

Instructional Leadership Behaviours as Correlate Instructional Practices

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ABSTRACT: *The objectives of the study were to determine instructional leadership behaviour commonly practiced by heads, establish relationship between heads instructional leadership behaviours and teachers' instructional practices. One research question and two hypotheses were raised to guide the study. The study employed descriptive survey design. Purposive sampling technique was used to select the teachers. A sample of 96 teachers was drawn from three senior high schools. Questionnaire was used to gather data from respondents. The overall reliability coefficient of 0.82 was obtained from the pre-testing of the instrument. Data were analyzed using means and standard deviations, Pearson product moment correlation coefficient and standard multiple regression. The results were discussed in relation to the literature. Findings revealed that heads commonly evaluate and supervise instruction. The study established significant and positive relationship between leadership behaviours and teachers' instructional practices. It was therefore, recommended that Ghana Education Service should accelerate its efforts by providing the needed support for instructional supervisory activities of heads to enable them promote effective instructional delivery of teachers. It was again, recommended that heads should reinforce the use of evaluating and supervising instruction by regularly visiting classrooms to make teachers more effective in lesson delivery.*

KEYWORDS: instructional practices, instructional leadership behaviours, mentorship, coordinate curriculum, communicate goals

INTRODUCTION

Generally, headmasters' role as instructional leaders considerably contributes to effectiveness of schools. Educational institutions need heads in the twenty-first century who can act independently, take initiative, make sensible choices, exercise critical thought, and adopt a fresh approach to tasks and problems. Therefore, school heads need to push teachers' thinking and give them skills-building opportunities (Sergiovanni & Green, 2021).

As Bush (2023) stated, school heads leadership is second only to classroom instruction among school-related factors that influence students' academic outcomes. It can be established that leadership is vital to the functioning of the school if the ideologies around leadership are examined. A teacher's instructional practice can be improved with the help of instructional leadership behaviors and the actions have impact on classroom instruction (Pietsch & Tulowitzki, 2017). In order to accomplish the goals of education through others, it entails applying knowledge strategically to solve problems related to certain classroom practices (Dewit, 2020).

In this paper, the two main variables are instructional leadership behaviors and instructional practices. Instructional leadership behaviour is a mode of school leadership in which heads work along side with teachers to provide support and guidance in establishing best practices in teaching. Heads' instructional leadership behaviors included evaluating and supervising instruction, professional development, communicating school goals, coordinating curriculum and provision of mentorship. School heads who practice instructional leadership, employ available methods to improve the quality of instruction in schools. The heads must be knowledgeable, capable of carrying out the appropriate duties, and skillful enough to inspire teachers to work to the best of their abilities. Heads and teachers work together as they coordinate activities such as setting direction for the school, redesigning the organization of the school and improving instructional programme (Bush, 2017).

Instructional practices are actions taken by teachers in developing lesson in classroom. Heads of schools are accountable to teachers' instructional success which has a significant impact on senior high schools today. Due to state accountability, today's heads are encouraged to take an active role in supervising teachers' instruction. To do this, they need to possess excellent instructional leadership abilities and knowledge (Hallinger, Gumus, & Bellibas, 2020). Heads carry out this duty through directing and influencing senior high school teaching and learning standards. According to (Walker & Quan, 2022), standards and accountability have increased the relevance of heads roles in instructional' effectiveness. The fact that heads are required to give all teachers, irrespective of their socioeconomic status, the resources they need to successfully deliver high-quality educational services, make instructional leadership behaviours even more vital (Ng, 2019). High performance is required of senior high schools which calls for capable heads who can

supervise the implementation of curriculum and provide teachers the freedom to actively participate in the implementation. Senior high school heads must offer high-quality professional development that addresses instructional issues confronting teachers. To help teachers improve instructional practices, heads may need to provide support services such as mentorship, training, and workshops (Shamow, 2017).

Heads are regarded as more important than ever in the achievement of success in senior high schools. Knowing how heads administer schools affects how teachers deliver lessons and this may enable them to meet the high standards for providing high-quality education set by Ghana government and Ministry of Education. It is therefore, expedient to look into instructional leadership behaviours exhibited by senior high school heads and how these leadership behaviours influence teachers' instructional practices, and also what these heads do to help teachers accomplish tasks and achieve the goals and objectives of providing good tuition for Ghanaian senior high school students.

