

PLANNING FOR DIFFERENTIATED INSTRUCTION: INSTRUCTIONAL LEADERSHIP PRACTICES PERCEIVED BY ADMINISTRATORS AND TEACHERS IN MIDDLE SCHOOLS

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ABSTRACT

This study was designed to generate an awareness of the differences between school administrators' and teachers' perceptions of instructional leadership practices towards implementation of differentiated instruction. Data were collected from 34 middle school administrators and 171 teachers from a major metropolitan school district in the southeast United States using a researcher-designed survey. The study found that teachers were not in complete agreement with administrators in 4 of 6 subsets including the total average of all subsets. Teachers perceived survey statements about supervision and evaluation of instruction, protection of instructional time, providing incentives for teachers, and providing professional development as not being experienced to the same extent as believed by administrators to be in practice. A high degree of disagreement between administrators and teachers for the statements of the survey raised the concern that misconceptions exist. The findings suggest that school administrators may not be as attuned to the teachers' perceptions of their support for the practice of differentiated instruction. The study has implications for instructional leadership in that a misalignment of beliefs and attitudes held for innovations by school administrators and teachers can contribute to unintentionally creating barriers for implementation. Consequently, planning for differentiated instruction should be purposely informed by the perceptions of all stakeholders.

INTRODUCTION

Differentiated instruction is accepted by scholars as being effective in improving student learning outcomes (Campbell, Campbell, & Dickerson, 1999; Koeze, 2006; Tomlinson, 2007). The importance of differentiated instructional approaches towards student learning and outcomes is prevalent in the literature (Hall, 2002; McCoy & Ketterlin-Geller, 2004; Subban, 2006; and Tomlinson, 2004a). Among these works, Rock, Gregg, Ellis and Gable (2008) purported differentiated instruction as a means of addressing the changing demographics of the classroom and its relative impact on instructional practices. Differentiation requires teachers to change the teaching process based on instructional strategies aligned to the large span of students' learning needs represented in today's contemporary classrooms (Tomlinson, 1999a, 2001a; Valiande, Kyriakides, & Koutselini, 2011). Consequently, implementation of differentiated instruction places new requirements on teachers' skills involved in the process of adapting content to meet the academically diverse learning needs of individual students (Holloway, 2000).

Research into school effectiveness has produced a variety of studies that supported the idea that principals' instructional leadership can influence change in the instructional practices of teachers (Blasé & Blasé, 1998; Goddard, Neumerski, Goddard, & Salloum, 2010). Goddard et al. (2010) purported that school leaders' instructional support was a significant predictor in motivating teachers to incorporate challenging teaching approaches, such as differentiated instruction, into everyday practices in their classroom setting.

Accountability legislation of the past decade, such as No Child Left Behind (NCLB) (2002), has brought about a re-examination of the role of the principal as the primary instructional leader. Along with the changing conception of principal leadership, Clifford (2012) and Lee, Walker and Chui (2012) envisioned a type of instructional leadership that encourages teachers to problem solve, revise practice through self-reflection, collaborate in professional learning, monitor progress, and define teachers' roles in the process of improving instruction. Noonan and Hellsten (2013) maintained that as a result of a consistent stronghold in leadership literature, instructional leadership is held as the model for emulation by school leaders for its part in monitoring, mentoring, and modeling effective teaching and learning practices for teachers' classroom instruction.

BACKGROUND OF THE STUDY

Over the past 30 years, the Georgia Department of Education (GaDOE) has sought to impact classroom outcomes directly through accountability-based policy requiring school leadership to implement evaluation instruments designed toward building teacher effectiveness. The Teacher Keys Effectiveness System (TKES), predicated on the work of Stronge (2011), was adopted in 2012. TKES is comprised of 10 performance standards of which differentiated instruction is recognized by the GaDOE as key to effective teaching and learning for ever increasing levels of classroom diversity (GaDOE, 2012). Through the TKES evaluation instrument, school leadership is held accountable for the implementation of strategies for differentiation in the practices of classroom teachers.

As the emphasis on the importance of effective teaching practices, such as differentiated instruction, began to increase in the State of Georgia so did a renewed focus on the role of school administrators as instructional leaders to carry out the mandates prescribed by legislated reforms (Bottoms & O'Neill, 2001). Horng and Loeb (2010) purported that the literature portrays instructional leaders as inspiring teachers to focus their teaching skills to impact student learning directly. Salo, Nylund and Stjernstrom (2015) purported that the concept of instructional leadership has evolved over recent years with a significant interest in the intentional, goal-oriented practices by which school leaders relate to teachers' responsibilities for teaching and learning. Thus, instructional leadership serves as the focal point of this study of planning for differentiated instruction.

STATEMENT OF THE PROBLEM

Despite the knowledge that differentiated instruction is effective in addressing the diverse learning needs of students, researchers on the topic of the process of differentiated instruction have reported that teachers frequently displayed an unwillingness to employ differentiation in their classroom practices (De Neve et al., 2014; Goddard et al., 2010; Hertberg-Davis, 2009; Smit & Humpert, 2012; Tomlinson, 2002; Van Tassel-Baska & Stambaugh, 2005). Previous research into the challenges or obstacles involving teachers' implementation of differentiated instruction found that teachers did not differentiate due to: 1. a lack of professional development to support practice; 2. a lack of administrative support; 3. logistical time constraints; 4. impact on classroom management; 5. concerns about equity grading practices; 6. requirements associated with standards-based instruction discourage implementations; 7. teachers' resistance to change; and 8. misconceptions perpetuated by a lack of knowledge of strategies related to approaches toward differentiated instruction (Nunley, 2006; Weber, Johnson, & Tripp, 2013). Collectively, these obstacles can pose a very specific challenge to school leaders' abilities as an instructional leader to successfully institute differentiation as a common instructional approach towards teaching and learning.

In order for school administrators to meet the expectations established by state mandates for teachers'

implementation of differentiated learning, they must frequently enact a model of instructional leadership practice that removes challenges or obstacles that impede teachers' implementation of differentiated instruction. These practices should support teachers in dispelling misconceptions about differentiation and promote a willingness to employ the process in their classroom practices (Goddard et al., 2010; Hertberg-Davis, 2009; Weber et al., 2013). Understanding the teachers' perceptions of instructional leadership practices toward differentiated instruction will help administrators plan for strategies in working with teachers to the implement the process.

