

The Mediating Effect of Professional Development on the Relationship between Instructional Leadership and Teacher Self-Efficacy

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Abstract: The aim of this study was to contribute to the literature regarding potential indirect, mediating variable for the relationship between instructional leadership and teacher self-efficacy. In particular, professional development was investigated as a potential mediating construct to explain the manner in which instructional leadership affects teacher self-efficacy with the use of survey questionnaires as tool in gathering the primary data from the 400 secondary teachers in Region XI. The study employed a non-experimental quantitative design utilizing the correlational technique of research which is designed to gather data, ideas, facts and information related to the study. Statistical tools employed in the analysis of data gathered were mean, Pearson r, regression technique, medgraph using Sobel z-test. Results revealed that there is a significant relationship between instructional leadership and teacher self-efficacy, instructional leadership and professional development and professional development and teacher self-efficacy in Davao Region. Results in the mediation computation revealed that significant partial mediation occurred.

Keywords: Teacher Self-Efficacy, Professional Development, Instructional Leadership, Student Achievement, Mediating Effect.

1. INTRODUCTION

Over the years there have been significant discussions that focused on the improvement of student achievement not only in the Philippines but the same is true in other countries. However, despite the various development plans and projects implemented by the government and private sectors, the quality of education in the country still leaves much room for improvement. Educators, school principals and other officials in the Department of Education are all grappling with the issues of raising students' achievement.

In trying to figure out on who is really accountable, the role of the teacher in the process of promoting such improvement cannot be underestimated. Recent studies provide evidence supporting the idea that teachers are one of the most critical elements of school reform (U.S. Department of Education, 2007). Teachers' sense of efficacy is related positively to the percentage improvement of student growth. Teacher self-efficacy has been significantly associated with the use of instructional strategies that increase students' achievement and the teacher's willingness to embrace new ideas (Philipp, 2007). On the other hand, Lan (2014) found out that leadership of school principals influences teachers' belief in their ability to execute classroom instructions. This is basically the reason why the emphasis on instructional leaders driven in large part by the effective schools movement since 1970's to 1980's has since been renewed because of increasing demands that school leaders be held accountable for student performance (Hallinger, 2005). Sergiovanni and Starratt

International Journal of Novel Research in Education and Learning

Vol. 2, Issue 4, pp: (90-101), Month: July - August 2015, Available at: www.noveltyjournals.com

(2007) stressed that when a school's instructional capacity improves; teaching improves, leading to improvements in students' performance.

Moreover, teacher efficacy has been associated with such significant variables as student growth (Philipp, 2007); student achievement (Overton, 2007); teachers' adoption of innovations, superintendents' ratings of teachers' competence, teachers' classroom management strategies, time spent teaching certain subjects, and teachers' referrals of students to special education. Yet much remains to be learned about this important aspect of efficacy and how it develops in teachers.

Nevertheless, previous reports showed how professional development mediates on the relationship between instructional leadership and teacher self-efficacy, especially in the local setting. These variables are deemed to have pivotal role to increase the caliber of education at schools which are worthy of further research. Thus this study was conducted to investigate the potential indirect mediating effect of professional development in the relationship between instructional leadership and teacher efficacy.

2. REVIEW OF THE LITERATURE

Teachers' self-efficacy in this study is anchored on social cognitive theory of Bandura (1986) stating that the beliefs that people have about themselves are critical elements in the exercise of control, stating "what people think, believe, and feel affects how they behave" (p. 25). Furthermore, Bandura (1986) defined self-efficacy as "peoples judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391).

Teacher self-efficacy in this study is taken as teachers' judgment of his or her capabilities to bring about desired outcomes of student engagement and learning (Tschannen-Moran & Woolfolk-Hoy, 2001, p. 783. in terms of Efficacy to Influence Decision making, influence School Resource, Instructional Self-Efficacy, disciplinary Self-Efficacy, Efficacy to Enlist Parental Involvement, Efficacy to Enlist Community Involvement and Efficacy to Create a Positive School Climate.

