

Instructional Leadership, work Engagement, Self-Efficacy of School Heads: A Structural Equation Model

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ABSTRACT

This study aimed to determine the best-fit model of school effectiveness as influenced by instructional leadership, work engagement, self-efficacy of school heads among 400 public elementary school teachers in Davao Region, Philippines. With the used of Structural Equation Model Analysis, results gained a very high levels for Instructional Leadership and work engagement, a high level of self- efficacy of school heads and school effectiveness. Moreover, there was a strong, positive, and significant correlation between instructional leadership and school effectiveness, work engagement and school effectiveness. However, result for self- efficacy and school effectiveness is not correlated. Further, findings revealed that the influence of the exogenous variables indicates that the overall regression model is statistically significant. Furthermore, results showed that the best-fit model was model 3 showing the direct causal relationships of Instructional Leadership and self- efficacy on school effectiveness. Meanwhile, School effectiveness was defined by the retained indicators namely; Effectiveness of the School Climate, Effectiveness of the Relationship with Local Community, Effectiveness of Using Enrichment Activities in School and Student's Sense of Belonging the Surrounding Environment. On the other hand, instructional leadership style was described with the following retained indicators: Framing the Goals, Supervise and Evaluate Instructions, Provide Incentives for Teachers and Promote Professional Development. While Self efficacy of school heads was described in terms of the retained indicators namely; Efficacy for Instructional Leadership and Efficacy for Moral Leadership. Findings suggest that the policy making body of the Department of Education may look into provision of benefits of the teachers and the school heads to further increase the school effectiveness.

Keywords: educational management, instructional leadership, work engagement, self- efficacy and school effectiveness, SEM analysis, teacher, Philippines.

INTRODUCTION

The alarming problematic issues on school effectiveness causes educators to reflects how well schools can fulfill their functions to meet organizational goals. They continuously faced challenges on how to cope with the factors that can affect school effectiveness. The study elaborates that school climate effectiveness, school administration effectiveness, effectiveness of teacher in school and effectiveness of the relationship with the local community have average means of 4.0, 4.3, 4.1 and 4.2, respectively, which means that these areas need more interventions and strategies to addressed. Nevertheless, the challenge of school effectiveness persists, as it hinges on schools' continuous efforts to achieve the goals which necessitates from funding sources, educational materials and activities (Sammons,2020).

Moreover, effective schools have been consistently linked to higher levels of student achievement across various academic and non-academic metrics. They provide an environment where students can thrive academically and socially. Also, many educational leaders advocate for policies and practices that promote and sustain school effectiveness, aiming to ensure that every child receives a high-quality education that prepares them for a successful future in an increasingly complex world. In the Arab countries, a scale

to examine principals' perceptions of six school effectiveness factors: the effectiveness of school climate, school administration effectiveness, the effectiveness of the teacher, the effectiveness of the relationship with the local community, the effectiveness of educational practices, the student's having a sense of belonging to the surrounding environment. (Koh, 2023; Rabo, 2021).

Likewise, school effectiveness enables the schools to successfully progress the learning and development of the students. Thus, many countries put emphasis on enhancing conditions of schools and achievement of the students, engagement of teachers, student participation rates, instructional role of the school heads and attitudes towards learning which all serves as determinants of school effectiveness (Hellström & Hagquist, 2021).

Meanwhile, it is recognized and widely accepted that there is a concrete connection between instructional leadership and school effectiveness based from the result of the study conducted by Kilag, Uy, F., Calledo, M. F., Diano, Jr., F., Morales, Jr., N., & Abendan, C. F. (2024). Survey results showed a significant positive relationship between instructional leadership and school effectiveness. They emphasized that Instructional leadership skills of principal is directly related to the success of the school. It creates successful schools in country's educational advancement.

Also, based from the point of views of Concordia University Portland, (2018) Instructional leadership requires the school principal to wear many hats. Regularly, principals monitor teachers' instructional delivery and their level of compliance to school schedule in order to enhance teachers' commitment to teaching and it should be the morale of teachers in this school is high. Also, instructional leadership focuses on the academic progress of students. These include the value of creating clear educational goals, planning the curriculum, and evaluating the quality of teachers and their teaching. (Bhebe & Nyathi, 2019).

Further, there are skills essential for effective instructional leadership. Being an instructional leader is the most important part of our job, and it is also the most fun. Seemingly, it was revealed from the study that involving parents in school activities as well as decision making was essential for learners' high academic performance. The study also concluded that instructional leaders in schools have a task to supervise all activities that learners and teachers partake in (Bhebe & Nyathi, 2019).

In addition, school heads instructional leadership skills play a pivotal role in affecting the climate, attitude and reputation of their schools. With successful school leadership, schools become effective when it comes to learning, places where students are not only educated but challenged, nurtured and encouraged. They know that they must surround themselves with great teachers and colleagues and, not only that, they must fully support teachers instructional need by encouraging them to continually learn, develop and, perhaps most important, become instructional leaders themselves. On the contrary, poor or absent on instructional leadership style can undermine the goals of an educational system. When schools lack a strong foundation and direction, learning is compromised, and students suffer. According to a Wallace Foundation study, Leadership is second only to classroom instruction as an influence on student learning which gives a huge impact to school effectiveness (Lathan, 2019).

Meanwhile, Abelan, Koulae, Moeinikia, & Sharif, (2019), proved the belief that the principal could have an indirect effect on teachers' work engagement. Findings revealed that supervising and evaluating instruction and monitoring student progress were significant positive predictors of leadership self-efficacy. Also, work engagement has a positive effect on school effectiveness. Research has shown that work engagement was significantly and positively correlated with teacher efficacy which resulted to the effectiveness of the school (Hoigaard et al., 2012).

In addition, employees with high levels of work engagement are energetic and dedicated to their work and immersed to their work. The concept of work engagement fits into the tradition of positive psychology, a field in psychology which focuses on ways to increase wellbeing; rather than diagnosing or treating mental illness. It is a human resources (HR) concept that describes the level of enthusiasm and dedication a worker feels toward their job. Engaged employees care about their work and about the performance of the company, and feel that their efforts make a difference. Engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior (Rooseboom &

Schelviz, 2015).