PURPOSE OF THE STUDY

The purpose of this study was to identify, from the perspectives of administrators and teachers, functions of instructional leadership practice used by school administrators in support of teachers' approaches towards differentiation in the middle school classroom. Twenty-seven instructional leadership practices, identified in the literature as supporting the implementation of differentiated instruction (Carolan & Guinn, 2007; Goddard et al., 2010; Hertzberg-Davis & Brighton, 2006; MacAdmis, 2001; Page, 2000; Petig, 2000; Quinn, 2002; Suppovitz, Sirinides, & May, 2010; Tomlinson & Allan, 1997), were examined across six core functions of instructional leadership derived from the works of Hallinger (1983, 2005), Hallinger and Heck (1998), and Hallinger and Murphy (1985a, 1985b) on the topic of effective principals' instructional leadership practices. The six core functions of instructional leadership consist of communicating school goals, supervision and evaluation of instruction, monitoring student progress, protecting instructional time, providing incentives for teachers, and providing professional development. The selection of these leadership behaviors for this study was predicated upon the indication by researchers as being common to the daily functions of school administrators engaged in instructional leadership (Hallinger, 2005; Waters, Marzano, & McNulty, 2003). Consequently, this research may assist school leadership engaged in the troughs of implementing mandated instructional interventions to better align practices in support of differentiating instruction, across six core functions of instructional leadership.

RESEARCH QUESTIONS

This research sought to answer three questions.

- (1) What are instructional leadership practices toward differentiated instruction as perceived by middle school administrators and teachers?
- (2) Are there any significant differences in instructional leadership toward differentiated instruction as perceived by middle school administrators and teachers?
- (3) Are there any significant differences in school administrator and teacher perceived instructional leadership toward differentiated instruction among high, middle, and low achieving schools?

SIGNIFICANCE OF THE STUDY

Principal support of teaching is vital to teachers' use of differentiated instruction (Carolan & Guinn, 2007; MacAdmis, 2001; Page, 2000; Petig, 2000; Quinn, 2002; Suppovitz et al., 2010; Tomlinson & Allan, 1997). However, research does not demonstrate a statistically significant link between teachers' reports of principal support for instruction and school-wide norms centered on differentiated instruction. According to the authors, this lack of statistical significance constituted a gap in the literature to be addressed by future research.

As Hertberg-Davis (2009) noted:

As systemic change reforms focus on differentiated instruction, future research on principals' influence on sustaining differentiated instruction as a focus and priority in the classroom would add to the knowledge of how best to support and develop teachers' commitment and expertise in differentiation over time. (p. 101)

This study may generate an awareness of instructional leadership practices which facilitate the implementation of differentiated instruction and better enable leaders in buffering the challenges to implementation. School administrators with the knowledge of how to help teachers deal with the challenges to differentiation, through support and encouragement, are more likely to increase the implementation of differentiated instruction within their school norms of practice (De Neve et al., 2014; Smit & Humpert, 2012; Tomlinson, 2002).

LITERATURE REVIEW

Differentiated Instruction

Tomlinson (2005) defined differentiated learning as “a philosophy of teaching that is based on the premise that students learn best when their teachers accommodate for the differences in their readiness levels, interests, and learning profiles” (p. 940). Subban (2006) stated that the working definition provided by Tomlinson is reflective of Vygotsky's (1978) socio-cultural theory wherein the primary tenant resides in the social interactional relationship that occurs between teachers and students. Subban also maintained that Tomlinson's definition of differentiation aligned to Vygotsky's notions for the impact of the teacher upon the student. Tomlinson's (2004b) vision of a teacher is a professional who guides students through the use of appropriate techniques toward their fullest potential within the learning context.

The review of the literature on differentiated instruction revealed that challenges related to teaching staffs' implementation of differentiated instructional strategies are compounded by teacher held misconceptions or perceived obstacles to implementation imposed by state curricular requirements. Research (Carolan & Guinn, 2007; MacAdmis, 2001; Page, 2000; Petig, 2000; Quinn, 2002; Suppovitz, Sirinides, & May, 2010; Tomlinson & Allan, 1997) specifically claimed that principals' instructional leadership practices helps teachers overcome challenges of implementing differentiated instruction. De Neve et al. (2014), Smit and Humpert (2012), and Tomlinson (2002) purported that by understanding which instructional leadership practices facilitate the implementation of differentiation, leaders can buffer challenges to implementation. Collectively, the authors stated that by developing a critical understanding of how to help teachers deal with these difficulties, leaders learn to be supportive and encouraging of teachers' implementation.

Instructional Leadership

Leithwood (1994) defined instructional leadership to include only the practices that directly affected curriculum, teacher instruction, staff development, and supervision. Scholars examining a broader definition of instructional leadership, such as Donmoyer and Wagstaff (1990), and Murphy (1988), purported that principal leadership included all activities that affected student learning.

Salo et al. (2015) stipulated that the concept of instructional leadership has evolved in recent years with a significant interest in intentional goal-oriented practices through which principals communicate teachers' responsibilities for teaching learning to their staffs. Carolan and Guinn (2007) suggested a distinct need for leadership support for teachers implementing differentiated instruction in the middle school context. The authors' findings noted fewer obstacles to differentiation as a result of the supportive instructional leadership practices of principals. Hertberg-Davis and Brighton

(2006) examined characteristics of principals that impacted teachers' willingness and ability to differentiate instruction. The authors found that principals' support was essential in promoting teachers' willingness to implement differentiation.

Tomlinson (2005) stated that leaders can help offset challenges to differentiated instruction by providing planning, resources, ensuring access to differentiated curriculum, offering incentives to teachers to develop knowledge of how to differentiate instruction, creating an environment conducive for professional growth and practice, and ensuring local policy supports differentiated instruction. Following Tomlinson (2005), Robinson, Maldonado and Whaley (2014) indicated that overcoming obstacles towards teachers' implementation of differentiation required support for effective classroom management, facilitating professional learning communities that encourage collaboration, building on knowledge, and sharing experiences all in the execution and delivery of differentiated instruction. The authors also noted that teachers need support in learning how to scaffold tasks and become competent in the use of a set of strategies before taking on new approaches.

