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District Leadership Study: A Bivariate Analysis of Language Descriptors in Defining Educational Leadership Constructs

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Abstract

In 2013, a bivariate designed instrument of personality descriptors was given to a district school system to correlate difference between the teacher population and that of the administration. Results indicated a correlated population grouping where the two groups were similar in generalized personality constructs. Results indicate the leadership population is similar, in general, to the teachers, but some specific traits registered higher for the latter group. An inferential analysis using a paired sample, students' t analysis of the survey instrument confirmed that the educational leadership group was different in response than that of the teacher population.

Keywords: Teaching, Educational Leadership, Personality Constructs

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Objectives/Purposes

This study attempts to determine teacher leadership by comparing teachers and administrators' responses on a predesigned survey within a selected public school system. Using the Five Factor Model (FFM) of personality traits as well as descriptors developed through a meta-analysis of the current literature, the author developed a bivariate (two part) instrument to discern personality and management/leadership traits specific to educational populations and issues. The sample frame consisted of a medium sized school district in the South Eastern region of the United States. The district administration, primarily the leadership team, consisting of the superintendent, school principals, and assistant principals answered the instrument as well as the teaching staff in all eleven of the district's schools. The premise of the study was that administrators and teachers would exhibit certain traits, or levels of traits, possibly defined only within their specific populations. If differences can be determined or measured between these populations, it would be possible to assume that certain personality characteristics may populate, or favor one or the other. Differences are the objective in the study, designated under the premise that administrators typically get hired within the teacher ranks of the individual school. For those that had not 'moved up' from within, it was probable they had to exhibit certain characteristics to be hired and may have lacked such contexts or measures. Assuming that this culture is self-sustaining and typically recruits from within it is reasonable to ascertain that differences from leadership and of faculty can be determined.

Perspective(s) or Theoretical Framework

Educational leadership, as a discipline, devolves the study of a leader or leadership construct to that within an educational system or setting. Though strong in research, this sub-field still falls within the better known and more established contexts of the business or political fields, from which many pertinent models arrive. Traditionally, these genres have dominated leadership studies, consequently generating a large portion of leadership literature pertinent to their disciplines (Gardner, 2000; Northouse, 2004). Education, arguably, is one of the newer fields of the leadership disciplines, with its unique issues and constraints. The complexity of the discipline itself and the difficulty in defining terminology and consistent roles and responsibilities makes this a powerful subset of leadership studies. Educational organizations, especially public ones, tend to be complicated structures, involving dynamics such as politics, internal policies, accountability and regional and cultural differences, though this is by no means an exhaustive list. Schools, within the organization at large, are multi-faceted entities that will differ, to some degree, from each other based on variables not consistent from one to the other. These differences can involve the people within the organization, the region, and culture in which the school resides and, including the geographic and political entities of the area, culture, religion and other trends. The complexity delimits the effectiveness of studying influential people who, though probably successful, were in contexts and situations not applicable to educational roles (Silova & Wiseman, 2009).

What is needed is an accepted model or template of leadership behaviors, adjectives or terminology that can be analyzed, understood and hopefully recreated in different educational circumstances. Such models do exist but tend to focus towards generalized leadership behaviors, usefully filtered through literature not necessarily specific to school leadership settings. The utilization of such descriptors in defining leadership is common and deemed effective, allowing for potential outliers to be associated or correlated through the same or similar words. Many of these align but, unfortunately, the lists can be exceptionally long depending upon the instrument used. This has been a frequent issue of leadership trait research; what model to use and the length of the descriptors used. They do not always align. In this study, it was devised to utilize a personality model instead of a standard leadership construct to see if it can be an effective assessment.

Personality models have used descriptors or adjectives for years with much-heralded success, primarily through the assumption that common language is the primal resource for these descriptive traits. Lexicon derived descriptors of personality, called surface traits, have emerged in recent research theory (Craig, 2005). These traits, usually referred to as factors, have led to the development

of three competing models of personality; the Big Three, the Big Five (usually referred to as the Five Factor Model) and the Alternate Five (Zuckerman et al, 1993). These models differ from personality tests as they are generalized templates of an individual's overall personality dynamic, unlike specific assessments which tend to focus on one's needs, moods, and their possible states of anxiety or levels of depression (Craig, 2005). These templates are reasonably easy to administer, utilize language and scales simplistic for self-analysis and due to their descriptive nature are compatible for comparison to other disciplines and models. The Five Factor Model (FFM) was chosen as the design template for this and consequent future studies (Digman, 1990; Zuckerman et al, 1993 & Paunonen. 2003).

The Five Factor Model (FFM) is a template of basic personality descriptors that have been categorized into five domains, or super traits, through a meta-analysis of the modern English language (Mann, 2003). It should be noted, however, that the FFM is built from study of the English (formal) lexicon and is, therefore, limited by the scope of the language itself. Each of the five domains within the FFM, referred to as super-traits, also consist of four to five sub-traits within. These are basic descriptors that correspond, albeit positively or negatively, to their linked super trait or category (Judge & Bono, 2000).