In the contrary, employees can feel disengaged for a variety of reasons, and it's often a complex interplay of factors. Some common reasons why employees may feel disengaged could be Lack of Purpose, Inadequate Communication and Poor Leadership. When employees don't see the bigger purpose or meaning in their work, they can become disengaged. Feeling like their job doesn't contribute to a greater goal can be demotivating. Also, Ineffective or unsupported leadership can lead to disengagement. When employees don't feel valued or respected by their managers, they're more likely to disengage from their work. In addition, if communication within an organization is poor or inconsistent, employees may feel disconnected from the organizational goals (Andrews, 2022).

In addition, work engagement is characterized by vigor, dedication, and absorption. It represents a positive and psychologically fulfilling state of mind. The concept has become a core indicator that reflects the quality of teachers' occupational lives by accounting for significant variation in the prediction of their occupational and organizational outcomes. Specifically, vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. Finally, absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (Bhebhe & Nyathi, 2019). However, in a study made by Babelan (2019), it was found out that instructional leadership of the principal is not directly correlated on work engagement. But on the analysis of results, it was identified that instructional leadership had a positive association with work engagement although the direct relation between them was non-significant.

Meanwhile, self-efficacy has changed over the past three decades because principals' roles and duties have changed. it will generate positive impact to students achievement that can be viewed on the effectiveness of the school. Given that professional self-efficacy deals with competence in the profession, if the nature of the profession changes, the level of one's professional self-efficacy will change as well. Self-efficacy refers to an individual's belief in their ability to achieve their desired goals, which necessitates emotional intelligence and helps alleviate work-related stress. According to Bandura, self-efficacy involves having confidence in one's ability to plan and execute the necessary actions to reach specific objectives (Nguï & Lay, 2019; Liu & Aunguroch, 2019).

Similarly, since principals are responsible for all facets of their schools, they essentially were faced with a brave new world. Their self-efficacy can offer valuable insights into a school principal's assessment of their ability to provide instructional support to enhance teacher performance, as well as their belief in whether these supports will result in improved teacher performance effectiveness of the school. (Hayes et al., 2022; Fernández-Collazos et al., 2021; Hafiza Hamzah et al., 2021; Hesbol et al., 2019; Håkansson et al., 2019; Skaalvik, 2020).

Finally, principals must be able to manage educational resources in schools that include: teachers, educational facilities, infrastructure, curricula, and cooperation opportunities with educational institutions. The good management of all such elements leads to the effective leadership that helps achieve the school's vision and mission. School principals play an inevitable role in supporting the school, staff and students' performance. Therefore, their role is very vital in enhancing school effectiveness and developing education in any country (AlShehhi & Alzouebi, 2020).

In this study, it anchored on the main **theory of School Effectiveness** of Edmonds (1979) who developed five factors of school effectiveness and viewed that schools to be effective should have high expectations for student achievement, continuous assessment of student progress, strength of leadership education, a safe climate and organizes and emphasizing basic skills.

This study was also supported by the proposition of Lovell (2009) who believed that the responsibility for demonstrating school effectiveness lies on the shoulders of the building administrator. Without a principal's leadership efforts to raise student achievement, schools cannot succeed (Tschannen-Moran & Gareis, 2004)

In addition, this study was also associated with Bandura's social cognitive model which focuses on the multi-directional model that suggests individual actions and choices are affected by environmental, behavioral, and interpersonal factors. In effect, individuals take an active role in making things happen. Bandura terms this "human agency" (Bandura, 1986). Key to this sense of agency is the fact that, among other personal factors, individuals possess self-beliefs that enable them to exercise a measure of control over their thoughts, feelings, and actions, that "what people think, believe, and feel affects how they behave.

Numerous studies have been conducted about instructional leadership, work engagement, self-efficacy and school effectiveness. However, most research above restricts their investigation to the bivariate association between the variables. No studies have been established that shows the relationship of the four involved variables. The researcher was motivated to investigate the four variables using the Structural Equation Model (SEM) within the context of the Philippines in order to determine which variables significantly influence the school effectiveness and which model best fit the school effectiveness. Results of this study would serve as the catalyst for the enhancement of the current plans and programs of the Department. It gives an outlook towards the attainment of the school effectiveness.

This study determined to find out the best fit model of school effectiveness of public elementary School in Region XI. It also aimed to assess the level of instructional leadership, work engagement of public elementary teachers, self-efficacy of school heads and School effectiveness of public elementary school in Region XI. Further, it aimed to determine the significant relationship between; instructional leadership and school effectiveness, work engagement and school effectiveness, self- efficacy and school effectiveness. Furthermore, it also aimed to determine what variables significantly influence the school effectiveness.

Hypotheses such as no significant relationship between instructional leadership and school effectiveness; work engagement and school effectiveness; self efficacy and school effectiveness were tested at .05 significance level. There was no variable that can best influence school effectiveness in a public elementary school in Region XI; there was no model that best fits the school effectiveness in a public elementary school in Region XI.

Meanwhile, the conceptual framework of the study illustrated in Figure 1 reflects the direct causal relationship between exogenous and endogenous variables. The first exogenous variable was the Instructional leadership by Hallinger (2011) with indicators namely; *Framing the Goals, Communicate the School Goals, Supervise and Evaluate Instructions, Coordinate the Curriculum, Monitor Student's Progress, Protect instructional Time, Maintain high visibility, Provide incentives for teachers and Promote professional development.*

Next to it was the work engagement of teachers by Schaufeli & Bakker (2003). It had three indicators; Vigor, Dedication; and Absorption. While, the third variable was the Self -Efficacy of the school heads by Hesbol (2018). It has three (3) indicators namely; Efficacy for management, Efficacy for instructional leadership, Efficacy for moral leadership

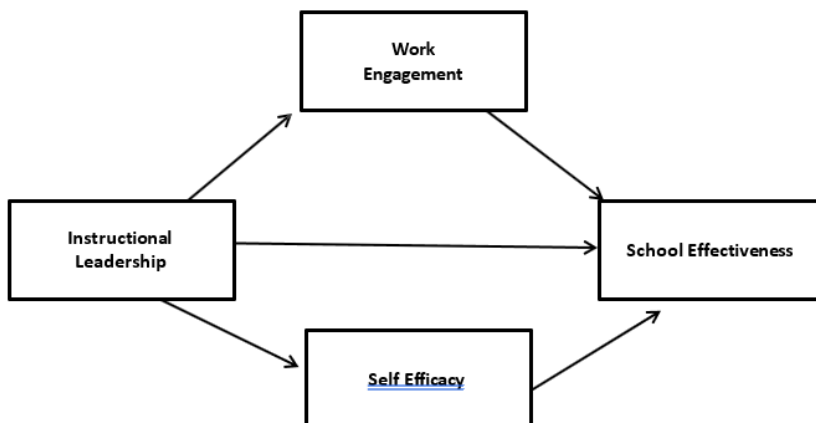


Figure 1: Conceptual Framework of the Instructional Leadership, Work Engagement, Self-Efficacy and the School Effectiveness.