The early research of Blasé and Blasé (1998) found that researchers had identified specific instructional leadership practices related to improving the teaching and learning process. The authors offered that effective approaches toward instructional leadership should expand teachers' instructional range with carefully designed support and assistance. Furthermore, the authors cited three effects of instructional leadership that affected teacher performance: 1. leaders teaching with teachers; 2. leadership promoting professional development; and 3. leadership that fosters teacher self-reflective practice toward improving student learning outcomes.

Southworth (2009) argued that a significant portion of instructional leadership that affects teacher performance takes the form of modeling, mentoring, monitoring instruction, and assumes that the principal can model effective instruction, lead others to effective instruction, recognize effective teaching, and understand that data is an intricate part of instructional leadership. May and Huff (2009) examined instructional leadership as a viable leadership approach toward improving teaching and learning. The authors stated researchers and policymakers had agreed that a principals' instructional leadership is key to increasing student achievement as well as being central to focusing their schools on improving teaching and learning. The authors noted principal instructional leadership activities included 1. planning, setting and developing goals towards school improvement; 2. monitoring and observing teaching; 3. supporting teachers; 4. providing for professional development; 5. analyzing data; and 6. modeling instructional practices.

THEORETICAL REVIEW

Multiple theories may be relevant in shaping the research questions, design, methodology, and finally the analysis of the findings derived from the study.

Vygotsky's (1978) Social Constructivist Learning Theory has been viewed by researchers as central to the delivery of educational innovations, interventions, and changes tailored to the instructional needs of students (Blake & Pope, 2008; Subban, 2006). Across time, scholars (Derry, 1999; Kim, 2001; Lave & Wenger, 1991; McMahon, 1997; Wertsch, 2005) have applied Vygotsky's theory towards the understanding of how individuals construct knowledge with relevance to teaching and learning. According to Derry (1999), social constructivism stresses the significance that culture and context have on understanding what events occur within society and the knowledge constructed through these experiences. Kim (2001) detailed the following three assumptions related to constructivist theory:

1. Reality is constructed through human activity and meaning created through these interactions.
2. Knowledge is socially and culturally constructed.
3. Learning is viewed, through the lens of social constructivism, as a social process when human beings interact.

McMahon (1997) observed learning from a constructivist's perspective as being shaped by external factors. These assertions of scholars are essential in understanding the theoretical framework for differentiated instruction. However, as it concerns this research study, learning is envisioned as the socially constructed realities, or perceptions, of school administrators and teachers while engaged in the process of implementing differentiated instruction as required by policy.

The social interaction (Wertsch, 2005) between school administrators and teachers factor in on teachers' abilities in formulating knowledge of how to differentiate instruction or how to be motivated to employ the approach in the classroom. Referring once again to Kim (2001), constructing social meaning "involves inter-subjectivity among individuals" where "personal meanings shaped through these experiences are affected by the inter-subjectivity of the community to which they belong" (p. 3). Kim drew upon Lave and Wenger (1991) who suggested that "a society's practical knowledge is situated in the relations among practitioners, their practice, and the social organization" (p. 5). Therefore, the development of knowledge and social meaning are formed by interactions and experiences consequently influencing the personal beliefs, attitudes, and perspectives of individuals in the context of the workplace.

The implications of social constructivism are relevant to this study in that this theory alludes to the existence of beliefs or attitudes derived from "constructs or perceptions of principals and teachers relating to shared ideas" (Kim, 2001, p. 5). Thus, the importance of appreciating the principles of the social constructivist theory is a primary step in the formulation and answering of the research questions.

Michael Fullan's (1982) work on educational change is of equal importance in answering this study's research questions. Fullan (1982, 2001, 2005, 2014) focused on the roles of the human participants taking part in the change process. In partnering with Stiegerlbauer in 1991, Fullan stressed that there was enormous potential for true, meaningful change simply in building coalition with other change agents, both within one's own group and across all groups (Fullan & Stiegerlbauer, 1991). In his concept of the initiation stage of the change process, Fullan identified advocacy from administration and teachers as being the two local factors affecting change. For the change momentum to continue he emphasized that skilled and committed administrators and teachers would be needed. Fullan's (1982) educational change model provides an underpinning to this study by indicating that a new educational initiative, such as differentiated instruction, has to involve dedicated stakeholders like school administrators and teachers to collaborate in planning and implementation. Furthermore, Fullan's work (2001) indicated that teachers' perceptions of actors involved in educational innovations to be a critical factor in the success of initiatives to improve teaching and learning (Hermann, Tondeur, van Braak, & Valcke, 2012). Therefore, any discussion on teachers' resistance to implementing differentiated instruction should involve the consideration of teachers' attitudes toward change alongside of any understanding of the importance of the social context in influencing the perceptions of both school administrators and teachers.

RESEARCH METHODOLOGY

Research Design

The non-experimental quantitative research design used for this study was a survey method which attempted to identify, from the perspectives of administrators and teachers, functions of instructional leadership practice used by school administrators in support of teachers' approach towards differentiation in the middle school classroom.

Participants

This study was conducted across 18 of 26 middle schools (less a pilot survey school) within a metropolitan school district located in the Southeast United States. Participants were invited to respond to an electronic survey specific to their position as an administrator or teacher. The targeted population (Fricker, 2012) that comprises the middle schools of the participating school district is estimated at 25 middle school principals, 83 assistant principals, and the 1,499 certified teachers who are evaluated under the TKES system. Based on the timing of the survey, at least one full cycle of teacher observations had been completed in accordance with the school district's policy. This resulted in the survey population (McMillan, 1996) consisting of school administrators with at least one semester of experience in evaluating teachers under the TKES instrument, as well as general and special education teachers from all subject areas that had been evaluated through the TKES platform for at least one semester. The actual response rate was comprised of 45% of the administrators and 17% of the teachers from the participating middle schools.

