



## Quantitative study on the influence of principal's instructional leadership practices on the school culture: Teachers' perception

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### Abstract

This quantitative study aimed to: (1) explore Bhutanese middle secondary school teachers' level of perception on the principal's instructional leadership practices and the school culture, (2) explore the relationship between the principal's instructional leadership practices and the school culture, (3) construct the best predictive equation to predict the school culture using four dimensions of the principal's instructional practices in the school. The following statistics were employed for data analyses: means, standard deviations, the Pearson  $r$  analysis and stepwise regression analysis. It was found that there was a small positive correlation between demographic data of respondents and the school culture. The result indicated that the perception level of teachers on the principal's instructional practices and school culture were at high level (Mean = 3.68 and 3.82 respectively). There was a highly positive correlation between the principal's instructional practices and the school culture (Pearson  $r = .775$  with  $p \leq 0.01$ ,  $r^2 = .604$ ). The best predictive dimension of school culture from the four dimensions of principal's instructional practices in the school was the improvement of instructional practices( $X_2$ ), management of people and resources( $X_3$ ) and allocation of resources( $X_4$ ) with  $r = .777$ , and significance level at 0.01.

**Keywords:** Principal's instructional leadership practices, four dimensions of instructional and leadership, school culture

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### 1. Introduction

The nature of school leadership is seen as one of designing strategies behind every successful school. However, understanding term leadership needs deeper exploration as the term leadership is operated and used differently by different authors. In short, there is no agreed prescriptive definition of leadership [1, 2], rather it has been justified under different situation by many writers. It is defined as an "influence on subordinates" [3, 4], "relationship between leader and employees" [2, 5] & "interpersonal influence" [6]. In short, it can be concluded that meaning of leadership in any organization is evolving with change in time and situations. Since, school is an organization where different individual works together to achieve common goals, the leadership behavior of school principals are seen as a very important aspect for the school success. The history of appointing Bhutanese as the school leader started only towards the end of 1980s until then, the schools in Bhutan were headed by head teachers from India [7]. However, school heads were

directly appointed by the Ministry of Education without proper formal leadership qualification and training unlike the school leaders in Western school system. It was only in 2003 that the formal leadership training and higher study in school leadership and management was introduced in Bhutan [7]. Although, progressive development has taken place in our education system, improving quality of education has always remained as one of the foremost challenges. For instance, some of the issues are students' poor performance in academics, classroom size, access to education, and teacher retention. These challenges impose greater impact on the quality education delivery which further impacted the realization of educational goals [8]. To this end, principals' personal attributes and initiative are seen as most paramount factor that would enable schools to perform well despite steep challenges [9]. In addition, principals in Bhutan are considered as the most essential and significant person in making decision and overall management of the school [10]. Although large number of research on the instructional leadership and school culture has been conducted in Western context, the studies in these aspects were very limited in Bhutan. So, this study was carried out mainly to answer the following research

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questions;

1. What is the level of Bhutanese teachers' perception on the principal's instructional leadership practices and the school culture?
2. Is there any relationship between the principals' instructional leadership practices and the school culture?
3. What are the best predictive dimensions of the principal's instructional leadership practices in the school influencing school culture?

## 2. Literature Review on the Instructional Leadership and the School Culture

Studies on instructional leadership date back to the early 1980s by Bridges and Bossert who claimed that "school administrator had little effect upon the field of education" before 1980s [11, 12, 13]. However, this claim was disputed by Austin [14] who stated principals' are the "expert instructional leaders who have high expectation from teachers and students to accomplish what they want". Towards the end of 1980s, many studies were conducted on instructional leadership and their roles as instructional leaders in the school [15, 16, 17, 18, 19]. By the early 1990s, many authors came up with numerous definitions on the instructional leadership. This clearly highlights that there is no explicit description of instructional leadership as stated by Leithwood et al. [1] and even viewed as narrow and broad concept [20]. This brought numerous definitions of instructional leadership. For instance, Glickman, et al. [21] described instructional leadership as the "integration of the tasks of direct assistance to teachers, group development, staff development, curriculum development, and action research". Similar description was also made by Tice [44] who stated that instructional leadership means "enhancement of staff abilities". It means educators helping educators. An instructional leader understands and makes decisions which improve curriculum and instructions. Furthermore, [20] stated that instructional leaders are directly involved in classroom teaching and learning that affects students learning. In conclusion, instructional leader is considered as one very influential factor in building good school culture.

