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Exploring the Relationship between AVID Professional Development and Teacher Leadership

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Objectives and Purpose

Classroom teachers receive various forms of professional development throughout their careers with the intent of improving their teaching practices and ultimately, student performance. However, professional development can also have an impact on teacher leadership activities outside of the classroom as well. The purpose of this study is to assess whether professional development received from the Advancement Via Individual Determination (AVID) program has an effect on AVID elective teachers’ level of teacher leadership within their schools. Teachers from middle schools and high schools implementing, or planning to implement, AVID were examined in order to answer the following research questions:

1) Is teacher leadership affected by the quantity of professional development received from AVID Summer Institutes?

2) Is there a relationship between teacher leadership and teaching experience, as defined by the number of years teaching?

3) Are certain demographic variables, such as gender and level of education, associated with teacher leadership?

Perspectives

AVID is a college preparatory program that was established in 1980 in Mary Catherine Swanson’s classroom as a means to support underserved students in a recently desegregated suburban high school. The basic component of AVID is a social and academic support elective class designed to assist students in their rigorous college preparatory courses. Mrs. Swanson, an English teacher who became the founder of AVID and the first ever AVID elective teacher, believed that students could succeed in the most rigorous curriculum, such as Advanced Placement (AP) classes, but only needed extra support provided through the AVID elective (Mehan et al. 1996).

While the elective class is still the foundation of AVID programs across the nation, AVID has become a catalyst for transforming and improving entire schools and districts (Swanson 2005). Many schools and districts across the country are using AVID to affect change in student performance and improve their schools. In Texas, for example, AVID has been used as a school reform model (Watt, Yanez, and Cossio 2002). The impact of AVID on student achievement is also well documented (Guthrie and Guthrie 2002; Mehan et al. 1996; Slavin and Calderon 2001; Watt, Huerta, and Lozano 2007; Watt et al. 2006; Watt, Yanez, and Cossio 2002), but the effect of AVID’s professional development component and its unquestionable empowerment of teachers to become leaders and key stakeholders in their schools is not as clearly defined.

Cited as one of the key ingredients to AVID’s success is its comprehensive and sustained professional
development component (Swanson 2005), which begins with an AVID summer institute (SI). A team of 8 professionals from each AVID school, including content area teachers, administrators, and counselors, attends a week-long SI to learn how to use AVID teaching methodologies and curriculum, and how to disseminate the AVID philosophy and strategies to school-wide audiences. AVID professional development continues throughout the year and includes ongoing support for AVID teachers and site teams from specially trained regional and district directors, thus ensuring the integrity of AVID principles and safeguarding its effective school-wide implementation (Watt, Huerta, and Lozano 2007).

A crucial aspect of each AVID program is in the strength of the AVID site team and specifically the lead elective teacher or coordinator who is responsible for facilitating the successful implementation of AVID. Though extensive research has shown the importance of strong administrative leadership in implementing change (Block, Everson, and Guskey 2001; Edmonds 1979; Fullan 1991, 1993; Goldring 1993), others (Datnow, Hubbard, and Mehan 2002; Heck and Brandon 1995; Ogawa 1993; Taylor and Bogotch 1994) argue that each stakeholder and change agent is just as important as the administrator in implementing and incorporating school-wide change. Due to the placement and involvement of teachers in the school environment, Donaldson (2001) contends that teachers often possess greater expertise than those individuals holding positions of formal authority.

Teacher Leadership

The benefit of teachers as leaders both in and out of the classroom is readily accepted and examined, but much of the literature lacks a clear and consistent definition of teacher leadership (York-Barr and Duke 2004; Greenlee 2007). According to York-Barr and Duke (2004), teacher leadership, when examined in the context of general leadership categories (for a review, see Leithwood and Duke 1999), aligns best with both the instructional and participative categories of leadership. Instructional leadership deals with organizational variables that impact teachers, such as school culture, as well as with teachers’ behaviors and activities that directly affect the growth of students. Participative leadership, however, focuses on the decision-making processes of a given group or organization, with a potential outcome of enhanced organizational effectiveness.

Leadership as an organizational quality (Ogawa and Bosset 1995) includes teachers’ participation in instructional, professional, and organizational development, whereby leadership “must affect more than individuals’ actions; it must influence the system in which actions occur” (233). Regardless of the context in which teacher leadership is viewed, a common understanding is that leadership does not rest with one person in a hierarchically high-level position with formal power or authority. In schools, leadership is shared across roles and positions (Spillane, Halverson, and Diamond 2001). According to Barth (2001), schools whose teachers take on leadership roles become more democratic than dictatorial. In AVID schools, the AVID elective teacher, coordinator and site team members take on leadership roles for successful implementation of the program.

