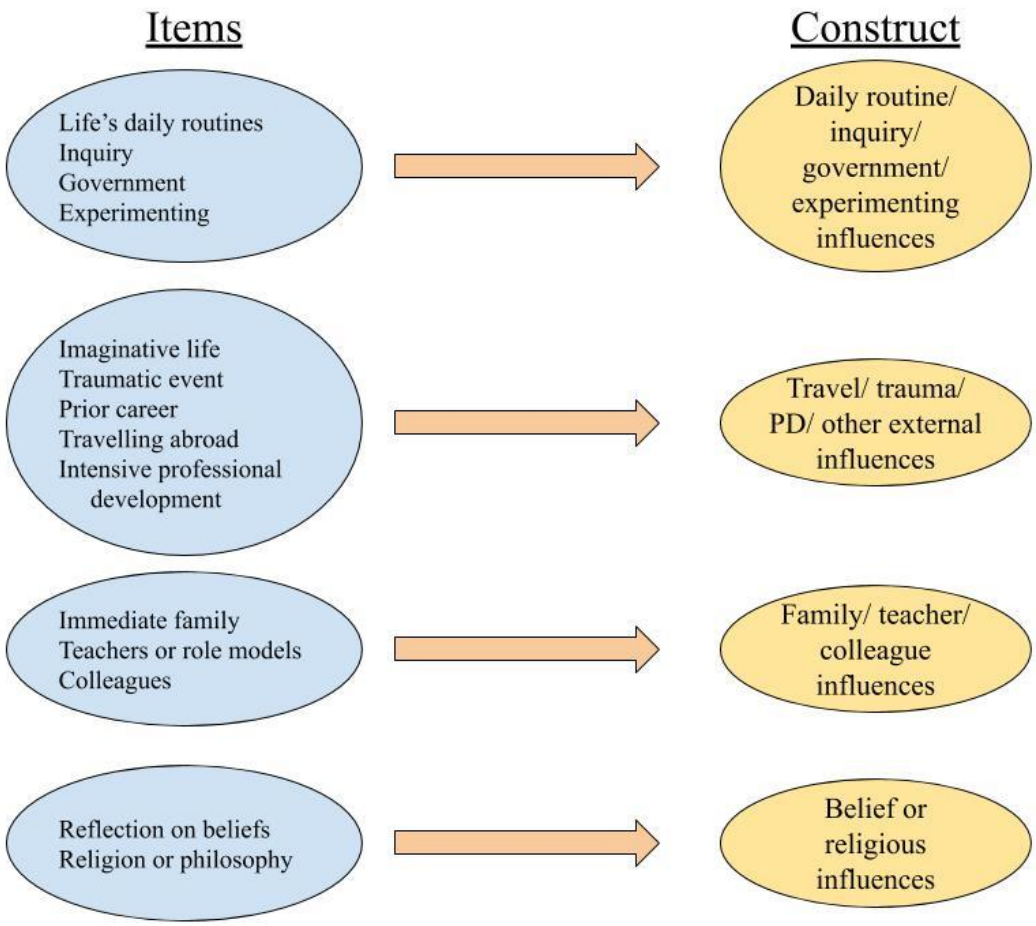
EFA Model	Extraction Method	Cumulative Variance Explained	Rotation Method	Scree Plot	Reproduced Residuals	Rotated Loadings (> .4)	Factor Correlations
Model # 1	PAF, eig > 1 4 factors	57.33%	Promax	2 factors	7% > |.05|	F1 = 4 items F2 = 2 items F3 = 2 items F4 = 1 item (5 items left)	Low - Moderate (all > .248)
Model #2	**PAF, eig > 1 4 factors**	**57.33%**	**Varimax**	**2 factors**	**7% > |.05|**	**F1 = 4 items F2 = 2 items F3 = 3 items F4 = 2 items (3 items left)**	**n/a (orthogonal rotation)**
Model #3	PAF, 5 fixed 5 factors	63.65%	Promax	2 factors	3% > |.05|	F1 = 4 items F2 = 2 items F3 = 2 items F4 = 2 items F5 = 1 item (3 items left)	Low - Moderate (.089 - .535)
Model #4	PAF, 5 fixed 5 factors	63.65%	Varimax	2 factors	3% > |.05|	F1 = 4 items F2 = 2 items F3 = 2 items F4 = 2 items F5 = 1 item (3 items left)	n/a (orthogonal rotation)
Model #5	PAF, 3 fixed 3 factors	50.12%	Promax	2 factors	21% > |.05|	F1 = 5 items F2 = 5 items F3 = 1 items (3 items left)	Low - Moderate (all > .288)
Model #6	PAF, 3 fixed 3 factors	50.12%	Varimax	2 factors	21% > |.05|	F1 = 5 items F2 = 5 items F3 = 1 items (3 items left)	n/a (orthogonal rotation)
Model #7	PAF, 2 fixed 2 factors	42.27%	Varimax	2 factors	29% > |.05|	F1 = 6 items F2 = 6 items (2 items left)	n/a (orthogonal rotation)
Model #8	PAF, 6 fixed 6 factors	69.24%	Varimax	2 factors	2% > |.05|	F1 = 3 items F2 = 3 items F3 = 2 items F4 = 2 items F5 = 1 item F6 = 1 item (2 items left)	n/a (orthogonal rotation)

Note: *This model was selected

Figure 7 shows the individual items that loaded onto each of the four constructs and includes names for each construct based on the collective meaning of the items involved. Like the previously created constructs, factor scores for these constructs were found by summing the individual item ratings using the listwise deletion method.

Figure 7

Underlying Constructs for Influence Ratings of Belief Sources



Multivariate Regression

The purpose of conducting EFA on the purpose of education variables and the belief source variables was to reduce the number of variables into constructs, better allowing for multivariate regression analysis. Research question five sought to determine, after controlling for

school level, school locale, and teaching experience, the extent to which ratings of belief source influence predict ratings of importance regarding purposes of education for both ideal importance and experience-based importance. The underlying constructs found through EFA were used to model such a predictive relationship. The models found are exploratory in nature considering the novice survey instrument utilized in this study and the uncertain predictive relationship between the newly formed underlying constructs.

For both multivariate regressions conducted below, the same two assumptions were in question; multicollinearity and linear relationships between each pair of independent variables and dependent variables. First, is it possible that the multicollinearity assumption was violated. In both regression analyses, there were significant bivariate correlations between all independent variables in every case. This fact, on its own, is not an indication that the assumption of multicollinearity was violated, but rather a reason for further inspection. One method for which multicollinearity can be investigated is through comparing the significance of regression coefficients in the multivariate regression model with individual multiple regression models of each dependent variable, checking if there are far more significant coefficients in the multiple regression models versus the multivariate model. Now, one should expect to find *some* increase in significant coefficients in individual models over multivariate models; this fact is the impetus for the need for significance level adjustments, such as the Bonferroni correction. However, *far* more significant coefficients in the individual models could be an indication of a multicollinearity violation. Indeed, that is what was found for both multivariate regression analyses below. Another method for further investigation of the multicollinearity assumption is checking levels of tolerance and variance inflation factors (VIF). Inspecting these values in all six multiple regression models (four ideal purpose DVs and two experience-based purpose DVs)

found acceptably high levels of tolerance and acceptably low levels of VIF (Montgomery et al., 2012).

Second, it is likely that the linear relationships assumption was violated, specifically for the ideal purposes multivariate regression model. Linear relationships were tested for all combinations of the four independent variable constructs and six dependent variable constructs. Six of the sixteen ideal purposes relationships were significantly nonlinear while one of the eight experience-based purposes relationships was significantly nonlinear. Therefore, the results below should be observed with sufficient caution.

Table 29

Regression Model of Belief Source Constructs and Ideal Purpose Constructs

Dependent Variable	df, error df	F	Sig	R	R^2	Adj R^2
Improve social and emotional	20, 382	7.278	.000*	.525	.276	.238
Improve society	20, 382	6.171	.000*	.494	.244	.205
Improve academic learning	20, 382	4.623	.000*	.442	.195	.153
Improve body and spirit	20, 382	8.189	.000*	.548	.300	.263

Note: *p < .001

Ideal Purpose Constructs. The multivariate regression was run to predict the four dependent variables improve social and emotional (I_SE), improve society (I_So), improve academic learning (I_AL) and improve body and spirit (I_BS) from travel/trauma/PD/other external influences (TTPDO), family/teacher/colleague influences (FTC), daily routine/inquiry/government/experimenting influences (DRIGE), and belief or religious influences (BR), while controlling for school level, school locale, and teaching experience. These variables statistically significantly predicted I_SE, $F(20, 382) = 7.278$, $p < .001$, $R^2 = .276$, I_So,

$F(20, 382) = 6.171$, $p < .001$, $R^2 = .244$, I_AL, $F(20, 382) = 4.623$, $p < .001$, $R^2 = .195$, and I_BS, $F(20, 382) = 8.189$, $p < .001$, $R^2 = .263$ (Table 29).

For the dependent variable I_SE, there were many independent variables and interactions between independent variables that added statistically significantly to the prediction (Table 30). These were TTPDO ($B = 5.030$, $p < .001$, $\eta^2 = .038$), FTC ($B = 6.481$, $p < .001$, $\eta^2 = .053$), DRIGE ($B = 4.064$, $p < .005$, $\eta^2 = .022$), FTC*BR ($B = -.379$, $p < .05$, $\eta^2 = .015$), FTC*DRIGE ($B = -.357$, $p < .001$, $\eta^2 = .032$), TTPDO*FTC ($B = -.402$, $p < .001$, $\eta^2 = .048$), TTPDO*DRIGE ($B = -.277$, $p < .005$, $\eta^2 = .028$), TTPDO*FTC*BR ($B = .028$, $p < .01$, $\eta^2 = .019$), TTPDO*FTC*DRIGE ($B = .022$, $p < .001$, $\eta^2 = .039$), and TTPDO*FTC*BR*DRIGE ($B = -.002$, $p < .05$, $\eta^2 = .016$). For the dependent variable I_So, the independent variables and interactions between independent variables that added statistically significantly to the prediction were FTC ($B = 5.798$, $p < .001$, $\eta^2 = .028$), FTC*DRIGE ($B = -.350$, $p < .01$, $\eta^2 = .020$), and TTPDO*FTC ($B = -.230$, $p < .05$, $\eta^2 = .010$). For the dependent variable I_AL, there was one independent variable that added statistically significantly to the prediction, FTC ($B = 3.264$, $p < .05$, $\eta^2 = .014$). Finally, for the dependent variable I_BS, the independent variables and interactions between independent variables that added statistically significantly to the prediction were FTC ($B = 3.760$, $p < .05$, $\eta^2 = .017$), FTC*BR ($B = -.381$, $p < .05$, $\eta^2 = .013$), TTPDO*FTC ($B = -.215$, $p < .05$, $\eta^2 = .013$), TTPDO*FTC*BR ($B = .023$, $p < .05$, $\eta^2 = .011$), and TTPDO*FTC*BR*DRIGE ($B = -.001$, $p < .05$, $\eta^2 = .010$).