Research shows that the importance of culture was recognized as early as 1930; however, it was during the 1970s the educational researchers began to explore and draw direct link between the quality of school climate and its educational outcomes. Culture is a "strategic body of learned behaviors that gives both meaning and reality to its participants" [22]. It has been explained as the "collective programming of the mind which distinguishes the members of one group from another group" [23] and as a "complex pattern of norms, attitudes, beliefs, behaviors, values, ceremonies, traditions, and myths that are deeply ingrained in the very core of the organization" [24, 25,

26].

Volumes of research were carried out to investigate the relationship between instructional leadership and the school culture. For example, Gruenert [27] conducted a study to analyze the relationship between school culture and students' achievement in 81 Indiana elementary, middle, and high schools and he found significant relationships between various factors of school culture, school climate, leadership, and student achievement. Of most interest are the significant correlational relationships between school culture factors and student academic orientation, instructional management, and student achievement in both Maths and Language Arts. Similar findings were found by Leithwood [28] who stated that school leaders could shape the culture of school formally or informally and the change could be positive or negative [29]. This clearly indicates that the principal's leadership practices have either positive or negative impact on the school culture and also can lead to the better student academic performance.

## 3. Summary

Although many educational theorists have put numerous descriptions to the instructional leadership, it needs to be viewed from both broader and narrow perspective. To this end, instructional leader must be viewed as a school leader who takes care of both teachers and students' climate positively. They should enhance positive learning culture through building conducive teaching and learning environment rather than focusing narrowly on one aspect.

## 4. Theoretical Framework

### 4.1. Instructional leadership

The study is grounded on the instructional leadership framework developed at the Centre for Educational Leadership, University of Washington by Rimmer [30]. This model proposes four dimensions for the instructional leadership practices of the principal:

#### 4.1.1. Vision, mission and culture building

The first dimension outlines that principal as an instructional leader must embrace school vision of academic success through building well established culture of learning and creating conducive learning and working environment of both teachers and students [30]. In addition, Hoy & Miskel [26] put that instructional leaders give major priority in improving quality instruction in the school by incorporating in the school's visions and goals.

#### 4.1.2. *Improvement of instructional practices:*

The second dimension focuses on enhancing and upgrading curriculum and instructions through establishing system of innovation, monitoring, evaluating, and reviewing for teacher development [30]. Similarly, Blasé & Blasé [31] added that principals as an instructional leaders should shoulder task to escalate developments in terms of classroom, staff and curriculum. In short, school leaders must take effort and energy on improving teaching and learning in the school through creativity and innovative professional development activities.

#### 4.1.3. *Allocation of Resources*

Under this dimension principal as an instructional leader's role is to do strategic planning of budget and other resources allocation to upscale instructional practices [30]. Nevertheless, effective instructional leaders "integrate linkage" and deploy of all resources to achieve school purpose and mission [32].

#### 4.1.4. *Management of people and processes*

This dimension emphasizes on the administering subordinates through professional development programs and creating conducive working environment to motivate and inspire them to establish culture of learning excellence [26, 30].

#### 4.2. *School culture*

For school culture, the researcher used the theory developed by Steven Gruenert & Valintine [33] at the Middle Level Leadership Center. They have developed two different types of assessment tools for collecting data useful in faculty analysis and reflection about school culture. The first tool was the school culture Survey (SCS) measuring six factors: collaborative leadership which focuses on shared and distributed leadership, teacher collaboration which refers to teachers sharing and discussing ideas with each other, professional development which refers to individual teacher's professional and personal development, collegial support which refers to sense of belongingness to school, unity of purpose which refers to working collaboratively to achieve common goals, and learning partnership that is referred as improving and enhancing of students learning by partnering with different stakeholders.

#### 4.3. *Summary*

Principals as instructional leaders play a very pivotal role in constructing positive culture that could enhance overall school improvement. A good school is based on good school culture which depends on school leadership. As discussed in literature review section school leaders are considered as the most paramount factor in creating proper teaching and learning culture. In fact, school leadership and school culture are mutually dependent. Nonetheless, school culture is one of

the critical components to student and teachers effectiveness.

### 5. **Research Methodology**

The research methods are outlined below under the subheadings: Source of Data, Statistical Design, Instrumentation, Data Collection and Analysis.