Data Collection Instruments

Data were collected via a self-designed two-part questionnaire based on concepts *and* adaptation of questions drawn from Hallinger's (1983) Principal Instructional Management Rating Scale (PIMRS) and elements of the items from Stetson's (2007) Differentiated Instruction Self-Assessment Tool (DISAT). They were intended to examine: 1. the self-perceptions of principals, in the role of an instructional leader, engaged in support the implementation of differentiated instruction; and 2. teachers' perceptions of instructional leadership practices about the implementation of differentiated instruction. Separate instruments were required to be created to collect data from school administrators and teachers.

Survey questions were constructed by adopting the context of items from Hallinger's (1983) PIMRS and adapting the wording to be reflective specifically of instructional leadership practices toward teacher implementation of differentiated instruction. Functions of instructional leadership related to removing barriers to teachers implementing differentiated instruction were compartmentalized into six sub-sets (De Vellis, 2003). Each sub-set was comprised of survey items reflective of the instructional leadership practices associated with each function (Hallinger, 1983; Stetson, 2007).

In its final form, the survey instruments used to collect data for this study were comprised of a Part One, which collected demographic information requesting the respondents to state their gender, years working at their schools, years of teaching experience, and years of administrative experience that may be factored in as variables during analysis. In the case of school administrators, responding to "years of teaching experience" may provide a means to differentiate among administrators based on years of teaching in the classroom prior to going into administration.

Part Two consisted of items designed to elicit the participants' ratings of the extent to which leadership practices are used to support the implementation of differentiated instruction in the classroom. Data

were collected using a Likert-type 5-point response rating scale ranging from (1) Never, (2) Rarely, (3) Sometimes, (4) Often, or (5) Always.

Instrument Reliability and Validity

An external pilot survey was conducted on a small group of judges comprised of veteran middle school administrators and teachers who did not participate in the main survey. Judges were asked to make commentary on the instruments in the following areas: a) Content; (b) Language; and (c) Format. The judges' commentary provided the basis for revision.

The revised survey instrument was again given to the judges to solicit actual responses to the items. The completed surveys were returned, and the data were entered into an Excel spreadsheet. Using the Cronbach Alpha method, a reliability test for internal consistency was conducted utilizing an alpha value range from 0.00 to 1.0. The resulting alpha must be at 0.7 or close to being acceptable. In instances where an alpha of 0.7 was not obtained, a rotation analysis of each section was performed to identify items causing the inconsistency. The rotation analysis resulted in the deletion of items from the original questionnaire.

Data Collection and Analysis Procedures

The instruments were administered using an Internet-based survey application, SurveyMonkey.com. Principals' agreement to participate was collected and District forms were completed as required by the school system. Hyperlinks specific to each participating schools' administration and teaching staffs were embedded in instructions provided to the principals who forwarded the links to their staffs. Data collected was entered into SPSS spreadsheet for analysis.

RESULTS

Research Question # 1 - The first research question: *What are instructional leadership practices toward differentiated instruction as perceived by middle school administrators and teachers?* Descriptive statistics of means, standard deviations and percentages were employed to examine the extent of the principals' perceptions of instructional leadership practices. The same method was used to examine the extent of the teachers' perceptions of instructional leadership practices. Middle school administrators and teachers within the participating school district perceived a high degree of agreement of the positive statements in the survey across the six functions and 27 practices of instructional leadership in support of differentiated instruction. Data from the quantitative survey indicated that the school administrators agreed with the extent that they communicate school goals (M = 4.03), supervise and evaluate instruction (M = 4.14), monitor student progress (M = 3.79), protect instructional time (M = 4.17), provide incentives for teachers (M 3.72), provide professional development (M = 3.83), and in total average (M = 3.95). The findings are reflective of the functions of instructional leadership school administrators believe they enact in support of teachers' implementation of differentiated instruction. Likewise, it is fair to assert that the findings associated with the teachers' perceptions of instructional leadership are reflective of what teachers believe they experience in their own school settings. Data from the quantitative survey indicated that the teachers agreed with the extent that their school administrators communicate school goals (M = 3.96), supervise and evaluate instruction (M = 3.65), monitor student progress (M = 3.77), protect instructional time (M = 3.68), provide incentives for teachers (M 3.28), provide professional development (M = 3.47), and in total average (M = 3.61).

Research Question # 2 - The second research question: *Are there any significant differences in instructional leadership toward differentiated instruction as perceived by middle school*

administrators and teachers? A one-way Multivariate Analysis of Covariance (MANCOVA) was used to investigate if any significant differences existed between the administrators' and teachers' perceptions of instructional leadership practices toward differentiated instruction. Administrators' and teachers' demographic data were included in the statistical analysis as co-variates to minimize the possible effect of these data on the perceptions of administrators and teachers so that a truer picture of the differences can be displayed. The results (See Table 1) revealed there were no significant differences in instructional leadership toward differentiated instruction as perceived by middle school administrators and teachers relative to the statements of the survey for S1 Communicate School Progress ($p = .603$) and S3 Monitors Student Progress ($p = .864$). However, there were significant differences in perception between the administrators and the teachers concerning S2 Supervise and Evaluate Instruction ($p = .002$), S4 Protects Instructional Time ($p = .001$), S5 Provide Incentives for Teachers ($p = .006$), and S6 Provide Professional Development ($p = .027$). Overall, a high degree of disagreement was found between middle school administrators and teachers in their perceptions of the statements of the survey as indicated by the Total Average of all functions ($p = .012$).

The statistically significant differences in perceptions of administrators and teachers of the survey statements relative to supervision and evaluation of instruction, protection of instructional time, providing incentives for teachers, and in providing staff development were consequently perceived by teachers as not being experienced to the same extent as believed by administrators to be in practice. Additionally, the statistically significant differences indicated in S2, 4, 5, 6, and Total Average were not reflective of chance but were supported by the statistics derived from Cohen's D test for effect size.