Table 1- Five Factor Model (FFM) – of personality

	Super traits – common descriptor	Super traits – other names	Letter code	Antonym descriptor/ continuum	Sub-traits – correlated traits
Factor 1	**Extraversion**	Extroversion Introversion	**E**	Introvert to Extrovert	1. Ethusiasm 2. Sociability 3. Energy mode 4. Taking charge
Factor 2	**Accommodation**	Agreeableness Friendliness Honesty	**A**	Challenger to Adapter	1. Service 2. Agreement 3. Deference 4. Reserve 5. Reticence
Factor 3	**Consolidation**	Conscientiousness	**C**	Laissez Fair to Focused	1. Perfectionism 2. Organization 3. Drive 4. Concentration 5. Methodical
Factor 4	**Stability**	Neuroticism	**N**	Resilient to Reactive	1. Sensitiveness 2. Intensity 3. Interpretation 4. Rebound time
Factor 5	**Originality**	Intelligence	**O**	Preserver to Explorer	1. Imagination 2. Complexity 3. Change 4. Scope

These sub-traits are best defined through continuum scales, as either a strength or weakness of the relationship as delineated by their linked super-trait (Howard & Howard, 2004). Indications for the scales being utilized by the particular word can be accomplished through synonyms, separate for each super-trait, binding the sub-traits back to the one general definition or descriptor. This, then, establishes a form of measurement, generating data which can be interpreted to different personality dynamics. The model is considered statistically accurate and simplistic enough for multiple uses and users, a reasonable choice for educators to use (Digman, 1990; Oxford Handbook of the Five Factor Model, 2017 & Paunonen, 2003).

The factors of the FFM consist of extroversion, accommodation, consolidation, stability and originality (See Table 1). Factor one, extraversion, is described as the level or degree upon "which a person can tolerate sensory stimulation from people and situations" (Howard & Howard, 2004, p. 5). Traits common with this domain are enthusiasm, sociability, level of energy, trust, tact and taking charge. Factor 2, accommodation, is defined as friendliness, honesty, and agreeableness depending upon the theorist or author (Zuckerman et al, 1993; Howard & Howard, 2004). Corollary sub-traits or

adjectives of this domain are agreement, deference, reticence, service and reservations. Factor three is consolidation or conscientiousness which has listed five sub-traits or descriptors; perfectionism, organization, level of drive, the level of concentration and how methodical an individual can be. Four is stability or neuroticism, the other domain like extroversion both universally agreed upon as a personality super-trait. Its descriptors are sensitivity, levels of intensity, how interpretive a person can be to different situations and surroundings, and the time it takes to recover from a situation or crisis. Finally, factor five is originality or intellect and is described through adjectives of imaginative, complexity, degrees or willingness of change and scope or breadth of knowledge and intellect (Howard & Howard, 2004).

Using traits to correlate with leadership has significance in the determination of these adjectives themselves. If personality is measured or developed through language descriptors, then it may be safe to say the same paradigm could also apply to leadership studies. Doing so correlates to the trait conceptualization models of leadership (versus process or outcomes) where specific descriptors of individuals deemed as leaders are measured (Northouse, 2004). Outliers, or common adjectives of similar traits, has long been used in leadership, as it has in personality studies. From here the research study may use different or correlating adjectives or descriptors as determined by teachers and administrators (education students as well) to determine differences or similarities, potentially isolating specific variables of the leadership construct.

Another aspect concerns the informal leadership roles and traits that educational leadership may best employ. In this instance teacher leadership, primarily those not specifically identified within the overall faculty population. Unlike formal leadership endeavors there is no defined title, nor possible labels, powers or any other defining characteristic for a teacher leader than that of a traditional school leader, such as a principal. Autonomous leadership qualities are examples of personality within themselves; they have just not been assigned or discussed as such. However, such outliers should still correlate with specific trait and language descriptors regardless of the study. It is assumed a personality dynamic should still delineate these individuals, as they will exhibit traits correlating to the language descriptors.

METHODS OF INQUIRY

The instrument has been 'field tested' twice and is in its third iteration as of this study. The first survey consisted of 22 Likert (five) scaled questions, consisting of four or five questions for each of the five factors. The questions or prompts were internally consistent; the direction was the same (Creswell, 2020 & Babbie, 2010). In each, left was negative while the right was always positive. Administered in the fall and summer semesters of 2010, over 300 education students eventually participated. Validity was ascertained through a concurrent-criterion methodology, as the questions were built from an already established model (Groves, et al, 2004 & Creswell, 2020). Internal Consistency was determined by Cronbach's Alpha (α) utilizing SPSS software. The internal consistency for the instrument measured 0.76 alpha, good enough to go forward.

The second iteration of the instrument was developed partially from the first. Through a Principal Component Analysis (PCA) 6 components were identified from the 22 questions, indicating a good reduction of variables (DeCoster, 1998 & Howell, 2004). However, this was one more than the initial five developed from the FFM. Validity would best be illustrated with a data reduction back to the original five components. Subsequent testing for internal consistency scores of the five different sections was not as high as hoped either. To bring up the alpha scores, questions in each section was assessed or measured in different combinations. Eleven questions would eventually remain, combining in some way to give each of the five factors an alpha score of 0.7 or higher. This would be the first section in the new instrument.