#### 5.1. *Source of Data*

The population of the study was 2786 teachers [34] of middle secondary schools in Bhutan. Simple Random Sampling Method was used for randomizing the sample size for this study and the total sample size of 370 teachers were selected using Krejcie & Morgan [35] sample size table.

#### 5.2. *Statistical Design*

Three statistical techniques were employed for data analyses to answer the three research questions: Descriptive Statistics to find teachers' level of perception on principal's instructional leadership practices and the school culture, the Pearson Product Moment Correlation Coefficient analysis was deployed to find the relationship between two variables (Instructional leadership and school culture) and stepwise multiple regression analysis was employed to find the best predictive factor of school culture using four dimensions of instructional leadership.

#### 5.3. *Research instrumentation*

The specific steps followed in the construction of the research instrument were as follows: The instrument consisted of two parts; part I consisted of demographic data of respondents and 21 items questionnaire on four dimensions of principal's instructional practices in the school developed after literature review. For the school culture, 35 items questionnaire developed by Gruenert [33] was used. The questionnaire was checked for reliability test with 30 teachers who were not in sample. The Cronbach's  $\alpha$  (alpha) reliability coefficient was calculated at .928 for instructional leadership and .835 for school culture. The reliability test indicated that the instrument was reliable for data collection.

#### 5.4. *Data Collection and Analysis*

The researcher collected data from 370 middle secondary school teachers by distributing surveys. The following procedure of data analysis was operated through SPSS program. The Mean ( $\bar{X}$ ) and Standard Deviation (SD) on the four dimensions of principals instructional practices in the school and the school culture were analyzed to study the perception level of the teachers. The Pearson Product Moment Correlation Coefficient was employed for studying and exploring the relationship between principal's instructional practices in the school and school culture. To construct

**Table 1.** Teacher's level of perception on principal instructional leadership practices and the school culture [N = 370].

Dimensions of principal's Instructional Leadership Practices in the school	Mean	S.D.	Perception Level
Vision, Mission and Culture Building [ $X_1$ ]	3.99	.78	High
Improvement of Instructional Practices [ $X_2$ ]	3.61	.81	High
Allocation of Resources [ $X_3$ ]	3.53	1.13	High
Management of People and Resources [ $X_4$ ]	3.77	.90	High
Principals Instructional Leadership Practices [ $X_T$ ]	3.68	.78	High
School Culture Dimensions [ $Y$ ]	3.82	.65	High

**Table 2.** Pearson product moment correlation coefficient between principals instructional leadership practices and school culture [N = 370].

Dimensions	$X_1$	$X_2$	$X_3$	$X_4$	$X_T$	$Y$
Vision, Mission and culture Building [ $X_1$ ]	1	.757**	.565**	.826**	.854**	.644**
Improvement of Instructional Practices [ $X_2$ ]		1	.660**	.724**	.926**	.723**
Allocation of resources [ $X_3$ ]			1	.625**	.824**	.586**
Management of people and resources [ $X_4$ ]				1	.858**	.715**
Principals instructional leadership practices [ $X_T$ ]					1	.775**
School Culture [ $Y$ ]						1

\*\* Correlation is significant at the 0.01 level (2-tailed)

the best predictive equation to predict the school culture, stepwise method in multiple regressions was employed.

## 6. Result Analysis

Research Question-1: What is the level of Bhutane teachers' perception on principals' instructional leadership practices and the school culture?

The table 1 reveals that in overall, the teacher's level of perception on principals instructional leadership practices in the school was at high level (Mean = 3.68). The teacher's level of perception on all the four dimensions of principals instructional practices were at a high level with Mean score at 3.99( $X_1$ ), 3.61( $X_2$ ), 3.53 ( $X_3$ ) and 3.77 ( $X_4$ ). It was found that overall level of teacher's perception on school culture was high with Mean score at 3.82.

Research Question-2: Is there any relationship between Principals Instructional Practices and school culture?