Table 2. *Effect Size Statistics Calculations Associated with the One-way MANCOVA (Cohen's d)*

Dependent Variable	Teacher/Admin Mean/SD	N	Calculations	Effect
S1	(3.97-4.03)/0.578191	T=159; A=34; N=193	0.103772	Small
S2	(3.66-4.14)/0.682941	T=159; A=34; N=193	0.702842	Moderate
S3	(3.76-3.79)/0.660309	T=159; A=34; N=193	0.045433	Small
S4	(3.70-4.17)/0.64229	T=159; A=34; N=193	0.731757	Moderate
S5	(3.25-3.72)/0.7742421	T=159; A=34; N=193	0.633064	Moderate
S6	(3.46-3.85)/0.743808	T=159; A=34; N=193	0.49744	Moderate
Total Avg	(3.63-3.98)/0.543596	T=159; A=34; N=193	0.588672	Moderate

Effect size testing was done to indicate the magnitude of the results obtained from the One-way MANCOVA (See Table 2). Effect size quantified the size of the differences between the perceptions of the middle school administrators and teachers for the statements of the survey. Using Cohen's *d*, the standard interpretation of the meaning of the effect size in sub-sets 2, 4, 5, 6, and Total Average indicated a moderate effect. Cohen's (1988) terminology can be used to assert that the importance of the findings is neither trivial or nor substantial. However, the researcher can reasonably purport that on average moderate differences can be seen to exist between the perceptions of administrators and teachers for the statements of the survey. In terms of practical significance, the importance of the findings associated with Research Question 2 do not rise to the level of a substantially large difference. Therefore, the differences in the perceptions of the administrators and teachers for the

survey statements in sub-sets 2, 4, 5, 6, and Total Average are not so far apart as to indicate that there is a total absence of instructional leadership towards differentiated instruction. Table 2 revealed that among administrators and teachers in S1 and S3 there was a small effect and the results were non-significant. However, among administrators and teachers there was a statistically significant difference in S2, S4, S4, S6, and Total Average. The magnitude of the effect was moderate.

Research Question #3 - *Are there any significant differences in principal and teacher perceived instructional leadership toward differentiated instruction among high, middle, and low achieving schools?* A One-way MANOVA was utilized to take into account the three levels of school achievement status. Quantitative data analysis revealed no statistically significant differences in the perceptions of middle school administrators and teachers for instructional leadership toward differentiated instruction relative to average mean scores among schools of different achievement status. Pillai's Trace multivariate test and the outcomes generated by the one-way MANOVA revealed that school achievement status was not a determining factor in revealing any of the significant differences in perceptions among school administrators and teachers from high, middle, and low achieving schools for instructional leadership toward differentiated instruction.

DISCUSSION

In framing the context of the findings, literature associated with the study's theoretical framework (Fullan, 1999, 2001; Kin & Kareem, 2016) offered that a critical factor in the success of innovations, such as differentiated instruction, may well hinge on teachers' perceptions of the change agents involved in implementing educational initiatives. Following this line of thinking, it becomes the responsibility of the leader to manage stakeholders' perceptions by including those insights in adapting functions indicated by feedback as not being extensive in their leadership practices (Maxwell, 2005).

Conversely, the findings do support the researcher's assertion for the need and significance of the study. Scholars have recommended future research to examine principals' influences on sustaining differentiated instruction as a focus and priority in the classroom. By identifying six functions of instructional leadership and 27 practices agreed upon by both administrators and teachers as being supportive of teachers' implementation of differentiated instruction, this study added to the knowledge of how best to support and develop teachers' commitment and expertise in differentiating instruction over time (Hertberg-Davis & Brighton, 2006). Generating an awareness of instructional leadership practices, which facilitates the implementation of differentiated instruction, better directs administrative support in an effort to offset teachers' displays of unwillingness to employ differentiation in their classroom practices (De Neve, Devos, & Tuytens, 2014; Goddard et al., 2010; Hertberg-Davis, 2009; Smit & Humpert, 2012; Tomlinson, 2002; Van Tassel-Baska & Stambaugh, 2005).

The findings of this study raise one essential question. What happens when leaders believe they are practicing functions of instructional leadership in support of differentiated instruction, but the teachers disagree? From a theoretical perspective, misconceptions held by school administrators for their instructional leadership practice can be conceived as negatively impacting on teachers' willingness to implement an innovation through a perceived lack of administrative support in critical areas. Therefore, the results of this study call to the attention of school administrators that differences may exist between the perceptions of themselves and teachers for the extensiveness of the functions of their instructional leadership practice.

CONCLUSIONS

The middle school administrators and teachers who participated in this study of planning for differentiated instruction concurred with the statements of the survey, and thus helped to identify six functions of instructional leadership and twenty-seven related practices supportive of teachers' implementation of differentiation. The participants came from a variety of content areas, and grade levels. The participants' relative average years of leading or teaching experience provided for a seasoned group of educators who had undergone profound educational changes over the past years produced by Federal and State education reforms. Therefore, the participants' perspectives on the functions of instructional leadership practices have been shaped not only by change but by the context of professional interactions.

The administrators' and teachers' perceptions derived from this study can be seen to be reflective of a belief that instructional leadership towards differentiated instruction is extensive in the participants' school setting. However, when comparing administrators' and teachers' perceptions, teachers were not in complete agreement with administrators in four out of six subsets including the total average of all six subsets. Teachers consequently perceived survey statements about supervision and evaluation of instruction, protection of instructional time, providing incentives for teachers, and in providing for professional development as not being experienced to the same extent as believed by administrators to be in practice.

Administrators have the responsibility to attend to teachers' perceptions. A misalignment of beliefs and attitudes held for innovations by school administrators and stakeholders can, unfortunately, contribute to creating additional barriers for implementation. A perceived lack of administrative support by teachers can send mixed messages to stakeholders about the leadership's priority or focus for learning. Interestingly, administrators and teachers agreed about the statements of the survey related to organizational learning goals and practices that are informed by student achievement data and are aligned to accountability. However, administrative support associated with functions of instructional leadership, such as supervision of the instructional program, teacher evaluation or professional development that have their place in sustaining teaching practices, are potentially lacking based on leaderships' priorities for learning.

Planning for differentiated instruction, as in any change, should be informed by the perceptions of all stakeholders for the innovation. A collaborative approach toward instructional leadership aligns with the cognitive change (Vygotsky, 1978) aspects of the theoretical framework of this study and may be a contemporary method in planning for the implementation of differentiation as well as sustaining practice. Successful school operations are more positively enhanced when instructional leadership is perceived by stakeholders as a team effort or shared process rather than a role carried out by administration (Ham & Kim, 2015).