In lieu of an operational definition of teacher leadership, focus is often placed on descriptions of the activities and roles of teacher leaders. For example, Katzenmeyer and Moller (2001) contend that teacher leaders are those that not only lead within and beyond the classroom, but also contribute to and influence the improved educational practice of teachers within their school. Teacher leaders are also described as those who create and oversee a successful team, equipping others with valuable resources to improve student achievement (Gabriel 2005). Other reviews of teacher leadership (York-
Barr and Duke 2004; Greenlee 2007) describe the formal and informal roles of teacher leaders, which include taking part in school-wide decision making (Hart 1995; Paulu and Winters 1998), being mentor teachers (Fessler and Ungaretti 1994; Hart 1995), facilitating the professional growth of other teachers (Gabriel 2005; Katzenmeyer and Moller 2001; Smylie and Denny 1990), and fostering collaborative work arrangements (Blasé and Anderson 1995).

To positively affect school change, teachers must be provided with increased access to additional resources, information, and expertise (Hallinger and Richardson 1988). AVID elective teachers, through their training and professional development from AVID, receive such resources and are at the center of ensuring a classroom and school environment conducive to empowering students to become more responsible for their learning, while they themselves become more responsible not only for their teaching within the classroom but also for their leadership roles outside of the classroom.

Formal and Informal Teacher Leadership Practices

Most often teacher leaders are thought of in formal terms, such as those holding positions of authority. As mentioned earlier, these positions or roles might include chairing a department, being a teacher mentor, or being a staff developer. However, more powerful positions or roles that teachers hold may be informal rather than formal (Moller 2005). These informal roles are created whether the principal supports them or not and occur when a teacher feels passionate about something and takes action. York-Barr and Duke (2004) describe informal teacher leadership roles as coaching peers, working in teams, modeling reflective practice and/or communicating a vision for improvement.

Teacher leaders are proactive and function best when the principal promotes teacher leadership (Moller 2005). The principal plays an integral role in promoting or even inhibiting teacher leadership. The principal must believe that teachers must contribute to the professional community within a school and must promote the involvement of teachers in leadership roles within the school. Moller (2005) suggests building the capacity of teachers to address challenges within the school setting, such as in providing professional development for teachers that will result in teachers taking an active role in affecting change.

Teachers who lead their peers must be respected and regarded as highly qualified professionals by the other teachers they are leading. Hargreaves and Evans (1997) suggest that the quality of teaching and learning is affected by the quality of professional relationships that occur outside of the classroom. When a professional culture of teaching is present, sustainable change and increased learning opportunities are more likely to occur. Ultimately, teacher leaders are those teachers who facilitate change in and out of the classroom, be it formally or informally.

Methods

More than 3,100 new and existing AVID elective teachers were surveyed during their professional development strands at AVID SIs held in Dallas, Chicago, Sacramento, Atlanta, and San Diego during the summer of 2007. Schools implementing AVID are required to assemble a site team consisting of AVID elective teachers, site or district administrators, counselors, and core academic teachers. In this study, only AVID elective teachers were surveyed due to their unique role in the AVID elective classroom, and because they are most often the individuals appointed as the AVID coordinator. This position of leadership requires coordinating the implementation of AVID and AVID site team activities...
within a given school.

Descriptive and inferential statistics were performed to examine AVID elective teachers’ level of teacher leadership. While a strictly quantitative approach is used to analyze the survey data, this research is exploratory in nature and intended as preliminary research into the effects of AVID professional development on teacher leadership.

Data Sources and Measures

Data for this research comes from the Survey of AVID Teachers, a brief survey soliciting demographic information, professional development information, and teacher leadership information from AVID elective teachers who attended one of the six AVID SIs in 2007. All survey data were entered into SPSS 12.0 for analyses.

Teacher Leadership

Teacher leadership, the dependent measure in this research, was constructed using four items that ask about a teacher’s leadership roles within their school. Specifically, teachers were asked if they sponsored any clubs or organizations, chaired any committees, led a professional development workshop or session, or served as a mentor teacher. All four items were coded 0=no, 1=yes, and aggregated to create a teacher leadership scale. However, upon running a reliability analysis, it was discovered that the “sponsoring clubs or organizations” item had a considerably low item-total correlation and was not contributing to the internal consistency of the scale. This item was removed, resulting in a three-item scale with scores ranging from 0 to 3. The overall mean of the scale was 1.42 (SD=1.11) with an alpha of 0.60.