Justification of the study

Gaps in previous studies indicated that not much empirical research has been done on instructional leadership behaviours and instructional practices. Gyamerah (2021) explored instructional leadership and students' achievement. Harris, Jones, Clean, Devadason, and Adams (2017) explored principals instructional leadership practices. Ismail, Don, Husin and Khalid (2018) looked at instructional leadership and teachers' functional competency. Ismail, Monsor, Iksan (2018) studied influence of principals instructional leadership on science teaching competency Bellibas and Liu (2017) investigated instructional leadership and teacher self-efficacy. These studies did not cover teachers instructional practices. This paper sought to fill this gap.

Ozdemir, Sahin and Ozurk (2020) suggested that future research on instructional leadership behaviours should consider professional development. Based on Ozdemir et al's suggestion, this paper included professional development as one of the predictor variables to measure teachers instructional practices.

Another gap that was addressed focused on data analysis tools. Bellibas and Liu (2017) used multilevel analysis to test relationship between instructional leadership and teacher self-efficacy. Ozdemir, Sahin and Ozurk (2020) applied hierarchical regression analysis to find out the effect of principals' instructional leadership behaviours on teacher self-efficacy. This paper adopted Pearson product moment correlation coefficient and standard multiple regression analysis to measure relationship and influence of instructional leadership behaviours on instructional practices.

Problem Statement

Instructional leadership behaviour is a vital tool that facilitates effectiveness in teachers' instruction. However, this important tool appears to be less effectively used by heads of senior high schools. Heads seem not to supervise classroom instruction and allow teachers to conduct teaching activities less effectively. An interaction with some teachers revealed that some heads probably fail to offer instructional support teachers need to enable them function effectively in classroom. Novice teachers are perhaps left alone without mentors to direct and guide them. yet these teachers are required to deliver lessons up to expectation. The questions that naturally arise are what instructional leadership behaviours do heads of senior high schools commonly exhibit? How do instructional leadership behaviours of heads influence teachers' instructional practices? It is utmost important to answer these and other questions.

Purpose

The purpose of the paper was to investigate relationship between heads' instructional leadership behaviours and teachers' instructional practices and how these leadership behaviours influence teachers instructional practices in senior high schools at Bantama in the Kumasi metropolis.

Objectives

The paper was directed by the following objectives:

1. to examine instructional leadership behaviours commonly exhibited by heads of senior high schools at Bantama sub-metro in the Kumasi metropolis.
2. to establish whether relationship exists between heads instructional leadership behaviours and teachers instructional practices at Bantama sub-metro in the Kumasi metropolis.
3. to assess whether instructional leadership behaviours of heads have significant influence on teachers instructional practices at Bantama sub-metro in the Kumasi metropolis.

Research Question

What instructional leadership behaviours do heads of senior high schools at Bantama sub-metro in the Kumasi metropolis commonly exhibit?

Hypothesis Testing

To achieve objectives two and three, the following directional hypotheses were tested:

1. There is statistically significant relationship between instructional leadership behaviours and teachers instructional practices.
2. There is statistically significant influence of heads instructional leadership behaviours on teachers instructional practices.

METHODOLOGY

The Design

Descriptive survey design was used for the study since the researcher wanted to find out teachers' attitudes, characteristics and opinions on present instructional leadership behaviours and instructional practices (Bordens & Abbott, 2018). The design provides meaningful picture of events and seeks to explain behaviour on the basis of data gathering. The design enables the researcher to collect and analyze data to achieve the objectives (Creswell & Creswell, 2019). Nevertheless, it is difficult to get respondents to answer questions thoughtfully and honesty and retrieve sufficient number of questionnaires completed to make meaningful analysis (Abutabenjeh & Jaradact, 2018). Despite these shortcomings, the researcher sees descriptive survey design as useful in gathering data that facilitate finding out whether heads instructional leadership behaviours have any influence on teachers' instructional practices.

Population

Senior high schools at Bantama sub-metro were selected as the areas for the study. The target population for the study comprised all senior high schools and all teachers at Bantama sub metro. The nature of the research problem requires data from a large number of perspectives, hence, the use of all senior high school teachers at Bantama sub- metro. Statistics from the Regional Education Directorate in the Kumasi Metropolis puts the population of public senior high school teachers at the sub metro for 2020/2021 academic year at 322. The accessible population comprised teachers of the three public senior high schools who have spent at least five years in their respective schools at Bantama sub -metro.

