

The Mediating Effect of Student Intellectual Stimulation on the Relationship between Teachers' Self-Assessment and Teachers' Leadership Competency

John Rey A. Otong¹, Celso L. Tagadiad²

Department of Education¹, Department of Teacher Education²

University of Mindanao Professional Schools, UM Panabo College

Panabo City, Davao del Norte Philippines

DOI: https://dx.doi.org/10.47772/IJRISS.2023.70826

Received: 11 July 2023; Revised: 15 July 2023; Accepted: 18 July 2023; Published: 17 August 2023

ABSTRACT

This study sought to determine the mediating effect of students' intellectual stimulation on the relationship between teachers' self-assessment and leadership competency. This study employed a descriptivecorrelational technique using adopted standardized questionnaires to gather respondents' data. The research revealed a mediating effect of students' intellectual stimulation on the relationship between teachers' selfassessment and leadership competency. Additionally, a relationship was revealed between the teachers' selfassessment, students' intellectual stimulation, and teachers' leadership competency. It implies that the students' intellectual stimulation mediates their teachers' leadership competency. Furthermore, the study hopes to contribute to the knowledge that students' intellectual stimulation mediates the overall teachers' leadership competency. This research hopes to make new knowledge and identify the factors in teachers' selfassessment. It could help educators in the teaching-learning process of the language more effectively in developing new interventions.

Keywords: educational management, mediating effect, student intellectual stimulation, teacher self-assessment, teacher leadership competency, Philippines

INTRODUCTION

Nowadays, teachers are becoming more engaged in numerous school operations outside their professional responsibilities, including decision-making, policy adoption, professional development, school improvement, and communication and dialogue with stakeholders. However, in the Philippines, there has yet to be a specific policy that motivates teachers to become leaders. Furthermore, qualifications for teacher leaders are based on something other than experience but rather academic qualifications. Further, training programs that could help neophyte teachers grow professionally need to be provided. This communicates that when teachers perform leadership, they do not align it with the school head's functions because of risk factors (Alegado, 2018; Kenjarski, 2015).

Teacher leadership is vital in bringing constructive change in every educational institution. Regardless of experience, teacher leaders impact schools considering the amount of training and opportunities they provide. Indeed, effective teacher leadership increases teaching and learning outcomes, extends the career opportunities of teachers, and guarantees a role for teachers in policy decisions affecting their practice leading to school improvement (Alegado, 2018; Angelle & DeHart, 2016; Coggins & McGovern, 2016; Katzenmeyer & Moller, 2001; Smylie et al., 2002; York-Barr & Duke, 2004).



Moreover, teachers engaging in leadership opportunities can develop their teaching practice. Teachers are challenged to improve themselves, enhance their teaching strategies and reflect on their teaching performance. Teacher self-assessment impacts teacher leadership for schools with meaningful activities and opportunities supporting partnership and inquiry (Fiarman, 2007; Mackiewicz-Wolfe, 2013).

Although many studies on teacher leadership can be found, the researcher has yet to come across a study on the mediating effect of student intellectual stimulation on the relationship between teacher self-assessment and teacher leadership competency. It signifies that the present study is geared to make a specific contribution and contribute new knowledge on teacher self-assessment concerning their teacher leadership competency. The present situation has led the researcher to determine the factors that can lead to teacher leadership competency. In this circumstance, the researcher is interested in determining whether teacher selfassessment influences teacher leadership competency. This can raise responsiveness to the intended beneficiaries of this study, thus, the urgency to conduct this study.

METHOD

This chapter exhibits the methods and procedures used in this study, including the research design, research locale, population and sample, research instrument, data collection, and statistical tools.

Research Design

This study utilized the non-experimental quantitative research design employing a descriptivecorrelational technique with the aid of adopted standardized questionnaires to gather data from the respondents. This procedure determined the relationship between two or more variables and examined the level to which one or more relationship exists.

It is descriptive because the data presented in quantitative descriptions are based on the mediating effect of student intellectual stimulation on the relationship between teacher self-assessment and teacher leadership competency. Correlation is utilized when the researcher wants to determine the existence, strength, and direction of the relationship between the two variables often leads to regression. It is supported by other theories that test relationships between variables, including characteristics of individuals, groups, or events (Salkind, 2010).

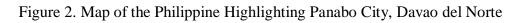
The quantitative aspect is an appropriate schedule for gathering the data designed for the target respondents to answer the questions. The process of gathering the data will be based on the use of a survey questionnaire. It will include varied information regarding the current or present condition. Further, the study focuses on determining the mediating effect of student intellectual stimulation on the relationship between teacher self-assessment and teacher leadership competency in Panabo City Division, Panabo City, Davao del Norte.

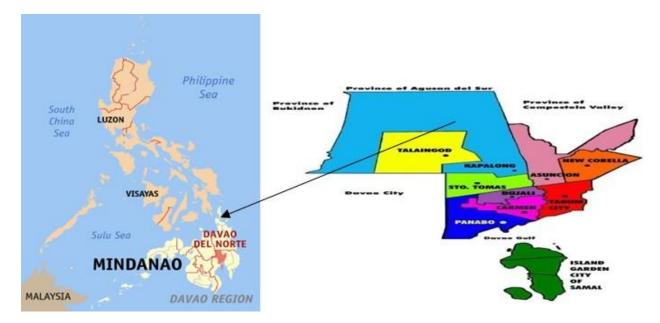
Research Locale

The findings of this study are specific to the context of the City of Panabo, located between the two bustling cities of Tagum and Davao, Davao del Norte. The scope and the sample will limit the possibility of the general applicability of the findings. Accordingly, although there could be standard features, the findings may have little applicability to other systems.

Presented in Figure 2 is the map of the Philippines consisting of 17 regions, including the City of Panabo, province of Davao del Norte. It is in Region XI. It is within 125° to 44? North and Longitude of 7°,14?, and23? East. It is bounded on the North-West by the Municipality of Carmen and the West by Davao City.

It is the doorstep of Davao City towards the Province of Davao del Norte. It could be reached by all types of land transportation passing through the Daang Maharlika (Pan-Philippine Highways), plying from Davao City to the northern part of Davao and finally to Butuan City and Cagayan de Oro City. From Davao City, it is 32 kilometers away with an estimated 45-minute travel time if there are no obstructions like traffic and road repair. The city's total land area is 25,123 hectares, 7.25% of the total land area of Davao Province. Panabo City is labeled as a third-class city since it has an average annual income of 270 million and above.