This study had significance to the following; Public schools in the local setting: elementary, teachers, it gave them the value of having positive work engagement. Further, it made them understand how factors such as instructional leadership, work engagement and self-efficacy would contribute to achieve effectiveness of the school. leaders, stakeholders, and researchers. This study gave welfare to the DepEd officials, they can create a concept or framework on how to help the school heads to improve the school situation as a whole. Globally, the findings of this may have the potential to influence policies, practices, and initiatives that support the attainment of the Sustainable Development Goals. By aligning with SDGs, the study underscores its relevance and importance in addressing global challenges. The study on school effectiveness is significant because it provides insights that can help improve educational outcomes, thereby supporting SDG 4. This connection would enhance the study's relevance by demonstrating its contribution to a widely recognized global agenda.

METHOD

The research respondents of this study were the 400 teachers from the total number of 25,469 public elementary school teachers in Region XI. This sample size is in accordance to Kline (2016), who in his book "Principles and Practice of Structural Equation Modeling" suggests that for structural equation modeling (SEM), having a sample size of at least 200-400 participants is generally sufficient. Upon determining the sample size for this study, respondents were identified through the use of stratified random sampling. In stratified sampling, the population is partitioned into regions or strata, and a sample is selected by some design within each stratum. The design was called stratified random sampling if the design within each stratum is simple random sampling (Hayes & Westfall, 2020).

In this study, there were ten (10) Divisions in Region XI which considered as a stratum wherein the simple random sampling will be utilized. The ten divisions in this study comprised the 25 elementary teachers from Davao del Sur Division, 30 from Digos City Division, 35 from Davao de Oro Division, Island Garden City of Samal Division has 25 participants, 45 from Panabo City Division, 25 from Davao Oriental Division, 30 from Davao Occidental Division, 25 school head from Mati City Division, 50 Tagum City Division, 60 Davao del Norte Division and 50 Davao City Division. However, not all public schools of the said divisions served as respondents in this study.

In this study, the 400 respondents chosen were aligned on the inclusion criteria;(1) they were teachers from Elementary level, (2) the respondents were teaching in a public school (3) they were teachers from the 11 Divisions of Region XI. Likewise, the following exclusion criteria which adhered; parents, students and teachers from the secondary level were not included in this study; teachers from the private school also were not part of this study and teachers from another Region will not be entertained. No respondents who felt awkward and uncomfortable upon answering the survey questionnaire. They were not force to be part of the study. Hence, the respondents' welfare was given utmost importance in the conduct of the study.

Region XI was the location of this study. It also known as Davao Region or Southern Mindanao. One of the regions of the Philippines, located on the southeastern portion of Mindanao. It has been the home of many cultural groups. Region XI has 5 provinces, such as: Davao de Oro, Davao del Norte, Davao del Sur, Davao Oriental and Davao Occidental. These provinces have been the home of these eleven recognized divisions, namely: Davao de Oro Division, Davao del Norte Division, Davao del Sur Division, Davao Oriental Division, Davao Occidental Division, Mati City Division, Davao City Division, Digos City Division, Panabo City Division, Tagum City Division and Island Garden City of Samal Division. As of 2014 record, it has a total of 2053 recognized public schools in elementary level. It took time for the researcher to travel and visit to personally ask permission to the Schools Division Superintendent of each division hence these divisions are poles apart.

Though the researcher adhered to the advancement of technology but she was not able to engaged in the use of google forms in collecting the data since it is not necessary especially, she was able to conduct the survey personally to schools in the far Divisions. The researcher had not come across of a study describing the school effectiveness in public elementary schools in Region XI. Hence, this prompted the researcher to explore the involved variables of her current study.

Materials/ Instruments

There were four instruments that was being used in this study namely; instructional leadership, work engagement, self-efficacy of principal and school effectiveness. Below are the four adapted questionnaires;

The first instrument used was adapted from Principals Instructional Management Scale (PIMRS) which was used by Hallinger (2011.) The Principal Instructional Management Rating Scale (PIMRS) authored by Hallinger (2011) measures principal management functions. It was modified to fit in to the study and subject for the validation of the experts. The questionnaire focuses on how should the principals exemplify leadership in school. In taking the test, the participants will answer 50 items questionnaire in 10 sub-scales, namely; framing the school goals, communicate the school goal, Supervise and evaluate instruction, coordinate the curriculum, monitor students' progress, protect instructional time, maintain high visibility, provided incentives for teachers and Promote professional development. While the second questionnaire was intended for Work engagement of teachers. It was used to assess with the use of U-Work Engagement Scale (UWES) developed by Schaufeli & Bakker (2003). It is a 17 items questionnaire clustered into three sub-scale that reflect the underlying dimensions of engagement such as; Vigor-VI (6 items), Dedication -DE (5 items) and Absorption- AB (6 items). All items were scored on a 7-point frequency rating scale ranging from 0 (never) to 6 (always). The third questionnaire used in this study was the Principal Sense of Efficacy Scale (PSES) developed by Tschannen-Moran and R. Gareis. This is to measure the beliefs of a principal about his/her personal competence or effectiveness in leading the school. It has three indicators such as; efficacy for management, efficacy for instructional leadership and efficacy for moral leadership. The fourth questionnaire to measure school effectiveness was the School Effectiveness Scale (SES) by Lezotte [16] which has six correlates of the effective schools namely the effectiveness of the school climate, school administration effectiveness, the effectiveness of the teacher, the effectiveness of the relationship with the local community, the effectiveness of educational practices, the student's having a sense of belonging to the surrounding environment. The instrument consisted of 38- item likert-type questions clustered into six categories of school effectiveness having five response options with 1 as the lowest and five as the highest.