Table 2 reveals that two dimensions of the principals instructional practices (Improvement of Instructional practices- $X_2$  and Management of people and resources- $X_4$ ) had a high positive correlation with school culture (The Pearson  $r = .723(X_2)$  and  $.715(X_4)$  with  $p \leq 0.01$ ) while Vision, mission and culture building-( $X_1$ ) and Allocation of resources-( $X_3$ ) had moderate positive correlation with school culture (Pearson  $r = .644(X_1)$  and  $.586(X_3)$  with  $p \leq 0.01$ ). The table showed that in overall there was a high positive correlation between the principals instructional practices ( $X_T$ ) and the School Culture ( $Y$ ) with Pearson  $r = .775$  with  $p < 0.01$ .

Research Question 3: What are the best predictive dimensions of the principal's instructional leadership practices in the school influencing school culture?

Table 3 shows the stepwise method of multiple regression analysis and the analysis produced  $F = 186.104$  at 0.01 level of significance. That means the predictive variables (dimensions of principal's instructional practices) were significantly related to school culture. Thus, multiple Correlation Coefficients and regression Coefficients of the predictive variables were taken into account both in unstandardized and standardized scores to construct the best predictive equation for the school culture. The results appear in table 4 and 5.

Table 4 shows the result of multiple regression using stepwise method to choose the best predictive variables for school culture from the four dimensions of principals instructional practices in the school, the first predictive variable selected was Improvement of Instructional Practices( $X_2$ ) and the analysis produced  $R = .723$ ,  $R^2 = .522$  and  $F = 402.087$  with significance level at 0.01. When the second predictive variable which is management of people and resources ( $X_4$ ) was selected and entered into equation, it was found that the  $R = .774$ ,  $R^2 = .599$  changed  $F = 274.271$  with at the 0.01 level of significance. Again when the third predictive variable Allocation of resources ( $X_3$ ) entered into equation, the  $R = .777$ ,  $R^2 = .604$  further increased and changed  $F = 186.104$  with significance level at 0.01. The rest variable which is Vision, mission and culture building ( $X_1$ ) dimensions of principal's instructional practices in the school was excluded from the analysis. Therefore, it can be concluded that the best predictive variables for the school

**Table 3.** Analysis of variance in stepwise method of multiple regression using school culture as criterion variable [N = 370].

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	94.096	3	31.365	186.104	.000 <sup>c</sup>
Residual	61.684	366	.169		
Total	155.780	369			

**Table 4.** Multiple correlation coefficients and multiple coefficients of determinations between predictive variables and criterion variables [N = 370].

Predictors	R	R <sup>2</sup>	F
X <sub>2</sub>	.723 <sup>a</sup>	.522	402.087 <sup>**</sup>
X <sub>2</sub> X <sub>4</sub>	.774 <sup>b</sup>	.599	274.271 <sup>**</sup>
X <sub>2</sub> X <sub>4</sub> X <sub>3</sub>	.777 <sup>c</sup>	.604	186.104 <sup>**</sup>

<sup>\*\*</sup> Significance Level 0.01(2-tailed)

culture (Y) were Improvements of Instructional practices (X<sub>2</sub>), Management of people and resources (X<sub>4</sub>) and allocation of resources (X<sub>3</sub>), respectively. The Regression weights of the predictive variables were computed and tested for the significance to construct the best predictive equation; the results appear in table 6.

The Table 5 reveals that the regression coefficient of predictive variables in unstandardized scores was .312 for Improvement of Instructional practices (X<sub>2</sub>), .268 for Management of people and resources (X<sub>4</sub>) and .056 for Allocation of resources (X<sub>3</sub>). The regression coefficients in standardized scores were .389 for improvement of instructional practices (X<sub>2</sub>), .372 for management of people (X<sub>4</sub>) and .097 for allocation of resources (X<sub>3</sub>), which means that the three dimensions of principal's instructional practices in the school exert positive influence on the school culture. The multiple regression analysis produced multiple correlation (R) = .777 and multiple coefficient of determinations (R<sup>2</sup>) = .604 with F = 186.104 (significance at 0.01 level), that means 77.7% of the variation in school culture can be explained by improvement of instructional practices (X<sub>2</sub>), management of people (X<sub>4</sub>) and allocation of resources (X<sub>3</sub>) dimensions of principals instructional practices in the school with standard error of estimation = .41053.

Thus, predictive regression for school culture can be written as follows; Unstandardized Score:  $Y' = 1.483 + .312(X_2) + .268(X_4) + .056(X_3)$  and Standardized Score:  $Z' = 1.483 + .389(X_2) + .372(X_4) + .097(X_3)$ .

