

Impact of Training on Virtual Instructional Leadership in Jamaica During the Covid-19 Pandemic

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Abstract

Globally, instructional leadership is critical to the educational reform agenda of schools. The purpose of this study was to ascertain educators' perceived effectiveness of virtual instructional leadership training on school leadership in Jamaica during the Covid-19 pandemic. It also sought to examine if there are statistically significant differences in the scores of the composite dependent (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on school level, capacity in which educators work and gender. The instrument used to collect data for this study was adopted by the researcher. The instrument was converted into a Google Form to make it easier for distribution and data collection. The authors reported that the instrument achieved reliability of Cronbach Alpha amongst the tenets ranging from 0.87-0.80. Overall, the instruments' reliability statistic is .95. The data was analyzed using weighted means and MANOVA. The results revealed that the educators rated four dimensions of the instructional leadership scale High, maintaining visible presence; professional development; feedback on teaching learning, and curriculum implementation. In addition, instructional resource provider; maximize instructional time, and monitoring students' progress were rated moderate. Another finding of this study is that there is no statistically significant difference in the scores of the composite dependent variables based on school level, capacity served, and gender. Another implication of the finding of this research is that principals must ensure that instructional time is maximized by managing and planning for instruction, assessment, and other teacher-student activities while developing strong relationships with teachers and students by rewarding them for achieving targets.

Keywords: Covid 19 Pandemic, Curriculum implementation, Feedback on teaching and learning, Instructional resource provider, Maintain visible presence, Maximize instructional time, Monitoring students' progress, Professional development, Virtual instructional leadership.

Introduction

Globally, instructional leadership is critical to the educational reform agenda of schools. The role of the instructional leader is to provide teachers with essential resources and ongoing professional development for students' success [1]. The widespread Coronavirus Disease

(Covid-19) recorded its first case in Jamaica on March 9, 2020 immediately following was the mandatory closing of schools on March 12, 2020. Since then, schooling has never been the same in Jamaica. School administrators and teachers had to plan how to mitigate teaching students remotely, which was a first in the education system on a large scale in Jamaica,

especially at the early childhood, primary, and secondary school levels. However, there was a huge concern that many principals lacked the skills in instructional leadership that would effectively lead the new normal brought on by the pandemic. Moreso, a principal's pedagogical beliefs and instructional leadership behaviors will affect their adoption of virtual learning and leadership. One of Jamaica's Ministry of Education's main thrusts focuses on the utilization of Information and Communication Technology (ICT) as a primary avenue for improving the teaching-learning process across all school and grade levels. An effective school leader is one who has mastered instruction and is able to demonstrate to his or her staff that they are an effective instructional leader [1]. Consequently, in light of the pandemic, the school leader will need to effectively demonstrate this attribute.

Related Literature

Instructional leadership is essential in educational reform. The role of the instructional leader is to provide teachers with essential resources and ongoing professional development for students' success [1]. Resources relevant to the curriculum and their skillful implementation are made possible through the management of effective instructional forecasts to support the effective implementation of the curriculum [2-3].

In relation to maintaining of visible presence, the instructional leader's presence must be felt in all areas [4]. The principal must supervise and evaluate teachers' instructional practices and professional development. This role is necessary to assess learning targets, an exhibition of practices of learning, and establish programs and exercises on guideline [5]. The instructional leader must assess teachers' professional development needs and offers purposeful professional development opportunities to develop teachers' instructional skills, knowledge, and attitude [6]. The principal must also do follow-ups to evaluate

the effectiveness of professional development opportunities and give feedback and constructive criticisms. Principals must ensure that instructional time is maximized. This includes managing and planning for instruction, assessment, and other teacher-student activities. Thus, teacher and student supervision is critical to the effective functioning of the school. This should also include tokens and other motivation strategies for students and teachers who meet expectations and beyond.

Principals must monitor student learning progress to gather data pertinent in making instructional decisions and providing feedback to students and parents on their progress and learning achievements [7]. Effective instructional leaders conduct regular classroom inspections, set and communicate clear evaluation criteria, give feedback on teaching learning through collaboration with staff and students [8-10]. Thus, the dimension of providing feedback on teaching and learning becomes paramount. This can include being visible physically throughout the school, providing praise and feedback to teachers concerning their growth and capacity development. It must be noted that giving praise and feedback to parents is essential and other activities on student's behaviours helps to ensure instructional time is maximized [11]. In relation to curriculum implementation, the principal must seek to provide an environment that caters to the efficient instructional development, management, and organization of content, interventions, and monitoring in the teaching-learning space [12-13]. The instructional leader must possess adequate learning, aptitudes, and expertise [14] to ensure sufficient learning action, scope of syllabus in time, and astute supervision [12].