RECOMMENDATIONS

Recommendations for Educational Researchers

Future research into the impact of broader organizational needs that generate competing priorities upon administrators' focus of instructional leadership may offer insights into the attentiveness of administrators and their degree of support toward teachers' instructional needs. Future study into the notion put forth by Memisoglu (2015) that teachers may have higher expectations for instructional leadership support for the classroom could shed light into what influences their reality and perceptions of administrators' instructional leadership. As long as the problem persists of teachers'

infrequent implementation of differentiated instruction, future research into instructional leadership support for planning for differentiation should continue to seek to understand the perspectives of all individuals involved in the process.

Recommendations for Educational Practitioners

Reflecting back the theoretical works of Vygostky (1978) and Fullan (2001), perceptions are the reality in an educational context. It is of paramount importance to recognize teacher perceptions of leadership practice in order to reduce resistance to change. By identifying any misconceptions held by school administrators for the extensiveness of their instructional leadership, practices can be adapted and more flexible behaviors may emerge in response to stakeholders' needs. In reflecting back on the work of Lim, Gronlund and Andersson (2015), misalignment of beliefs and attitudes held for innovations by principals and stakeholders contributes to creating additional barriers for its implementation. Policy makers should take into account the perceptions of principals for an innovation like differentiated instruction before requiring its institutionalization. More specifically, leadership development should better prepare school administrators in gaining a broader knowledge of the formative processes involved in supervision and evaluation of teachers to improve instruction.

Researchers and policymakers agree that a principals' instructional leadership is key to increasing student achievement as well as being central to focusing their schools on improving teaching and learning. Consequently, this vein of research assists school leadership engaged in the troughs of implementing mandated instructional interventions in better aligning practices toward planning for changes in teaching and learning. At a minimum, this study should promote professional conversation for the role that a principals' beliefs and attitudes play in the implementation of a multi-faceted standardized teacher evaluation system or for the effectiveness of mandated innovations such as differentiated instruction to improve learning outcomes for students.

REFERENCES

- Blake, B., & Pope, T (2008). Developmental psychology: Incorporating Piaget's and Vygotsky's theories in classrooms. *Journal of Cross-Disciplinary Perspectives in Education*, 1(1), 59-67.
- Blasé, J., & Blasé, J. (1999). Principal's instructional leadership and teacher development: Teacher's perspectives. *Educational Administration Quarterly*, 35, 349-378.
- Bottoms, G., & O'Neill, K. (2001). *Preparing a new breed of school principals: It's time for action*. Atlanta, GA: Southern Regional Education Board.
- Campbell, L., Campbell, C., & Dickinson, D (1999). *Teaching and learning through the multiple intelligences* (2nd ed.). Boston, MA: Allyn and Bacon.
- Carolan, J., & Guinn, A. (2007). Differentiation: Lessons from master teachers. *Educational Leadership*, 64(5), 44-47.
- Clifford, M. (2012). *Hiring quality school leaders: Challenges and emerging practices*. Naperville, IL: American Institutes for Research.
- De Neve, D., Devos, G., & Tuytens, M. (2014). The importance of job resources and self-efficacy for beginning teachers' professional learning in differentiated instruction. *Teaching and Teacher Education*, 47, 30-41.
- Derry, S. J. (1999). A fish called peer learning: Searching for common themes. In A. M. O'Donnell, & A. King (Eds.), *Cognitive perspectives on peer learning*, (pp. 197-211). Hillsdale, NJ: Lawrence Erlbaum Associates.

- De Vellis, R. (2003). *Scale development: Theory and applications* (2nd ed.). Thousand Oaks, CA: SAGE Publications.
- Donmoyer, R., & Wagstaff, M. (1990). Principals can be effective managers and instructional leaders. *NASSP Bulletin*, 74(525), 20-29.
- Fricker, R. D. (2012). Sampling methods for web and e-mail surveys, SAGE internet research methods. In J. Hughes (Ed.), *The SAGE handbook of online research methods*, (pp. 195-216). London, UK: SAGE Publications.
- Fullan, M. G. (1982). *The meaning of educational change*. New York, NY: Teachers College Press.
- Fullan, M. G. (1999). *Change forces: The sequel*. London, UK: Taylor & Francis/Falmer.
- Fullan, M. G. (2001). *The new meaning of educational change*. London, UK: Routledge Falmer.
- Fullan, M. G. (Ed.) (2005). *Fundamental change*. Dordrecht, The Netherlands: Springer.
- Fullan, M. G. (2014). Interview with Michael Fullan. *The MG Times*, 7, 10-15.
- Fullan, M. G., & Stiegerlbauer, S. M. (1991). *The new meaning of educational change* (2nd ed.). New York, NY: Teachers College Press.
- Georgia Department of Education (2012). *Georgia Teacher Keys Effectiveness System implementation procedures*. Retrieved from <http://www.gadoe.org/SchoolImprovement/Teacher-and-Leader-Effectiveness/Documents/TKES%20Implementation%20Procedures%207-25-2012.pdf>.
- Goddard, Y., Neumerski, C., Goddard, R., & Salloum, S. (2010). A multilevel exploratory study of the relationship between teachers' perceptions of principal instructional support and group norms for instruction in elementary schools. *The Elementary School Journal*, 11(2), 336-357.
- Hall, T. (2002). *Differentiated instruction: Effective classroom practices report*. National Center on Assessing the General Curriculum, CAST, U.S. Office of Special Education Programs. Retrieved from: <http://www.cast.org/ncac/classroompractice/cpractice02.doc>.
- Hallinger, P. (1983a). *Assessing the instructional management behavior of principals*. (Unpublished doctoral dissertation). Stanford University, Stanford, CA.
- Hallinger, P. (1983b). *Principal instructional management rating scale*. Palo Alto, CA: Stanford University.
- Hallinger, P. (2005). Instructional leadership and the school principal: A passing fancy that refuses to fade away. *Leadership and Policy in Schools*, 4(3), 221-240.
- Hallinger, P., & Heck, R. (1998). The principal's role in school effectiveness. An assessment of Methodological progress, 1980-1995. In K. Leithwood, J. Chapman, D. Corson, P. Hallinger, & H. Hart (Eds.), *International handbook of educational leadership and administration* (pp. 723-783). Dordrecht, The Netherlands/Boston/London: Kluwer Academic Publishers.
- Hallinger, P., & Murphy, J. (1985a). Assessing the instructional leadership behavior of principals. *American Journal of Education*, 94(3), 328-355.
- Hallinger, P., & Murphy, J. (1985b). Assessing the instructional management behavior of principals. *The Elementary School Journal*, 86, 217-247.
- Ham, S-H., & Kim, R-Y. (2015). The influence of principals' instructional leadership on teachers' use of autonomy-supportive instruction: An analysis of three Asia-Pacific countries. *The Asia-Pacific Education Researcher*, 24(1), 57-65.
- Hermann, R., Tondeur, J., van Braak, J., & Valcke, M. (2012). The impact of primary school teachers' educational beliefs on the classroom use of computers. *Computers & Education*, 51, 1499-1509.
- Hertberg-Davis, H. (2009). Myth 7: Differentiation in the regular classroom is equivalent to gifted