The adapted questionnaires were contextualized in accordance with the local setting. Then, it was checked by the research adviser and underwent a thorough validation by the internal and external validators for the refinement of the questionnaires. They evaluated the contents of the questionnaires for construct reliability and validity. It also underwent a pilot testing to determine the alpha coefficient of which the Cronbach alpha values for instructional leadership is 0.75, work engagement is 0.87, self- efficacy is 0.76 and school effectiveness is 0.81. The questionnaires received an average rating of 4.4, indicating a very good level of descriptive equivalent. The three instruments obtained a relatively *high* internal consistency.

Research Design and Procedure

This research employed a quantitative methodology incorporating correlational analysis and a structural equation model (SEM). The quantitative approach was employed to collect and analyze numerical data, discern patterns and averages, predict outcomes, establish causal relationships, and generalize findings to wider populations (Bhandari, 2020; Jain & Chetty, 2021).

Also, descriptive correlational was used to describe the statistical association between two or more variables (Creswell, 2013). This study was quantitative research since it dealt with statistical tools in analyzing data. More so, it was descriptive in nature since it will determine the levels of instructional leadership, work engagement, self- efficacy and school effectiveness. It was also correlation in nature since it aimed to investigate the association of the four focus variables. This study also used the Structural Equation Model to find out which among the models best fit the effectiveness of the school. Likewise, The subsequent indices were generated to assess the adequacy of the model's fit. All of these indices met the specified criteria. In gathering the data, the researcher followed a meticulous procedure for data collection. Permission was sought from the Dean of Professional Schools and endorsement was obtained from the Department of Education Region XI. Subsequently, request and endorsement letters were sent to the Schools Division Superintendents and School Heads across ten divisions in Region XI. Test questionnaires were distributed according to a predetermined schedule, including clear study explanations and instructions. Respondents received an

orientation emphasizing the study's rationale and their rights. They were allotted adequate time to complete the survey. To facilitate data collection, Google Forms were utilized, particularly for schools in remote divisions. Upon retrieval of all questionnaires, data were confidentially compiled, tabulated, analyzed, and interpreted in line with the research objectives. Initial analysis involved computing means to interpret levels of instructional leadership, work engagement, self-efficacy, and school effectiveness. In this study, the collected data from the survey questionnaires being answered by the respondents had undergone Data Analysis and tallied and tabulated.

Then, Pearson r was used to determine the significant relationship between the variables. Next, the structural equation model was employed to determine which among the models best fit the school effectiveness. For more extensive data interpretation and analysis of the result, the following statistical tools were utilized. **Mean** was used to measure the level of instructional leadership, work engagement, self-efficacy and school effectiveness. **Pearson Product Moment Correlation** was utilized to determine the interrelationships between instructional leadership, work engagement, self-efficacy and school effectiveness. **Structural Equation Model** was employed to determine which among the models best fit the school effectiveness. In addition, CMIN/DF should be less than 2 with a p-value greater than 0.05; Tucker-Lewis Index (TLI) should exceed 0.95; Comparative Fit Index (CFI) should surpass 0.95; Goodness of Fit Index (GFI) should be higher than 0.95; Normed Fit Index (NFI) should be greater than 0.95; Root Mean Square Error of Approximation (RMSEA) should be 0.05 or lower; and P of Close Fit (PCLOSE) should be above 0.05.

This research adhered strictly to ethical considerations set to ensure confidentiality and respect for participants' rights. Ethical standards included voluntary participation, privacy, and confidentiality in compliance with the Data Privacy Act of 2012. Informed consent was prioritized, Informing participants of study objectives, methods, and benefits. Measures were taken to prevent fabrication, falsification, and plagiarism of data. Conflict of interest was absent, with the study focused solely on participant welfare. Deceit was avoided, and beneficence ensured no harm to participants. Observational protocols were followed, and authorship reflected academic integrity and supervision. In this study, the respondents were fully informed of the nature of the study. Likewise, in this study students were the primary beneficiary since the results served as a baseline for the DepEd officials and school administrators. This study was being conducted for a purpose. Furthermore, to achieve beneficence in research, the researcher was able to cater the aspects that would not harm the respondents' lives. The most essential to all in achieving benefits was the job characteristic that had been improved. Observation was strictly adhered especially during the conduct of the study by placing notes in a conspicuous area indicating that there was an ongoing researcher conducting in the area. Lastly was the **Authorship** of which the researcher of this study is a graduate of Master of Education Major in Educational Management and currently enrolled in the University of Mindanao for a Doctor in Education major in Educational Management. She had undergone rigid review and content revisions based from the suggested details of the study. She had an adviser who served as a co-author of this study.

RESULTS AND DISCUSSION

This section presents, analyzes, and interprets data on instructional leadership, work engagement, self-efficacy, and school effectiveness based on the research objectives. The discussion unfolds in the following sequence: assessment of instructional leadership among school heads, work engagement levels, examination of self-efficacy levels, appraisal of school effectiveness, exploration of relationships between instructional leadership style and school effectiveness, work engagement and school effectiveness, teachers' self-efficacy and school effectiveness, as well as the significant influence among exogenous and endogenous variables and the optimal model influencing school effectiveness.

Level of Instructional Leadership of School Heads

Exhibited in Table 1 is the level of Instructional Leadership of school heads, with an overall standard deviation of .13 and an overall mean of 4.47 with a descriptive equivalent of very high. The results show that all indicators received a very high mean value, Communicate the School Goals with a mean value of 4.43, Supervise and Evaluate Instructions with a mean value of 4.39, Coordinate the Curriculum with a mean value of 4.42, Monitor

Student’s Progress with a mean value of 4.42, Protect instructional Time with a mean value of 4.48, Maintain high visibility with a mean value of 4.50, Provide incentives for teachers with a mean value of 4.69, Promote professional development with a mean value of 4.52, Provide incentives for learning with a mean value of 4.46; and among the indicators, *Framing the Goals* gained the lowest mean value of 4.36 of which it can be depicted on appendix 1.1 specifically when the school head is *using needs assessment or other formal and informal methods to secure staff input on goal development*.