Instrumentation

Questionnaire was used to gather information from the teachers because Babbie (2021) have said that if questionnaire is used, data offered by respondents are of limited interference on the part of the researcher. The questionnaire contained two main scales namely: instructional leadership behaviours and instructional practices. The items on the questionnaire were mostly likert-type scale because it is easy to construct (Leedy & Ormrod, 2020).

Sampling Technique

The three public senior high schools and teachers were purposively selected for the paper. Lambert (2019) postulated that purposive sampling does not involve randomly selected samples and the respondents are deliberately chosen because of some qualities that interest the researcher. The teachers were selected as participants for the study since they receive direct instructional leadership and other support from heads during instructional delivery and therefore, they could provide the needed information for the study. Altogether, 96 teachers formed the sample size for the paper

Pre-testing of Instrument

Pre-testing of questionnaire items was conducted at Subin Sub Metro in Kumasi which has similar characteristics as Bantama sub metro. The pre-test was analyzed using Cronbach alpha because Creswell (2018) advised that “Cronbach alpha is used when items are multiple scores” (p. 235). In this paper, almost all the items constructed were multiple scores therefore, Cronbach alpha was considered appropriate to use. A reliability coefficient of 0.82 was obtained which indicated that the items were reliable to derive the needed responses.

Data Analysis

Data were analyzed using descriptive statistics such as means and standard deviations to answer the research question. Pearson product moment correlation coefficient was used to test hypothesis one. The aim was to find out the significance of the relationship that exists between instructional leadership behaviours of heads and teachers’ instructional practices. Linear multiple regression analysis was performed to test hypothesis two. This was to find out the significance of the regression coefficients that determine the influence of instructional leadership behaviours on teachers’ instructional practices.

RESULTS

Research Question 1: What leadership behavior is commonly practiced by heads of senior high schools in the Kumasi metropolis?

Answer to research question one was sought by calculating the means of the responses. The mean scores calculated were used to determine leadership behaviours of heads. Table 1 displays the scores.

Table 1: Common instructional leadership behaviours

	Mean	Standard Deviation	Skewness Statistics	Kurtosis Statistics	Std. Error
Evaluating and supervising instruction	2.860	5.525	-.644	-1.045	.246
Professional Development	2.241	6.254	-.673	-1.242	.246
Communicate goals	2.473	3.776	-.619	-.836	.246
Coordinate Curriculum	2.417	4.409	-.504	-.355	.246
Provision of Mentorship	1.274	3.679	-.805	-.846	.246
Valid (list wise)					

Computed from field data, 2021

From Table 1, The skewness of the five instructional leadership behaviours (-.644, -.673, -.619, -.504 and -.805) were negative and their means were also higher. This indicated that the left tail is longer and majority of the responses were tilted to the right. The kurtosis of the five leadership behaviours (-1.045, -1.242, -.836, -.355, -.846) were negative indicating that the scores were relatively flat with too many cases in the extreme. This shows that leadership behaviours are essential to improving teachers instructional practices.

From Table 1, evaluating and supervising instruction had the highest mean score of 2.86 and standard deviation of 5.525, followed by communicate school goals (M= 2.47, SD=.3.776), coordinate curriculum (M=2.42, SD=4.410), professional development (M= 2.24, SD=6.254) and mentorship recorded the lowest mean score of 1.274 and standard deviation of 3.679. The result means that heads are rated high on evaluating and supervising instruction scale and low on mentorship scale.

Hypothesis 1

H₁: There is a statistically significant relationship between leadership behaviours and instructional practices

Table 2: Correlation matrix of leadership behaviours and instructional practices

	Leadership Behaviours	Instructional practices
Leadership Behaviours	1	.911**
Correlation Sig. (2-tailed)		.000
N	96	96
		1
Instructional Practices	.911**	-
Correlation Sig. (2-tailed)	.000	-
N	96	96

Computed from field data, 2021 ** $P \leq .001$ (2-tailed)

As indicated in Table 2, there was statistically significant and strong relationship between instructional leadership behaviours and instructional practices. At the alpha level of .01, leadership behaviours correlated with instructional practices at high correlation coefficient ($r = .911$). The significance level (.000) was lower than .01 alpha level. The relationship was found to be positive ($r = .911$, $n = 96$, $p \leq .01$). The result means that heads leadership behaviours and teachers instructional practices are related. Therefore, the alternate hypothesis is retained.