The respondents of the study were the teachers of the Panabo City Division. It consists of 18 public secondary schools. Furthermore, the study was conducted in Panabo City to resolve teacher self-assessment and leadership competency concerns.

Population and Sample

In this study, the targeted population includes public secondary school teachers of the Panabo City Division. The group was selected through stratified random sampling, preferred by the researcher. Stratified random sampling is the sampling method from a population that can be partitioned into subpopulations. It could be advantageous to sample each subpopulation independently (Botev & Riddler, 2017).

To get the ideal sample size of the population, the researcher utilized the stratified random sampling technique using Slovin's Formula. The maximum sample of Slovin's Formula will determine the desired sample size. Slovin's Formula was used to calculate the sample size (n) given the population size (N) and a margin of error (e). The sampling technique formula was used to estimate the sampling size. With the data provided by Panabo City Division- Planning Office, the total number of teachers who participated in the study was 336. However, the respondents can withdraw anytime if they think it is unfavorable and feel threatened.

There were twenty-one (21) schools identified in Panabo City where this study was conducted. These are the following schools with the total population, percentage distribution, and sample size; school A has 35 teachers with a 1.7 percentage distribution, which means there were six teachers possible respondents; School B has 56 teachers with a 2.6 percentage distribution, which means there were nine possible



respondents, school C 36 teachers with 1.7 percentage distribution which means there were six teachers, possible respondents, school D has 37 teachers with 1.7 percentage distribution which means there were six teachers, possible respondents, school E has 77 teachers with 3.6 percentage distribution with 12 teachers possible respondents, school F has 193 teachers with 9.1 percentage distribution which means there were 31teachers possible respondents.

In addition, school G has 66 teachers with 3.1 percentage distribution which means there were 10 teachers possible respondents, school I has 60 teachers with 2.8 percentage distribution which means there were 10 teachers possible respondents, school I has 183 teachers with 8.6 percentage distribution which means there were 29 teachers possible respondents, school J has 29 teachers with 1.4 percentage distribution which means there were 5 teachers possible respondents, school K has 42 teachers with 2.0 percentage distribution which means there were 7 teachers possible respondents, school L has 35 teachers with 1.7 percentage distribution which means there were 6 teachers possible respondents, school M has 124 teachers with 5.9 percentage distribution which means there were 20 teachers possible respondents, school N has 489 teachers with 23.1 percentage distribution which means there were 78 teachers possible respondents, school P has 32 teachers with 1.5 percentage distribution which means there were 5 teachers possible respondents, school P has 49 teachers with 2.3 percentage distribution which means there were 8 teachers possible respondents, school P has 49 teachers with 2.3 percentage distribution which means there were 5 teachers possible respondents, school P has 32 teachers with 2.3 percentage distribution which means there were 8 teachers possible respondents, school P has 49 teachers with 2.3 percentage distribution which means there were 8 teachers possible respondents, school P has 49 teachers with 2.3 percentage distribution which means there were 8 teachers possible respondents, school P has 32 teachers with 2.3 percentage distribution which means there were 8 teachers possible respondents, school P has 49 teachers with 2.3 percentage distribution which means there were 8 teachers possible respondents.

Moreover, school R has 59 teachers with a 2.8 percent distribution, which means there were nine teachers possible respondents; school S has 34 teachers with a 1.6 percentage distribution, which means there were five teachers possible respondents; school T has 139 teachers with 6.6 percentage distribution which means there were 22 teachers, possible respondent, school U has 51 teachers with 2.4 percentage distribution which means there were eight teachers possible respondents and last is school V has 192 with 9.1 percentage distribution which means there were 30 teachers possible respondents. There are twenty-one (21) schools in Panabo City Division, with a total population of 2 116 with a total sample size of 336 respondents.

In this study, the researcher identified the inclusion and exclusion criteria. For inclusion criteria, the respondents were male and female public secondary school teachers of Panabo City Division who have been in service for about five years and above. For the exclusion criteria, they are the private school teachers of the Panabo City Division.

The criteria in selecting respondents, all public-school teachers, are included but not private school teachers, male, and female, with five years and above the length of service and work as public-school teachers in Panabo City Division.

Research Instrument

Three sets of instruments were used in the study. The first instrument was used to measure the level of teacher self-assessment; the second was utilized to measure the level of teacher leadership competency, and the third was employed to measure the student intellectual stimulation in Panabo City Division.

To measure the level of teacher self-assessment as the independent variable, the researcher used the adopted standardized Akram & Zepeda (2016) survey with five indicators: subject matter knowledge, instructional planning strategies, assessment, learning environment, and effective communication. To measure teacher leadership competency as the dependent variable, the researcher will use the survey questionnaire developed by Yuet, Yusof & Ismail (2016). It has the following indicators: fostering a collaborative culture, facilitating improvement, establishing standards, modeling leadership attributes and skills, and performing as a referral leader as its indicators.



In addition, to measure the level of student intellectual stimulation as the mediating variable, the survey questionnaire of Bolkan & Goodboy (2010) with the following indicators: interactive teaching styles, challenging students, and encouraging independent thought will be used. The contents of the instrument will be presented to the group of experts for validation.

In evaluating the level of teacher self-assessment, the five orderable gradations with their respective range of means and descriptions were considered:

| Range of Means | Descriptive Equivalent | Interpretation |
|----------------|------------------------|---|
| 4.20- 5.00 | Very High | The item on teacher self-assessment is always manifested. |
| 3.40- 4.19 | High | The item on teacher self-assessment is oftentimes manifested. |
| 2.60- 3.39 | Moderate | The item on teacher self-assessment is sometimes manifested. |
| 1.80- 2.59 | Low | The item on teacher self-assessment is seldom manifested. |
| 1.00- 1.79 | Very Low | The item on teacher self-assessment is never manifested. |

In evaluating the level of teacher leadership competency, the following five orderable gradations with their respective range of means and descriptions were considered:

| Range of Means | Descriptive Equivalent | Interpretation |
|----------------|------------------------|---|
| 4.20- 5.00 | Very High | The item on teacher leadership competency is always manifested. |
| 3.40- 4.19 | High | The item on teacher leadership competency is oftentimes manifested. |
| 2.60- 3.39 | Moderate | The item on teacher leadership competency is sometimes manifested. |
| 1.80- 2.59 | Low | The item on teacher leadership competency is seldom manifested. |
| 1.00- 1.79 | Very Low | The item on teacher leadership competency is never manifested. |

In evaluating the level of student intellectual stimulation, the following five orderable gradations with their respective range of means and descriptions were considered:

| Range of Means | Descriptive Equivalent | Interpretation |
|----------------|------------------------|--|
| 4.20- 5.00 | Very High | The item on student intellectual stimulation is always manifested. |
| 3.40- 4.19 | High | The item on student intellectual stimulation is oftentimes manifested. |
| 2.60- 3.39 | Moderate | The item on student intellectual stimulation is sometimes manifested. |
| 1.80- 2.59 | Low | The item on student intellectual stimulation is seldom manifested. |
| 1.00- 1.79 | Very Low | The item on student intellectual stimulation is never manifested. |



Further, the three sets of instruments were subjected to pilot testing to determine the Cronbach Alpha values before the content validation by the experts.