Capacity served and school level served by principal influences the effectiveness of the principals' instructional supervision [15]. These factors influence technical, human, and conceptual skills of supervision. These consist of a set of skills required for the planning,

staffing, and coordination of supervision. That is, skills that are concerned with the use of knowledge and methodology required to carry out established tasks. These skills also include forming productive relationships with people and the ability to see the school through the lens of system thinking. Research shows that gender influences different patterns of instructional leadership [16-19]. Their results revealed a small but statistically significant effect of gender on instructional in instructional leadership practices, which are meaningful. Female leaders tend to achieve higher ratings on transformational leadership as well as engaging in more contingent reward behaviours associated with transactional leadership [20].

Materials and Methods

In an effort to ascertain the effectiveness of the Virtual Instructional Leadership training on school leadership in Jamaica during the pandemic, literature was reviewed thoroughly to find an instrument that could be adapted and or adopted to be utilized in gathering the data for this study. Having found one, the authors were written seeking and receiving permission to utilize the instructional leadership scale questionnaire. Assistance was sought and received from the National College of Educational Leadership (NCEL) in assisting with the administering of the instrument to all participants who participated in a Virtual Instructional Leadership course. The researcher made minor changes to the adopted instrument to include keywords such as virtual and online. The instrument was converted into a Google Form to make it easier for distribution and data collection. The authors reported that the instrument achieved reliability of Cronbach Alpha amongst the tenets ranging from 0.87-0.80. Overall, the instruments' reliability statistic is .95. This is highly respectable and made the instrument appropriate to collect data for this study. The data were analyzed using weighted means and MANOVA.

The birth of this research came about as the impact of the Covid-19 pandemic has led to the Ministry of Education engaging several stakeholders to assist with the training of teachers on how to utilize varying online platforms and community physical resources to engage students through professional development sessions with various stakeholders such as the Jamaica Teaching Council. Through forged partnerships with UNICEF, the National College for Educational Leadership (NCEL), and the Ministry of Education and Youth (MOEY) the course Virtual Instructional Leadership was created in April 2020. The primary aim of this course was to help school leaders at the early childhood, primary and secondary levels within the seven educational administrative regions to gain the necessary exposure to not only applicable technologies but to increase and expand their knowledge of the plethora of tools, resources, platforms and best practices that can be employed while leading remotely. The training was targeted for at least 50 cohorts of school leaders, with at least 250 per cohort group. This training was done in preparation for school leaders to begin their planning for the new school year on the preposition that they will utilize digital collaborative tools, development of accountability systems that would guide the virtual participation and effective supervision of staff while adopting Virtual Learning Environments (VLEs) and other digital resources to bolster the teaching and learning process within their specific context. Hence, the aim of the Virtual Instructional Leadership course was to increase the ICT competencies of the school leaders, which would play a critical role in their delivery of excellent student-centered teaching-learning constructs and outcomes, effective monitoring and evaluation of both students and teachers within the virtual context. The course was a deliberate attempt to equip Jamaican school leaders in having the requisite knowledge to face the complex challenges of leading remotely during this

global pandemic. With the training completed, there is no documented study on the effect it had on school leaders as they led within the context of their school for the new school year. Hence the main objective of this study was to determine the effect of Virtual Instructional Leadership training on principals' school leadership in Jamaica during the pandemic.

Results

Research Question 1

What is educators' perceived effectiveness of Virtual Instructional Leadership training on school leadership in Jamaica during the Covid-19 pandemic?

Analysis – Impact of Covid 19 on School Administrators' Leadership Attributes

The data in table one show that the educator participants rated four of the seven dimensions of the instructional leadership scale High. These were: maintain visible presence ($M = 3.93$; $SD = 0.47$); professional development ($M = 3.77$; $SD = 0.63$); feedback on teaching learning ($M = 4.54$; $SD = 0.54$), and curriculum implementation ($M = 4.24$; $SD = 0.63$). This result shows that these dimensions of the instructional leadership scale were highly effective during the Covid-19 pandemic while implementing virtual learning. This suggests

that educators will continue to use these attributes in similar and novel situations in schools.

In addition, three of the seven dimensions of the instructional leadership scale were rated Moderate. These are: instructional resource provider ($M = 3.51$; $SD = 0.43$); maximize instructional time ($M = 3.40$; $SD = 0.54$), and monitoring students' progress ($M = 3.59$; $SD = 0.83$). These findings suggest these dimensions of the instructional leadership scale were perceived as effective during the Covid-19 pandemic while implementing virtual learning, but they could be improved upon. This suggests that educators will continue to use these attributes in similar and novel situations in schools. However, it is important for administrators and policy makers to ascertain how these dimensions can be more effectively implemented.