The instructional leadership of principal/school heads and their impact on teachers run parallel with theories of traditional organizational leadership and its effect on subordinates. Thus, instructional leadership in this study is anchored on the four prominent theories - the bureaucratic theory, social systems theory, open systems theory, and contingency theory.

Instructional leadership pertains to actions undertaken by the principal/school head/administrators to improve teaching and learning in terms of the following indicators; Communicating goals (Blasé & Roberts, 1994); supervising instruction (Blasé & Blasé 1998); promoting professional growth (Blasé & Balse); Providing support (Appleton & Kindt, 1999), providing incentives (Sheppard, 1996), providing support, issuing directives.

Professional development is another variable in this study that is anchored on Vygotsky (1978) whose work principally centered on children; however, identical processes occur in adult learners. Thus, the influence and interactions between a more knowledgeable individual, such as an expert, peer or mentor and an adult learner becomes a critical phenomenon for study in sociocultural learning. Though developed primarily to explain the teacher-student relationship, Vygotsky's (1978) theory assisted in understanding the process of teachers learning and developing their knowledge and skills with more capable individuals/expert teachers or professional developers providing continued education and different activities to support practicing teachers through in-service trainings, seminars, workshops, etc.

In this study, professional development refers to practices and opportunities for professional to increase their knowledge and skills (Morgan, 2007). A process of continual intellectual, experiential and attitudinal growth of teachers (Bailey et al. 1998).

3. METHODOLOGY

Research Design:

The study employed a non-experimental quantitative design utilizing the correlational technique of research which is designed to gather data, ideas, facts and information related to the study. Such method was used to establish norms and standards based on a wide class of survey data. This study used a descriptive method where the researcher describe and present data that gives a real picture of a phenomenon or phenomena under investigation (Shields and Rangarajan, 2013). This study tried to investigate the relationships between variables- professional development, instructional leadership and

International Journal of Novel Research in Education and Learning

 Vol. 2, Issue 4, pp: (90-101), Month: July - August 2015, Available at: www.noveltyjournals.com

teacher self-efficacy, with the use of survey questionnaire as a tool in gathering the primary data. The interest of the study is to investigate the mediating effect of professional development on the relationship between instructional leadership and teacher self-efficacy; the relationship between instructional leadership and teacher self-efficacy; the relationship between teacher efficacy and professional development and the relationship instructional leadership and professional development.

Med graph was employed to in determining the mediation effect of professional development on the relationship between instructional leadership and teacher-self-efficacy.

Research Locale:

This study was conducted in Davao Region- XI consisting of supposedly ten (10) divisions namely; Compostela Valley Province, Davao del Norte, Davao del Sur, Davao Oriental, Mati City, Digos City, Davao City, Panabo City, Tagum City and Island Garden City of Samal (IGACOS).

Population and Sample:

The respondents of the study were the secondary school teachers in the different divisions in Davao Region of the school year 2014-2015.

At 0.05% level of significance, the respondents of the study 400 secondary teachers in Davao region out of 9698 total population of teachers in the said region. Sample size per division was determined using the Slovin's formula. There were 66 respondents from the Division of Compostela Valley or 16.5% , 38 respondents from Davao del Norte or 9.49%, 53 respondents were from division of Davao del Sur or 13.25%, 17 respondents from division of Davao Oriental or 4.25%, 36 respondents were from division of Mati City or 8.90%, 124 respondents from Davao City division or 31%, 27 respondents from Digos City division that is 6.8%, 15 from Panabo City division or 3.76%, 22 respondents from Tagum City or 5.50% and 10 respondents were from Island Garden City of Samal division or 2.55% of the total population of secondary teachers in Davao Region.

Research Instrument:

The study utilized a three- part questionnaire which was validated by experts. The first part questionnaire on the extent of Professional Development of teachers is composed of 12 items which was adapted from the Teaching and Learning International Survey (TALIS) in which items were then contextualized and modified by the researcher. Respondents were asked to rate themselves how often they participated in the professional development activities using the scale; 4.5- 5.00 – as always (more than six times a year), 3.5- 4.49- as Often (four to six times a year), 2.5- 3.49- as Sometimes (two to three times a year), 1.5- 2.49 as Seldom (once a year) and 1.0-1.49 as Never (not attended any training).