Table 1 Level of Instructional Leadership of School Head in Region XI

Indicators	SD	Mean	Descriptive Level
Framing the goal	0.37	4.36	Very High
Communicate the School Goals	0.40	4.43	Very High
Supervise and Evaluate Instructions	0.39	4.39	Very High
Coordinate the Curriculum	0.46	4.42	Very High
Monitor Student’s Progress	0.44	4.42	Very High
Protect instructional Time	0.41	4.48	Very High
Maintain high visibility	0.37	4.50	Very High
Provide incentives for teachers	0.40	4.69	Very High
Promote professional development	0.38	4.52	Very High
Provide incentives for learning	0.34	4.46	Very High
Overall	0.13	4.47	Very High

The results of the study were supported by the findings of Bhebhe & Nyati, (2019) results on their study about effective instructional leadership. They viewed that a principal being an instructional leader served as the most important part the school. Seemingly, it was revealed from the study that instructional leaders in schools have a task to supervise all activities that learners and teachers partake, High level of instructional leadership will enable others to effectively and successfully use, manage, assess, and understand also technologies of the designed world. Likewise, an instructional leader should advocate for effective teaching by providing clarity and support for teachers as well as procuring the necessary resources

Level of Work Engagement

In Table 2, the overall weighted mean of each criterion of work engagement are presented. The overall standard deviation is 0.20 with a mean of 4.26 with a descriptive interpretation of Very High. The results revealed that Dedication has the highest mean score with a mean value of 4.32, described as Very High. This is followed by Vigor with a mean value of 4.28, which is also Very High. The remaining indicator, Absorption gained a descriptive equivalent of high with a mean value of 4.18. and served as the lowest mean value among the indicators.

Table 2 Level of Work Engagement of Public Elementary Teachers in Region XI

Indicators	SD	Mean	Descriptive Level
Vigor	0.37	4.28	Very High
Dedication	0.43	4.32	Very High

Absorption	0.49	4.18	High
Overall	0.20	4.26	Very High

Moreover, the high result of this study acknowledged the findings of Almagro et al. (2015), who emphasized that employees with high levels of work engagement are energetic and dedicated to their work and immersed to their work. Engaged employees care about their work and about the performance of the company, and feel that their efforts make a difference. Engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior.

Consequently, these findings conformed by Gorgievsky and Bakker (2018) who found that high level of work-engagement is positively related to productivity. The level of work engagement is affected by aspects of the job and the organization and can fluctuate by week and even by day. It seems that workers can also be too engaged. Over-engaged workers expand their resources to be able to perform extra role behaviors, sometimes resulting in working overtime at the cost of interference with family duties. If work interferes with home regularly, it undermines recovery from work. In the long run this can lead to health problems.

Level of Self-efficacy of School heads

Shown in Table 3 is the level of *Self-efficacy* of school heads with an overall standard deviation of 0.32 and an overall weighted mean score of 4.04 which has a descriptive equivalent of High. The indicators which obtained a highest mean is Efficacy for Management with a mean of 4.05, next are Efficacy for Instructional Leadership and Efficacy for Moral Leadership which gained the same mean value of 4.04. While the following specific items' result which gained the highest means are *Handling the time demands of the job*, of which obtained a mean value of 4.47 and a descriptive equivalent of Very High; followed by *Prioritizing among competing demands of the job* with a mean value of 4.36 and a descriptive equivalent of Very High.

Meanwhile, some items have the lowest means and have a verbal description of High. These are *Shaping the operational policies and procedures that are necessary to manage the school* and *Maintaining control of your own daily schedule* of which received a mean of 3.60 and 3.52 respectively.

Table 3 Level of Self-efficacy of school heads in Region XI

Indicators	SD	Mean	Descriptive Level
Efficacy for Management	0.32	4.05	High
Efficacy for Instructional Leadership	0.33	4.04	High
Efficacy for Moral Leadership	0.33	4.04	High
Overall	0.32	4.04	High

The result of the study conforms with what Calik (2012) believed on high ratings of self efficacy recognized the beliefs that it is an important variable that have to be considered in the process of restructuring schools and establishing effective schools. Likewise, in a study conducted by Cadosales (2017) at La Salle University in Ozamiz City, it was found out that teachers' level of teaching efficacy is generally very high. This was due to the training of the student teachers contributed to the development of their teaching efficacy. Greater efficacy leads to greater effort and persistence which leads to better performance.

Level of School Effectiveness

It presented in Table 4 the level of school effectiveness with an overall standard deviation of 0.20 and an overall weighted mean score of 3.74, which has a verbal interpretation of High.

Table 4 Level of School Effectiveness in Region XI

Indicators	SD	Mean	Descriptive Level
Effectiveness of the School Climate	0.30	3.57	High
School Administration Effectiveness	0.41	3.63	High
Effectiveness of the Teacher	0.36	3.69	High
Effectiveness of the Relationship with Local Community	0.36	3.67	High
Effectiveness of Using Enrichment Activities in School	0.44	3.92	High
Effectiveness of Educational Practices	0.43	3.82	High
Student's Sense of Belonging the Surrounding Environment	0.46	3.88	High
Overall	0.20	3.74	High

For specific items' indicators, the highest means with a verbal description of Very High is Effectiveness of Using Enrichment Activities in School with a mean value of 3.92; Next is Student's Sense of Belonging the Surrounding Environment with a mean value of 3.88, *Effectiveness of Educational Practices* of which with mean value of 3.82, Effectiveness of the Teacher with a mean value of 3.69, *Effectiveness of the Relationship with Local Community* is 3.67, School Administration Effectiveness is 3.63. Meanwhile, the lowest mean and have a verbal description of high belongs to *Effectiveness of the School Climate* with 3.52 mean value.

Relationship Between Instructional Leadership and School Effectiveness

Presented in Table 5.1 are the test results of the relationship between Instructional Leadership and School Effectiveness. It can be noted in the hypothesis of which the relationship was tested at a 0.05 level of significance. The overall R-value of **-0.250** with a p-value of .000 which failed to accept the null hypothesis. This means that there is a significant relationship between instructional leadership and school effectiveness.