Data Collection

After the approval of the panel members, the researcher underwent the following steps and procedures in gathering data for the study:

The researcher asked permission to conduct the study. Then, the researcher secured a letter of approval from the office of the Superintendent of the Division of Panabo City to conduct the study in the different public secondary schools. Upon approval, the letter of endorsement sought to accommodate the researcher to administer the survey questionnaire to the study's respondents.

Likewise, the researcher asked for approval from the School Heads to distribute the survey questionnaire to their teachers. The researcher personally handed out the questionnaires and explained the research tool and its purpose. Furthermore, the researcher retrieved the survey questionnaires after the respondents had answered all the items. Finally, the researcher tallied and tabulated all the data gathered from the respondents, subject to statistical analyses and with the guidance of a qualified statistician recommended by the university. The statistical results were analyzed and interpreted. With the data, conclusions were drawn, and recommendations were formulated based on the study's findings.

Statistical Tools

The statistical tools used for data analysis and interpretation are the following:

Mean. This statistical tool was used to determine the teacher self-assessment, teacher leadership competency, and student intellectual stimulation in Panabo City Division.

Pearson (**r**). This statistical tool was employed to determine the significant relationship between teacher self-assessment and teacher leadership competency, the significant relationship between teacher self-assessment and student intellectual stimulation, and the significant relationship between student intellectual stimulation and teacher leadership competency in Panabo City Division.

Simple Regression Analysis. This statistical tool was used to determine the influence of teacher self-assessment on teacher leadership competency in the Panabo City Division.

Multiple Regression Analysis. This statistical tool was used to determine the influence of teacher self-assessment towards teacher leadership competency with the student intellectual stimulation in the Panabo City Division.

Sobel Test. This statistical tool was used to determine the mediating effect of student intellectual stimulation on the relationship between teacher self-assessment and teacher leadership competency in the Panabo City Division.

RESULTS

Following the previously mentioned research objectives, the information gathered from the study participants was presented, examined, and interpreted in this section. The topics discussed in this order are the level of teachers' self-assessment, the level of teachers' leadership competency, the level of student intellectual stimulation; the relationship between teachers' self-assessment and student intellectual stimulation; the relationship between student intellectual stimulation and teachers' leadership competency;



and the results of the mediation analysis.

Level of Teachers' Self-assessment

Shown in Table 1 is the result of the teachers' self-assessment with an overall mean of 4.58 and a very high descriptive level. The outcome demonstrates that the learning environment has the highest mean of 4.63 and a Very High descriptive level. Following this, subject matter knowledge came in second with a mean of 4.58 and a descriptive level of High, followed by the assessment with a mean of 4.60 and a descriptive level of Very High, and instructional planning and strategies in third place with a mean of 4.55 and a descriptive level of High. On the other hand, effective communication has the lowest mean of all the indicators, with a mean of 4.52 and a very high descriptive level.

| Indicators | Standard deviation | Mean | Descriptive Equivalent |
|---------------------------------------|--------------------|------|------------------------|
| Subject matter knowledge | 1.01 | 4.58 | Very High |
| Instructional planning and strategies | 0.61 | 4.55 | Very High |
| Assessment | 0.60 | 4.60 | Very High |
| Learning environment | 0.60 | 4.63 | Very High |
| Effective communication | 0.63 | 4.52 | Very High |
| Over-all result | 0.75 | 4.58 | Very High |

Table 1. Level of Teachers' Self-assessment

Level of Teachers' Leadership Competency

Shown in Table 2 is the level of teachers' leadership competency, with a descriptive level of High and an overall mean of 4.45. Following facilitating of improvement and establishing standards with a mean of 4.51 and a descriptive level of High, fostering a collaborative culture with a mean of 4.41 and a descriptive level of High, and performing as a referral leader with a mean of 4.33 and a descriptive level of High, modeling leadership attributes and skills received the highest mean of 4.56 and a descriptive level of Very High.

Table 2. Level of Teachers' Leadership Competency

| Indicators | Standard deviation | Mean | Descriptive Equivalent |
|---|--------------------|------|------------------------|
| Fostering a collaborative culture | 0.67 | 4.41 | High |
| Facilitating improvement and establishing standards | 0.63 | 4.51 | Very High |
| Modeling leadership attributes and skills | 0.61 | 4.56 | Very High |
| Performing as referral leader | 0.77 | 4.33 | High |
| Over-all result | 0.67 | 4.45 | High |

Level of Student Intellectual Stimulation

Shown in Table 3 the weighted means of each criterion for the level of student intellectual stimulation, with a mean of 4.40 and a descriptive equivalent of High.

Table 3. Level of Student Intellectual Stimulation

| Mediating Variable | Standard deviation | Mean | Descriptive Equivalent |
|--------------------------|--------------------|------|------------------------|
| Intellectual Stimulation | 0.69 | 4.40 | High |

Significance of the relationship between the

Teachers' Self-assessment and Teachers' Leadership Competency

Shown in Table 4 is the outcome of the test on teachers' leadership competency and self-evaluation. The hypothesis was examined at the 0.05 level of significance for the connection. The null hypothesis was rejected by the overall r-value of .881 and the p-value of 0.05. It implies a strong correlation between teachers' leadership competency and self-assessment. It shows that teachers' self-assessment is correlated with teachers' leadership competency.