## 7. Discussions

The purpose of the study was to explore the influence of principal's instructional leadership practices on the school culture in Bhutanese middle secondary schools. Additionally, it aimed at answering three research questions: What is the level of Bhutanese teacher's perception on the principal's instructional

leadership practices and school culture? Is there any relationship between the principal's instructional leadership practices and the school culture? What are the best predictive dimensions of principal's instructional leadership practices in the school influencing the school culture?

The findings of study revealed that the perception level of Bhutanese middle secondary school teachers on the principal's instructional leadership practices in the school and the school culture were statistically at high level; Furthermore, the effect sizes produced were large and impactful. The study was in line with finding of Tshering & Sawangmek [36] who conducted a study on instructional leadership and school effectiveness in the urban primary schools of Bhutan. Besides, principals in Bhutan are instructional leaders as they need to spend 65 percent of their role in facilitating curriculum and instructions [9].

There was also a highly positive correlation between the principal's instructional practices and the school culture as perceived by the middle secondary teachers. The finding supports the statement of Bolman and Deal [37] who stated that leaders who understand the significance of symbols and know how to evoke spirit and soul can shape more cohesive and effective organization. Nevertheless, the leaders' decision and action have direct impact on school culture which positively influences the student's achievement [38].

The best predictive dimension of the school culture from the four dimensions of principal's instructional practices in the school were improvement of instructional practices (X<sub>2</sub>), management of people and resources (X<sub>3</sub>) and allocation of resources (X<sub>4</sub>), respectively. This finding supports the work of Dupont [39] who conducted a study on the teachers' perception of the influence of the instructional leadership on school culture. Moreover, the principal as an instructional leader plays major roles in forming and maintaining the school culture [40, 41]. In addition, principals can promote a positive culture, by acting in a certain way that sends signals to teachers and students that they can achieve more [42]. In addition, Hallinger [43] added that principals as instructional leaders must follow top down approach to improve curriculum and instruction in the school.

**Table 5.** Regression coefficient of significant predictors for school culture using stepwise method of multiple regression [N=370].

Predictors	<i>b</i>	$\beta$	SE	<i>t</i>
$X_2$	.312	.389	.041	7.534**
$X_4$	.268	.372	.036	7.484**
$X_4$	.056	.097	.026	2.125**
$a = 1.483 \quad R = .777 \quad R^2 = .604 \quad F = 186.104 \quad SE = .41053$				

## 8. Conclusion

In conclusion, this research study has helped to provide empirical investigation on Bhutanese school principals' instructional practices and their influence on school culture in Bhutanese school setting. It has provided more understanding on whether Bhutanese school principals are really into instructional leadership practices as outlined in Bhutan's Ministry of Education policy guidelines documents. Also, the study has shed some light on the influence of principals' instructional leadership practices on school culture as perceived by teachers. The findings concluded that instructional practices of school principals' were found at statistically high level with high positive relationship between principals' instructional leadership practices and school culture. On the other hand, improvement of instructional practices ( $X_2$ ), management of people and resources ( $X_3$ ) and allocation of resources ( $X_4$ ) of instructional leadership dimension, respectively were found as the best predictive factors of school culture in Bhutan.

## 9. Recommendations

The evidences reported in this research study support the following recommendations;

(1) The Bhutanese school principals' should focus more on the principal's instructional leadership dimensions of improvement of instructional practices, management of people and resources and allocation of resources to improve the school culture in their respective schools.

(2) The Ministry of Education in Bhutan should instruct school principals' to use the four dimensions of principal's instructional leadership practices in the school as guidelines to build positive school culture to enhance student learning achievement. Furthermore, the Ministry of Education should conduct leadership trainings and professional development programs for the school principals to enhance their instructional leadership skills.

## 10. Future Research

The following issues were deemed necessary for exploring the principal's instructional leadership practices in the school and the school culture:

(1) The research was carried only in the middle secondary schools of Bhutan through quantitative approach. Hence, similar research could be conducted including primary, lower and higher secondary schools of Bhutan through mixed method approach.

(2) The study was focused on the instructional leadership and its influence. Thus, study could be carried out examining other factors influencing the school culture such as school size, location, infrastructure and teacher competency.

(3) The sample in this study includes only the perception of teachers. So, to have more accurate findings data's could be collected from school principals as a instructional leader.

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