- programs and is sufficient: Classroom teachers have the time, the skill, and the will to differentiated adequately. *Gifted Child Quarterly*, 563, 251-253.
- Hertberg-Davis, H., & Brighton, C. (2006). Support and sabotage: Principals' influence on middle school teachers' response to differentiation. *The Journal of Secondary Gifted Education*, 17(2), 90-102.
- Holloway, J. (2000). Preparing teachers for differentiated instruction. *Educational Leadership*, 58(1), 82-83.
- Hornig, E., & Loeb, S. (2010). New thinking about instructional leadership. *Kappan*, 92(3), 66-69.
- Kim, B. (2001). Social constructivism. In M. Orey (Ed.), *Emerging perspectives on learning, teaching, and technology*. Athens: University of Georgia. Retrieved from <http://www.coe.uga.edu/epitt/SocialConstructivism.htm>.
- Kin, T. M., & Kareem, O. A. (2016). Teacher attitudes toward change: A comparison between high- and mediocre-performing secondary schools in Malaysia. *International Studies in Educational Administration* (Commonwealth Council in Educational Administration & Management (CCEAM)), 44(1), 105-127.
- Koeze, D. (2006). *District context and its impact on the instructional leadership role of the elementary school principal* (Unpublished doctoral dissertation). University of San Francisco, San Francisco, CA.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.
- Lee, M., Walker, A., & Chui, Y. (2012). Contrasting effects of instructional leadership on student learning. *Journal of Educational Administration*, 50(5), 586-611.
- Leithwood, K. (1994). Leadership for school restructuring. *Educational Leadership*, 49(5), 8-12.
- Lim, N., Gronlund, A., & Andersson, A. (2015). The beliefs and perceptions of Swedish school principals. *Computers in Education*, 84(2015), 90-100.
- MacAdmis, S. (2001). Teachers tailor their instruction to meet a variety of student needs. *Journal Of Staff Development*, 22(2), 1-5.
- Maxwell, J. (2005). *The 360 degree leader: Developing your influence from anywhere in organization*. Nashville, TN: Nelson Business.
- May, H., Huff, J., & Goldring, E. (2012). A longitudinal study of principals' activities and student performance. *School Effectiveness and Improvement*, 23(4), 417.
- McCoy, J., & Ketterlin-Geller, L. (2004). Rethinking instructional delivery for diverse student populations. *Intervention in School and Clinic*, 40(2), 88-95.
- McMahon, M. (1997). *Social Constructivism and the Philosophy of Science*. New York, Rutledge.
- McMillan, J. H. (1996). *Educational Research: Fundamentals for the consumer*, (2nd ed.). New York, NY: Harper Collins Publishers, Inc.
- Memisoglu, S. P. (2016). Teachers' and administrators' perceptions of knowledge management competence of high school administrators. *Educational Research and Reviews*, 11(4), 125-133.
- Murphy, J. T. (1988). The unheroic side of leadership: Notes from the swamp. *Phi Delta Kappan*, 69, 654-659.
- No Child Left Behind Act of 2002, Pub. L. No. 107-110, 115 Stat. 1425 (2002). Retrieved from <http://www.ed.gov/legislation/ESEA02>.
- Noonan, B., & Hellsten, L. (2013). Toward instructional leadership: Principals' perceptions of large-scale assessments in schools. *Canadian Journal of Educational Administration and Policy*, 140, 1-28.