Table 30

Regression Coefficients for Belief Source Constructs and Ideal Purpose Constructs Model

Dependent Variable	Independent Variable	B	Std Error	Sig	Partial Eta Squared
Improve social and emotional	Travel/trauma/PD/other	5.030	1.292	.000**	.038
	Family/teacher/colleague	6.481	1.395	.000**	.053
	Daily routine/inquiry/ government/experimenting	4.064	1.398	.004*	.022
	Family/teacher/colleague x Belief/religious	-.379	.157	.016	.015
	Family/teacher/colleague x Daily routine/inquiry/gov/exp	-.357	.101	.000**	.032
	Travel/trauma/PD/other x Family/teacher/colleague	-.402	.092	.000**	.048
	Travel/trauma/PD/other x Daily routine/inquiry/gov/exp	-.277	.083	.001*	.028
	Travel/trauma/PD/other x Family/teacher/colleague x Belief/religious	.028	.010	.007*	.019
	Travel/trauma/PD/other x Family/teacher/colleague x Daily routine/inquiry/gov/exp	.022	.006	.000**	.039
	Travel/trauma/PD/other x Family/teacher/colleague x Belief/religious x Daily routine/inquiry/gov/exp	-.002	.001	.013	.016
Improve society	Family/teacher/colleague	5.798	1.748	.001*	.028
	Family/teacher/colleague x Daily routine/inquiry/gov/exp	-.350	.127	.006*	.020
	Travel/trauma/PD/other x Family/teacher/colleague	-.230	.115	.046	.010
Improve academic learning	Family/teacher/colleague	3.264	1.391	.019	.014
Improve body and spirit	Family/teacher/colleague	3.760	1.480	.011	.017
	Family/teacher/colleague x Belief/religious	-.381	.167	.023	.013

Table 30 Continued

Dependent Variable	Independent Variable	B	Std Error	Sig	Partial Eta Squared
	Travel/trauma/PD/other x Family/teacher/colleague	-.215	.097	.028	.013
	Travel/trauma/PD/other x Family/teacher/colleague x Belief/religious	.023	.011	.036	.011
	Travel/trauma/PD/other x Family/teacher/colleague x Belief/religious x Daily routine/inquiry/gov/exp	-.001	.001	.046	.010

Note: Only significant coefficients with $p < .05$ are displayed; *$p < .01$; **$p < .001$

Experience-Based Purpose Constructs. The multivariate regression was run to predict the two dependent variables improve social, emotional, and academic learning (EB_SEAL) and improve society, body, and spirit (EB_SBS) from TTPDO, FTC, DRIGE, and BR, while controlling for school level, school locale, and teaching experience. These variables statistically significantly predicted EB_SEAL, $F(20, 377) = 5.595$, $p < .001$, $R^2 = .229$, and EB_SBS, $F(20,377) = 2.959$, $p < .001$, $R^2 = .136$ (Table 31). None of the independent variables or interactions between any of the independent variables added statistically significantly to the prediction.

Table 31

Regression Model of Belief Source Constructs and Experience-Based Purpose Constructs

Dependent Variable	df, error df	F	Sig	R	R^2	Adj R^2
Improve social, emotional, and academic learning	20, 377	5.595	.000*	.479	.229	.188
Improve society, body, and spirit	20, 377	2.959	.000*	.369	.136	.090

Note: *$p < .001$

Chapter 4 Closure

This chapter has served to review the results of surveying 423 K-12 teachers about their perceptions regarding the importance of 11 purposes of education and the influence of 14 sources of belief on these. It was determined that the importance of many of the 11 purposes were rated significantly differently than the others. So too were the influence ratings of many of the 14 belief sources rated significantly differently than the others. The importance of the set of 11 purposes were each rated higher when survey respondents considered what was ideal versus when respondents considered what they experienced in their schools.

The school level of the respondents seemed to correlate with differences in ratings on certain purposes of education and certain belief sources. The school locale of the respondents seemed to correlate with differences in these ratings as well, though in a smaller number of purposes and beliefs. Teaching experience seemed not to impact the results in a significant way and there were not enough respondents in the public charter and private subgroups of school type to be able to conduct analyses.

The purpose of education items, for both ideal importance and experience-based importance, loaded onto a smaller number of underlying constructs. The model selected for ideal importance included four constructs while the model selected for experience-based importance included two constructs. A model was also selected for the belief source items, which included four underlying constructs, although this model did ideally fit a common set of selection criteria. Finally, regression analyses were conducted using the underlying constructs for ideal importance purposes and experience-based purposes as dependent variables while using the underlying constructs for belief sources as independent variables. Chapter 5 will discuss the implications of these results.

CHAPTER 5

DISCUSSION

The following chapter presents the key research findings, how they address my research questions, and how these findings connect to the existing literature. The purpose of my study was to determine the perceptions of K-12 teachers about the primary purposes of education, and to analyze the effects of belief sources on such perceptions. My review of the literature revealed that there have been and still are many conflicting views about the purposes of K-12 education. It was clear that the views of practitioners, that is, the teachers charged with implementing education purposes, was lacking in the literature, confirming the need for this research. The following discussion of the results of my study seeks to add the teachers' voice into the discussion of K-12 education purposes and provide some insight as to the source of their purpose beliefs. Finally, limitations of this study, recommendations for leaders in K-12 education, and suggestions for future research are also explored.

Discussion of Major Results

There were 423 participant surveys included in my study. These participants mostly came from a population of two Midwestern states, although some participants may have come from other states since social media was one mechanism used to solicit participation. The online survey was administered through Qualtrics (2020) and the resulting data were analyzed using SPSS to address my research questions.

Sample and Demographics

The proportion of teachers in my study, when categorized by experience, school level, and school locale was different than the nation at large. According to USDE (2019), teachers in my study, on average, had more teaching experience and came from schools that were more suburban and less rural.

Clearly seen in Table 32, the categorical breakdowns used in my study do not mirror those of USDE (2019). The upshot remains that the sample of teachers surveyed here was quite different than the national average. Specifically, my sample included a far greater percentage of teachers with 21 years of teaching experience or more (42.1%) than the nation at large (22.8%). The difference in school locale categories makes it difficult to compare the sample in my study to the nation. USDE defines "town" as a territory inside an urban cluster but some distance from an urbanized area. Therefore, combining USDE's suburban and town percentages may be a more accurate comparison with the suburban percentage of my sample. Still, the percentage of suburban teachers in my study (54.1%) is greater than the combined percentage of suburban and town of the nation (44.6%).

Table 32

Demographic Comparison of Study Sample and Nation

Category	Study Sample	Nation (USDE, 2019)
Teaching experience (in years)	1-10 (15.6%) 11-20 (42.3%) 21+ (42.1%)	1-9 (37.3%) 10-20 (39.9%) 21+ (22.8%)
School level	Elementary (34.5%) Middle (26.2%) High (38.8%)	Elementary (55.5%) Secondary (38.9%) Ungraded (5.6%)
School locale	Urban (12.5%) Rural (32.9%) Suburban (54.1%)	City (28.3%) Rural (27.1%) Suburban (32.4%) Town (12.2%)

The breakdown by school level is much closer when comparing the sample of my study with the nation. USDE (2019) defines "elementary" as including grades K-8, the percentage of which (55.5%) is close to the combination of elementary and middle in my study (60.7%). Taking these comparisons together, generalizations made to my study population, two Midwestern states, should be made carefully as it is likely the demographics of these two

Midwestern states more closely align with national averages than those found using the sample in my study.

Key Findings Related to Research Question 1

The aim of research question one was to understand K-12 teacher perceptions regarding the ideal importance of each of 11 purposes of education and the experience-based importance of the same 11 purposes. Survey respondents were asked to rate the level of importance for each purpose of education using a 6-point Likert scale, from (1) not at all important to (6) extremely important. These ratings were analyzed using descriptive statistics and parametric and non-parametric tests.

Ideal Importance Ratings

The participants in my study rated the ideal importance of the purpose, provide safe and nurturing environment (M = 5.75, SD = .592), significantly higher than each of the other 10 purposes. The next tier of purposes, foster cognitive development (M = 5.48, SD = .748), foster social development (M = 5.36, SD = .809), and foster emotional development (M = 5.31, SD = .821) were each rated significantly higher than each the seven purposes below them. The lowest rated purposes, integrate students into spiritual community (M = 2.85, SD = 1.485) and foster physical development (M = 4.43, SD = 1.052), were both rated significantly lower than each of the nine purposes above them.

These ratings reveal that the 423 survey respondents collectively believed that, out of the 11 purposes given, providing a safe and nurturing environment was the most important purpose of K-12 education, followed by fostering cognitive, social, and emotional development. These same respondents collectively believed that integrating students into a spiritual community was the least important purpose of K-12 education and fostering physical development was the second least important purpose, out of the 11 purposes given.

Experience-Based Importance Ratings

Research question one also sought to understand teacher perceptions about K-12 purposes based on what they experience in their schools. From the experience-based lens, respondents rated the purpose, provide safe and nurturing environment (M = 5.35, SD = .845), significantly higher than each of the other 10 purposes. Foster cognitive development (M = 5.03, SD = .906) was rated significantly higher than each of the nine purpose below it, while foster emotional development (M = 4.71, SD = 1.116), foster social development (M = 4.65, SD = 1.039), and provide challenging environment (M = 4.58, SD = 1.039), each were rated significantly higher than the six purposes below this group. At the other end, integrate students into spiritual community (M = 2.20, SD = 1.376) was rated significantly lower than each of the 10 purposes above it.

Based on their collective school experiences, respondents believed that providing a safe and nurturing environment was the most important purpose of K-12 education, fostering cognitive development was the second most important purpose of K-12 education, and that there was a third tier of most important purposes, consisting of foster emotional and social development and providing a challenging environment. Based on what respondents experienced in their schools, integrating students into a spiritual community was the least important purpose of K-12 education.