Table 4. Significance of the relationship between the teachers' self-assessment and Teachers' leadership Competency

| Pair | Variahles | Correlation Coefficient | p-value | Decision |
|---------|--|----------------------------|---------|----------|
| | Teachers' self-assessment and Teachers' leadership competency. | .881** | 0.000 | Reject |

Significance of the Relationship between Teachers' Self-assessment and student intellectual stimulation

Shown in Table 5 is the outcome of the test on teachers' leadership competency and student intellectual stimulation. The hypothesis was tested at the 0.05 level of significance for the connection. The null hypothesis was rejected by the overall r-value of .854 and the p-value of 0.05. It implies a strong correlation between teachers' self-assessment and student intellectual stimulation. It demonstrates the relationship between teachers' self-assessment and student intellectual stimulation.

Table 5. Relationship between teachers' self-assessment and student intellectual stimulation

| Pair | Variables | Correlation Coefficient | p-value | Decision |
|------|---|--------------------------------|---------|----------|
| | Teachers' self-assessment and student intellectual stimulation. | .854** | 0.000 | Reject |

Significance of the relationship between student intellectual stimulation

and teachers' leadership competency

Shown in Table 6 is the outcome of the test on student intellectual stimulation and teachers' leadership competency. The hypothesis was tested at the 0.05 level of significance for the connection. The null hypothesis was rejected by the overall r-value of .895 and the p-value of 0.05. It strongly correlates with student intellectual stimulation and teachers' leadership competency. It demonstrates the relationship between student intellectual stimulation and teachers' leadership competency.

Table 6. Relationship between student intellectual Stimulation and Teachers' leadership Competency

| Pair | Variahles | Correlation Coefficient | p-value | Decision |
|-------------|---|----------------------------|---------|----------|
| INIV and DV | Student intellectual stimulation and teacher leadership competency. | .895** | 0.000 | Reject |



Regression Results

Shown in Table 7 is the regression analysis of student intellectual stimulation on the relationship between teachers' self-assessment and leadership competency. The data in this table were used as input to the red graph. As evident in the study of Baron and Kenny (1986), as cited by Bananuka, Juma et al. (91), three steps must be met for a third variable to act as a mediator. Presented in Table 7 were categorized as Steps 1 to 3. Step 4 is the final step. In Step 1 (Path c), teachers' self-assessment as the independent variable significantly predicts teachers' leadership competency, the dependent variable. Then, in step 2 (Path a), teachers' self-assessment significantly predicts student intellectual stimulation, the mediator. Consequently, in step 3, student intellectual stimulation significantly predicts teachers' leadership competency and student intellectual stimulation on English language attitude is significant.

Table 7. Regression results of the variables in the four criteria of the presence of mediating effect

| STEP | PATH | BETA (UNSTANDARDIZED | STANDARD ERROR | BETA (STANDARDIZED) |
|--------|------|----------------------|----------------|---------------------|
| Step 1 | c | .914 | .028 | .881 |
| Step 2 | a | .889 | .031 | .854 |
| Step 3 | b | .526 | .043 | .528 |
| Step 4 | c' | .446 | .045 | .430 |

Table 8. Correlation between measure

| Correlations | | | | |
|--------------------|------------------------|-------------------------------|------------------------------------|---------------------------------------|
| | | Teacher's Self- Assessment | Teacher's Leadership Competency | Student's Intellectual Stimulation |
| Teacher's | Pearson Correlation | 1 | .881** | .854** |
| Self-assessment | Sig. (2-tailed) | | .000 | .000 |
| | N | 300 | 300 | 300 |
| Teacher's | Pearson Correlation | .881** | 1 | .895** |
| Leadership | Sig. (2-tailed) | .000 | | .000 |
| Competency | N | 300 | 300 | 300 |
| Student's | Pearson Correlation | .854** | .895** | 1 |
| Intellectual | Sig. (2-tailed) | .000 | .000 | |
| Stimulation | N | 300 | 300 | 300 |
| **. Correlation is | significant at the | 0.01 level (2-tailed). | • | |

DISCUSSION

This chapter discussed the study's findings on teacher leadership competency, student intellectual



stimulation, and teacher self-assessment. It also includes conclusions and recommendations.

Level of Teachers' Self-assessment

Assessing the teacher's personal, academic, and professional performance entails a person learning from his experiences. Teachers who self-assess can take charge of their development. It can potentially be one of the most effective methods for assessing the caliber of teachers.

The first indicator, subject matter knowledge, has a descriptive equivalent of Very High and is interpreted as teachers agree; the items with a descriptive equivalent of very high starting from the highest are the following: use school and community resources to help students, communicate content in ways that students can understand, demonstrate accurate knowledge of the subject matter, link content with past and future learning experiences, teach according to the intellectual and emotional needs of the students, effectively address appropriate curriculum standards, and based instruction on goals that reflect high expectations, demonstrate a variety of skills of subject area(s). All are with a descriptive equivalent of Very High and interpreted as teachers Strongly agree.

The second indicator, instructional planning and strategies, have a descriptive equivalent of Very High and are interpreted as teachers Strongly agree; the items with a descriptive equivalent of Very high, starting from the highest, are the following: understanding individual differences between students and teach accordingly, use strategies to enhance students' understanding, engage, motivate, and maintain students' attention, use appropriate material, technology, and resources, use student learning data to guide planning, change teaching methodology to make topics relevant, and teach the required curriculum according to a time-table. All items got a descriptive equivalent of Very High and were interpreted as teachers strongly agreeing.

The third indicator, assessment, has a descriptive equivalent of Very High and is interpreted as teachers Strongly agree; the items with a descriptive equivalent of very high, starting from the highest, are the following: conduct class tests to monitor student performance, keep an official record of student's learning progress, maintain students' results, and use future improvement, evaluate students' performance and provide feedback, and revise content to enhance students' achievement. All items got a descriptive equivalent of Very High and were interpreted as teachers strongly agreeing.

The fourth indicator, the learning environment, has a descriptive equivalent of Very High and is interpreted as teachers Strongly agree; the items with a descriptive equivalent of very high starting from the highest are the following: ensure students' participation in the learning process, encourage students to interact respectfully, maintain a classroom setting that minimizes disruption, create a climate of mutual trust and respect in the classroom, and create friendly and supportive classroom environment. All are with a descriptive equivalent of Very High, interpreted as teachers strongly agree.

The fifth indicator, effective communication, has a descriptive equivalent of Very High and is interpreted as teachers Strongly agree; the items with a descriptive equivalent of very high starting from the highest are the following: respond to students' questions with inappropriate language and explain lessons according to the age and ability of students. All items got the exact descriptive equivalent of Very High and interpreted as teachers strongly agree.