A somewhat similar study, conducted in 2011, asked 115 students to self-assess their teaching, overall personality characteristics, and leadership traits. The list of personality descriptors was populated through another meta-analysis of existing literature, delimited to studies concerning the

FFM (Babbie, 2010). Unlike the 2010 study, this instrument did not use scaled questions, instead of asking students to identify the adjectives or descriptors which they, themselves, felt best suited them. A list of potential attributes was provided. This study was developed to identify common traits in populations; initially first-year education students, senior education students, and first-year graduate students. The survey was modified to reflect the adjectives generated from the first sample then added as the second component of the research instrument.

The two sections of the instrument developed the bivariate design, exploring the components of teacher leadership through different variables (Babbie, 2010; Creswell, 2020; Hakim, 2000 & Stevens, 2001). The adjectives or language descriptors would be analyzed through descriptive statistics to see if differences in populations between administration and teachers could be delineated. This will determine a baseline of commonalities for the sampled groups. The second section, involving the Likert Scaled questions, would help determine variance and correlation. Both are language based designs and will correlate effectively through descriptive statistics.

Data Sources

The sample population was a medium-sized, rural school system in the South East United States. The school system was one of two serving a small size city and subsequent county populations. The overall population of the county is roughly 100,000 residents with a school population slightly more than 10, 000 students. The system employed 824 certified staff members in 11 schools (excluding alternative based settings and district office) for the surveyed school year. Survey response was 543 school-based, certified educators from all eleven schools. District leadership, including the superintendent, school principals, and assistant principals, were measured as well, with 18 respondents, including the superintendent and multiple school principals.

RESULTS

Language Descriptors

Teachers and administrators were similar in the descriptor response section though there were some differences (see table 2). Towards personality choices, administrators picked themselves as being ‘personable’ at 72%, ‘friendly’ at 61% and as ‘outgoing’ at 56%. The administrators overall saw themselves as a friendly and open group (See Table 2). These were the only traits illustrated for over 50% of the respondents (N=18). However, ‘humorous’ was almost there with 44% of the respondents choosing this descriptor.

Table 2 - Self Identified Adjectives/Descriptors - Personality

Administration

Personality Style

Listed Adjective	Responses tallied	Total possible responses	% of response	Correlating Personality Trait
Personable	13	18	72%	Extraversion/Accommodation
Friendly	11	18	61%	Extraversion
Outgoing	10	18	56%	Extraversion/Stability
Humorous	8	18	44%	Extraversion / Originality
Sensitive	7	18	39%	Stability
Assured	6	18	33%	Consolidation
Serious	6	18	33%	Consolidation
Intense	4	18	22%	
Quiet	1	18		

Teacher

Personality Style

		Responses tallied	Total possible responses	% of response	Correlating Personality Trait
Listed Adjective					
	Friendly	428	492	87%	Extraversion
	Personable	338	492	69%	Extraversion/Accommodation
	Outgoing	234	492	48%	Extraversion/Stability
	Humorous	231	492	47%	Extraversion / Originality
	Serious	123	492	25%	Consolidation
	Assured	121	492	25%	Consolidation
	Quiet	101	492	21%	Extroversion
	Intense	61	492	12%	
	Egregious	30	492	6%	
	Introvert	28	492	6%	
	Boisterous	24	492	5%	
	Timid	23	492	5%	

Table 3 - Self Identified Adjectives/Descriptors - Management

Management Style

		Responses tallied	Total possible responses	% of response	Correlating Personality Trait
Listed Adjective					
	Open	15	18	83%	Originality
	Friendly	14	18	78%	Extraversion
	Charismatic	4	18	22%	Extraversion
	Stern	2	18		
	Authoritarian	1	18		
	Controlling	1	18		
	Laissez Fair	1	18		
Unlisted Adjective					
	Situational	2	18		
	Caring	2	18		

Teacher

Management Style

		Responses tallied	Total possible responses	% of response	Correlating Personality Trait
Listed Adjective					
	Friendly	376	492	76%	Extraversion
	Open	260	492	53%	Originality
	Stern	148	492	30%	Accommodation
	Charismatic	85	492	17%	
	Authoritarian	82	492	17%	
	Controlling	38	492	8%	
	Laissez Fair	27	492	5%	
Unlisted Adjective					
	Fair	14	492	3%	
	Consistent	9	492	2%	
	Organized	6	492	1%	
	Flexible	5	492	1%	
	Structured	5	492	1%	

The teachers had only two traits at 50% or higher; 'friendly' (87%) and 'personable' (69%), the same two as for the administrators. The teachers' next choice was 'outgoing', also similar to the administrators though this did not meet the 50% threshold (48%). Teachers, like the administrators, also saw themselves as friendly, and open; though in significant lower percentages than the administrators. Outgoing, listed above the 50% threshold by the administrators did not meet it for teachers. The biggest difference between the two was 'sensitivity', listed by the administration sample (39%) and 'quiet' for the teachers (21%). Neither was listed by the other population as a major descriptor or trait. Correlating back to the FFM traits, all of the descriptors chosen fell within the super-trait of Extraversion, defied as social constructs and events or activities that fall within personal engagements.

In the management field, the responses were similar for both populations as well (See Table 3). Administrators had only two traits selected by over 50% of the population, 'open' (83%) and 'friendly' (78%). It would be the same two traits for the teachers, except 'friendly' would be higher (76%) than 'open' (53%). A major difference was in 'stern', chosen by nearly 30% of the teachers but conspicuously absent in all but two of the administration responses. 'Authoritarian' was also a significant choice for the teachers as nearly 17% of respondents picked this adjective while only one administrator did so.