The second questionnaire administered was the instructional leadership questionnaire taken from Linburg (2010) in which items were modified and contextualized for the purpose of this investigation. Instructional leadership questionnaire is composed of seven indicators; promoting professional development, providing resources, Communicating goals, Providing Incentives & supervising instruction, providing support and issuing directives. Each of these indicators has five items.

The third part questionnaire employed was on Teacher Self-Efficacy constructed by Bandura (2005). It is composed of seven indicators each of which is composed of five questions. Each item in the Instructional leadership and Teacher Self-Efficacy questionnaires were rated on a five-point scale from 1 as always, 2 as often, 3 as sometimes, 2 as seldom and 1 as never

Statistical Tools:

In obtaining more comprehensive analysis and interpretation of the data gathered, the following statistical treatments were utilized. Mean. This was utilized in determining the extent of professional development of teachers, level of instructional leadership as well as the level of teacher self-efficacy and answer problems 1, 2 and 3 of this study, Correlation analysis. This was applied to discover whether relationship exists between instructional leadership and teacher self-efficacy; instructional leadership and professional development and the correlation or relationship between professional development and teacher self-efficacy, Regression analysis. This was employed in determining the significance of the relationship between instructional leadership and teacher self-efficacy. Pearson r. This statistical tool was utilized in

determining the significance of relationship exists between instructional leadership and teacher self-efficacy; instructional leadership and professional development and the correlation or relationship between professional development and teacher self-efficacy at 0.05 level of significance, Regression Technique. According to Baron and Kenny, this will be utilized to determine the significance of the relationship between instructional leadership and teacher efficacy. Medgraph using Sobel z-test. This was also used to determine the mediation of professional development on the relationship between instructional leadership and teacher efficacy.

4. RESULTS

Level of Instructional Leadership:

The instructional leadership is measured in the areas of promoting professional growth, providing resources, communicating goals, providing incentives for teachers, supervising instruction, providing support and issuing directives.

Among the indicators in the extent of instructional leadership of school heads, communicating school goals has the highest mean of 3.83, followed by providing support with the mean of 3.75 then issuing directives with a mean of 3.70, promoting professional growth with a mean of 3.64, providing incentives for teachers with a mean of 3.56 and supervising instruction with a mean of 3.50. All these indicators reveal to have a descriptive equivalent of extensive except providing resources which has a mean of 3.40 and a descriptive equivalent of moderately extensive. Overall mean is 3.63 with a descriptive equivalent of extensive.

Level of instructional leadership was *extensive* based on the overall rating of the respondents on indicators of instructional leadership of school heads. Among the indicators, promoting professional growth, communicating school goals, providing incentives for teachers, supervising instruction, providing support and issuing directives all have *extensive* rating except providing resources which has a rating of *moderately extensive*.

The *moderately extensive* level result of *providing resources* is indicative that their principals or school heads moderately provide them the resources they need in the delivery of their lessons inside the classroom such as LED projectors, monitors and other instructional materials mostly needed by teachers. Principals influence classroom instruction by supplying teachers with necessary resources. Providing resources is viewed by teachers as effective leadership by principals (McGhee & Lew, 2007). Teachers perceived that principals improved their writing instruction by providing resources such as technology ((McGhee & Lew, 2007).

Promoting professional growth was rated as *extensive*. This shows that teacher respondents believed that the school heads promote professional growth to them. Promoting professional growth has been found to influence change in the instructional practices of teachers and improve their teaching knowledge and skills (Garet et al., 2001; Mouza, 2006).

In terms of *communicating goals*, respondents' rating to their principal or school heads was *extensive*. This implies that teachers were able to feel that their school heads were able to communicate and make clear to them the goals of their school and instruction that is anchored on their school's vision and mission. This results supports Kelly, Thomson and Daughtery (2005) which declares that principal behavior such as effective communication, teacher advocacy, participatory, decision-making and equitable evaluation procedures as related to the every school's need of principals to create climate of open communication. Principals communicate school goals in many different ways, like in faculty meetings and departmental chair meetings. They communicate with the teachers through individual meetings such as conducted post-conferences after classroom observations.