Relationship of Results to Existing Mission Statement Studies

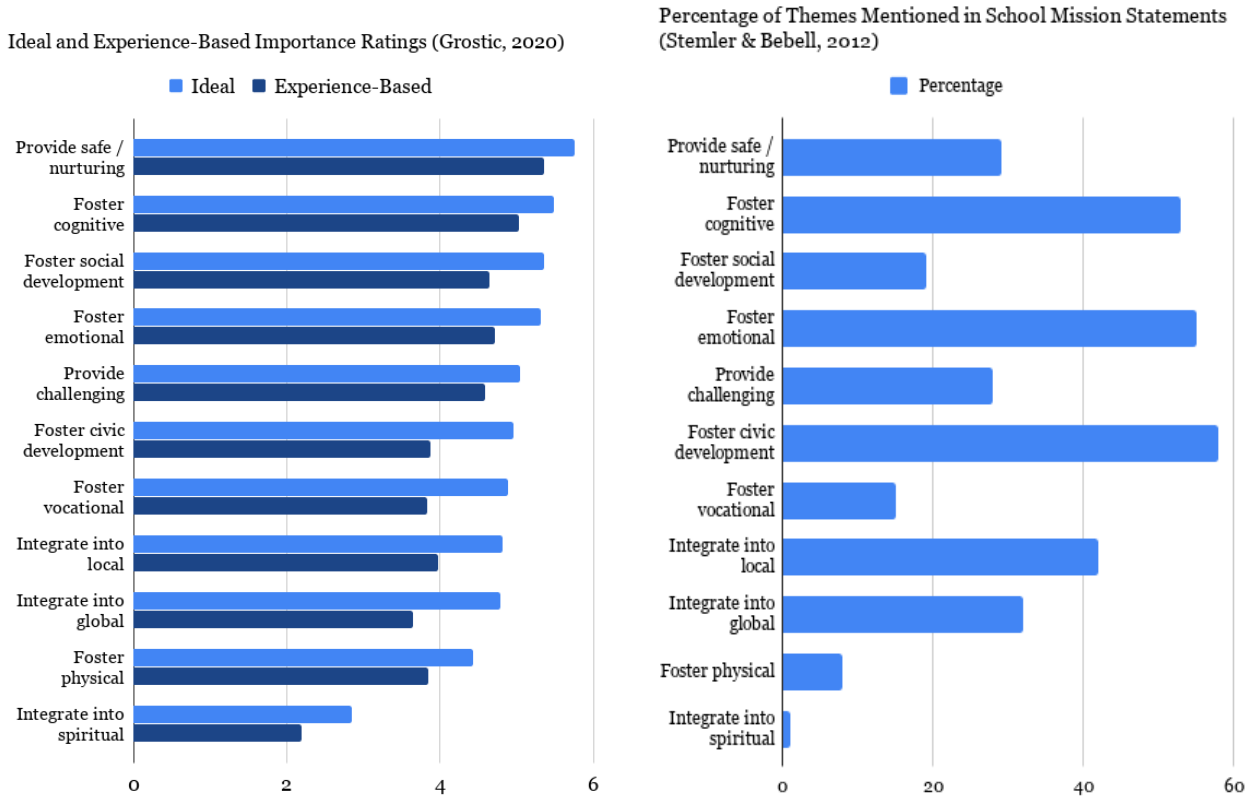
Since the 11 purposes used to create the survey for my study came out of several analyses of school mission statements by Stemler and Bebell (1999, 2012) and Stemler et al. (2011), it is prudent to compare the ratings from the participants of my study to the frequencies of education purpose themes from the work of Stemler and Bebell. Figure 8 shows a comparison between the

rank order of purposes based on the ratings of participants in my study and the frequencies of purpose themes based on the analysis of mission statements by Stemler and Bebell.

A comparison of the two sets of rankings highlights at least three stark differences. Providing a safe and nurturing environment was the highest ranked purpose based on the ratings in my study, based on both teacher ideals and what teachers experience in their schools, while it was the six-most frequently occurring theme in the mission statement analysis. Civic development was ranked sixth based on teacher ideal ratings and seventh based on what teachers experienced, while it was the most frequently occurring theme in the mission statement analysis. Fostering social development was ranked third based on teacher ideals and fourth based on teacher experience, while it was ranked eighth on the mission statement list.

Figure 8

Comparison of Importance Ratings with Mentions in Mission Statements



There are two important notes to mention. First, it is important to compare my study's results to more than one single previous study, and such a comparison will happen below. However, I felt it prudent to isolate Stemler and Bebell's (2012) work for an initial comparison to my results since the survey instrument used in my study was developed from their mission statement analyses. Second, the ranking created for Figure 8 is based on a survey question that asks teachers to rate importance, not to rank order education purposes. It may be possible for one purpose to be rated higher, on average, but to not be thought most important out of all possible purposes. The purpose, provide safe and nurturing environment, had the highest average rating of importance, but it also had the smallest standard deviation for both the ideal and experience-based ratings. This indicates that respondents rated provide safe and nurturing environment within a narrower range than all other purposes, which may be more of an indication of agreement amongst respondents that it was one of the most important purposes than an indication that it was the *primary* purpose of K-12 education.

There are many other recent studies that analyzed the themes of school mission statements. Table 33 compares the top three rated purposes from my study, based on ideal importance, to the top three purposes from seven other recent studies of mission statements. The theme cognitive development or academic achievement shows up ranked first or second in every study but one (for which it is third). Teachers in my study rated fostering cognitive development second, so this is consistent with recent literature about the purposes of K-12 education according to school mission statements. Another purpose for which my study reflects recent literature is that of fostering the social and emotional development of students. These two purposes were rated third and fourth in my study, based both on ideals and what teachers experience. Some variation of these purposes was in the top three most frequently occurring themes for five of the seven studies listed.

The clearest contrast between the purpose ratings in my study and the purpose themes in recent mission statement studies is the purpose, provide safe and nurturing environment. This purpose was rated the highest in my study for both ideal and experience-based ratings. However, this purpose or a variation of it only shows up once in any of the seven studies listed, that is, physical well-being, the third most frequently occurring purpose of Japanese mission statements.

Table 33

Top Purposes of Education from Recent Studies

Study	Top 3 (rating or %)	Region, Country	School	N (type)
Grostic, 2020	Safe and nurturing (5.75/6) Cognitive (5.48/6) Social (5.36/6)	Midwest, USA	K-12	423 (teachers)
Allen et al., 2018	Academic achievement (88%) Mental health promotion (66.2%) School belonging (57.5%)	Victoria, Australia	Secondary	308 (school mission statements)
Chapple, 2015	Emotional (44.9%) Cognitive (29.8%) Social (16.8%)	New Zealand	Primary	150 (school mission statements)
Chapple, 2015	Cognitive (35.0%) Emotional (30.5%) Physical well-being (18.7%)	Japan	Primary	150 (school mission statements)
Craft et al., 2009	Academic success (70.2%) Educate all (48.8%) Opportunity (39.3%)	Texas, USA	Elementary	84 (school mission statements)
Lubienski & Lee, 2016	Academic (69.7%) Character/Emotion (48.4%) Environment (30.3%)	Detroit, Michigan, USA	K-12 Public charter	155 (school mission statements)
Schafft & Biddle, 2014	Academic (49.0%) Citizenship (44.0%) General success (41.0%) Community ties (41.0%)	Pennsylvania, USA	K-12	480 (district mission statements)
Stemler et al., 2011	Civic (58%) Emotional (55%) Cognitive (53%)	USA	High school	421 (school mission statements)

What might account for such a discrepancy? It is possible that stark difference in methodologies is the only explanation that is needed. In mission statement analyses, researchers count the frequency of the important phrases within school mission statements. My study, of course, asked teachers to rate the importance of those themes. These processes are entirely different so perhaps different results should be of no surprise. The discrepancy might also be explained by the timing of my study. Teachers were given three weeks to complete my survey. This three-week stretch started nine days after nearly all schools closed due to the coronavirus outbreak in the two Midwestern states that served as the population that my study's sample was drawn from. It would not be at all surprising if the school closings influenced the participants in my study and made it more likely for them to rate the purpose, provide safe and nurturing environment, higher than they otherwise would have. Of course, it may be that teachers believed a safe and nurturing environment was a more important purpose of K-12 education than was reflected in most school mission statements.

Key Findings Related to Research Question 2

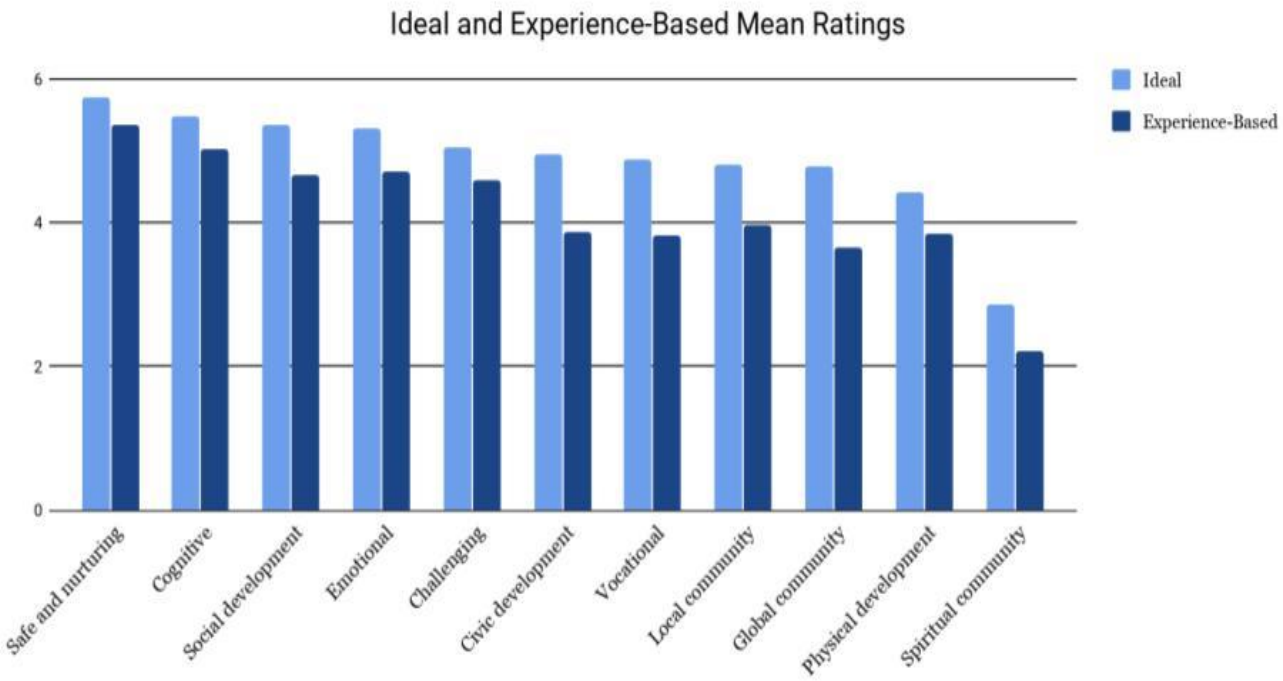
Research question two sought to determine the extent to which there were differences between teacher perceptions regarding the ideal importance and teacher perceptions regarding the experience-based importance of each of the 11 purposes of education. Analyses included parametric and non-parametric tests of survey respondents' purpose ratings. In addition, answers to the open-response question, "If your 'ideal' and 'actual' education purpose importance ratings were quite a bit different, what do you think accounts for such differences?" (Appendix A), were also categorized into themes.