Hypothesis 2

H₀: There is a statistically significant influence of leadership behaviours on instructional practices

The hypothesis investigated whether instructional leadership behaviours have statistically significant influence on teachers instructional practices. To test the hypothesis multiple regression analysis was conducted. Table 3 provides the results.

Table 3: Model Summary

Model	R	R ²	Adjusted R ²	R ² change	Std Error of the Estimate	F Change	Sig
1	.911 ^a	.830	.828	.830	7.57467	457.924	.000

a. Predictors: (Constant), Total Leadership behaviours

b. Dependent Variable: Total Instructional practices

From Table 3, in the model summary, 'R' had a value of .911 and this value represented correlation between leadership behaviours and instructional practices. The value of R² was .830, which

indicated that 83% of the variance in instructional practices was explained by heads instructional leadership behaviours. The F change of 457.924, adjusted R^2 of .828 and significance level of .000 showed that the model was significant.

Table 4: ANOVA Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	26273.637	1	26273.637	457.924	.000b
	Residual	5393.306	94	57.376		
	Total	31666.944	95			

- a. Dependent Variable: Total instructional practices
 b. Independent Variable: Leadership behaviours

Output from ANOVA test in Table 4 showed that the value of F statistics was 457.924 a degree of freedom has 94 groups. The significance value (.000) was relatively smaller than .001. This means that there is more than 0% chance that an F-ratio would happen if the null hypothesis was true. It could be concluded that the regression model resulted in significantly better prediction of leadership behaviours than using mean value. That is, the regression model overall predicted instructional practices well at $F(1,94) = 457.924, P \leq .01$. Therefore, the alternate hypothesis is accepted at $\alpha = .01$.

Table 5: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T-value	Sig.
	B	Std. Error	Beta		
Included variables					
(Constant)	-.048	3.289		-.319	.751
Mentorship	.026	.221	.008	.118	.906
Communicate goals	.670	.186	.292	3.600	.001
Provisional	.400	.240	.119	1.666	.099
Development					
Coordinate	.538	.213	.265	2.525	.013
Curriculum					
Supervising instruction	.905	.259	.314	3.492	.001

Source: Computed from Field Data, 2018.

- a. Dependent Variable: Total instructional practices
 b. Independent Variable: Leadership behaviours

The predictors were determined by using multiple regression analysis with significance level of .000. It is shown in Table 5 that only the coefficients of evaluating and supervising instruction (.314), communicate school goals (.292) and coordinate curriculum (.265) were significant. This means that when all the five predictors were considered only three variables were found to contribute significantly to the regression equation

The 't' at .001, .013 and .001 levels were significant because the 't' values obtained from the data (3.600), (2.525) and (.314) were above the critical 't'. That is, the coefficients of evaluating and supervising instruction, communicate school goals and coordinate curriculum have influence on the regression equation. In the model, it was found that evaluating and supervising instruction, communicate school goals and coordinate curriculum were the best predictors of instructional practices. The single largest Beta coefficient (.314), at significance level of .001 was evaluating and supervising instruction. This means that evaluating and supervising instruction emerged the overall best predictor of teachers' instructional practices.

DISCUSSION

The views of teachers on instructional leadership behaviours and instructional practices statements call for discussions. On common leadership behavior, findings revealed that evaluating and supervising instruction were common among heads. This is not surprising since heads are aware of the demands of Ghana Education Service which are excellence in teaching and good students' outcomes. This means that heads assist teachers to build classroom confidence to enable them practice effective teaching. This implies that teachers will make judicious use of instructional hours and adopt appropriate instructional role behavior towards classroom activities and also select suitable methodology to enhance delivery of lessons.

Provision of mentorship was less effectively practiced by heads and this shows that heads less effectively assign mentors to new teachers. This implies that teachers may have issues regarding teaching since they are not given the needed support to enable them function well in the teaching and learning process as a result, the realization of the overall goals of the school may not be achieved. This finding is consistent with Agyemang's (2017) finding that mentorship was the least behaviour indicated on leadership behaviour scale. It could be said that heads vary the use of leadership behaviours and this will impact positively on teaching and learning since application of appropriate behaviour will improve instructional practices at a particular time.