Table 1 shows that the educators rated four dimensions of the instructional leadership scale High, maintaining visible presence; professional development; feedback on teaching learning, and curriculum implementation. This result shows that these dimensions of the instructional leadership scale were highly effective during the Covid-19 pandemic while implementing virtual learning.

Table 1. Descriptive Statistics

Dimensions of IL Scale	Mean	Std. Deviation	Interpretation
Instructional resource provider	3.51	.43	Moderate effectiveness
Maintain visible presence	3.97	.58	High effectiveness
Professional development	3.77	.63	High effectiveness
Maximize instructional time	3.40	.53920	Moderate effectiveness
Monitoring students' progress	3.59	.82696	Moderate effectiveness
Feedback on teaching learning	3.86	.66594	High effectiveness
Curriculum implementation	4.24	.63392	High effectiveness
Valid N (listwise)	-	-	-
The mean ranges for interpretation include: 1.00 – 2.33 = Low effectiveness; 2.34 – 3.67 = Moderate effectiveness and 3.68 – 5.00 = High effectiveness.			

Results

The educators rated four dimensions of the instructional leadership scale High, maintain visible presence; professional development; feedback on teaching learning, and curriculum implementation. This result shows that these dimensions of the instructional leadership scale were highly effective during the Covid-19 pandemic while implementing virtual learning. This suggests that educators will continue to use these attributes in similar and novel situations in schools. In addition, three of the seven dimensions of the instructional leadership scale were rated Moderate: instructional resource provider; maximize instructional time, and monitoring students' progress. These findings suggest these dimensions of the instructional leadership scale were perceived as effective during the Covid-19 pandemic while implementing virtual learning, but they could be improved upon. This suggests that educators will continue to use these attributes in similar and novel situations in schools. However, it is important for administrators and policy makers to ascertain how these dimensions can be more effectively implemented.

Research Question 2

Is there statistically significant differences in the scores of the composite dependent variable (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on school level?

H₀₁: There is no statistically significant differences in the scores of the composite dependent (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on school level.

Analysis – Instructional Leadership Scale Based on School Level

The results from the statistical analysis showed that there is no statistically significant difference in the scores of the composite dependent variables (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on school level. The multivariate main effect of school level on the combined dependent instructional leadership variables was not statistically significant, $F(42, 180) = 1.106, p = .533$, Pillai's Trace = .533, partial eta square, $\eta^2_p = .184$. The observed power was .905 (see table 2). However, less frequently used statistic, Roy's Largest Root (.001), showed statistical significance, $F(7, 30) = 1.125, p = .001$, Roy's Largest Root = .001, partial eta square, $\eta^2_p = .529$. The observed power was .983 (see table 2). This finding can be taken with caution if used to make the decision at the different school level.

Table 2 shows that there is no statistically significant difference in the scores of the composite dependent variables (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on school level. The multivariate main effect of school level on the combined dependent instructional leadership variables was not statistically significant, $F(42, 180) = 1.106, p = .533$, Pillai's Trace = .533, partial eta square, $\eta^2_p = .184$.

Research Question 3

Is there a statistically significant difference in the scores of the composite dependent variable (instructional resource provider; maintain visible presence; professional development; maximize instructional time;

monitoring students' progress; feedback on teaching learning; curriculum implementation) based on capacity served?

H₀₂: There is no statistically significant differences in the scores of the composite dependent (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on capacity served.

Analysis – Instructional Leadership Scale Based on Capacity Served

The results from the statistical analysis showed that there is no statistically significant difference in the scores of the composite dependent variables (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on capacity served. The multivariate main effect of school level on the combined dependent instructional leadership variables was not statistically significant, $F(7, 29) = 1.236, p = .224$, Pillai's Trace = .533, partial eta square, $\eta^2_p = .224$. The observed power was .669 (see Table 3).

Table 3 shows that there is no statistically significant difference in the scores of the composite dependent variables (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on capacity served.

Research Question 4

Is there statistically significant differences in the scores of the composite dependent variable

(instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on gender?

H₀₃: There is no statistically significant differences in the scores of the composite dependent (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on gender.

Analysis – Instructional Leadership Scale Based on Gender

The results from the statistical analysis showed that there is no statistically significant difference in the scores of the composite dependent variables (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on gender. The multivariate main effect of school level on the combined dependent instructional leadership variables was not statistically significant, $F(21, 90) = .716, p = .807$, Pillai's Trace = .807, partial eta square, $\eta^2_p = .143$. The observed power was .509 (see Table 4).

Table 4 shows that there is no statistically significant difference in the scores of the composite dependent variables (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on gender.