Figure 9 compares the average ratings of all 11 purposes for both ideal and experience-based ratings. Both parametric and non-parametric tests revealed that each experience-based rating was significantly lower than its ideal rating counterpart. Put another way, teachers in this

study believed that all 11 purposes of education are more important according to their ideals than according to their actual experiences in their schools. The largest raw difference is ratings from ideal to experience-based, as can be seen in Figure 9, were the purposes, integrate students into global community, foster civic development, and foster vocational development, meaning these three purposes were rated most differently. A charitable interpretation of this result is that all teachers believed there was room for improvement, that their schools had not yet reached the ideal importance for each school purpose. A more cynical interpretation would cite the common finding that people tend to overrate their own intelligence, skill, and generosity (Dunning et al., 2004). Perhaps the participants in my study felt their own ideals contain higher levels of importance for education purposes than their colleagues' ideals.

Figure 9

Ideal and Experience-Based Mean Importance Ratings (Grostic, 2020)



While every experience-based importance rating was significantly lower than its ideal counterpart, the order of education purposes for ideal and for experience-based, ranked highest to lowest based on ratings, remained similar. Three purposes that changed positional rank the most from ideal to experience-based, only moved by two positions. They were foster vocational preparation (moved down two), integrate students into local community (up two), and foster physical development (up two). This movement is minimal and means that the other eight purposes moved one position or less from ideal to experience-based.

Open-Responses

Comparing importance rating averages was not the only method for revealing differences in teacher ratings of ideal importance and experience-based importance. An open-response question was also posed, which asked participants to account for differences in their own ratings if differences existed. Open-response answers were themed into categories, of which government mandates, differing opinions within the school, and lack of resources had the highest frequency of responses.

Government mandates was the category with the highest frequency. Many teachers referred to mandated assessments as the primary reason for their difference in ratings. For example, one teacher wrote “State standardized tests. Instead of preparing and teaching students to succeed in life, teachers are bound to teaching to the test.” Other teachers noted that mandated tests are only one part of government mandates. For example, “Pressures from standardized testing, pressures from legislation and department of education, timelines and calendars from district office.” Still other respondents cast a wider net to include standards and oversight, as noted by one respondent:

> I believe that standardized testing with corresponding test practice, rigid academic standards and topics, an increase in the level of standards for younger children that

> opposes best developmental practice, and a de-emphasis of creativity and autonomy in teaching coupled with a preoccupation of oversight and lack of confidence in educational professionals have taken away from quality student instruction, valuable non-academic components, and teacher-student connections.

What these examples show is that government mandates, including testing, content standards, and teacher oversight, give some teachers a feeling of being constrained and unable to fulfill the purposes they desire. One teacher reported that the school shutdown during coronavirus offered a glimmer of hope:

> I firmly believe that what our schools *need* and what our schools *do* are very different. I think in the midst of this entire Covid quarantine we are finally getting a glimpse of what is needed: we are fostering students emotionally, we are driving their creative sides and physical awareness. What we don't see? testing, pre testing, post testing, and teaching to tests. We as teachers are finally "free" to just teach for the love of teaching and learning. Strange way to get there....

It is clear from these open-response answers that many teachers attribute government control as a major reason their ideal purpose and experience-based purpose ratings were different. A recent survey from Center on Education Policy (2016), as noted earlier, aligns with the open responses from my survey, as 81% of 3,328 educators surveyed think students spend too much time taking mandated tests. As a reminder, federal policy mandates yearly testing for mathematics and reading in grades 3-8 and 11 (ESSA, 2015).

The open-response category with the second highest number of answers was differing opinions within the school. This could be due to differences in knowledge “My school places special emphasis on areas in which I am less informed.” Or, differing opinions could be a result of different personal experiences. For example, “I think personal experiences account for

differences. No one had lived my life or experienced my joys or hardships. I think our pasts are what frames us." These differences could also be a result of varied values "I have different core values than the culture at large." What is particularly interesting is that since the experience-based purposes were each rated significantly lower than its ideal counterpart, many teachers not only think that their leaders and colleagues within their school have different opinions, but that those opinions lead to lower importance ratings on education purposes.

The category with the third highest frequency of open responses was lack of resources. Responses filed into this category mostly dealt with references to a lack of funding. For example, "One simple word: money. I believe schools want to develop the whole student (all aspects) but don't have the money or time required to make this happen." Another manifestation of the lack of resources category dealt with time. Many teachers felt that they had too many tasks in the amount of time they were given. For example:

> Resources are very different from my "ideal" and "actual" education. In my ideal, teachers would have smaller class sizes and the freedom to foster personal growth as well as academic. Time is so limited that I hardly have time to speak one on one with a student. Teachers (and other school staff) are spread too thin.

Another response variation within this category alluded to not having enough funding to implement various government mandates:

> As an educator, we don't always have the influence of how purposes are focused on within our actual school. Many times, curriculum, lessons, and activities are dependent upon resources which may require additional funding.

Clearly, many teachers in my study felt that a lack of resources, namely time and money, was a reason that their experience-based importance ratings were different than their ideal importance ratings.

These examples of a belief that resources are lacking strengthens the idea that teachers are street-level bureaucrats. One of the three components that creates the street-level bureaucrat phenomenon is that support for the policy must be lacking or perceived to be lacking (Weatherly & Lipsky, 1977). Many teachers in my study attribute the difference between their ideal and experience-based ratings to a dearth of support and resources.

Key Findings Related to Research Question 3

The third research question sought to understand teacher perceptions regarding the level of influence that each of 14 established sources of beliefs had on ratings of the ideal importance of education purposes. Survey respondents were asked to rate the level of influence for each of 14 sources using a 6-point Likert scale, from (1) not at all influential to (6) extremely influential. These ratings were analyzed using descriptive statistics and parametric and non-parametric tests.

The influence of one belief source, teachers or role models (M = 5.17, SD = .833), was rated significantly higher by participants than each of the other 13 belief sources. The second-highest rated belief source, life's daily routines and experiences (M = 4.93, SD = .939), was rated significantly higher than 11 of the lower-rated belief sources. Below these top two were a tier of highly-rated belief sources, including immediate family or associates (M = 4.81, SD = 1.206), inquiry (M = 4.71, SD = .953), reflection on beliefs (M = 4.64, SD = 1.019), and colleagues (M = 4.60, SD = 1.014), which were each rated significantly higher than the eight belief sources rated below them. These six most highly rated belief sources seem to emphasize that certain groups of people (teachers, family, colleagues) are particularly influential when establishing education purpose ideals. The belief source, teachers or role models, having been rated significantly more influential than all others, underscores the importance of understanding the perceptions of teachers about K-12 education purpose since today's teachers are currently influencing the next generation of teachers. Certain groups of people may have had an outsized influence on

participants' ideals, but the group of highly rated belief sources reveals that the individual actions (daily routines, inquiry, reflection) that teachers take are also influential when establishing ideal K-12 purpose beliefs.

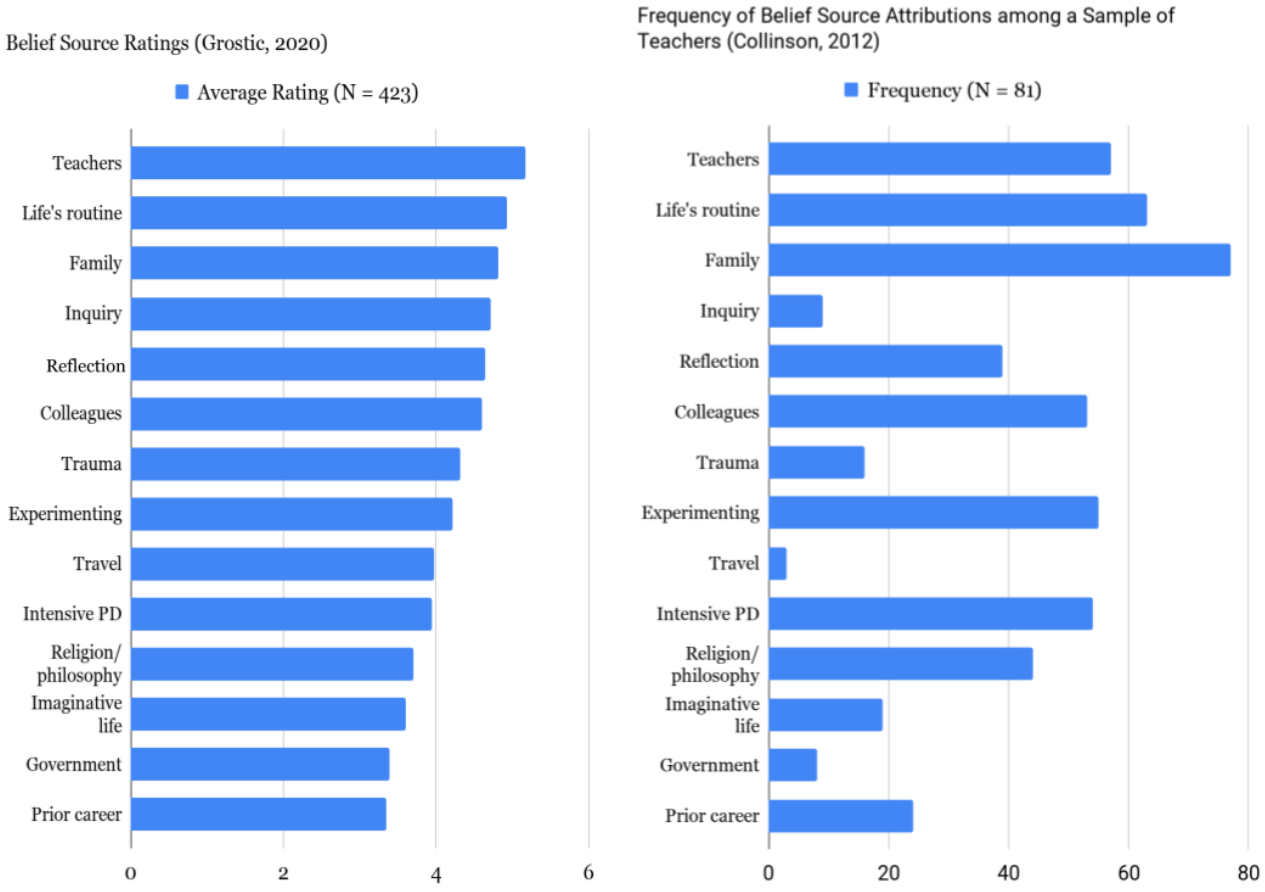
The lowest-rated belief source was prior career (M = 3.34, SD = 1.603), rated significantly lower than 11 of the belief sources rated higher. It also had the largest standard deviation, indicating that while, on average, prior career was the least influential belief source, some participants may have found it particularly influential. This is understandable as participants that had no other prior career would have had little reason to rate this belief source very high, while those that had prior careers likely found it more influential than their education-as-a-first-career peers. The next lowest rated was a tier of belief sources that included government (M = 3.39, SD = 1.338), imaginative life (M = 3.61, SD = 1.369), and religion or philosophy (M = 3.70, SD = 1.513). It is not surprising that government and imaginative life were rated in this way. Noted earlier, many teachers in this study expressed discontent about government oversight in their open-response answers, and imaginative life is about learning vicariously from real or fictional characters, a source that may be difficult both to understand and to attribute current beliefs. More surprising is the fact that participants rated religion or philosophy so low as an influential belief source. Perhaps this source represented too much overlap with the belief source, reflection on beliefs, which was rated as the fifth most influential source.