The result confirms the study of Gribusts (2016), who stated that it improves students' performance and makes learning more realistic; the learning environment must also stay up to modern technology. A good teacher sets a structure for the classroom that establishes the rules and regulations (Evertson, 1985; Stronge, 2007). Additionally, there are three critical elements of the learning environment: the surrounding environment, the mental state of the students, and the human resources. These elements are crucial to



learning and nurturing learners, especially in this contemporary period. Teachers make ensuring that the learning environment is used in a way that encourages authentic learning. Moreover,

Level of Student Intellectual Stimulation

General definitions of intellectual stimulation include challenging oneself to identify and determine problems and to develop solutions as part of one's technical proficiency and intellectual dominance (Bass, 1985; Bolkan & Goodboy, 2010).

The first indicator, interactive learning style has a descriptive equivalent of High and is interpreted as teachers agree; the items with a descriptive equivalent of very high starting from the highest are the following: help students get excited about learning through classroom activities, stimulate students to help us get involved in the learning process in a variety of ways, use unique activities to get the class involved with the course materials, have an interactive style of teaching, use exciting teaching techniques in class, use an innovative teaching style to get students excited about learning, play games in class to help students learn, present course material in a novel way, and use the same sort of activities that any other teacher would use, and have a superior teaching style compared to other teachers.

The second indicator, challenging students has a descriptive equivalent of Very High and is interpreted as teachers Strongly agree; the items with a descriptive equivalent of very high starting from the highest are the following: challenge them to be the best student they can be, pushes to produce quality work, does work hard to ensure that know the material well, helps realize that hard work is worth it, helps come to conclusions about what learn through discussion, challenges to support ideas in class with evidence and examples, encourages to look into course concepts in a meaningful way, help students see things we learn about in new perspectives, challenges to see course content in new ways and assign demanding but worthwhile assignments. All items got the exact descriptive equivalent of Very High and interpreted as teachers strongly agree.

The third indicator, encouraging independent thought, has a descriptive equivalent of Very High and is interpreted as teachers Strongly agree; the items with a descriptive equivalent of very high starting from the highest are the following: would appreciate a student who expresses his/her own opinion, even if it is not exactly right, encourage independent thought from students, ask for personal examples from students in class when teaching concepts, helps think analytically about what we learn, helps to form conclusions about the course content, helps think through deeply about the concepts taught in class, helps think critically about course concepts, drives to think critically about what we are learnings, encourages to come to conclusions about course material, and gets to think through problems in class. All items got the exact descriptive equivalent of Very High and interpreted as teachers strongly agree.

The result supports Bolkan & Goodboy (2010) mentioned that when teachers encourage intellectual stimulation in their pupils, they experience a sense of empowerment. It gives them the freedom to think of endless possibilities for the topic; they want to participate in the activities for it to have meaning. Additionally, they want intellectual challenges that would allow them to demonstrate their abilities and potential throughout their learning process. Yasin (2014) also found that intellectual stimulation may be devised as a tool for progress and is closely connected to innovation-related activities.

Level of Teachers' Leadership Competency

Teacher leadership competency refers to the ability of the teacher to walk into the roles portrayed by some school leaders when opportunities are afforded to them.

The first indicator, fostering a collaborative culture, has a descriptive equivalent of Very High and is



interpreted as teachers Strongly agree; the items with a descriptive equivalent of very high, starting from the highest, are the following: collaborate and share responsibilities with others for student excellence, exemplify ethical standard, foster teamwork in order to achieve targeted goals, utilize data to make an informed decision, make improvements in management practices based on data analysis, provide feedback to the management to enhance school improvement, practice professional learning through research, and access and utilize research data to improve managerial practices. All items got the exact descriptive equivalent of Very High and interpreted as teachers strongly agree.

The second indicator, facilitating improvement and establishing standards, has a descriptive equivalent of Very High and is interpreted as teachers Strongly agree; the items with a descriptive equivalent of very high, starting from the highest, are the following: life-long practice learning, nurture the ability to make a good decision among peers and students, practice collaboration culture in order to maximize student performance, establish standards for student behavior and school-wide classroom management policies, model various leadership values and behavior. All items got the exact descriptive equivalent of Very High and interpreted as teachers strongly agree.

The third indicator, modeling leadership attributes and skills, has a descriptive equivalent of Very High and is interpreted as teachers Strongly agree; the items with a descriptive equivalent of very high starting from the highest are the following: develop student potential for higher order thinking and practice life-long learning values, inculcate ethical/integrity values in leadership practices, enhance student capacity to be a leader and help students to apply practical interpreted and intrapersonal communication skills. All items got the exact descriptive equivalent of Very High and interpreted as teachers strongly agree.

The fourth indicator, performing as referral leader, has a descriptive equivalent of Very High and is interpreted as teachers Strongly agree; the items with a descriptive equivalent of very high starting from the highest are the following: deal with instructional and management matters, contribute above and beyond their prescribed roles, demonstrate exemplary practices on "organizational change and innovation," and lead groups, workshops, collaborative work, mentoring, teaching adults and action research. All items got the exact descriptive equivalent of Very High and interpreted as teachers strongly agree.

The result supports that leadership attributes and skills are essential as education leaders become change agents. To improve teaching and learning outcomes, these teachers must be prepared to comprehend how the organization works and challenge current policies. Teachers must have the principals' full support to carry out their other responsibilities (Grant et al., 2010; Medina, 2014).

Additionally, teacher leadership makes A seamless transition between teaching and leading possible. Realizing formal leadership enables teachers to pick up new knowledge and abilities during lessons and school activities (Smylie, 1995; Struyve et al., 2014).

Significance of the Relationship between the Teachers' Self-assessment and

Teachers' Leadership Competency

The relationship between teachers' self-assessment and leadership competency revealed a significant relationship between teachers' self-assessment and leadership competency. It implies that the teachers' self-assessment is correlated with teachers' leadership competency. In other words, the teachers' self-assessment of the teachers would also likely be affected by the teachers' leadership competency.

The result supports the studies of Kagan (1992), Liberman & Miller (2004), and Mackiewicz-Wolfe (2013) that teacher self-assessment is manifested through teaching confidence in the skills and knowledge of the subject matter with professional and principled practice. It has been linked



positively to the domains of teacher leadership, specifically communication with parents and other stakeholders, building relations, and encouraging disposition in teaching and handling people. These can be classified into two, which are leadership engagement and participation in school change or improvement.