Likert Scaled Questions

The Likert responses garnered interesting results especially in the correlation between the two sampled populations. Inferential analysis was conducted by a Students' t test (two paired sample) for correlation on SPSS software (Zhang, 2006 & Garson, 2008). This was a challenging task as the two populations differed greatly in population size. Student's t is recommended for smaller samples, which was appropriate for the administration group, and is somewhat robust towards varying population sizes (Garson, 2008). But the sheer size and discrepancy of the teacher population towards the administration sample is too great in this instance (Howell, 2004 & Garson, 2008). Since the t variable is indicative of differences in means, it was decided to try a harmonic mean effect for the teacher sample; 18 numbers were randomly picked from the population (range included) and tested to see if mean was similar to the overall population (Howell, 2004). Once the mean was statistically similar, this 'batch' was measured against the corresponding administration response. This technique would be similarly used for all 12 questions. Doing so establishes a higher level of power, reducing the risk of a Type I error (Howell, 2004). Meddling with samples is still problematic however, so it was decided to establish the confidence interval at 99%, for a two-tailed test and to be forthcoming within the limits of the inferential testing. Analysis of the descriptive statistics was added for further clarification.

The descriptive analysis also had limits, due to the ordinal nature of the scaled questions (Babbie, 2004, Creswell, 2020; Howell, 2004, Berman, 2006). Because of distance or value ambiguity between the choices on the survey, it is controversial to use means as an example of central tendency, as it is widely suggested that only the median should be used (Howell, 2004; Jamieson, 2004; Berman, 2006 & Lane, 2007). The argument centers on the interpretation of the data more so than the data itself. To avoid the argument both the mean and median values are illustrated. This description will also be presented as a numerical value and a visual descriptor, illustrating where on the scale the respondents' choices lie. Combining the results, and using multiple perspectives it was hoped for better interpretation of the data.

Each trait was tested as a specific domain and illustrated in Tables 4 through 8. The first trait; extraversion, consisted of two questions asking respondents how happy and energetic they felt at work and school. Both groups responded positively in respect to the adjectives, ranking themselves as both enthusiastic and energetic. The difference between the two was that the administration group had a higher mean response for both questions (see Table 4). The difference in means was 0.7 of a scale for enthusiastic and 0.5 (basically half a scale) for energetic, which was significant when comparing to the other questions. Medians were different for each as well, illustrating a difference in distribution for

the two. Students' t results indicated no correlation between the populations for the questions. Administrators, overall, responded higher, or more positive than the teachers in enthusiasm and energy, both in the super-trait of extraversion. Extraversion which was the most cited domain when delineated through the common adjectives was also one with a high variance between the teacher and administrative populations. Interesting, when defining by positive adjectives, administrators would continually rate higher than the faculty in most, if not all, of the questions. There was discernible difference between the two populations across all questions and prompts.

The super-trait of accommodation had two questions; the first asked how much free time the respondent would be willing to give up at work for no advantage or pay, the second asked how far the respondent was willing to concede in an argument with someone they didn't like (see Table 5). Both groups indicated a willingness to help but, again, the administrators rated higher on the scales than the teachers. The difference in means was 0.6, the second highest in range recorded in the instrument. Teachers ranked closer to the scale of 'willing to help' where the administration was closer to 'always willing to help'. Medians were different as well. In the second question, the two populations were closer in their response, ranking themselves between 'sometimes' and 'willing' in admitting to being wrong. The difference in range was only 0.2 here. Students' t illustrated no correlation responses for either question, indicating a difference in both responses from the populations, it just was not as pronounced in the second question.

The super-trait of consolidation had two questions; the first asking how competitive the respondents were at work and the second asking how they rated their drive to succeed as compared to their peers (see Table 6). Teachers ranked themselves between 'average' and 'I do better' with a mean response of 3.5 and a mode of 3. Administrators, however, ranked themselves very close to 'I do better' with a mean of 3.9 and a median of 4. Students' t indicated no correlation between the groups. In the second question, the range in response was 0.5 in scale with administrators ranking themselves more likely in trying to do better than their peers. The teachers responded with a mean of 4.0, directly on the 'usually willing' scale in rating or driving themselves against their peers. Their counterparts had a mean response of 4.5, in between the 'usually willing' and 'willing' scales. Students' t indicated no correlation found for this question either. As in the other domains both populations ranked themselves relatively high in the question responses but the administrators saw themselves as much more so in both questions.

Stability was the first super-trait to use three questions in the domain. The questions asked the respondents their (1) sensitivity to criticism and insults, the (2) effort they put towards understanding others and (3) the length of time it takes for the respondent to get over an incident (see Table 6). There was no inferred correlation for any of the three questions between the two sampled groups. Sensitivity had a range difference of only 0.3 of a scale as both the teachers and the administration ranked within the 'neutral/average' range. The administration illustrated a slight lessening of sensitivity with a mean response of 3.3 to the teacher's 3.0.