Relationship of Results to Belief Source Studies

The 14 belief sources used in my study came from Collinson's (2012) work, a mixed-methods study that included a meta-analysis of teacher belief literature and interviews with 81 teachers. Figure 10 compares the belief source ratings from my study with the frequency of reported belief sources among the 81 teachers in Collinson's study.

Figure 10

Comparison of Belief Source Rankings



While the order is slightly different, the top three belief sources in both studies are the same, adding extra weight to the idea that family, life's routines, and teachers are primary influencers on teachers' beliefs and ideals. This is also consistent with previous studies that have found that teachers often attribute their beliefs about education to their own teachers (Cady & Rearden, 2007; Holtz, 2009). Collinson (2012) refers to all three of these sources as coming predominantly from the childhood years of life. While the participants of my study may have interpreted the source, life's daily routines and experiences, as coming from childhood or adulthood, it is likely that the sources, teachers and role models and immediate family or close associates, caused participants to reflect back to childhood. Therefore, it may be that many

teachers attribute much of the influence on their current ideals to happenings from their childhood.

Ranking among the least most influential sources for both participants in my study and Collinson's (2012) were government and imaginative life. Again, this does not strike as surprising given that many teachers tend to have a certain disdain or apathy toward government oversight and vicarious learning through others, while potentially powerful, may be difficult to recognize as a source of belief.

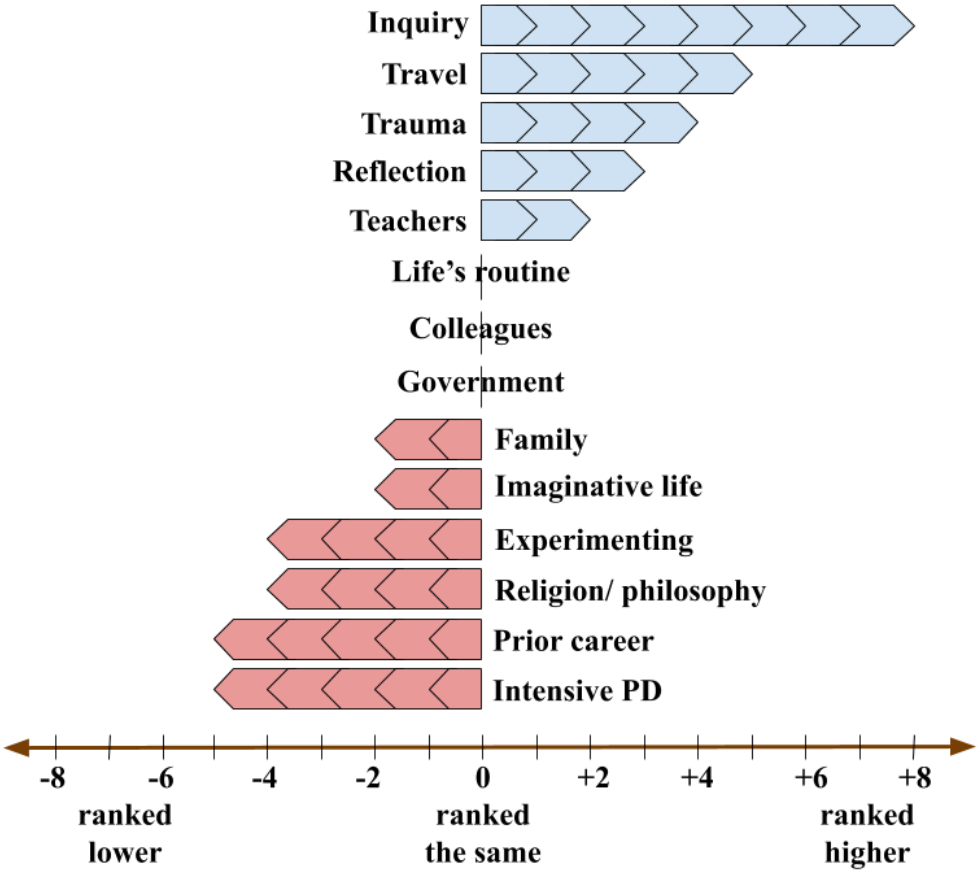
While certain belief sources at the top and the bottom of both Collinson's (2012) list and the rank order from participant ratings in my study are similar, there are many belief sources that show up in a different place on my study's list than on Collinson's (Figure 11). The largest difference was the source, inquiry, which was the fourth most influential belief source in my study but had the 12th highest frequency in the Collinson study. It is difficult to pinpoint the reasons for such a difference. Intuition might lead one to believe that inquiry is a difficult source to attribute ideals to, a thought that is reflected by the low frequency in Collinson's study. Inquiry may also be more likely an activity among those teachers with curious personalities, a disposition that might also make such teachers more likely to respond to a survey such as mine.

There were six other sources that had a fairly large change in ranking of four positions or more from Collinson's (2012) study to mine. These were travel (five positions higher in my study), trauma (four positions higher), religion or philosophy (four positions lower), experimenting (four positions lower), intensive professional development (five positions lower) and prior career (five positions lower). The reasons for this movement are not clear, although there are a few reasonable possible explanations. The sample size for Collinson's study was only 81 teachers which could lead to a wider variance in the data. The contexts for each study were different, one focused on values and attitudes; the other on education purposes. The methods of

each study were different, one using interviews for data collection, the other a survey. All of these reasons may have contributed to the differences in rank order seen between my study and the Collinson study.

Figure 11

Rank Change of Belief Source from Collinson's (2012) to Grostic's (2020) Studies



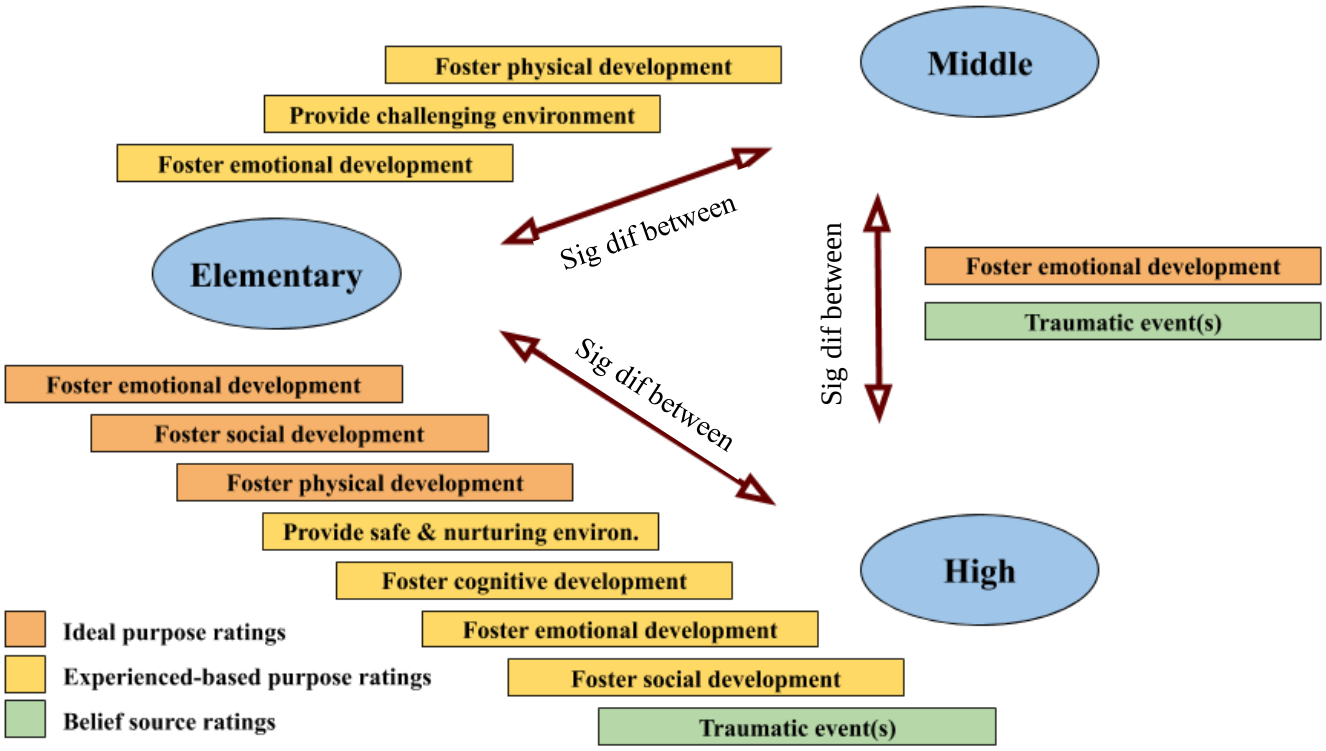
Key Findings Related to Research Question 4

Research question four sought to understand the extent to which there were differences in ideal importance, experience-based importance, and belief source influence ratings when broken down by school level, school locale, school type, and teacher experience. Parametric and non-parametric tests were conducted to analyze the survey results. Mentioned previously, the school

type variable was not included in analyses due to a lack of representation in the public charter school and private school subgroups from survey respondents.