Significance of the Relationship between Teachers' Self-assessment and Student Intellectual Stimulation

The relationship between teachers' self-assessment and student intellectual stimulation revealed a significant relationship between teachers' self-assessment and student intellectual stimulation. It implies that the teachers' self-assessment is correlated with student intellectual stimulation. In other words, the teachers' self-assessment of the teachers would also likely be affected by the student's intellectual stimulation.

Significance of the relationship between Student Intellectual Stimulation and Teachers' Leadership Competency

Student intellectual stimulation and teachers' leadership competency revealed a significant relationship between student intellectual stimulations and teachers' leadership competency. It implies that student intellectual stimulation is correlated with teachers' leadership competency. In other words, student intellectual stimulation of the students would also likely be affected by the teachers' leadership competency.

The result supports the studies of Bass (1999); Bolkan et al. (2011) that teacher leadership competency is influenced by student intellectual stimulation. The classroom behavior of teachers, especially their leadership capacity, impacts their teaching methods. These actions promote independent thought, challenge pupils, and employ an interactive teaching approach. Additionally, transformational leadership supports the organization's mission and students' interests.

On the mediating effect of Student Intellectual Stimulation on the relationship between Teachers' Selfassessment and Teachers' Leadership Competency

According to the mediation study, intellectual stimulation partially mediates the connection between teachers' self-assessment and leadership competency. The partial mediation could not ultimately assert that student intellectual stimulation is why teachers' self-assessment can influence the teacher's leadership competency. It suggests that student intellectual stimulation can help explain how teachers' self-assessment toward teachers' leadership competency.

CONCLUSION

The study's findings are used in this section to conclude. The outcomes of this study support the hypothesis that student intellectual stimulation mediates the connection between teachers' self-assessment and leadership competency. Although only partial mediation exists for student intellectual stimulation, the mediator cannot account for the effects on teachers' leadership competency.

The level of teachers' self-assessment is Very High and interpreted as most respondents strongly agree. The indicator with the highest mean is the learning environment, with a descriptive value of Very High, and the indicator that got the lowest mean is the effective communication which still has a descriptive value of Very High.

While the teachers' leadership competency level got a descriptive value of High, which is interpreted as most respondents agree, the indicator with the highest mean is modeling leadership attributes and skills with a descriptive value of Very High. On the other hand, the indicator with the lowest mean performs as a



referral leader with a High descriptive value.

On the other hand, the level of student intellectual stimulation got the descriptive value of High and interpreted as most students agree. The intellectual stimulation got the mean of High, interpreted as most students agree.

Furthermore, the teachers' self-assessment and leadership competency were rejected, which means there was a significant relationship between the teachers' self-assessment and leadership competency.

On the teachers' self-assessment and student intellectual stimulation, which were rejected, there was a significant relationship between the teachers' self-assessment and student intellectual stimulation. While the student intellectual stimulation and teachers' leadership competency were rejected, there was a significant relationship between student intellectual stimulation and teachers' leadership competency.

On another note, the mediating effect of student intellectual stimulation on the relationship between the teacher's self-assessment and teachers' leadership competency was rejected. There was a mediating effect of student intellectual stimulation on the relationship between student intellectual stimulation and teachers' leadership competency.

The overall result supports the studies of Anderson & Krathwohl (2011); Boettcher & Conrad (2010) stated that teachers engage their pupils in public or online dialogues to stimulate their intellectual capacity. Online discussion forums on specific subjects help stimulate the brain. Students may use their information in new ways; they could go beyond rote memorization to higher levels of thought, which should inspire discussion among the students.

Additionally, technology tools must be incorporated to support the intellectual stimulation of students on the Internet. It helps communicate with them effectively. If used appropriately, these technologies improve the learning experience. These technologies must cover generating, assessing, and analyzing learning components. They are inspired to improve when they can produce outputs using these techniques. Thus, teachers must offer tutorials and a support system to motivate students to achieve more. Some students tend to keep going if they cannot complete it or are unfamiliar with how to utilize it (Churches, 2009; Lan et al., 2003).

Moreover, Mottet, Parker-Raley, Beebe, & Cunningham (2007) suggested that students might not be resistant to obtaining activities that boost intellectual function if teachers in the classroom use appropriate instructional communication conduct. As a result, it was strongly suggested that college students should only expect their instructors to assign them a few activities, projects, and other similar chores. It suggests that such students believe they should receive a lot from their professors because they paid for their education, which means that they believe they should.

RECOMMENDATIONS

Based on the findings and conclusions, the following suggestions are made:

Administrators may design programs that will improve teachers' practical communication skills by giving equal opportunities for training and development workshops that would enhance teachers' practical communication skills, like attending seminars and workshops for delivering instructions and even language communication in the workplace among teachers and students.

Teachers' leadership competency, supervisors, and leaders may monitor and evaluate their subordinates regularly to help the leaders diagnose and know what appropriate skills, training, and needs their teacher



needs. With appropriate planning, the teacher-leader may help novice or veteran teachers enhance, improve, diversify, strategize, cope, and manage the class more effectively, helping the students stimulate learning.

Further research of the study may be conducted to explore other factors that significantly mediate the student intellectual stimulation on the relationship between the teachers' self-assessment and the teachers' leadership competency. Additionally, replication of this study is encouraged to confirm and test the findings in different settings.