Another indicator under instructional leadership that has a rating of *extensive* is *providing incentives for teachers*. This result gives the idea that teacher respondents' noticed and were able to witness that the school heads or principals of their particular school were able to provide incentives maybe personally or were able to observed this to their fellow teachers. The role of monetary reward should come from career ladder opportunities for the most highly rated teachers to take on extra responsibilities for increased pay; incentives for the most effective teachers to work in high need schools and subject areas; and denial of step increases to teachers with mediocre ratings (Marshall, 2010). As for teachers who fail to perform, there must be a way of moving to dismiss teachers with unsatisfactory ratings based on all of the above (Marshall, 2010). Administrators need to take performance abilities and classroom observations seriously in an effort to place the best possible teachers in front of children. This all points to evidence-based performance and assessment that relies on peer

groups, administration, student, and parent input. If the seniority and tenure variable is removed, the workplace fosters a growing society of eager and active learners and teachers, progressive principal input, and parent involvement (Marshall, 2010).

Hess (2010) suggests that merit pay should reward performance, value and productivity. During current economic times, Hess (2010) also suggested that states need to be wise with the use of merit pay and was quick to point out the need to continue to look ahead to years with less funding. Hess (2010) stated that well-designed merit pay systems should reward teachers who not only amplify a student's potential but are also the ones who will take up opportunities to do more good. These techniques may include instructing additional students, leveraging particular skills, or assisting colleagues.

Items on *instructional supervision* as an indicator of instructional leadership was rated by the respondents as *extensive* which means that teachers receive instructional supervision from their school heads. And instructional supervision is mainly concerned with improving schools by helping teachers to reflect on their practices, to learn more about what they do and why, and to develop professionally (Sergiovanni & Starratt, 2007).

However, survey research conducted by Alemayehu (2008) showed that the subject-area instructional supervision practiced has multiple problems, such as, lack of adequate support for newly deployed (beginning) teachers, infrequent use of classroom visits and peer coaching by instructional supervisors, focus of such supervisors on administrative matters rather than on academic issues, and lack of mutual professional relationship between instructional supervision and professional development trust between supervisors and teachers are linked to a negative perception of teachers towards instructional supervision.

Glanz (2006) mentioned that principals must pay "attention to their role as instructional leader, which is paramount to positively affect teaching and learning. Engaging teachers in instructional dialogue and meaningful supervision [and] strive to encourage good pedagogy and teaching [is essential]" (p. 79). The ultimate goal of instructional leadership was to improve teaching, and meaningful supervision became the instrument to assist teachers in developing and growing in their professional knowledge, skills, and abilities.

Items on providing support were also rated by the respondents *extensive* which implies that teachers were given and provided support by their school heads.

Meanwhile items on issuing directives were also rated by the teacher respondents as *extensive*. This shows that issuing directives was observed by teachers and evident.

Extent of Professional Development:

Among the items, visiting other schools and observing teaching techniques has a mean of 1.87, participating in an individual or collaborative research on topic that interests teachers professionally has a mean of 2.44 and giving lecture or presentation to colleagues has a mean of 2.35. Only these items have the same descriptive equivalent which is less extensive.

While items that have a descriptive rating of moderately extensive are participating in workshops or in-service trainings on subject matter or methods and or other education-related topics with a mean of 3.37, attending education conferences or seminars where teachers present their research results and discuss educational problems with a mean of 2.57, participating in a network of teachers formed specifically for the professional development of teachers with a mean of 2.66, having received mentoring and or peer observation and coaching as part of formal school arrangement with a mean of 2.83, reading and researching on professional literature such as journals, evidence-based papers, thesis papers with a mean of 2.89, leading a group discussions on subject matter related to the subject being taught with a mean of 3.07, conducting in-depth study of specific concepts related to the subject area being taught (e.g. attending classes on post graduate courses in line with the subject taught) with a mean of 2.95 as well as practicing what teachers learned from feedbacks as part of professional development activity with a mean of 3.48.