Figure 12

Significantly Different Ratings by School Level (Grostic, 2020)



Out of the categories for which group differences in participant importance and influence ratings were sought, school level had the largest affect particularly between elementary and high school teachers. There were significant differences between elementary, middle, and high school teacher ratings for two belief source variables, four ideal purpose variables, and seven experience-based purpose variables (Figure 12).

Relationship of Results to Existing Mission Statement Studies

Ratings regarding the importance of the purpose, foster emotional development, represented the most contrast between the three school level subgroups. Both elementary and

middle school teachers rated the ideal importance of foster emotional development significantly higher than high school teachers while elementary teachers also rated the experience-based importance of foster emotional development significantly higher than high school teachers. These results are consistent with Stemler and Bebell's (2012) school mission statement analyses. They found that elementary and middle school mission statements mentioned fostering emotional development the most out of all 11 possible purpose themes, while high school mission statements mentioned fostering emotional development third most.

Another interesting result found when analyzing my study participants' ratings by school level was that high school teachers attributed their ideal purpose beliefs to traumatic events significantly less than both elementary and middle school teachers. This result may connect with the school level differences in foster emotional development ratings. If elementary and middle school teachers attribute more of their beliefs to trauma than high school teachers, it would stand to reason that they may also place a higher value on the importance of fostering emotional development in students than would high school teachers.

The main takeaway from the school level analysis may be that differences exist between elementary, middle, and high school teacher groups, which might be more reinforcing than it is surprising. Most people, when recalling their K-12 years would recognize differences in personality, structure, style, and connection between their elementary, middle, and high school teachers, so learning that these groups of teachers also differ in regards to beliefs about education purposes and from where their beliefs originated is not unexpected.

Differences by School Locale

Out of all 36 variables within the ideal, experience-based, and belief source ratings, only one variable showed a significant difference by school locale. The experience-based importance rating of the purpose of integrating into global community was rated significantly lower among

teachers in rural schools than teachers in both suburban and urban schools. This difference may simply be due to the fact that rural schools tend to be smaller than both urban and suburban schools, thus this "small-school" feel might have led teachers to rate the importance of integration into the global community lower than they otherwise would have. More surprising is that there were not more differences in ratings among the school locale subgroups. Just as Lubienski and Lee (2016) found little difference between the mission statements of charter schools and public schools, and Schafft and Biddle (2014) found that place and context influences were mostly superseded by broader discourse, perhaps our intuition fails us when assuming that teacher beliefs might significantly differ between rural, suburban, and urban schools.

Differences by Teaching Experience

There were several weak, positive correlations between participants' ratings and teaching experience. As teaching experience increased, teachers tended to rate the ideal importance of foster cognitive development and provide challenging environment higher. As teaching experience increased, teachers tended to rate the experience-based importance of foster emotional development, foster physical development, and provide safe and nurturing environment higher. One interpretation of these results is that experienced teachers believe that cognitive development and challenging environments are more important purpose than their less experienced peers. These experienced teachers may also believe that their schools value foster emotional development, foster physical development, and provide safe and nurturing environment more than do their less experienced peers. If taken carelessly, these results could lead to an image of the experienced teacher as strict on academics and less concerned with emotional and physical well-being.

Key Findings Related to Research Question 5

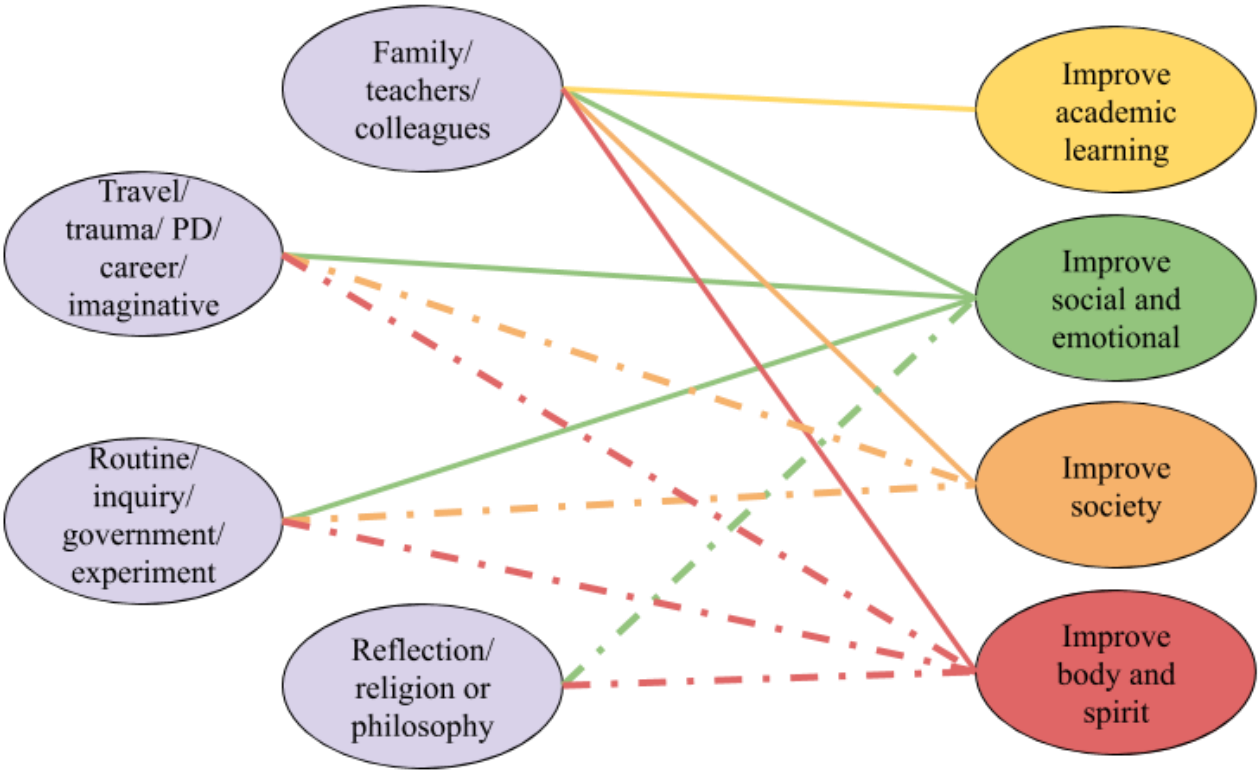
Research question five sought to determine, after controlling for school level, school locale, and teaching experience, the extent to which ratings of belief source influence predict ratings of importance regarding purposes of education for both ideal importance and experience-based importance. EFA was used to expose underlying constructs in the survey data and multivariate regression tests were conducted. Results of EFA and multivariate regression analyses should be viewed with caution due to failed statistical assumptions. Still, viewed through the lens of exploration if not statistical confidence, the multivariate regression models, which were all statistically significant, tell an interesting story.

The independent variable FTC (family, teachers, and colleagues belief sources) was the only variable that added significantly to all four dependent variables in the ideal purpose regression model (Figure 13). FTC was also a part of several interactions that added significantly to the model. It explained the most variance in the dependent variables out of any of the independent variables. So, knowing how a teacher rated the level of influence of family, teachers, and colleagues on their beliefs can help predict how that teacher perceives the ideal important of the dependent variables improve social and emotional (I_SE), improve society (I_So), improve academic learning (I_AL), and improve body and spirit (I_BS).

The ideal purpose dependent variable I_SE had 10 independent variables and interactions among independent variables that added significantly to the model, more than the other three dependent variables combined (6). So, knowing how a teacher rated the level of influence of all four belief source constructs can help predict how that teacher perceives the ideal important of the dependent variable I_SE.

Figure 13

Independent Variables and Interactions that Added Significantly to the Belief Source Constructs and Ideal Purpose Constructs Model (Grostic, 2020)



Note: Solid lines indicate that the variable added significantly; dotted lines indicate that the variable contributed to an interaction that added significantly.

The experience-based regression model, while significant, did not include a single independent variable or interaction among independent variables that added significantly to the model. At first blush, this seemed surprising, particularly after a combined 16 significant variables and interactions were found in the ideal purpose model. After deeper reflection, this result was not so unexpected. The interpretation of these results is that if we know how teachers rate the importance of all four belief source constructs, we can predict how they perceive the importance of purposes based on what they experience in their schools. However, knowing how teachers rate any *individual* belief source construct does not help us predict how they perceive the importance of any of the experience-based purpose constructs. Put another way, teachers' 14

individual belief source ratings do not help us predict what they experience at their schools any more than would knowing all their belief source ratings. This result seems to mostly be about the degree to which a teacher can control his or her environment. Whereas teachers control their own education purpose ideals, thus many significant variables and interactions in the ideal purpose regression model, teachers do not perceive as much control over what they experience at their schools, leading to no significant variables nor interactions in the experience-based purpose regression model.

There is a more structural explanation as well, based on the survey methodology used. Specifically, my survey asked participants to consider the influence of sources on their ideal purpose ratings only, excluding experience-based from consideration. It could be expected, then, that the ideal purpose regression model would be more predictive than the experience-based regression model. Another contributing factor could be that the experience-based purposes loaded onto two constructs compared to four constructs for ideal. This alone could have represented enough of a difference to limit the number of variables and interactions that significantly added to the model.

Factor Loadings

For both the ideal purpose and experience-based purpose regression models, the factor loadings were interesting and somewhat intuitive. In the ideal purpose model, foster social development, foster emotional development, and provide safe and nurturing environment all loaded together, meaning teacher ratings for ideal importance were correlated for these three purposes. One might have predicted that result before the start of my study based on how connected social learning, emotional learning, and nurturing environments are in the formal and informal K-12 culture. A similar story can be told for the other factor loadings in the ideal purpose model. Foster cognitive development and provide challenging environment loaded

together, both purposes that represent an academic focus. The purposes representing civic development, vocational development, the local community, and the global community loaded together, which all connect to preparing students for a role in society. Lastly, foster physical development and integrate students into the spiritual community loaded together. These purposes are connected in how different they are from the other nine purposes.

The experience-based purpose ratings loaded onto just two constructs, which represented a wider band of purposes than did the ideal purpose constructs. The purposes representing cognitive development, social development, emotional development, safe and nurturing environments, and challenging environments all loaded onto the construct called improve social, emotional, and academic learning. Again, it makes some sense that these purposes correlated together, and they clearly represent a wider band than any of the ideal purpose constructs. The second construct, called improve society, body, and spirit, included physical development, civic development, vocational preparation, local community, global community, and spiritual community, revealing another wide band of purposes. As noted earlier, the breadth of these constructs may have also been a contributing factor in the lack of significant variable and interaction add-on effects.