Table 4 - Inferential and Descriptive Statistics for the Extraversion Trait

Extraversion Trait	Introvert to Extrovert	Scaled Outcomes				
		Not enthused at all	Mostly unenthused (not happy)	Neutral/ Average	Pretty enthusiastic	Always enthusiastic
Question 1 - How enthused (happy and willing) are you towards work and school?		1	2	3	4	5
					Teachers Mean - 4.1 Median - 4	
		Students' t results DF 19 (t = 3.883 for correlation) T = 2.71 Not Correlated			Administrators Mean - 4.8 Median - 5	

Question 2 -	Not energetic at all	sometimes energetic	Neutral/ Average	Usually energetic and ready	Always ready to go
How energetic are you normally, especially regarding work and/or school?	1	2	3	4	5

Teachers
Mean - 4.1
Median - 4

Administrators
Mean - 4.6
Median - 5

Students' t results
DF 19 (t = 3.883 for correlation)
T = 1.79
Not Correlated

The second question was only different by 0.1 of a scale. Both groups responded high in trying to understand others, 4.7 to 4.8 respectively, in between the scales of 'sometimes' to

Table 5 - Inferential and Descriptive Statistics for the Accommodation Trait

Accommodation Trait	Challenger To Adapter	Scaled Outcomes				
Question 1 - To what extent or level are you willing to spend your free time helping your peers with assignments and work (for no gain or advantage)?		Rarely willing to help 1	Sometimes willing to help 2	Neutral/ Average 3	Usually willing to help 4	Always willing to help 5
Question 2 - How far are you willing in conceding a point or an argument to a fellow worker or student who you are not friendly with?		I will not admit to being wrong 1	Rarely will I admit to being wrong 2	Neutral/ Average 3	Sometimes I will admit to being wrong 4	I am willing to admit to being wrong 5

Teachers
Mean - 4.2
Median - 4

Administrators
Mean - 4.8
Median - 5

Students' t results
DF 19 (t = 3.883 for correlation)
T = 2.93
Not Correlated

Teachers
Mean - 4.4
Median - 5

Administrators
Mean - 4.6
Median

Students' t results
DF 19 (t = 3.883 for correlation)
T = 0.21
Not Correlated

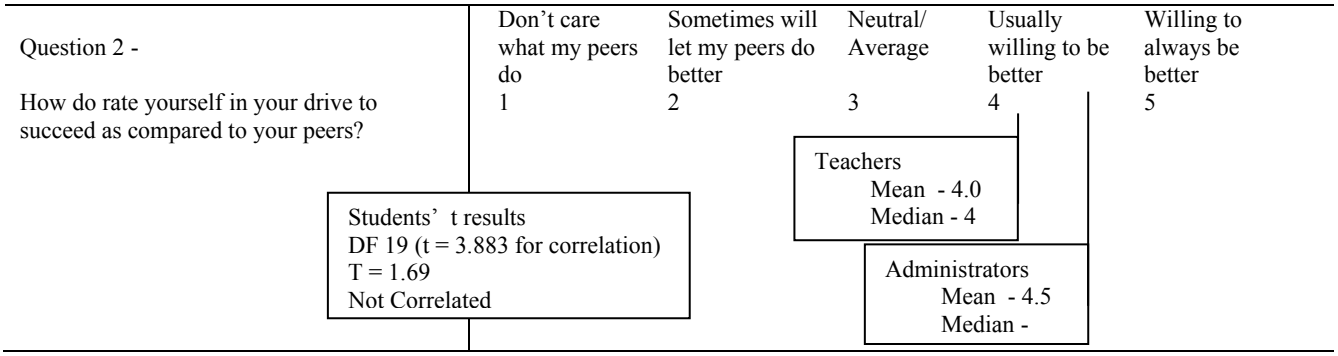
Table 6 - Inferential and Descriptive Statistics for the Consolidation Trait

Consolidation Trait	Casual To Focused	Scaled Outcomes				
Question 1 - How competitive do you consider yourself towards the quality of work you undertake as compared to your peers at work and school?		I am not interested in competing 1	My work is fine as it is 2	Neutral/ Average 3	I do better than my peers 4	Anything I do must be the best 5

Teachers
Mean - 3.5
Median - 3

Administrators
Mean - 3.9
Median - 4

Students' t results
DF 19 (t = 3.883 for correlation)
T = 1.14
Not Correlated



'always' trying to understand others. The biggest difference was in question three, concerning the time respondents felt it took to get 'over' a traumatic event. Teachers had a mean response of 3.5 with a mode of three; administrators had a mean of 4.1 with a mode of 4. The range was 0.6 of a scale with the responses falling within two categories. The teachers saw themselves as average in this regard while the administrators saw themselves as more stable, or quicker in recovering; no doubt a precious skill for that position.