Moreover, data revealed that among items, engaging in informal dialogue with colleagues on how to improve their teaching has a mean of 3.68 which means extensive.

The extent of professional development of teacher' respondents is said to be *moderately extensive*. This implies that respondents involved themselves and participated in the professional development activities moderately such as visiting other schools and observing teaching techniques, participating in an individual or collaborative research on topic that interest teachers professionally and giving lecture or presentation , workshops or in-service trainings on subject matter or methods and or other education-related topics, attending education conferences or seminars where teachers present their research results and discuss educational problems, participating in a network of teachers formed specifically for the professional development of teachers, having received mentoring and or peer observation and coaching as part of formal school arrangement, reading and researching on professional literature such as journals, evidence-based papers, 9, leading a group discussions on subject matter related to the subject being taught, conducting in-depth study of specific concepts related to the subject area being taught as well as practicing what teachers learned from feedbacks as part of professional development activity.

Moreover, results revealed that among items, engaging in informal dialogue with colleagues on how to improve their teaching *extensive*.

Level of Teacher Self-Efficacy:

Data in the table further shows that the level of teachers' self-efficacy has an overall mean of 3.82 which has a descriptive equivalent as high. Among the indicators disciplinary self-efficacy has the highest mean of 4.25 with a descriptive equivalent of high. Other indicators with high descriptive equivalent are efficacy to enlist a positive school climate with a mean of 4.22, efficacy to enlist parental involvement with a mean of 4.04, instructional self-efficacy with a mean of 3.87 and efficacy to influence school resources with a mean of 3.66. While efficacy to influence decision making with a mean of 3.43 and efficacy to enlist community involvement with a mean of 3.26 reveal to have a descriptive equivalent of moderate.

Level of *teacher self-efficacy* as shown in the results that all items in this variable were rated as *high* which implies that teacher respondents' have high belief and concept that she/he can influence students' performance. Respondents have high regard in their capability to execute courses of action to successfully accomplish a specific teaching task specifically in terms of the efficacy to influence decision making, efficacy to influence school resource, instructional self-efficacy, disciplinary self-efficacy, efficacy to enlist parental involvement, efficacy to enlist community involvement and efficacy to create a positive school climate (Bandura, 1977).

In terms of teachers' *efficacy to influence decision making*, the rating was moderately *high*. This rating suggests that teachers influence in the decision making in their schools in a moderate level only. This is maybe because the teacher is mainly more concern in the delivery of instruction inside the classroom. Another is the fact that there some school leaders who do not consult teachers in the making of decisions that involves the whole school community.

Efficacy to influence school resource has a rating of high by the respondents which clearly shows that teachers have high regard in their ability to acquire necessary materials for instruction and initiate or convince school heads and other stakeholders of the school to provide some materials needed for instruction and localize material if possible.

Another indicator of teacher self-efficacy is *disciplinary self-efficacy* which rated as *high*. This implies that teachers have strong beliefs that they can control disruptive behaviour in the classroom and get students to follow classroom rules and uses proactive approaches to students' behaviour.

Instructional self-efficacy has also a high rating based on teachers' responses to the items in this indicator. This result indicates that teachers believe that they can promote learning, keep students on task on difficult assignments, motivate students who show slow interest in school work and get through even the most difficult students who sometimes refuse to learn. This result runs parallel with Shidler (2009) suggested that teachers with a high level of instructional efficacy believe more whole-heartedly in children's abilities to be successful and will devote more time and effort into the profession of teaching. These teachers will deliver content more clearly, using a more interesting delivery approach and will produce better outcomes (Vartuli, 2005). Furthermore, these teachers will be more likely to reflect on their own practices and be more willing to adjust failed practices in an effort to better themselves within the profession (Vartuli, 2005). Goodwin (2010) furthers the key points made by Bandura (1997) and Tschannen-Moran and Hoy (2002)

International Journal of Novel Research in Education and Learning

Vol. 2, Issue 4, pp: (90-101), Month: July - August 2015, Available at: www.noveltyjournals.com

suggesting that good teachers possess a few simple, quantifiable attributes. Those include the ability to think quickly on their feet, knowledge of subject material, and knowledge of how to teach the subject material (Goodwin, 2010).