- Nunley, K. (2006). *Differentiating in high school classrooms: Solution strategies for 18 common obstacles*. Thousand Oaks, CA: Corbin.
- Page, S. (2000). When changes for gifted spur changes for all. *Educational Leadership*, 58(1), 62-65.
- Petig, K. (2000). On the road to differentiated practice. *Educational Leadership*, 58(1), 14-18.
- Quinn, D. (2002). The impact of principal leadership behaviors on instructional practice and Student engagement. *Journal of Educational Administration*, 40, 447-468.
- Robinson, L., Maldonado, N., & Whaley, J. (2014). *Perceptions about implementation of differentiated instruction*. Paper presented at the Annual Mid-South Educational Research (MSERA) Conference. Retrieved from Education Resources Information Center (ERIC) No. ED554312.
- Rock, M., Gregg, M., Ellis, E., & Gable, R. (2008). REACH: A framework for differentiating classroom instruction. *Preventing School Failure*, 52(2), 31-47.
- Salo, P., Nylund, J., & Stjernstrom, E. (2015). On the practice architectures of instructional leadership. *Educational Management Administration & Leadership*, 43(4), 490-506.
- Smit, R., & Humpert, W. (2012). Differentiated instruction in small schools. *Teaching and Teacher Education*, 28(8), 1152-1162.
- Southworth, G. (2009). Learning-centered leadership. In B. Davies (Ed.), *The essentials of school leadership*, (pp. 91-111). London, UK: SAGE Publications.
- Stetson, R., Stetson, E., & Anderson, K. (2007). Differentiated instruction, from teacher's experiences. *School Administrator*, 64(8), 28.
- Stronge, J. H. (2011). *Leader keys effectiveness system: Implementation Handbook State of Georgia Department of Education*. Georgia Department of Education, Office of School Improvement. Retrieved from <http://www.gadoe.org/.../LKES%20Hanbook-%20%20FINAL%205-30-1>.
- Subban, P. (2006). Differentiated instruction: A research basis. *International Education Journal*, 7(7), 935-947.
- Suppovitz, J., Sirinides, P., & May, H. (2010). How principals and peers influence teaching and learning. *Educational Administration Quarterly*, 46(1), 31-56.
- Tomlinson, C. A. (1999a). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C. A. (2001a). *How to differentiate instruction in a mixed-ability classroom* (2nd ed.). Alexander, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C. A. (2002). Different learners, different lessons. *Instructor*, 112(2), 21-25.
- Tomlinson, C. A. (2004a). Differentiation in diverse settings. *School Administrator*, 61(6), 12-15.
- Tomlinson, C.A. (2004b). Sharing responsibility for differentiating instruction. *Roeper Review*, 26(4), 188-200.
- Tomlinson, C. A. (2005). Grading and differentiation: Paradox or good practice? *Theory Into Practice*, 44(3), 262-269.
- Tomlinson, C. A. (2007). Learning to love assessment. *Educational Leadership*, 65(4), 8-13.
- Tomlinson, C. A., & Allan, S. (1997). Leadership for differentiating schools and classrooms. *Journal for the Education of the Gifted*, 29(1), 60-89.
- Valiande, S., Kyriakides, L., & Koutselini, M. (2011). *Investigating the impact of differentiated instruction in mixed ability classrooms: It's impact on the quality and equity dimensions of education effectiveness*. Paper presented at the International Congress for School Effectiveness and Improvement. Retrieved from <http://www.icsei.net/icsei2011/Full%20>

Papers/0155.pdf.

- Van Tassel-Baska, J., & Stambaugh, T. (2005). Challenges and possibilities for serving gifted learners in the regular classroom. *Theory Into Practice, 44*(3), 211-217.
- Vogt, W. (2007). *Quantitative research methods for professionals*. Boston, MA: Pearson.
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Waters, T., Marzano, R. J., McNulty, B., & Mid-Continent Regional, E. L. (2003). *Balanced leadership: What 30 years of research tells us about the effect of leadership on student achievement*. Denver, CO: Mid-continent Research for Education and Learning. Retrieved from http://www.mcrel.org/PDF/LeadershipOrganizationDevelopment/5031RR_Balanced_Leadership.pdf.
- Weber, C., Johnson, L., & Tripp, S. (2013). Implementing differentiation: A school's journey. *Gifted Child Today, 36*(3), 79-186.
- Wertsch, J. V. (2005). Making human beings human: Bioecological perspectives on human development. *British Journal of Developmental Psychology, 23*(10), 143-151.

Table 1. *Tests of Between-Subjects Effects*

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	S1 Avg	.484	3	.161	.413	.744	.007
	S2 Avg	7.622	3	2.541	3.985	.009	.059
	S3 Avg	1.426	3	.475	.904	.440	.014
	S4 Avg	6.787	3	2.262	4.383	.005	.065
	S5 Avg	7.101	3	2.367	3.138	.027	.047
	S6 Avg	6.120	3	2.040	2.755	.044	.042
	Total Avg	3.603	3	1.201	2.920	.035	.044
Intercept	S1 Avg	91.488	1	91.488	233.836	.000	.553
	S2 Avg	98.339	1	98.339	154.249	.000	.449
	S3 Avg	86.909	1	86.909	165.249	.000	.466
	S4 Avg	78.554	1	78.554	152.182	.000	.446
	S5 Avg	79.889	1	79.889	105.910	.000	.359
	S6 Avg	75.009	1	75.009	101.288	.000	.349
	Total Avg	84.842	1	84.842	206.303	.000	.522
Gender	S1 Avg	.342	1	.342	.874	.351	.005
	S2 Avg	1.050	1	1.050	1.646	.201	.009
	S3 Avg	1.279	1	1.279	2.431	.121	.013
	S4 Avg	.100	1	.100	.193	.661	.001
	S5 Avg	1.081	1	1.081	1.433	.233	.008
	S6 Avg	1.319	1	1.319	1.781	.184	.009
	Total Avg	.764	1	.764	1.857	.175	.010

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
YearsTeaching	S1 Avg	.031	1	.031	.078	.780	.000
	S2 Avg	.050	1	.050	.078	.780	.000
	S3 Avg	.145	1	.145	.276	.600	.001
	S4 Avg	.494	1	.494	.958	.329	.005
	S5 Avg	.030	1	.030	.040	.842	.000
	S6 Avg	.942	1	.942	1.272	.261	.007
	Total Avg	.093	1	.093	.227	.634	.001
AdminTeacher	S1 Avg	.106	1	.106	.272	.603	.001
	S2 Avg	6.453	1	6.453	10.122	.002	.051
	S3 Avg	.016	1	.016	.030	.864	.000
	S4 Avg	6.043	1	6.043	11.706	.001	.058
	S5 Avg	5.916	1	5.916	7.842	.006	.040
	S6 Avg	3.701	1	3.701	4.998	.027	.026
	Total Avg	2.671	1	2.671	6.494	.012	.033
Error	S1 Avg	73.946	189	.391			
	S2 Avg	120.494	189	.638			
	S3 Avg	99.400	189	.526			
	S4 Avg	97.559	189	.516			
	S5 Avg	142.565	189	.754			
	S6 Avg	139.963	189	.741			
	Total Avg	77.726	189	.411			
Total	S1 Avg	3133.167	193				
	S2 Avg	2833.560	193				
	S3 Avg	2834.800	193				
	S4 Avg	2860.444	193				
	S5 Avg	2296.333	193				
	S6 Avg	2539.120	193				
	Total Avg	2705.441	193				
Corrected Total	S1 Avg	74.430	192				
	S2 Avg	128.116	192				
	S3 Avg	100.826	192				
	S4 Avg	104.345	192				
	S5 Avg	149.666	192				
	S6 Avg	146.083	192				
	Total Avg	81.329	192				