The fifth and last domain, the super-trait of originality, consisted of three questions as well. Respondents were asked (1) to rank how imaginative they perceived themselves to be, (2) to rank the amount of thought they would be willing to put into a complex or difficult issue and (3) to rank the amount of change they would be willing to make for work. Imagination correlated closely with the teachers having a mean response of 3.9 to the administrators 4.0. This put both populations around the scale of 'somewhat imaginative' though once again the administration scored slightly more so than the teachers. The amount of thought put to complicated endeavors had a slightly larger range for the population means. Teachers' had a mean score of 4.0, squarely on the scale of 'usually think' about these issues while the administration was a 4.3, still on the scale but further to the right in willingness. The final question, how is the respondent willing to change also had a range difference of 0.3 of a scale between the two populations, with the teachers having a mean score of 4.4 with the administrators a 4.9. This measure is telling as the threshold can only be a 5, for the administrators they must have exclusively checked five, save for just one. In a generalized view, the administration team is completely willing to change while the teachers are sometimes to always willing to do so. There was no correlation to any of the three questions with the populations as determined by the Students' t analysis.

FINDINGS OF THE STUDY

Description by Language

In the discussion, the traits of the district should be analyzed first, starting with the adjective descriptors. Of the overall population of the district sampled, the teachers and administrators described themselves through their individual (self) perceptions. Overall, both populations reported as being friendly, personable and outgoing, always good signs towards a positive district culture. Interestingly enough, the top two traits of 'friendly' and 'outgoing' juxtaposed in order depended on the population. Teachers picked 'friendly' first (87%) and then 'personable' (69%) while administrators picked 'personable' first (72%), then friendly (61%). Administrators also picked 'outgoing' at 56%. Interestingly enough there was also a different, specific trait that one would have while the other did not. For administration, this was 'sensitive' at 39% of responses, which didn't come up at all with the faculty. The teachers, though, had 'quiet' at 21% which the administration did not.

It must be noted that this was a self-populated instrument so perceived bias is definitely a limitation in the responses, however good intentions can still be derived from the findings, regardless of others actually perceive the populations as 'friendly' or 'outgoing'. The switch between these two,

arguably similar traits between teaching and administrators is an intriguing construct of developed though a pedantic lens. Perhaps teachers see 'friendly' as more conducive to teaching styles and/or classroom culture where an administrator would feel that outgoing, or extroverted, would have more benefit to their particular duties? Both are important in general, which can be extrapolated back to the school culture at large but the differences in roles and responsibilities dependent on each position one may benefit one population slightly more than the other. 'Personable' makes sense for administrators as well as they would need to

Table 7 - Inferential and Descriptive Statistics for the Stability Trait

Stability Trait	Resilient To Reactive	Scaled Outcomes				
Question 1 - How sensitive are you to criticism and insults?		Extremely sensitive 1	Sensitive 2	Neutral/ Average 3	Not very sensitive 4	Not sensitive at all 5
		Students' t results DF 19 (t = 3.883 for correlation) T = 1.30 Not Correlated	Teachers Mean - 3.0 Median - 3	Administrators Mean - 3.3		
Question 2 - How much effort do you put towards understanding other people and their issues/problems?		Not interested 1	Usually don't think about it 2	Neutral/ Average 3	Sometimes try to understand 4	Always try to understand 5
		Students' t results DF 19 (t = 3.883 for correlation) T = 0.62 Not Correlated		Teachers Mean - 4.7 Median- 5	Administrators Mean - 4.8	
Question 3 - How long does it take you to get over a stressful or (mild) traumatic event?		**Can't get over things 1**	**Have trouble letting go 2**	**Neutral/ Average 3**	**Usually no problem letting go 4**	**Easy to forgive and move on 5**
		Students' t results DF 19 (t = 3.883 for correlation) T = 1.93 Not Correlated		Teachers Mean - 3.5 Median - 3	Administrators Mean - 4.1	

be more open to different situations and contexts than that of a teacher, arguably more narrowly defined through their classroom and/or subject or content, while a principal would need to have more context and range for his or her varied responsibilities. As for quiet, this segues with personable and is interesting how it does not come up at all with the administration. It can be argued that there are different styles of teaching based on the different personalities of the teacher utilizing them (Lennon, 2012). It may be possible that the quiet, or more introverted teachers, may not illustrate traits deemed important or necessary for this administration. Further study is definitively needed before a stronger analysis can be determined.

In the management descriptor, the two populations were also similar, with another interesting juxtaposition between the top two traits. Teachers picked 'friendly' first (76%) then 'open' (53%) while administrators' selected 'open' first (83%) than 'friendly' (78%). Note the big difference in

percentages of 'friendly' in the two populations and through both sections of the adjective descriptors section of the instrument. This metric was seen as the most or second most important adjective in both sections by both sample groups, obviously seen as the most important descriptor throughout the district. 'Open' is also interesting as this correlates somewhat to personable in the first section as well. The populations are not so dissimilar, at least towards their perceived notions of themselves.