Teachers were also asked to report the extent in which they perceived themselves to be a teacher leader at their school, with answers ranging from 1 (not at all) to 4 (very much so). As a preliminary effort to assess the construct validity of the dependent measure of teacher leadership, this item was correlated to the 3-item scale, revealing a significant positive relationship (r = 0.454, p < 0.001) between the two.

Predictor Variables

The following predictor variables were also included in this study: quantity of professional development received from AVID SIs, total number of years teaching, and total number of years teaching at current school. Categorical variables of gender and level of education were also included in this study to assess whether each is associated with the measure of teacher leadership.

Results and Discussion

This study was guided by three research questions examining teacher leadership among AVID elective teachers who attended an AVID SI in 2007. Prior to exploring and addressing the research questions, however, descriptive statistics were compiled to illustrate the overall characteristics of AVID elective teachers surveyed in this study.

Population Characteristics
A total of 3,104 AVID elective teachers completed the Survey of AVID Teachers: 27% were male and 73% were female. A majority of the teachers (64%) were White, 15% were Hispanic, 14% were African American, 4% were Asian or Pacific Islander, and 4% indicated that they were either Native American or some other ethnicity. As seen in Table 1 below, most of the teachers (66%) have been at their current school for five years or less. However, according to the total teaching experience of the teachers, most (61%) have been teaching for six years or more. This indicates that even though teachers may have ample teaching experience, a number of them have switched schools and may still be considered as new or inexperienced teachers within their current school.

An additional variable of interest pertains to the level of education of the teachers. When asked about the highest academic degree they obtained, 51% reported having a bachelor’s degree, 48% reported having a master’s degree, and 1% reported having a doctorate. Due to the in-depth training and development received from doctoral programs and since so few teachers possessed such a degree, their data have been removed to avoid skewing the remaining analyses. Most of the AVID elective teachers (88%) exhibited some form of teacher leadership by stating that they at least occasionally considered themselves to be a teacher leader at their schools. The results of this single-item, self-reported measure of teacher leadership supports Dewey’s (1960) contention that teachers, in general, exhibit some form of leadership due to their role as an intellectual leader of a social group. The posed research questions, however, address teacher leadership utilizing a brief 3-item scale that was created for this study. As stated earlier, the overall mean for all AVID elective teachers was 1.42 (SD=1.11) out of a possible 3.0 score.

### Teacher Leadership and Quantity of AVID Professional Development

Considering the effect of professional development on school improvement (Sergiovanni 1996) and the significance AVID places on the role of professional development in improved student achievement and schoolwide reform (Swanson 2005; Watt, Huerta, and Lozano 2007), it was hypothesized that AVID elective teachers, as recipients of intense and sustained professional development, would exhibit greater levels of teacher leadership than teachers who have not yet received such professional development. To determine whether there is a relationship between teacher leadership and the amount of professional development received from AVID SIs, a correlation analysis and ANOVA were run. A weak but significant positive correlation (r = 0.22, p < 0.01) was observed between these two variables; as the amount of AVID professional development increased, so too did the level of teacher leadership. To further explore this relationship and determine whether significant differences exist in teacher leadership among groups of teachers who attended certain numbers of AVID SIs, a one-way analysis of variance with a Scheffe pairwise comparison was conducted. For this analysis, teachers were placed into one of four groups, depending on the number of AVID SIs they previously attended. As shown in Table 2 below, an ANOVA yielded a significant difference in teacher leadership means

<table>
<thead>
<tr>
<th># of Percent</th>
<th>Experience at Current School</th>
<th>Total Teaching Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2</td>
<td>26%</td>
<td>11%</td>
</tr>
<tr>
<td>2 to 5</td>
<td>40%</td>
<td>28%</td>
</tr>
<tr>
<td>6 to 9</td>
<td>18%</td>
<td>22%</td>
</tr>
<tr>
<td>10 to 13</td>
<td>8%</td>
<td>14%</td>
</tr>
<tr>
<td>14 to 17</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>&gt; 18</td>
<td>5%</td>
<td>16%</td>
</tr>
</tbody>
</table>

**Table 1. Percent distribution of AVID elective teachers’ years of teaching experience**
among the groups. By examining the group means, it is evident that teacher leadership increases with each SI that a teacher attends.