Efficacy to enlist parental involvement has moderate rating which suggests that teachers believe that they can get parents involve in school activities, make parents feel comfortable in coming to school and interact with them to assist parents how to help their children to do better in school and in the same way build a smooth relationship among parents.

Efficacy to enlist community involvement as rated by the respondents has *moderate* rating. This means that teachers can only moderately get community groups involved in working with the school such as local colleges and universities and businesses to take part in various activities of the school.

In terms of the *efficacy to create positive school climate*, teacher respondents' give this indicator a rating of high. High rating in the items of this indicator indicates that the respondents has high regard and beliefs in their capability to make students enjoy coming to school, make them feel that the school is a safe place, get students trust their teachers, reduce school absenteeism and dropout and make students also to believe that they can do well in school work.

These results supports Bandura (1977) which emphasized that teacher with a high level of efficacy believe that they can control, or at least strongly influence, student achievement and motivation. (p. 2). These beliefs influence how much effort teachers put forth, how long they persist in the face of obstacles, their resilience in dealing with failures, and how much stress or depression they experience in coping with demanding situations.

Correlations between Instructional Leadership and Teacher Self-Efficacy:

Data shows that the overall r value of 0.546 with p value of 0.000. Since p value is 0.000 is less than α value of 0.05, thus the null hypothesis is rejected. This means that there is a significant relationship between instructional leadership and teacher self-efficacy.

Furthermore, it is observed that every indicator of instructional leadership such as promoting professional growth, providing resources, communicating goals, proving incentives for teachers for teachers, supervising instruction, providing support and issuing directives when correlated with every indicator of teacher self-efficacy have resulted to p-value of 0.00 that is less than α .05. Thus all indicators of instructional leadership show significant relationship with all the indicators of teacher self-efficacy.

Correlations between Instructional Leadership and Professional Development:

Data revealed that the result of the test of the relationship between instructional leadership and professional development has an overall r-value of 0.351 with p-value of 0.000 which is less than α .05 thus, the null hypothesis is rejected. This means that there is a significant relationship between instructional leadership and professional development.

This implies that instructional leadership of the principal has significant direct effect on professional development.

Correlations between Professional Development and Teacher Self-Efficacy:

Data revealed that overall r value is 0.475 with p-value of 0.00 thus the null hypothesis is rejected. This means that there is a significant relationship between professional development and teacher self-efficacy.

Result suggests that professional development activities of which teachers indulged and participated has a significant effect on teachers's self-efficacy.

Research findings on instructional supervision suggested that there is a significant link between instructional supervision and professional development. They are inter-linked and inter-dependent (Burant, 2009)

Mediating Effect of Professional Development on the Relationship between Instructional Leadership and Teacher Self-Efficacy:

The aim of this study was to contribute to the literature regarding potential indirect, mediating variable for the relationship between instructional leadership and teacher self-efficacy. In particular, professional development was investigated as a potential mediating construct to explain the manner in which instructional leadership affects teacher self-efficacy. While full mediation was not found in this study, significant and important direct effects were shown that may be of help in the

enhancement of the existing researches (Goker, 2006; Runhaar & Yang, 2010; & Tschannen-Moran & McMaster, 2009) on instructional leadership and teacher self-efficacy.

Teachers' self-efficacy which has been developed in Bandura's concept of self-efficacy generally consists of teachers' beliefs about effecting and coping with students who have difficulty in motivation and learning (Lewandowski, 2005; Yılmaz & Çokluk Bökeoğlu, 2008). As well as being the indicator of teachers' effectiveness, teachers' self-efficacy is indispensable for an effective school and program (Bitto & Butler, 2010).

Importantly, the studies of these authors on the relationship between instructional leadership and teacher self-efficacy find relevance with the theoretical framework of this study specifically that of Albert Bandura's cognitive social learning theory that addresses motivation based on appraisals of outcomes and feedback. Bandura (1986) defined self-efficacy as "peoples judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (p. 391).