The belief source factor loadings were fairly unintuitive. For example, life's daily routines, government, inquiry, and experimenting all loaded together. Those sources do not jump out as ones that would correlate at first glance. The construct that was perhaps the least surprising was FTC, or the family or close associates, teachers or role models, and colleagues belief sources, which all relate to influential people in one's life. Another unsurprising result was that the sources, reflection on beliefs and religion or philosophy, loaded together onto a construct. Both of these sources are similar in that beliefs and philosophy are often times used interchangeably in common nomenclature.

Relationship of Results to Existing Studies

The results from my study have been analyzed and connected to recent studies, particularly recent studies of school mission statements. The historical studies that helped contextualize my literature review in Chapter 2 deserve their own discussion here, specifically the work from Labaree (1997b, 2011, 2013, 2014) and Carpenter (2005; Carpenter & Hughes, 2011). The following will include a comparison of the results from my study with both the work of Labaree and Carpenter.

Comparison with Labaree

Labaree (1997b, 2011, 2013, 2014) has discussed at length how, throughout the decades, K-12 education purposes have represented a push and pull between three competing purposes: democratic equality, social efficiency, and social mobility. Further, Labaree argues that recent years have seen the social mobility purpose having an increased emphasis in education at the expense of democratic equality and social efficiency. Certain purposes use my study relate to Labaree's three-fold purposes. Importance ratings for the purpose, foster civic development, might reveal how teachers feel about Labaree's democratic equality purpose. Importance ratings for the purposes, foster vocational preparation, integrate into the local community, and integrate into the global community, might reveal teacher perceptions about Labaree's social efficiency purpose. Social mobility is more difficult to connect directly to my study. However, noted earlier, academic purposes can often serve as coded messages about credentialing, a key element of social mobility according to Labaree (2011, 2014; Darrow, 2016). Therefore, the purposes, develop cognitive development and provide challenging environment, may indeed connect to Labaree's social mobility.

So how do these specific purpose ratings compare to Labaree's (1997b, 2011, 2013, 2014) thesis that social mobility is stronger than ever? Foster civic development was the sixth

highest rated ideal purpose and the seventh highest rated experience-based purpose, hardly a ringing endorsement for democratic equality. Foster vocational development was seventh in ideal ratings and ninth in experience-based ratings, while integrate into local community was eighth and sixth, respectively, and integrate into global community was ninth and tenth, respectively. Again, these teacher ratings, if meaningfully connected at all to Labaree's work, would indicate that social efficiency is not primary in teachers' minds. Foster cognitive development was the second highest rated purpose for both ideal and experience-based, while provide challenging environment rated fifth for both ideal and experience-based. These are the highest ratings for any of the purposes that reasonably relate to any of Labaree's triad, indicating some evidence for Labaree's contention that social mobility is becoming more prominent.

Comparison with Carpenter

Carpenter's (2005; Carpenter & Hughes, 2011) work focused on presidential and gubernatorial addresses and found that one purpose, economic efficiency, has been emphasized by Presidents and Governors, more than three other purposes: self-realization, human relationships, and civic responsibility. Carpenter's economic efficiency is characterized by accountability policies and cultivating an educated populous that make predictable choices. There was some mention of accountability policies such as mandated tests and common standards in the open-response answers, indicating some level of agreement with Carpenter's assessment that economic efficiency is prevalent. Carpenter's self-realization purpose connects nicely with both emotional and social development, as it is characterized by the development of the self. My survey results showed that the foster emotional development and foster social development purpose were rated as having high importance when compared with other purposes, ranking third and fourth for both ideal and experience-based. According to Carpenter, the self-realization purpose was rarely mentioned by presidents and mentioned in only 27% of

gubernatorial addresses. So, it seems that teachers in my survey value self-realization-like purposes more than state and national leaders. Carpenter's civic responsibility purpose obviously connects with the foster civic development purpose in my survey. While civic development ranked in the middle of the pack in my survey, that level aligns with Carpenter's work, in which recent presidents mentioned civic responsibility sparingly and governors mentioned in 7% of the time.

Many of the findings from my study affirmed previous literature while some findings, such as the high average rating of safe and nurturing environment, disputed previous literature. Still other findings, such as the relationship between belief source ratings and ratings of purpose importance, were new. A summary of these findings can be seen in Table 34.

Table 34

Finding and Literature Comparison

Finding	Relationship to Literature
Participants, both ideally and based on their school experience, feel providing a safe and nurturing environment is the most important purpose of K-12 education.	Disputes: Allen et al. (2018); Biesta (2009, 2012, 2015); Chapple (2015); Craft et al. (2009); Didau (2019); Lubienski and Lee (2016); Macallister (2016); Schafft and Biddle (2014); Stemler et al. (2011); Stemler and Bebell (2012)
Participants, both ideally and based on their school experience, feel fostering cognitive, social, and emotional development are important purposes of K-12 education.	Affirms: Allen et al. (2018); Biesta (2009, 2012, 2015); Chapple (2015); Craft et al. (2009); Didau (2019); Lubienski and Lee (2016); Macallister (2016); Schafft and Biddle (2014); Stemler et al. (2011); Stemler and Bebell (2012)
Participants ideal ratings were higher than their experience-based ratings for each purpose. They attribute these differences to: Government mandates; Differing opinions in their school; and Lack of resources	Affirms: Center on Education Policy (2016) Supports: Weatherly & Lipsky (1977)
Participants attribute the most influence on their purpose ratings to teachers and role models, life's daily routines and experiences, and immediate family or close associates.	Affirms: Cady & Rearden (2007); Collinson (2012); He et al. (2011); Sale et al. (2015)
Participant ratings differed most by school level and very little by school locale and teacher experience.	Affirms: Stemler & Bebell (2012) Supports: Lubienski & Lee (2016); Schafft & Biddle (2014)
Participant ratings for the influence of family, teachers, and colleagues had the most impact on ratings for ideal importance of education purposes.	New finding
Participants rated purposes connected to social mobility, self-realization and the economy higher than those connected to democratic equality, social efficiency, and civic preparedness.	Supports: Labaree (1997b, 2011, 2013, 2014) Carpenter (2005) Carpenter & Hughes (2011)

Limitations and Delimitations

A key limitation of this study is in the survey instrument. The items of the survey instrument had not previously been used in a survey; rather, they were themes found in qualitative analyses. It may be that participants in my study interpreted certain survey items differently based on the wording of the items. For example, the purpose provide safe and nurturing environment could reasonably be interpreted differently by participants based on whether they put more emphasis on the word "safe" or on the word "nurturing." A similar story can be told about other purposes and belief sources.

Another limitation of my study is in comparisons between the results of my study and previous studies in the existing literature. Many comparisons were made between the ranking of ratings in my study and the frequencies of other works. However, participants in my study were not asked to rank purposes or belief sources, so analysis that puts these ratings in rank order may be fraught.

The major delimitation of my study is that it is difficult to generalize to the population. To begin with, the methodology makes it ungeneralizable to any population outside of the two states included in recruitment. Further, my study is difficult to generalize even to the two states included in recruitment due to the demographic makeup of my respondents. Mentioned earlier, participants in my study were more experienced than the national average and taught in suburban schools at a higher rate than the national average.

Implications for Future Research

There are many opportunities for future research based on the results of my study. First, researchers may use a similar survey instrument and expand participant recruitment to a wider geography in an attempt to more accurately match national teacher demographics, thus making results more generalizable. To sharpen the survey instrument, researchers could use mixed-

methods and ask participants to explain their interpretation of particular survey items. It may be that some items should be split or reworded, such as safe and nurturing environment, and a qualitative aspect to a similar study may help answer those questions.

Future research in this field could go further and ask teachers to reveal which purposes they act on while teaching in their schools. My study starts the conversation by asking teachers what their ideals are and what they actually experience in their schools. However, ideals and experiences could be quite different than actions. Asking a teacher to rate their experiences may reveal more about their feelings of their colleagues than their own actions, as evidenced by the fact that many teachers stated as much in their open-response answers. Conversely, a question that asks teachers to rate the purposes that they act on in their schools cuts through the noise and may make for a more interesting comparison with ideals. If ideals and actions do not align, what accounts for such differences? The inclusion of belief source ratings might be prudent to help explain any differences between ideals and actions that are revealed.

Other Implications

There are a few implications from these results for educational and policy leaders. Foremost is a call for more clarity of K-12 purpose from government and leading educational thinkers. Ten of 11 purposes in my study were rated as at least moderately important; nine of 11 were rated as very important or extremely important. If teachers truly believe that it is their responsibility to fulfill nine unique purposes, clarity is badly needed. Weatherly and Lipsky (1977) make a strong case that when public servants have many job responsibilities and lack resources, implementation becomes varied based on each individual. Teachers in my study wrote about this very feeling of having too much to do and not enough support to do it in their open-response answers. Clarity of purpose is needed.

Teachers also need a stronger voice in educational policy and purposes. Mentioned earlier, a recent survey of 3,328 teachers found that high percentages of teachers felt they had little to no input on local (76%), state (94%), and national (94%) educational decision-making (Center on Education Policy, 2016). Coupled with a feeling of having too much to accomplish and insufficient support, the situation becomes ripe for teachers going their own way within their classrooms. This is a situation we all ought to want to avoid and one that is entirely avoidable with more clarity of educational purpose and more inclusion of teacher voices in policy processes.

A final implication involves the rate of change. Should our educational system narrow the purposes for which it is primarily responsible and give teachers more voice in policy development, change could happen fairly rapidly, within a generation. My study showed that the influential beliefs that inform teachers' ideals came, first, from their own teachers. If this result is true more broadly, then as teachers change how they implement education purposes, current students that will become the next generation of teachers will formulate their own ideals accordingly.

Concluding Thoughts

The highest rated purpose in my study, for both ideal importance and experience-based importance, was provide safe and nurturing environment. The three purposes that followed were foster cognitive development, foster emotional development, and foster social development. Taking these four results together, there is general agreement between the ratings of my study and the frequencies of recent mission statement analyses. When participants in my study rated the ideal importance of purpose differently than the experience-based importance, they tended to attribute such differences to government mandates, differing opinions within their schools, and a lack of resources.