Table 5.1 Significance on the Relationship between Instructional Leadership of School Heads and School Effectiveness of Public Elementary School in Region XI

Instructional Leadership	School Effectiveness of Public Elementary							
	ESC	SAE	EOT	ERC	TEC	EEP	SBE	Overall
Framing the Goals	.120*	-.122*	.016	.029	-.112*	-.121*	-.030	-.080
	.016	.015	.754	.567	.025	.016	.544	.111
Communicate the School Goals	.025	-.018	-.064	.006	-.013	-.061	-.014	-.042
	.612	.725	.203	.911	.793	.223	.786	.407
Supervise and Evaluate Instructions	.057	.024	.007	-.028	-.061	-.019	-.039	-.024
	.259	.633	.887	.579	.220	.705	.440	.633
Coordinate the Curriculum	-.061	-.054	-.071	-.013	-.068	.033	-.021	-.070
	.223	.279	.156	.788	.174	.513	.677	.161
Monitor Student's	-.012	-.068	-.098	.075	-.007	-.110*	-.024	-.072

Progress	.806	.174	.051	.136	.885	.027	.632	.153
Protect instructional Time	-.024	-.114*	-.145**	-.112*	.071	.000	-.019	-.089
	.630	.023	.004	.025	.155	.992	.709	.076
Maintain high visibility	.030	-.104*	-.032	-.079	.016	-.041	-.099*	-.093
	.555	.038	.521	.115	.757	.415	.047	.063
Provide Incentives for teachers	-.008	-.161**	.044	-.069	-.140**	-.203**	-.133**	-.207**
	.878	.001	.377	.167	.005	.000	.008	.000
Promote professional development	-.066	-.104*	-.037	-.034	.017	-.028	-.047	-.082
	.188	.037	.464	.495	.735	.579	.344	.102
Provide incentives for learning	-.078	-.016	.005	-.030	-.048	-.024	-.111*	-.087
	.121	.753	.915	.551	.343	.636	.027	.081
Overall	-.007	-.219**	.119*	-.073	-.102*	-.169**	-.154**	-.250**
	.883	.000	.018	.143	.042	.001	.002	.000

More specifically, the result reveals that the variable instructional leadership is positively correlated with school Effectiveness, the following p- value of Framing the Goals is .111, the School Goals with a mean value of .407, Supervise and Evaluate Instructions with a mean value of .633, Coordinate the Curriculum with a mean value of .161, Monitor Student’s Progress with a mean value of .153, Protect instructional Time with a mean value of .076, Maintain high visibility with a mean value of .063, Provide incentives for teachers with a mean value of .000, Promote professional development with a mean value of .102 and Provide incentives for learning with a mean value of .081.

This result is in conformity to the findings of Wenhui and Mansor (2024) that there is a concrete link between instructional leadership and school effectiveness based from their study. Likewise, the findings also are aligned with prior research, demonstrating a positive correlation between instructional leadership and school effectiveness. This is supported also by the idea of Kilag, et al (2024) who proved that based on their survey results showed a significant positive relationship between instructional leadership and school effectiveness. It indicates that Instructional leadership of principal is directly related to the success of the school and would create successful schools in country’s educational advancement.

The result of the study is also supported with AlShehh and Alzouebi,(2020) findings that the high level of school effectiveness is in relation to enhancing and developing instructional leadership in any country. Likewise, the result of the study conforms with what accentuated in the research of (Rabo, 2021), in the Palestinian school. She used the Effectiveness scale to examines principals' perceptions of six school effectiveness factors: the effectiveness of school climate, school administration effectiveness, the effectiveness of the teacher, the effectiveness of the relationship with the local community, the effectiveness of educational practices, the student's having a sense of belonging to the surrounding environment.

Relationship Between Work Engagement and School Effectiveness

Shown in Table 5.2 are the results of the test of the relationship between Work Engagement of Teachers and School Effectiveness. The results show that the overall values reveal with no significant relationship between Work Engagement of Teachers and School Effectiveness ($r=-.132$, p value of = **.008**).

Table 5.2 Significance on the Relationship between Work Engagement and School Effectiveness of Public Elementary School in Region XI

Work Engagement of Public Elementary Teachers	School Effectiveness of Public Elementary							
	ESC	SAE	EOT	ERC	TEC	EEP	SBE	Overall
Vigor	.041	-.173**	.029	-.041	-.063	-.143**	-.092	-.138**
	.412	.000	.562	.411	.211	.004	.067	.006
Dedication	-.008	-.040	-.031	-.077	-.021	-.082	-.041	-.086
	.876	.422	.540	.123	.677	.100	.418	.086
Absorption	-.004	.015	-.004	-.033	.010	-.038	-.057	-.033
	.937	.768	.932	.515	.845	.454	.254	.508
Overall	.013	-.094	-.006	-.082	-.035	-.135**	-.100*	-.132**
	.798	.060	.898	.102	.490	.007	.046	.008
*Significant at 0.05	at significance level.							

Legend:

<i>ESC- Effectiveness of the School Climate</i>	<i>TEC- Effectiveness of Using Enrichment Activities in School</i>
<i>AE- School Administration Effectiveness</i>	<i>SBE- Student's Sense of Belonging the Surrounding Environment</i>
<i>EOT- Effectiveness of the Teacher</i>	<i>ERC- Effectiveness of the Relationship with Local Community</i>
<i>EEP- Effectiveness of Educational Practices</i>	

This result agree to the findings of Hoigaard et al., (2012) who found out that work engagement has a positive effect on school effectiveness. On their research, work engagement was significantly and positively correlated with teacher effectiveness which resulted also to the effectiveness of the school.

Additionally, this result also supported with the result of the study conducted by Koçak and Nartgün (2020). There was a positive and significant relationship between teachers' work engagement with the job and their opinions about the effectiveness of schools.

Relationship between Levels of Self-efficacy of School Heads and School Effectiveness

Shown in Table 5.3 are the results of the test of the relationship between self efficacy of school heads and school effectiveness. As displayed in the hypothesis, the relationship was tested at 0.05 level of significance. The results show that the overall r- value of **.016** with p value of **.745** signifies a weak association between self efficacy of school heads and school effectiveness public elementary schools. It indicated that the null hypothesis was accepted. It demonstrates that there is no significant relationship of self efficacy of school heads and school effectiveness. Precisely, all of the indicators of self-efficacy of school heads did not correlate positively with school effectiveness namely; Efficacy for Management gained an r-value of .033 with p-value of .515; while Efficacy for Instructional Leadership have .029 with p-value of .561; and Efficacy for Moral Leadership got -.015. with p-value of .769. As shown in Table 5.3, all indicators of each variable are not correlated. Thus, there is no favorable relationship between the two variables.