REFERENCES

- 1. Akram, M., & Zepeda, S. J. (2015). Development and Validation of a Teacher Self-assessment Instrument. Journal of Research & Reflections in Education (JRRE), 9(2).
- 2. Alegado, P. J. E. (2018). The challenges of teacher leadership in the Philippines as experienced and perceived by teachers. International Journal of Education and Research, 6(6), 291-302.
- 3. Aliakbari, M., &Sadeghi, A. (2014). Iranian teachers' perceptions of teacher leadership practices in schools. Educational Management Administration & Leadership, 42(4), 576-592.
- 4. Anderson, L., & Krathwohl, D. (2001). A Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of
- 5. Angelle, P. S., &DeHart, C. A. (2011). Teacher perceptions of teacher leadership: Examining differences by experience, degree, and position. Nassp Bulletin, 95(2), 141-160.
- 6. Arbizu, F., C. Olalde, and L. Del Castillo. 1998. The self-evaluation of teachers: A strategy for improving teaching at the higher education level. Higher Education in Europe 23, no. 3: 351–6.
- 7. Artzt, A. F., Armour-Thomas, E., Curcio, F. R., &Gurl, T. J. (2015). Becoming a reflective mathematics teacher: A guide for observations and self-assessment. Routledge.
- 8. Astuto, T. A., Clark, D.L., Read, A-M., McGree, K., & Fernandez, L., deK. P. (1993). Challenges to dominant assumptions controlling educational reform. Andover, Massachusetts: Regional Laboratory for the Educational Improvement of the Northeast and Islands.
- 9. Avolio, B. J., & Bass, B. M. (2004). MLQ: Multifactor leadership questionnaire. Mind Garden.
- 10. Bass, B. M. (1999). Two decades of research and development in transformational leadership. European Journal of Work and Organizational Psychology, pp. 8, 9–32.
- 11. Boettcher, J., & Conrad, R. (2010). The online teaching survival guide: Simple and practical pedagogical tips. San Francisco:Jossey-Bass.
- 12. Bogner, J. (2002). Teacher leadership and peer coaching. Unpublished master's thesis, Principal Leadership Institute.
- Bolkan, San &Goodboy, Alan & Griffin, Darrin. (2011). Teacher Leadership and Intellectual Stimulation: Improving Students' Approaches to Studying through Intrinsic Motivation. Communication Research Reports. 28. 337–346. 10.1080/08824096.2011.615958.
- Botev, Z. & Riddler, A. (2017). Variance Reduction. Wiley Stats Ref: Statistics Reference Online: pp. 1–6.
- 15. Boud, D. (2013). Enhancing learning through self-assessment. Routledge.
- 16. Brown, G. T., & Harris, L. R. (2014). The Future of Self-Assessment in Classroom Practice: Reframing Self-Assessment as a Core Competency. Frontline Learning Research, 2(1), 22–30.
- Butler, R. (2011). Are positive illusions about academic competence always adaptive under all circumstances: New results and future directions? International Journal of Educational Research, 50(4), 251–256. doi 10.1016/j.ijer.2011.08.006
- 18. Charteris, J., & Smardon, D. (2014). Dialogic peer coaching as teacher leadership for professional inquiry. International Journal of Mentoring and Coaching in Education.
- 19. Cheung, R., Reinhardt, T., Stone, E., & Little, J. W. (2018). Defining teacher leadership: A framework. Phi Delta Kappan, 100(3), 38-44.
- 20. Chickering, A., & Gamson, Z. (1987). Seven principles for good practice in undergraduate education. AAHE Bulletin, 39(7), pp.3-7.

- 21. Churches, A. (2009). Bloom's digital taxonomy. http://edorigami.wikispaces.com/file/view/bloom%27s +Digital+taxonomy+v3.01.pdf
- 22. Coggins, C., & McGovern, K. (2014). Five goals for teacher leadership. Phi Delta Kappan, 95(7), 15-21.
- 23. Colley, M. (2011). Everyday teacher leadership: Taking action where you are. San Francisco, CA: Jossey-Bass.
- 24. Cranston, P. (2001). Interpretive and critical evaluation. New Directions for Teaching and Learning 88: pp. 11–18.
- 25. Crowther, F., Ferguson, M., & Hann, L. (2009). Developing teacher leaders: How teacher leadership enhances school success. Thousand Oaks, CA: Corwin Press.
- 26. Day, C. & Harris, A. (2002). Teacher leadership, reflective practice, and school improvement. In K. Leithwood and P. Hallinger (Eds.), Second International Handbook of Educational Leadership and Administration (pp. 957-977). AA Dordrecht, the Netherlands: Kluwer Academic Publishers.
- 27. DuFour, R., & Eaker, R. (1998). Professional learning communities at work: Best practices for enhancing student achievement. Alexandria, VA: Association for Supervision and Curriculum Development.
- 28. Durrant J and Holden G (2006). Teacher Leading Change: Doing Research for School Improvement. London: Paul Chapman Publishing. Educational Objectives. New York: Longman.
- 29. Essays, UK. (November 2018). Theories of Self Leadership. Retrieved from https://www.ukessays.com/essays/business/self-assessment-in-self-leadership-business-essay.php?vref=1
- 30. Fiarman, S. E. (2007, April). It's hard to go back: Career decisions of second stage teacher leaders. Paper presented at the American Educational Research Association Annual Conference, Chicago, IL.
- 31. Fink, L. D. (2003). Creating significant learning experiences: An integrated approach to designing college courses. San Francisco: Jossey-Bass.
- 32. Fullan, M. (2014). The principal: Three keys to maximizing impact. Don Mills, Ontario, Canada: Pearson.
- 33. Grant, C., & Singh, H. (2009). Passing the buck: This is not teacher leadership! Perspectives in Education, 27(3), 289–301.
- 34. Grant, C., Gardner, K., Kajee, F., Moodley, R., &Somaroo, S. (2010). Teacher leadership: a survey analysis of KwaZulu-Natal teachers' perceptions. South African Journal of Education, 30(3).
- 35. Gray, B. C. (2016). Teacher Leadership: A Delphi Study of Factors in Building Teacher Leadership Capacity in Elementary Educational Organizations(Doctoral dissertation, Brandman University).
- 36. Guenzler, A. M. (2016). Teacher Leadership and Teacher Efficacy: A Correlational Study Comparing Teacher Perceptions of Leadership and Efficacy and Teacher Evaluation Scores from the North Carolina Educator Evaluation System. ProQuest LLC. 789 East Eisenhower Parkway, PO Box 1346, Ann Arbor, MI 48106.
- 37. Harris A and Muijs D 2005. Improving schools through teacher leadership. Maidenhead: Open University Press.
- 38. Harris, A. (2005). Crossing boundaries and breaking barriers: Distributing leadership in schools. iNET pamphlet, Specialist Schools Trust.
- 39. Harris, A., & Muijs, D. (2002). Teacher leadership: Principles and practice.
- 40. Institute for Educational Leadership, Inc. (2011a). Leadership for student learning: Redefining the teacher as leader. In E. B. Hilty (Ed.), Teacher leadership: The "new" foundations of teacher education (pp. 85-103). NY: Peter Lang Publishing, Inc.
- 41. Iwanicki, E. F., &McEachern, L. (1984). Using teacher self-assessment to identify staff development needs. Journal of Teacher Education, 35(2), 38-41.
- 42. Katzenmeyer, M., & Moller, G. (2001). Awakening the sleeping giant. Helping teachers develop as leaders. Thousand Oaks, CA: Corwin Press.
- 43. Kenjarski, M. R. (2015). Defining Teacher Leadership: Elementary Teachers' Perceptions of Teacher Leadership and the Conditions Which Influence its Development.