A Scheffe post-hoc comparison of mean differences revealed a statistically significant difference in teacher leadership means between teachers who had not attended a previous SI and those who attended one SI. Between the first and second SIs, however, while there was an increase in teacher leadership means, from 1.57 to 1.77, the mean difference was not statistically significant. These findings imply that teachers who attend their first SI exhibit significant gains in teacher leadership, yet a plateau in teacher leadership gains occurs after the second SI. Statistically significant gains then become evident again after the third SI attended.

### Table 2. ANOVA results for teacher leadership by number of SIs previously attended

<table>
<thead>
<tr>
<th>Number of SIs Previously Attended</th>
<th>Teacher Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>None</td>
<td>1829</td>
</tr>
<tr>
<td>One</td>
<td>860</td>
</tr>
<tr>
<td>Two</td>
<td>213</td>
</tr>
<tr>
<td>Three or more</td>
<td>122</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Squares</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>186.79</td>
<td>3</td>
<td>62.27</td>
<td>0.00*</td>
</tr>
<tr>
<td>Error</td>
<td>3519.84</td>
<td>3020</td>
<td>1.17</td>
<td>---</td>
</tr>
</tbody>
</table>

*A p < .05

A Scheffe post-hoc comparison of mean differences revealed a statistically significant difference in teacher leadership means between teachers who had not attended a previous SI and those who attended one SI. Between the first and second SIs, however, while there was an increase in teacher leadership means, from 1.57 to 1.77, the mean difference was not statistically significant. These findings imply that teachers who attend their first SI exhibit significant gains in teacher leadership, yet a plateau in teacher leadership gains occurs after the second SI. Statistically significant gains then become evident again after the third SI attended.

### Teacher Leadership and Years of Teaching Experience

To understand whether such gains are solely a result of the professional development received from AVID SIs, the effects of other variables on teacher leadership were also examined. It was hypothesized that as teachers become more experienced and familiar with their teaching and with their school environment, regardless of the professional development received, they would exhibit increased amounts of teacher leadership. Two variables of teaching experience were included in this study. Teaching experience, as defined by the number of years a teacher has been teaching at their current school, exhibited a moderately strong positive correlation with teacher leadership ($r = 0.38, p < 0.01$). The other variable of teaching experience, as defined by the number of years of total teaching experience, also exhibited a positive correlation with teacher leadership ($r = 0.49, p < 0.01$).

To further test this hypothesis, two separate ANOVAs were run. For the first ANOVA, teachers were placed into one of six groups, depending on the number of years they have been teaching at their current school. As seen in Table 3 below, a significant difference in teacher leadership means was found among the groups. While the group means show that longer tenure at the same school results in increased levels of teacher leadership, a Scheffe post-hoc analysis revealed that these gains in teacher leadership stop becoming statistically significant after six to nine years.
For the second ANOVA, teachers were placed into one of six groups, depending on their total number of years of teaching experience, regardless of location. As seen in Table 4 below, a significant difference in teacher leadership means was found among the groups. While the group means show that more teaching experience results in increased levels of teacher leadership, a Scheffe post hoc analysis revealed that these gains in teacher leadership stop becoming statistically significant after 10 to 13 years.

Table 4. ANOVA results for teacher leadership by years of total teaching experience

<table>
<thead>
<tr>
<th>Yrs of Total</th>
<th>Teacher Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Less than 2</td>
<td>343</td>
</tr>
<tr>
<td>2 to 5</td>
<td>868</td>
</tr>
<tr>
<td>6 to 9</td>
<td>671</td>
</tr>
<tr>
<td>10 to 13</td>
<td>416</td>
</tr>
<tr>
<td>14 to 17</td>
<td>271</td>
</tr>
<tr>
<td>18 or more</td>
<td>469</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Squares</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1021.63</td>
<td>5.00</td>
<td>204.33</td>
<td>228.78*</td>
</tr>
<tr>
<td>Error</td>
<td>2707.96</td>
<td>3032.00</td>
<td>0.89</td>
<td>---</td>
</tr>
</tbody>
</table>

Demographic Variables Associated with Teacher Leadership

It was also anticipated that certain demographic variables, such as gender and the level of education of teachers, would be related to teacher leadership. An independent samples t-test showed that teachers who have a master’s degree exhibited significantly greater levels of teacher leadership (M = 1.66, SD = 1.09) than did those teachers who only had a bachelor’s degree (M = 1.19, SD = 1.08), t(3,028) = -12.11, p < .001. Additionally, female teachers exhibited significantly greater levels of teacher leadership (M = 1.49, SD = 1.11) than did male teachers (M = 1.23, SD = 1.08), t(1479) = -5.57, p < .001.