Table 5.3 Significance on the Relationship between Self-efficacy of School Heads and School Effectiveness of Public Elementary School in Region XI

Self-efficacy of School Heads	School Effectiveness of Public Elementary							
	ESC	SAE	EOT	ERC	TEC	EEP	SBE	Overall
Efficacy for Management	-.039	.008	.092	.014	.052	-.009	-.001	.033
	.436	.875	.067	.783	.302	.864	.990	.515
Efficacy for Instructional Leadership	-.061	.059	.102*	.016	.014	-.009	-.016	.029
	.223	.237	.042	.743	.777	.861	.749	.561
Efficacy for Moral Leadership	-.036	-.031	.042	.018	.020	-.018	-.037	-.015
	.473	.531	.402	.717	.689	.725	.464	.769
Overall	-.046	.013	.080	.017	.029	-.012	-.018	.016
	.356	.803	.108	.738	.559	.815	.715	.745

Legend:

<i>ESC- Effectiveness of the School Climate</i>	<i>TEC- Effectiveness of Using Enrichment Activities in School</i>
<i>SAE- School Administration Effectiveness</i>	<i>SBE- Student’s Sense of Belonging the Surrounding Environment</i>
<i>EOT- Effectiveness of the Teacher</i>	<i>ERC- Effectiveness of the Relationship with Local Community</i>
<i>EEP- Effectiveness of Educational Practices</i>	

The result of this study is supported by Coban et al. (2020) who examined and found out that though self-efficacy is an important component, its direct correlation with school effectiveness can be weak or non-significant.

Additionally, a study by Djigic et al. (2014) found that while self-efficacy is an important factor, it may not always predict school effectiveness in a straightforward manner. They pointed out that other factors, such as the school environment and administrative support, can play a more significant role in influencing school effectiveness than self-efficacy alone.

Significance on the Influence of the Exogenous Variable on the School Effectiveness

Presented in Table 6 is the influence of instructional leadership, work engagement and self- efficacy of school heads on school effectiveness. Further, as indicated by the F-value of 8.822 with a significance level (p) of 0.000. This indicates that the model is statistically significant. It shows that the overall regression model explains a small portion of the variance in school effectiveness. It could be stated that there are other variables that can predict the school effectiveness which are not covered in this study.

Table 6 Significance on the Influence of Instructional Leadership, Work Engagement, and Self-efficacy of of School Heads, on School Effectiveness of Public Elementary Schools in Region XI School Effectiveness of Public Elementary Schools

Exogenous Variables	B	β	t	Sig.
Constant	5.409		15.256	.000
Instructional Leadership	-.358	-.242	-4.367	.000

Work Engagement	-.013	-.018	-.318	.751
Self-efficacy	-.003	-.006	-.114	.910
R	.250			
R ²	.063			
ΔR	.056			
F	8.822			
ρ	.000			

Generated Structural Models

The interrelationships among the variables in the study were analyzed. The three models were generated to obtain the best fit model of school effectiveness. The models were assessed against the given fit indices and served as basis to accept or reject the model. The summary of the findings of the goodness of fit measures of these five structural models is presented in Table 7.

In identifying the best fitting model, all the indices included must consistently fall within the acceptable ranges. Chi-square/degrees of freedom value should be between 0 and 2, with its corresponding p-value greater or equal to 0.05. Root Mean square of Error Approximately value must be less than 0.05 and its corresponding p close value must be greater or equal to 0.05. The other indices such as Normed Fit Index, Tucker- Lewis Index, Comparative Fit Index, and Goodness of Fit Index must be all greater than 0.90.

Hypothesized Structure Model 1 appended as Figure 1 considered only the direct effects of instructional leadership, work engagement, and self- efficacy of school heads to school effectiveness. It suggested a poor fit model to the data as all the index values did not fall within each criterion.

Hypothesized Structural Model 2 appended as Figure 2 showed an index value of *Chi Square/Degrees of Freedom* (1.610) and CFI or *Comparative Fit Index* of .951, which obtained that is not fit for the data. It also suggested a poor fit model to the data as all the index values do not fall within each criterion.

Hypothesized Structural Model 3 appended as Figure 3 showed an index values which is identified as best fit model. It included instructional leadership and self- efficacy as the potential variable which is expected to have influence on school effectiveness. The model fitting was calculated as being highly acceptable as presented in Table 7. The Chi-square divided by the degrees of freedom was 1.187 with the P-value of .192. This indicated a very good fit model to the data. This was also strongly supported by RMSEA index of .022 which was less than 0.041 level of significance with its corresponding P-close value of .992 which is > 0.05. Likewise, the other indices such as NFI which gained .953, TLI of .990 and CFI of .992. These were found to be consistently indicating a very good fit model as their values fall within each criterion.

Table 7 Goodness of Fit Measures of Structural Best Fit Model

INDEX	CRITERION	MODEL FIT VALUE
P-value	> 0.05	.192
CMIN/DF	0 < value < 2	1.187
GFI	> 0.95	.979
CFI	> 0.95	.992
NFI	> 0.95	.953

TLI	> 0.95	.990
RMSEA	< 0.05	.022
P-Close	> 0.05	.992

Legend:

- CMIN/DF** - Chi-Square/Degrees of Freedom
- NFI** - Normed Fit Index
- TLI** - Tucker-Lewis Index
- CFI** - Comparative Fit Index
- GFI** - Goodness of Fit Index
- RMSEA** - Root Means Square of Error Approximation
- P-close** - P of Close Fit

Best Fit Model of School Effectiveness

Figure 3 expounds the standard estimates of Generated Model 3. It shows the interrelationships of the latent exogenous variables’ instructional leadership, work engagement and self- efficacy of school heads and its direct causal relationship with the latent endogenous variable, school effectiveness. As can be gleaned in model 3, as the best fit model, it shows the interrelationships of the latent exogenous variables, instructional leadership, and self- efficacy of school heads are exogenous variables that have direct causal relationship on school effectiveness. The model also revealed the interconnectedness of these two exogenous variables. Instructional leadership, and self- efficacy of school heads had a direct relationship school effectiveness.

The model fitting was calculated as being highly acceptable as presented in Table 7.1. The Chi-square divided by the degrees of freedom was 1.187 with the P- value of .192. This indicated a very good fit model to the data. This was also strongly supported by RMSEA index of .022 which was less than to 0.05 level of significance with its corresponding P-close value > 0.992. Likewise, the other indices such as NFI .953, TLI .990 and CFI .992 were found to be consistently indicating a very good fit model as their values, all fall within each criterion.