On hypothesis one, findings indicated that heads instructional leadership behaviours had a strong, positive and statistically significant relationship with instructional practices. The finding means that heads leadership behaviours are related to teachers' instructional practices. This suggests that heads provide the requisite classroom assistance to enable teachers give out their best by using best instructional practices. Therefore, the alternate hypothesis was accepted because there was enough

evidence to support the statement that statistically significant relationship existed between heads leadership behaviours and teachers' instructional practices. This means that when instructional leadership behaviours are adequately applied, there will be positive improvement in teachers instructional practices. It could be said that heads who provide instructional leadership are able to meet the needs of teachers.

On hypothesis two, findings revealed statistically significant influence of evaluating and supervising instruction, communicate goals and coordinate curriculum on teachers' instructional practices. The P-value was small therefore, the alternate hypothesis was accepted. This means that teachers instructional practices significantly improves when heads leadership behaviours are provided. Evaluating and supervising instruction, communicate goals and coordinate curriculum were found to be the best predictors of instructional practices. However, evaluating and supervising instruction made the strongest unique contribution to explaining the occurrence of instructional practices. It could thus be concluded that evaluating and supervising instruction was the overall best predictor of instructional practices. This is being described as the overall best predictor due to its effects on instructional practices.

The R^2 of .830 indicated that 83% of the variance in total instructional practices was accounted for by heads leadership behaviours. This means that, a unit change in leadership behaviours will significantly improve instructional practices by the average of 83%. The remaining 17% could be accounted for by variables which were not included in the model.

The independent variables such as mentorship and professional development are described as bad predictors since their values did not make any significant contribution to the prediction. Therefore, the hypothesis that there is statistically significant influence of heads instructional leadership behaviours on teachers' instructional practices was retained. This is because there is adequate information to support the claim of the alternate hypothesis. The finding is in agreement with Hallinger, Gumus and Bellibas's (2020) statement that instructional leaders make sure teachers are complying with instructional goals of the schools.

CONCLUSIONS

The study revealed that supervising and evaluating instruction was the common instructional leadership behaviour heads exhibited. Heads were found to provide mentorship less effectively. It could be concluded that the frequency of providing this behaviour will lead to improvement in the teaching and learning process.

The paper established statistically significant, strong and positive relationship between instructional leadership behaviours of heads and teachers' instructional practices. It could be concluded that instructional leadership behaviour is related to teachers' instructional practices.

The study found that heads leadership behaviours significantly and positively influenced teachers' instructional practices. It could be concluded that instructional leadership behaviours support teacher's classroom instructional practices for good performance to be achieved.

Implications

The findings of the paper have several implications regarding instructional leadership behaviours and teachers' instructional practices. Evaluation and supervision of instruction was found to be commonly used by heads and this could lead to high teaching standards and also minimizes teachers teaching concerns since instructional issues bothering teachers could be managed. Heads should focus on this variable to maintain standards in senior high schools.

The significant correlation between instructional leadership behaviours and instructional practices implies that instructional leadership behaviours are very important in promoting teachers' instructional practices. Effective use of these variables in the management of senior high schools could promote changes in educational outcomes which could also lead to realization of set goals of education. Adequate attention to these variables may enhance teaching activities and minimizes classroom issues that pose as hindrance to teachers' effectiveness.

Recommendations for Practice

1. On leadership behaviours, findings indicated that heads commonly exhibited behaviour of supervising and evaluating instructions. It is therefore, recommended that heads need to evaluate and supervise teachers' classroom instruction on weekly bases to enable teachers improve their pedagogical knowledge and skills.
2. Heads were found to provide mentorship less effectively. It is recommended that heads need to assign mentors to new teachers at the beginning of each academic year to enable them address issues in teaching that may confront them.
3. The study found that heads leadership behaviours significantly and positively influenced teachers' instructional practices. It is recommended that heads should advocate for sustaining the use of instructional leadership behaviours by applying the appropriate behaviour to a particular issue to meet the needs of the teachers.