Given that all of the variables in this research are significantly related to the three-item measure of teacher leadership, a series of simple regression models were run to examine each variable’s unique predictive power on teacher leadership. Table 5 below displays the individual model summaries from each simple regression as well as that of a multiple regression that shows the joint predictive power.
when all of the variables are factored into the model. The adjusted R-square values indicate that, individually, gender accounts for the least amount of variance (1%) in teacher leadership while years of total teaching experience accounts for the most amount of variance (24%). AVID professional development, as measured by the number of SIs attended, accounts for about 5% of the variance in teacher leadership. When all of the variables are included in a model simultaneously, R-square is 0.275 which means that approximately 28% of the variability of teacher leadership is accounted for based on these variables. All regression findings were significant at $p < .001$.

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>as Simple Regression Models</th>
<th>Adjusted</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.101</td>
<td>0.010</td>
<td>31.359*</td>
</tr>
<tr>
<td>Level of Education</td>
<td>0.215</td>
<td>0.046</td>
<td>146.649*</td>
</tr>
<tr>
<td>Number of SIs Attended</td>
<td>0.223</td>
<td>0.049</td>
<td>157.718*</td>
</tr>
<tr>
<td>Yrs Teaching Exp at Current School</td>
<td>0.376</td>
<td>0.141</td>
<td>499.559*</td>
</tr>
<tr>
<td>Yrs Total Teaching Exp</td>
<td>0.490</td>
<td>0.240</td>
<td>960.926*</td>
</tr>
<tr>
<td>Complete Multiple Regression Model with All 5 Predictors</td>
<td>0.525</td>
<td>0.275</td>
<td>228.206*</td>
</tr>
</tbody>
</table>

It is evident that the predictor variables explain overlapping portions of the variance of teacher leadership because the complete model accounts for only 4% more variance than the individual model examining only one of the predictors—years of total teaching experience. If there was no overlap among the predictors, then the complete model would account for the sum of the R-square values from the individual models. To compute whether there was a significant increase in the model’s predictive power due to the addition of the AVID professional development predictor, even after its overlapping portions are accounted for, two regression models were run and their change statistics examined. The first model (R-square = 0.261) contained all predictors except AVID professional development, while the second model (R-square = 0.276) included the professional development predictor. An F-test for the change in R-square between the two models (0.015) indicates that there is a significant increase in teacher leadership variance ($p < 0.001$) explained when AVID professional development is added.

Conclusions and Implications

The findings of this study conclude that AVID professional development, when defined as the number of AVID Summer Institutes attended, is a significant predictor of teacher leadership, even after any overlapping effects from a teacher’s gender, level of education, and teaching experience have been accounted for. Understanding the relationship between AVID professional development and teacher leadership is necessary to better address the intended roles and expectations of teachers receiving professional development. Given that teachers and other recipients of professional development play a role in school improvement efforts (Datnow, Hubbard, and Mehan 2002; Harris and Muijs 2003; Heck and Brandon 1995; Ogawa 1993; Taylor and Bogotch 1994), the implications of this study are important not only for those involved with AVID, but also for all levels of school administrators interested in school reform.

Since this research is preliminary and exploratory in nature, several limitations should be considered with regard to the findings and their implications. Though the data collection process was anonymous, teachers used self-report measures to convey aspects of their job duties, responsibilities, and
teachers used self-report measures to convey aspects of their job duties, responsibilities, and experiences. This may result in only rough approximations of actual details. Additionally, the experiences and perceptions of AVID elective teachers may vary from those of teachers involved in other school programs, so any generalizations from this study should be made with caution. Finally, while the measure of teacher leadership used in this study is based on a uni-dimensional scale comprised of only three items, which is an acceptable minimum number of variables (Kim and Mueller 1978), future research is needed to expand such a measure in order to encompass a deeper and more thorough assessment of teacher leadership.

An additional question emerging from the results of this study is: Are AVID elective teachers chosen by their principals because of their leadership qualities, or do AVID elective teachers develop into leaders due to the professional development and the (formal and informal) roles and responsibilities required for implementing an AVID program? This question will be further explored in follow-up studies with the sample of teachers surveyed for this study.

[This article was modified from a presentation at the SRCEA annual conference in Kansas City, MO, November 2007. The organization homepage is: http://www.unf.edu/~rmays/srcea/]

References


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