Figure 3 shows the structural model standardized solution of the exogenous variables. Results indicated that school effectiveness is strongly influenced by following indicators of instructional leadership such as *Framing the Goals, Supervise and Evaluate Instructions, Provide Incentives for Teachers and Promote Professional Development*. While Self efficacy of school heads indicators namely; *Efficacy for Instructional Leadership* and *Efficacy for Moral Leadership* have significant contribution to the latent variable school effectiveness. It can also be viewed from the figure that *Effectiveness of the School Climate, Effectiveness of the Relationship with Local Community, Effectiveness of Using Enrichment Activities in School* and *Student’s Sense of Belonging the Surrounding Environment* have strong interconnectedness on school management. As a result, the goodness of its values changes in all indices and notably achieved the desired range for good fitting model.

Table 7.1 Summary of Goodness of Fit Measures of the Five Generated Models

Model	P-value (>0.05)	CMIN/ DF (0<value< 2)	GFI (>0.95)	CFI (>0.95)	NFI (>0.95)	TLI (>0.95)	RMSEA (<0.05)	P-close (>0.05)
1	.000	5.965	.835	.229	.212	.128	.112	.000

2	.000	1.610	.936	.951	.881	.940	.039	.984
3	.192	.1187	.979	.992	.953	.990	.022	.992

Legend: CMIN/DF — Chi Square/Degrees of Freedom NFI – Normed Fit Index GFI - Goodness of Fit Index TLI-Tucker-Lewis Index RMSEA — Root Mean Square of Error Approximation CFI — Comparative Fit Index

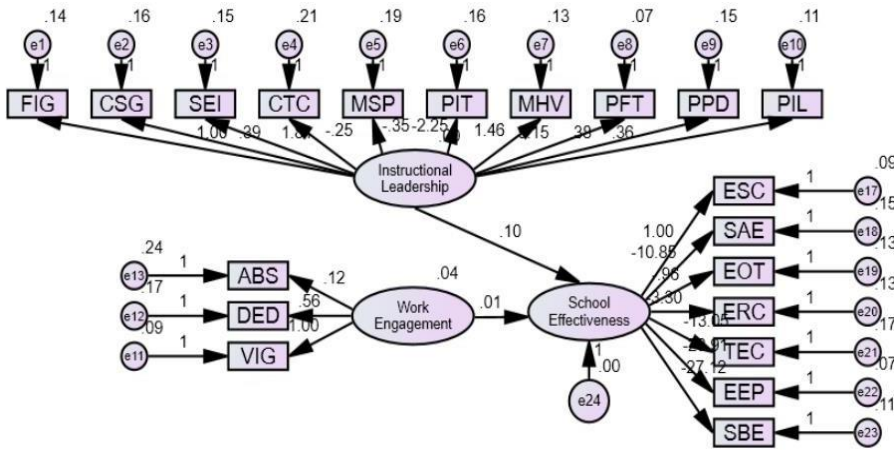


Figure 2. Generated Model 1

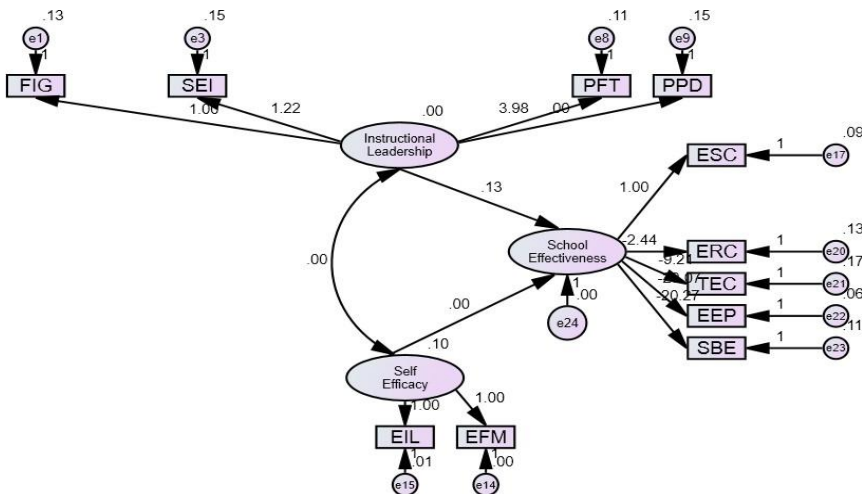


Figure 3. Best Fit Model

CONCLUSIONS AND RECOMMENDATION

As can be gleaned in the findings of the study, conclusions are drawn in this section. The results depicted a very high level of instructional leadership, a high level of work engagement, a high level of self efficacy, and a very high level of school effectiveness. It generally indicates that among indicators, only self efficacy has no significant relationship to school effectiveness.

Moreover, the findings of this study, contradict the null hypothesis which suggest that there is no exogenous variables that could influence school effectiveness. It means that the overall regression model is statistically significant. Further, results showed that the best-fit model was model 3 showing the direct causal relationships of Instructional Leadership and self -efficacy on school effectiveness. All indices in Model 3 were found to be consistently indicating a very good fit model as their values fall within each criterion.

The findings of this study support theory of School Effectiveness of Edmonds (1979) who viewed that schools to be effective should have high regards on how the leader believed that they are effective for student achievement, teachers’ performance and the school.

Based on the findings and conclusions, recommendations will be offered. The study revealed that among the variables, self-efficacy of school heads obtained the lowest mean on the indicators Efficacy for Instructional Leadership and Moral Leadership. Specifically, on the items Promoting a positive image of your school with the media, Promoting the prevailing values of the community in your school, generating enthusiasm for a shared vision for our school and Managing change in our school. This can be addressed through the enhancement seminars for school heads focusing on how to develop the self-efficacy of school heads. Sharing of best practices also of how the vision is making a difference in their school and beyond, and highlight the achievements and impact of their stakeholders.

In addition, among the items of instructional leadership, indicators Framing the Goals obtained the lowest mean such as; Using needs assessment or other formal and informal methods to secure staff input on goal development, This can be increased through having an In Service Training for teachers focusing goal achievement to improve and build their weaknesses for better organizational relations. Furthermore, to improve the level of Supervise and Evaluate Instructions, specifically on the items " Conducting informal observation on a regular basis and may not involve written feedback or formal conference which also obtained the lowest mean, the school, in partnership with the DepEd Division Curriculum Implementation Division may conduct school activities that give emphasis on how to strengthen clinical supervision to help school heads in giving positive feedback for those who employees who really need it.

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