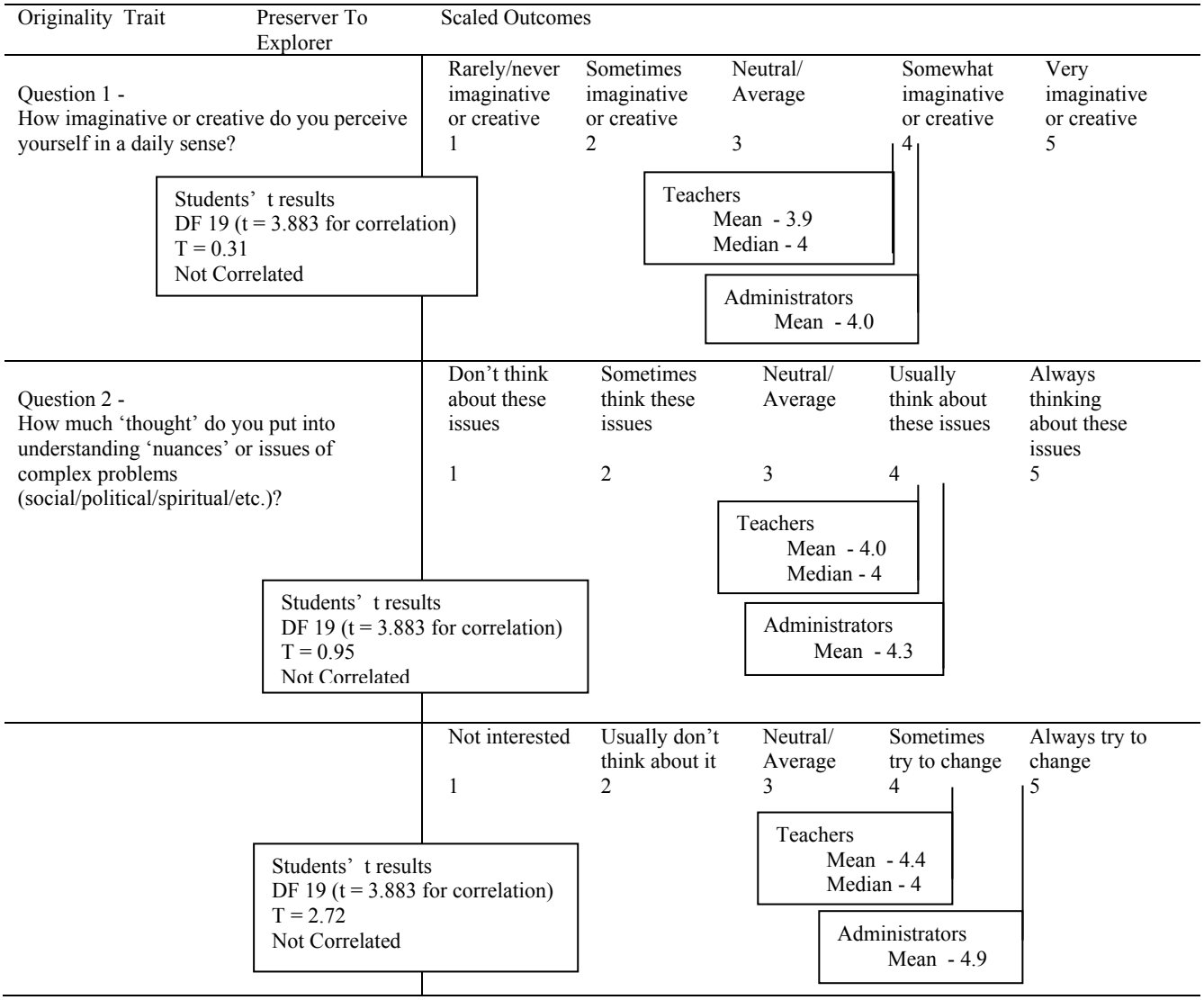
Teachers also reported themselves as stern (30%) and more authoritarian (17%). This difference may be due to the shifting of managerial roles of an administrator to that of a teacher. Focus on the educator is more tuned to children and specific roles and expectations. Educational leaders have more nuanced managerial roles, from teachers to students and parents, and for any myriad of issues in between. The shifting percentages of 'open' may indicate this as well as 'sensitive' for administrators. Comparing the descriptors to the FFM, the trait of extraversion is most pronounced, with accommodation, stability, and originality also present. Interestingly enough, the consolidation super-trait was not measured or determined in any strength through the adjective descriptors. This is interesting as this super trait focuses on perfectionism, drive, being methodical and having higher levels of concentration, common traits associated with management. For many teachers, this can be developed as classroom management and perhaps constructs in grading and pedagogy and, no doubt, seen by many as strength. Yet, for it to be absent for leadership it is surprising not to see this higher in administration. Or is it? Perhaps, school based leaders do not recognize this super trait as highly as other leadership fields. Or, it is seen, once again, more as a managerial duty than a leadership one, with less importance in the specified field of educational leadership. More research is suggested before any further correlations can be explored.

Likert Scaled Questions

In the likert questions domain, differences in scale became apparent. Most interesting, the teachers and administrators were statistically different for all 12 questions. In the students' t analysis of paired samples, significant measures were taken to reduce bias and increase power, reducing the risk of a type I error (Howell, 2004). No correlation was determined, between the two samples for any questions. Though the populations seemed arguably similar in the adjective descriptors, they tested differently in that of the scaled responses. This difference is most revealing through visual interpretation of the means. The scaled questions were designed to indicate differences in personality (at least in degrees) which ranked as negative or positive, weaker or stronger. In this, the administrators were always to the right in mean response to the teachers. Regardless of the personality measure asked, the administration sample was consistently more, or greater than the mean responses than that of the teachers. The two populations are similar still, unsurprising as the one is no doubt derived from the other, but differences are ascertained. The administration is more excessive, or positive towards each trait, magnified more so than their teaching peers.