Teachers with a high level of efficacy believe that they can control, or at least strongly influence, student achievement and motivation. (p. 2) These beliefs influence how much effort teachers put forth, how long they persist in the face of obstacles, their resilience in dealing with failures, and how much stress or depression they experience in coping with demanding situations (Bandura, 1997).

Teachers with a high sense of efficacy are less likely to criticize students following incorrect responses, more likely to persist with students in a failure situation, and more likely to divide a class for small group instruction as opposed to instructing the class as a whole (Tschannen-Moran, Woolfolk Hoy & Hoy, 1998).

Specifically, the current study has found that professional development is a positive and significant mediator of instructional leadership and teacher self-efficacy and met Baron and Kenny's (1986) mediation guidelines.

The mediation analysis involved the path between instructional leadership and professional development and the path between professional development and teacher self-efficacy. The findings confirmed the significant relationship between instructional leadership and professional development, lending support to one of the framework accounts of this study that of Vygotsky (1978) who studied the importance of learning in social settings and the impact of the assistance of more capable others on the development of the learner. He maintained that children rely on the example and skills of adults and more competent peers to gradually develop abilities to do certain tasks. For Vygotsky and other socio-cultural theorists, the social nature of cognitive development is captured in the concept of intersubjectivity, which refers to mutual, shared understanding among participants in an activity (Vygotsky, 1978; Wertsch, 1998).

According to Tharp and Gallimore (1988), this sociocultural perspectives has profound implications for teaching, schooling, and education. Vygotsky's work principally centered on children; however, identical processes occur in adult learners. Thus, the influence and interactions between a more knowledgeable individual, such as an expert, peer or mentor and an adult learner becomes a critical phenomenon for study in sociocultural learning.

Though developed primarily to explain the teacher-student relationship, Vygotsky's (1978) theory assisted in understanding the process of teachers mentoring other teachers or professional developers providing continued education and support to practicing teachers through seminars, workshops, in-service trainings, education conferences, peer observation and mentoring, participating in a network of teachers to discuss matters related to the subject area being taught and others.

Similarly, observational learning has been found to be an important mechanism in teacher development (Lortie, 2002) as the importance of a mental model or a picture of the lesson as the teacher enters the classroom (Rowland, Thwates & Jared, 2011).

In the same line, Mizell (2010) stressed that educators who do not experience effective professional development do not improve their skills and student learning suffer. Professional development has been found to influence change in the instructional practices of teachers and improve their teaching knowledge and skills (Mouza, 2006). Scholars agree among themselves that teachers' professional development should be viewed as knowledge and skills development (Timperley et al., 2007).

Several researches like that of Cardno (2005) stated that professional development for teachers is vital to guarantee the sustainability and growth of teaching profession. This claim supports Boyle, While and Boyle (2004) statement that “the continual deepening of knowledge and skills is an integral part of the professional development of any professional working in any profession”. In addition, Duffy and Cunningham (as cited in Ozkal., Tekkaya, Cakiroglu, & Sungur, 2008) also affirmed that teachers need to build their own knowledge by anchoring the new ideas and concepts received to pre-existing knowledge.

Studies showed that new teachers who received intensive mentoring had a significant effect on student achievement after as little as two years (Villar, 2004). Most importantly, research findings on improving classroom instruction suggest that the need for professional development to be long term, embedded in teaching practice in the classroom and rooted in research (Duschl et. al., 2006).

However this suggestion for teachers’ professional development to be conducted in longer period of time is conceive to result to teachers miss lessons as they leave their classroom more often and hence causing more disruption to the students’ learning (Wayne et al., 2008). Some professional development approached through a workshop style presentation has proven ineffective in meeting the needs of teachers (Rebora, 2008). Massive amounts of information combined with little time for application and continued practice leave a great deal to be desired of traditional workshop professional development (Hunzicker, 2011).

Jurasait-Harbison (2009) in an investigation on how teachers learn, he found out that teachers are obliged to learn by the current educational policies. These obligations involved the teachers having to concurrently modify their practices. For such modification to be effective, it is very necessary for the professional development to increase the scope so that it can captivate a wider range of areas that are within their unique epistemology that is teaching resources and instructional practices (Elmore, 2000). Similarly, Jurasait-Harbison (2009) stresses that for the reforms to be a success, various learning opportunities and continuous professional growth is necessary for the teachers. According to Jurasait-Harbison (2009), within schools context, this professional growth takes place under the schools.