Contribution to Knowledge

The paper focused on two variables which facilitated the testing of relationship between instructional leadership behaviours and instructional practices. The findings indicated that evaluating and supervising instruction was the potent predictor of instructional practices. Instructional practices are useful in determining effective use of leadership behaviours. Management of senior high schools should pay particular attention to the use of appropriate leadership behaviours that influence instructional practices to improve teaching and learning outcomes. The paper revealed that other variables which were outside the model may have influence on instructional practices. This prompts heads of the value of instructional leadership

behaviours in senior high schools. It was realized that heads and teachers should consider improvement in instructional practices as a collective responsibility and not as an individual task. It is crucial for heads to identify instructional leadership behaviour that promotes effectiveness of teachers' instructional activities.

REFERENCES

- Abutabenjeh, S. Jaradact, R. (2018). Clarification of research design, research methods and research methodology: A guide for public administration research and practitioners. *SAGE Journals*, 3(36), 231-237
- Agyemang, N. P. (2017). *The influence of instructional leadership behaviours on tutors' professional development in the colleges of Education in Ghana*. Unpublished PhD thesis, University of Education, Winneba
- Babbie, E. R. (2021). *The practice of social research (15th ed.)*. Boston: Cengage
- Bellibas, M. S. & Lui, Y. (2017). Multilevel analysis of the relationship between principals perceived practices of instructional leadership and teacher's self-efficacy perceptions. *Journal of Educational Administration*, 55 (1), 49-69
- Bordens, K. S. & Abbott, B. B. (2018). *Research design and methods: A process approach (10th ed.)*. New York, NJ: McGraw-Hill Education
- Bush, T. (2017). leadership and context: Why one size does not fit all. *Educational Management, Administration and Leadership*, 46 (1), 3-
- Bush, T. (2023). The importance of middle leadership for school improvement. *Educational Management, Administration and Leadership*, 15 (2), 267-26
- Creswell, J. W. & Creswell, J. D. (2018). *Research design: quantitative, qualitative and mixed methods approach research (5th ed.)*. Los Angeles: Sage
- Dewit, P. M. (2020). *Instructional leadership: Creating practice out of theory*. Thousand Oak, CA: Crown
- Gyamerah, A. K. (2021). *Instructional leadership practices: The support increase students' achievement in Ghana's rural districts*. Unpublished doctoral thesis. Walden University. Doctoral studies collection
- Hallinger, P. Gumu, S. & Bellibas, M. S. (2020). Are principals' instructional leaders yet? A science map of the knowledge base on instructional leadership 1940-2018. *Scientometrics*, 22 (3), 1629-1650
- Harris, A., Jones, M., Chen, K. S. L., Devadason, E., & Adams, D. (2017). *Journal of Educational Administration*, 5(2), 207-221
- Ismail, M., Monsur, A., Iksan, Z., & Nor, M. (2018). Influence of principals instructional leadership on science teaching competency. *International Journal of Instruction*, 11 (13), 135-152
- Ismail, S. N., Don, Y., Husin, F., & Khalid, R. (2018). Instructional leadership and teacher functional competency across the 21st Century learning. *International Journal of instruction*, 11(13), 135-152

- Lambert, M. (2019). *Practical research methods in education*. New York: Routledge.
- Leedy, P. D., & Ormrod, J. E. (2020). *Practical research: Planning and design*. Upper Saddle River, N.J.: Prentice Hall.
- Ng, D. F. S. (2019). Instructional Leadership, In B. Wong, S. Hairan, & P. T. Ng (Eds). *School leadership and educational change in Singapore*. Switzerland: Springer Nature.
- Ozdemir, G., Sahin, S. & Oztirkk, N. (2020). Teachers' self-efficacy perception in terms of school principal's instructional behaviours. *International journal of progressive Education*, 16(1), 25-41
- Pietsch, M, & Tulowitzki, P. (2017). Disentangling school leadership and its ties to instructional practices-An empirical comparison of various leadership styles. *Journal of School Effectiveness and School improvement*, 28 (4), 629-649
- Sergiovanni, T. J., & Green, R. L. (2021). The role of principals' leadership abilities in improving school performance through school culture. *Journal of social science Education Research*, 12(1), 47-75.
- Shamow, T. E. (2017). *Characteristics of professional development that lead to change in teacher practices*. California state university, San Marcos
- Walker, A., & Quan, H. (2022). Developing a model of instructional leadership in China. *A Journal of Comparative and International Education*, 52 (1), 147-167