There were similarities between the ratings of influence of belief sources in my study and the frequency of belief sources in Collinson's (2012) work at both the top end, specifically teachers, family, and life's daily routines, and the bottom end, namely government and imaginative life. There were few differences in ratings when broken down by school level, specifically elementary teachers tended to rate the importance of foster emotional development higher than high school teachers, for both ideal and experience-based ratings. The regression models using both ideal purpose constructs and experience-based purpose constructs were significant but must be taken lightly due to failed statistical assumptions.

This study represented a reasonable starting point for incorporating the perceptions of teachers, whose voice has been missing in discussions of education purposes within the literature. Future studies could refine the survey instruments used here to sharpen the results and make them more useful to the larger educational community. Based on my results, government and educational leaders should consider narrowing the number of unique purposes teachers are asked to fulfill while incorporating more teacher voice into policy development.

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Appendix A

Survey Instrument

Teacher Perceptions of the Purposes of K-12 Education

Start of Block: Consent

Western Michigan University
Department of Educational Leadership, Research, and Technology.

Principal Investigator: Louann A. Bierlein Palmer, Ed.D.
Student Investigator: Peter Grostic, Ed.S.

You are invited to participate in a research project entitled "Teacher Perceptions Regarding the Purposes of K-12 Education."

STUDY SUMMARY: This consent form is part of an informed consent process for a research study and it will provide information that will help you decide whether you want to take part in this study. Participation in this study is completely voluntary. You may choose to not answer any question. The purpose of the research is to increase understanding of teacher perceptions about purposes of education and the factors that contribute to those perceptions. It will serve as Peter Grostic's dissertation for the requirements of the Doctor of Philosophy in Educational Leadership degree. If you take part in the research, you will be asked to answer 9 questions related to the purposes of K-12 education. Your replies will be completely anonymous, so do not put your name anywhere on the survey. Your time in the study will take 5 minutes to complete a survey. Possible costs to you for taking part in the study may be discomfort from answering sensitive questions and the time to complete a survey. There are no direct benefits. Your alternative to taking part in the research study is not to take part in it.

Upon completion of the survey you will have an opportunity to win one of five $20 Amazon gift cards. Please note, information entered for the gift card drawing will be kept separate from your survey responses.

The anonymous information collected for this research may be used by or distributed to investigators for other research without obtaining informed consent from you.

If you have any questions prior to or during the survey, you may contact Dr. Louann Bierlein Palmer at 269-387-3596 or l.bierleinpalmer@wmich.edu, or Peter Grostic at 616-994-2735 or peter.m.grostic@wmich.edu. You may also contact the Chair, Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298.

This study was approved by the Western Michigan University Human Subjects Institutional Review Board (HSIRB) on March 12, 2020. Please do not participate in this study after March 11, 2021.

Participating in this survey online indicates your consent for use of the answers you supply. If you wish not to participate in this study, you may close your browser window at any time.

End of Block: Consent

Start of Block: Job Role

Q1 Which of the following best describes your primary role at your school?

- Teacher (1)
- Administrator (2)
- Support Staff (3)

Skip To: End of Survey If Which of the following best describes your role at your school? ≠ Teacher

End of Block: Job Role

Start of Block: Ideal Purposes of K-12 Education

Q2 Rate your “ideal” level of importance for each purpose of K-12 education below.

	Not at all Important (1)	Slightly Important (2)	Somewhat Important (3)	Moderately Important (4)	Very Important (5)	Extremely Important (6)
Foster cognitive development (1)	○	○	○	○	○	○
Foster social development (2)	○	○	○	○	○	○
Foster emotional development (3)	○	○	○	○	○	○
Foster civic development (4)	○	○	○	○	○	○
Foster physical development (5)	○	○	○	○	○	○
Foster vocational preparation (6)	○	○	○	○	○	○
Integrate students into local community (7)	○	○	○	○	○	○
Integrate students into global community (8)	○	○	○	○	○	○
Integrate students into spiritual community (9)	○	○	○	○	○	○
Provide safe and nurturing environment (10)	○	○	○	○	○	○
Provide challenging environment (11)	○	○	○	○	○	○

End of Block: Ideal Purposes of K-12 Education

Start of Block: Sources of Belief

Q3 For each item below, how much does each influence your “ideal” K-12 purposes of education ratings?

	Not at all Influential (1)	Slightly Influential (2)	Somewhat Influential (3)	Moderately Influential (4)	Very Influential (5)	Extremely Influential (6)
Immediate family or associates (1)	○	○	○	○	○	○
Teachers or role models (2)	○	○	○	○	○	○
Imaginative life (vicarious learning from real or fictional characters) (3)	○	○	○	○	○	○
Life's daily routines and experiences (4)	○	○	○	○	○	○
Reflection on beliefs (5)	○	○	○	○	○	○
Inquiry (informal or systematic) (6)	○	○	○	○	○	○
Government: politics or political leaders (7)	○	○	○	○	○	○
Colleagues (8)	○	○	○	○	○	○
Traumatic event(s) (9)	○	○	○	○	○	○
Experimenting (having done something intentional or unintentional that altered beliefs) (10)	○	○	○	○	○	○
Prior career (11)	○	○	○	○	○	○
Travelling, serving, studying, or working abroad (12)	○	○	○	○	○	○
Religion or philosophy (13)	○	○	○	○	○	○
Intensive post-certification professional development over a period of time (14)	○	○	○	○	○	○

End of Block: Sources of Belief

Start of Block: Experience-Based Purposes of K-12 Education

Q4 Rate the “actual” level of importance for each purpose of K-12 education below as you experience it in your school.

	Not at all Important (1)	Slightly Important (2)	Somewhat Important (3)	Moderately Important (4)	Very Important (5)	Extremely Important (6)
Foster cognitive development (1)	○	○	○	○	○	○
Foster social development (2)	○	○	○	○	○	○
Foster emotional development (3)	○	○	○	○	○	○
Foster civic development (4)	○	○	○	○	○	○
Foster physical development (5)	○	○	○	○	○	○
Foster vocational preparation (6)	○	○	○	○	○	○
Integrate students into local community (7)	○	○	○	○	○	○
Integrate students into global community (8)	○	○	○	○	○	○
Integrate students into spiritual community (9)	○	○	○	○	○	○
Provide safe and nurturing environment (10)	○	○	○	○	○	○
Provide challenging environment (11)	○	○	○	○	○	○

End of Block: Experience-Based Purposes of K-12 Education

Start of Block: Explanation of Difference

Q5 If your "ideal" and "actual" ratings of importance for education purposes were quite a bit different, what do you think accounts for such differences?

_____

_____

End of Block: Explanation of Difference

Start of Block: Demographics

Q6 Which of the following best describes the level of the school at which you work?

- Elementary (1)
- Middle (2)
- High (3)

Q7 Which of the following best describes the locale of the school at which you work?

- Urban (1)
- Rural (2)
- Suburban (3)

Q8 Which of the following best describes the type of school at which you work?

- Traditional Public (1)
- Public Charter (2)
- Private (3)

Q9 How many years have you been a K-12 educator, rounded to the nearest whole number of years?

_____

End of Block: Demographics

Start of Survey Termination

Thank you for your participation!

If you would like to be entered into a drawing to win one of five $20 Amazon gift cards, please click HERE and enter your email address into the form. This information will only be used for the drawing and stored separately from your responses.

Appendix B

HSIRB Approval Letter

WESTERN MICHIGAN UNIVERSITY

Human Subjects Institutional Review Board

Date: March 12, 2020

To: Louann Bierlein Palmer, Principal Investigator
Peter Grostic, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: IRB Project Number 20-02-57

This letter will serve as confirmation that your research project titled "Teacher Perceptions Regarding the Purpose of K-12 Education" has been **approved** under the **exempt** category of review by the Western Michigan University Institutional Review Board (IRB). The conditions and duration of this approval are specified in the policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may **only** be conducted exactly in the form it was approved.
You must seek specific board approval for any changes to this project (e.g., ***add an investigator, increase number of subjects beyond the number stated in your application, etc.***). Failure to obtain approval for changes will result in a protocol deviation.

In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the IRB for consultation.

The Board wishes you success in the pursuit of your research goals.

A status report is required on or prior to (no more than 30 days) March 11, 2021 and each year thereafter until closing of the study. The IRB will send a request.

When this study closes, submit the required Final Report found at https://wmich.edu/research/forms.

Note: All research data must be kept in a secure location on the WMU campus for at least three (3) years after the study closes.

251 W. Walwood Hall, Kalamazoo, MI 49008-5456
PHONE: (269) 387-8293, FAX: (269) 387-8276

Appendix C

Email Invitations

Initial Email:

Subject: Invitation to Participate in Pete Grostic's Dissertation Research

Hello from Western Michigan University!

I know that we're living in a very strange time right now. I hope that you and your family are staying safe and healthy.

I write to you today because I am studying teacher perceptions about the purposes of K-12 education as part of my doctoral program dissertation research.

Please consider taking 5 minutes to complete the following survey by clicking the link: https://wmich.co1.qualtrics.com/jfe/form/SV_0MO4Gm0RiMzkDYx

Those completing the full survey have the option to enter a drawing for **one of five $20 Amazon gift cards**.

Thank you for your consideration!

Pete Grostic

Reminder Email:

Subject: Reminder: Invitation to Participate in Pete Grostic's Dissertation Research

Hello again from Western Michigan University!

I write to you today as a friendly reminder about a study that I am conducting on teacher perceptions about the purposes of K-12 education. This study is part of my doctoral program dissertation research.

Please consider taking 5 minutes to complete the following survey by clicking the link: https://wmich.co1.qualtrics.com/jfe/form/SV_0MO4Gm0RiMzkDYx

All surveys must be complete by April 16, 2020. If you have already taken the survey, thank you and please disregard.

Those completing the full survey have the option to enter a drawing for **one of five $20 Amazon gift cards**.

Thank you for your consideration!

Pete Grostic

Appendix D

Social Media Posts

Facebook and LinkedIn post:

Teachers! I am currently conducting my dissertation research on teacher perceptions about the purposes of K-12 education. Below is a link to the survey. It should take about 5 minutes to complete. After completion, you will have the opportunity to enter a drawing for one of five $20 Amazon gift cards. Please contact me if you have any questions. I appreciate your consideration!

https://wmich.co1.qualtrics.com/jfe/form/SV_0MO4Gm0RiMzkDYx

Twitter post:

I am conducting dissertation research on teacher perceptions about purposes of K-12 education. Below is a survey link, which takes ~ 5 minutes to complete. At the end you can enter a drawing for one of five $20 Amazon gift cards. I appreciate your help!
https://wmich.co1.qualtrics.com/jfe/form/SV_0MO4Gm0RiMzkDYx