Of the main traits associated with the FFM, the super-trait of extraversion was the most prominent as seen within the two components of the survey. It was the most cited domain when delineated through the common adjectives' activity and the two questions about it in the Likert section had the largest scaled difference in response. Administrators were more enthused and energetic than the teachers. The adjective response activity had both friendly, which easily correlates to the extraversion super-trait as well personable and charismatic as top choices for both populations. Personable may also segue into the accommodation trait as well, but it will also fit in extraversion. Here further study is also suggested. In the scaled responses, the

Table 8 - Inferential and Descriptive Statistics for the Originality Trait



differences were over 0.5 for both questions. The difference as totaled is greater in this domain for two questions than any other domain, including those of stability and originality, which had three questions apiece to this one's two.

Other super-traits had indicators of influence or impact as well. Accommodation, stability, and originality could be categorized from the adjective responses. Consolidation, interestingly not referred to in the adjective analysis, also showed a significant difference in the scaled responses between the two populations. This may mean nothing more than a lack of specific adjectives for respondents to have picked, but it may indicate a hidden, mitigating variable that the respondents themselves may not be aware. This domain looked at the drive and overall competitiveness which seemed to be strong within the two populations but, almost, not appropriate for them to admit to doing or being. Seemingly like a correct political statement, it appears that the populations, primarily the teachers, were more cautious than their administrative counterparts in admitting to this personality. It may also indicate a difference in professional expectations where the leadership team, for advancement, may need to be more competitive than the teachers. The trait of originality would be the closest grouping for both populations, with all three questions being less than 0.3 of a scale of the difference.

The individual questions with the biggest disparity in response was enthusiasm at work (+0.7), willingness to spend free time (+0.6), time needed to get to a stressful event (+0.6). Close behind

these three and tied are, energetic at work (+0.5), and drive to succeed (+0.5). In each instance mean administration response was at least a half scale higher in the rankings. These questions also encapsulate four of the five domains of the FFM, though extraversion is the only category to be listed twice. The closest grouping for questions was in trying to understand others (+0.1) and how imaginative the two populations saw themselves (+0.1). These comprise the traits of stability and originality respectively. Stability was somewhat interesting as it had within its domain one of the widest variances of questions response and one of the narrowest. Like in extraversion, this trait needs further study to help determine its role or influence in leadership constructs

The two populations share a common culture as indicated in the adjective activity yet they differ in important, measurable ways. This is no surprise as they are not independent sample groups. The administrative leadership team is part of the overall community, many of them were brought up from the teacher ranks, and those from outside would still need to conform to the culture already embedded in the system. There is a difference, however, though it is impossible in this study to determine if this is a natural construct of differing job expectations, or personality descriptors looked for in these positions. It is probably somewhat of both. Upon moving into an administrative leadership role, an individual would probably already have the appealing characteristics the team is looking for in a leader, regardless of it being implied or stated. This culture is not specific to just individual schools but is probably a subset of the institutional leadership culture of the district. In reviewing the surveys not one school or type (elementary, middle or High school) had a variance of range in the Likert response of more than 0.4 of a scale. Ten of the 12 question had a teacher variance of less than 0.2 for all schools. The administration scored higher than they, indicating an influence beyond the parameters of the building themselves. More data needs to be done, especially in regard to developing a scale of measurement, but it does appear the language and personality constructs can delineate leadership constructs within an educational system and these constructs are different than the teachers they administer over.

It would also seem that within these super traits, some are more dominant than others, at least towards self-perceived or individualized understanding of these concepts. Extraversion, with adjectives such as friendly and open was common in both segments of the study and had high correlations throughout. Both teachers and administrators strongly indicated this as a dominant trait in their dealing with students. Accommodation also seemed important, though not as strong as extraversion, it was commonly referred to with both populations as were stability and originality, though perhaps not as strongly. Of note was the lack, or least indicator of accommodation through the sample responses. Maybe due to the ‘nature’ of the teaching profession or to variables unknown at this time, this personality trait was shown to be the least important, or relevant to the teachers and administrators surveyed.

SCIENTIFIC OR SCHOLARLY SIGNIFICANCE

Educational leadership, including teacher leadership, is a sub-field of general leadership studies but what works in this domain should also fit in others. It fits a niche somewhere between the educational culture and hierarchy of a school and the leadership team culture and formalized roles as established by precedent and district expectations. This ‘pipeline’ has been established for years though little research has been done on the traits a person may possess before moving into administration and if these traits can be analyzed for specific data, and if these can be further correlated into leadership descriptors or metrics. In this study the answer is yes, and it appears the populations are different enough to be measured. There are similarities in self-perceived leadership and managerial traits though differences were ascertained. But in the Likert Scales the populations were clearly different. The potential significance of this research is in developing models of informal leadership constructs within a school, identifying traits that make a leader and using them to help identify possible candidates and developing models to make sure the administration is still in sync, to some degree, as the faculty. These are not independent populations, and though the difference is assumed between a teacher and an administrator, this difference cannot be so great that the two cannot communicate or understand the other. Obviously, there is more work needed to be done but the study

indicates it may be possible in utilizing personality templates in determining leadership types or concepts. The study also indicates the potential of personality models part of the cannon in leadership studies as another potential means of identifying, measuring or simply asking what it is that makes an individual a leader, albeit a successful one.

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