Effective professional development is grounded in research-based practices, sustained over time, has collective faculty participation, and is content focused on curricular and teacher needs (Lydon & King, 2009; Snow-Renner & Lauer, 2005).

Further, the significant relationship between professional development and teacher self-efficacy in this study supports the proposition of

A small number of studies have investigated the effects of PD on teacher efficacy. Given the stability of teacher efficacy (Hoy & Spero, 2005), some researchers reporting an increase in teacher efficacy scores over the duration of a professional development program.

Lortie (2002), emphasized that observational learning has been found to be an important mechanism in teacher development. as the importance of a mental model or a picture of the lesson as the teacher enters the classroom (Rowland, Thwates & Jared, 2011).

The mediation results further demonstrate that the indirect effect of the mediator (professional development) was weaker than the direct links of variables as evidenced by the ratio index of 21 percent. This signifies that about 21 percent of the total effect of instructional leadership on teacher self-efficacy goes through professional development and about 79 percent of the total effect is either direct or mediated by other variables not included in the study. Professional development partially mediated the relationship between instructional leadership and teacher self-efficacy. This is further evidenced by the Sobel z-test showing that the indirect influence of instructional leadership on teacher self-efficacy through professional development was considerably different from zero ($z=5.365$; $p<0.01$) indicating a partial type of mediation.

The result implies that professional development can improve on self-efficacy of teachers. A number of authors demonstrate that teachers with high efficacy beliefs generate stronger student achievement than teachers with lower teacher efficacy (Goddard et al., 2004; Ross, 1998; Tschannen-Moran, Wolfolk Hoy, & Hoy, 1998).

Another implication is that instructional leadership functions through professional development in influencing the self-efficacy of teachers in doing their teaching job. Professional development reinforces the relationship of instructional leadership and teacher self-efficacy. However, the partial mediation result of professional development points to the teachers not to disregard instructional leadership considering its greater influence on their self-efficacy.

5. CONCLUSION

The findings of the study pointed out that the extent of instructional leadership of school heads in region XI is extensive in terms of promoting professional growth, communicating goals, providing incentives for teachers, supervising instruction, providing support and issuing directives except providing resources which has a moderately extensive rating. On the other hand, teachers' level of self-efficacy is high. All indicators in this variable were rated high except the efficacy to enlist community involvement which is moderately high. It was found out that there is a significant relationship between instructional leadership and teacher self-efficacy. The study therefore confirms various of literature (Weisel & Dror, 2006; Derbedek, 2008; Scurry, 2010). Meanwhile, in test of the relationship between instructional leadership and professional development, it was revealed that there is a significant relationship between instructional leadership and professional development. Such result is paralleled with the findings of (Sergiovanni & Starratt, 2007; Zepeda, 2007). Another result revealed in this study is that there is a significant relationship between professional development and teacher self-efficacy which is aligned with the result and findings (Vladimir, 2008). Therefore, it can be concluded in this study that all three variables have significant relationship towards each other.

Professional development partially mediated the relationship between instructional leadership and teacher self-efficacy. This is further evidenced by the Sobel z-test showing that the indirect influence of instructional leadership on teacher self-efficacy through professional development was considerably different from zero indicating a partial type of mediation. The result suggests that professional development can improve on self-efficacy of teachers. A number of authors demonstrate that teachers with high efficacy beliefs generate stronger student achievement than teachers with lower teacher efficacy (Goddard et al., 2004; Ross, 1998; Tschannen-Moran, Wolfolk Hoy, & Hoy, 1998). This study points out that instructional leadership functions through professional development in influencing the self-efficacy of teachers in doing their teaching job. Professional development reinforces the relationship of instructional leadership and teacher self-efficacy. However, the partial mediation result of professional development points to the teachers not to disregard instructional leadership considering its greater influence on their self-efficacy.

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