- 44. Kirui, J. K., Iravo, M. A., & Kanali, C. (2015). The Role of Transformational Leadership in Effective Organizational Performance in State-Owned Banksin Rift Valley, Kenya. International Journal of Research in Business Management, Vol. 3, Issue 10, 45-60.
- 45. Klenowski, V. (1995). Student self-evaluation processes in student-centered teaching and learning contexts of Australia and England. Assessment in Education, 2(2), 145-163.
- 46. Lan, W., Tallent-Runnels, M., Fryer, W., Thomas, J., Cooper, S., & Wang, K. (2003). An examination of the relationship between technology problems and teaching evaluations of online instruction. The Internet and Higher Education, pp. 6, 365–375.
- 47. Light, R. (2001). Making the most of college: Students speak their minds. Cambridge: Harvard University Press.
- 48. Link, T. R. (2011). The impact of teacher evaluation models on teacher leadership, teacher collegiality, and instructional risk-taking(Doctoral dissertation, Walden University).
- 49. Lussier, R. N., & Achua, C. F. (2015). Leadership: Theory, application, & skill development. Nelson Education.
- 50. Mackiewicz-Wolfe, Z. (2013). The relationships between teacher practice and teacher leadership skills in second-stage teachers.
- 51. Mackiewicz-Wolfe, Z. (2013). The relationships between teacher practice and teacher leadership skills in second-stage teachers.
- 52. Margolis, J., & Huggins, K. S. (2012). Distributed but undefined: New teacher leader roles to change schools. Journal of School Leadership, 22(5), 953–981.
- 53. McMillan J, Hearn J. Student self-assessment: the key to stronger student motivation and higher achievement. Educational Horizons 2008: 40–49.
- 54. Medina, A. J. (2014). Elementary teacher leaders: Theory and methodology of development (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (UMI No. 1553217633)
- Messick, S. (1989). Validity. In R. L. Linn (Ed.), Educational Measurement (3rd ed., pp. 13–103). Old Tappan, NJ: MacMillan
- Mottet, T. P., Parker-Raley, J., Beebe, S. A., & Cunningham, C. (2007). Instructors who resist college light": The neutralizing effect of instructor immediacy on students' course-workload violations and perceptions of instructor credibility and effective learning. Communication Education, 56, 145–157. doi:10.1080=03634520601164259
- 57. Myers, C., & Jones, T. B. (1993). Promoting active learning: Strategies for the college classroom. San Francisco: Jossey-Bass.
- 58. National Academies of Sciences, Engineering, and Medicine. (2015). Science teachers learning: Enhancing opportunities, creating supportive contexts. Washington, DC: The National Academies Press.
- 59. Neck, C. P., & Houghton, J. D. (2006). Two decades of self?leadership theory and research. Journal of managerial psychology. Philippines(Doctoral dissertation, UCL Institute of Education).
- 60. Pa-alisbo, M. A. C. (2017). The 21st Century Skills and Job Performance of Teachers. Online Submission, 8(32), 7-12.
- 61. Panadero, E., Tapia, J. A., &Huertas, J. A. (2012). Rubrics and self-assessment scripts effects on self-regulation, learning, and self-efficacy in secondary education. Learning and individual differences, 22(6), 806-813.
- 62. Pillay S (2008). Teacher leadership: a self-study. Unpublished MEd dissertation. Pietermaritzburg: University of KwaZulu-Natal.
- 63. Rasberry, M. A., & Mahajan, G. (2008). From Isolation to Collaboration: Promoting Teacher Leadership through PLCs. Center for Teaching Quality.
- 64. Salkind, N. J. (2010). Encyclopedia of research design Thousand Oaks, CA: SAGE Publications Ltd doi: 10.4135/9781412961288
- 65. Singh HD (2007). To what extent does the School Management Team promote or hinder the development of teacher leadership? Case studies of two public primary schools in the northern suburbs of Pietermaritzburg, KwaZulu-Natal. Unpublished MEd dissertation. Pietermaritzburg:

University of KwaZulu-Natal.

- 66. Smylie MA, Conley S and Marks HM (2002). Exploring new approaches to teacher leadership for school improvement. In: Murphy J (ed.) The Educational Leadership Challenge: Redefining Leadership for the 21st Century. Chicago, IL: The National Society for the Study of Education, pp. 162–188.
- 67. Smylie, M. (1995).New perspectives on teacher leadership. The Elementary School Journal, 96(1), 3–7.
- 68. Spillane, J. (2006). Distributed leadership. San Francisco, CA: John Wiley and Sons, Inc.
- 69. Spiller, D. (2012). Assessment matters Self-assessment and peer assessment. Teaching development unit, pp. 1–19.
- Stone, G. A, Russell, R. F., & Patterson, K. (2004). Leadership & Organization Development Journal. 25(4), 349–361.
- 71. Stronge, J. H. (2010). Effective teachers= student achievement. New York, NY: Eye on Education.
- 72. Struyve, C., Meredith, C., & Gielen, S. (2014). Who am I, and where do I belong? The perception and evaluation of teacher leaders concerning teacher leadership practices and micropolitics in schools. Journal of Educational Change, 15(2), 203-230.
- 73. Walvoord, B., & Anderson, V. (2010). Effective grading: A tool for learning and assessment in college. San Francisco: Jossey-Bass.
- 74. Werner, J. M., Desimone, Randy, L., (2008). Human Resource Development, 5th Edition South Western.
- 75. Wilson, A. (2016). From Professional Practice to Practical Leader: Teacher Leadership in Professional Learning Communities. International journal of teacher leadership, 7(2), 45–62.
- 76. Yasin, G., Nawab, S., Bhatti, K. K., &Nazir, T., (2014). Relationship of Intellectual Stimulation, Innovations, and Smes Performance: Transformational Leadership a Source of Competitive Advantage in Smes. Middle-East Journal of Scientific Research 19 (1): 74-81.
- 77. York-Barr J and Duke K (2004). What do we know about teacher leadership? Findings from two decades of scholarship. Review of Educational Research 74(3): 255–316.