Table 2. Multivariate Test

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Pillai's trace	1.106	.968	42.000	180.000	.533	.184	40.665	.905
Wilks' lambda	.248	.995	42.000	120.712	.491	.207	31.589	.745
Hotelling's trace	1.843	1.024	42.000	140.000	.445	.235	43.002	.912
Roy's largest root	1.125	4.820 ^a	7.000	30.000	.001	.529	33.743	.983

Each F tests the multivariate effect of School Level. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. The statistic is an upper bound on F that yields a lower bound on the significance level.

b. Computed using alpha = .05

Table 3. Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^d
Intercept	Pillai's Trace	.989	369.008 ^b	7.000	29.000	.000	.989	2583.058	1.000
	Wilks' Lambda	.011	369.008 ^b	7.000	29.000	.000	.989	2583.058	1.000
	Hotelling's Trace	89.071	369.008 ^b	7.000	29.000	.000	.989	2583.058	1.000
	Roy's Largest Root	89.071	369.008 ^b	7.000	29.000	.000	.989	2583.058	1.000
Capacityserved	Pillai's Trace	.448	1.236	14.000	60.000	.274	.224	17.307	.669
	Wilks' Lambda	.590	1.251 ^b	14.000	58.000	.266	.232	17.509	.672
	Hotelling's Trace	.631	1.262	14.000	56.000	.260	.240	17.664	.674
	Roy's Largest Root	.504	2.159 ^c	7.000	30.000	.067	.335	15.113	.714

a. Design: Intercept + Capacityserved

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

d. Computed using alpha = .05

Table 4. Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^d
Intercept	Pillai's Trace	.987	313.637 ^b	7.000	28.000	.000	.987	2195.457	1.000
	Wilks' Lambda	.013	313.637 ^b	7.000	28.000	.000	.987	2195.457	1.000
	Hotelling's Trace	78.409	313.637 ^b	7.000	28.000	.000	.987	2195.457	1.000
	Roy's Largest Root	78.409	313.637 ^b	7.000	28.000	.000	.987	2195.457	1.000
Gender	Pillai's Trace	.429	.716	21.000	90.000	.807	.143	15.031	.509
	Wilks' Lambda	.618	.704	21.000	80.951	.817	.148	14.093	.467
	Hotelling's Trace	.544	.691	21.000	80.000	.830	.153	14.501	.480
	Roy's Largest Root	.348	1.493 ^c	7.000	30.000	.208	.258	10.450	.524

a. Design: Intercept + Gender

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

d. Computed using alpha = .05

Discussion

The educators rated the instructional leadership dimensions of maintain visible presence, professional development; feedback on teaching learning and curriculum implementation high. This result shows that these dimensions of the instructional leadership scale were highly effective when used during the Covid-19 pandemic while implementing virtual learning. This suggests that educators will continue to use these attributes in similar and novel situations in schools. In addition, the seven dimensions of the instructional leadership scale: instructional resource provider, maximize instructional time, and monitoring students' progress were moderately rated. These findings suggest these dimensions of the instructional leadership scale were perceived as effective during the Covid-19 pandemic while implementing virtual learning, but they could be improved upon. This indicates that educators will continue to use these attributes in similar and novel situations in schools. However, it is important for administrators and policy makers to ascertain how these dimensions can be more effectively implemented. Being an instructional resource provider is critical to achieving the school's vision and its objectives; it is the role of the instructional leader to provide teachers with essential resources and ongoing professional development for students' success [1]. Resources relevant for the curriculum and their skilful implementation are made possible through the management of effective instructional forecast to support the effective implementation of the curriculum [2-3].

In relation to maintaining of visible presence, the instructional leader's presence must be felt in all areas [4]. The principal must supervise and evaluate teachers instructional practices and professional development. This role is necessary to assess learning targets, exhibition of practices of learning, and establishing programs and exercises on guideline [5]. The instructional leader must

assess teachers' professional development needs and offers purposeful professional development opportunities to develop teachers' instructional skills, knowledge, and attitude [6]. The principal must also do follow-ups to evaluate the effectiveness of professional development opportunities, give feedback and constructive criticisms. Principals must ensure that instructional time is maximized. This includes managing and planning for instruction, assessment, and other teacher-student activities. Thus, teacher and students supervision is critical to the effective functioning of the school. This should also include token and other motivation strategies for students and teachers who meet expectations and beyond.

Principals must monitor student learning progress to gather data pertinent in making instructional decisions and providing feedback to students and parents on their progress and learning achievements [7]. Effective instructional leaders conduct regular classroom inspections, set and communicate clear evaluation criteria, and give feedback on teaching learning through collaboration with staff and students [8-10]. Thus, the dimension of providing feedback on teaching and learning becomes paramount. This can include being visible physically throughout the school, providing praise and feedback to teachers concerning their growth and capacity development. It must be noted that giving praise and feedback to parents is essential and other activities on student's behaviours help to ensure instructional time is maximized [11]. In relation to curriculum implementation, the principal must seek to provide an environment that caters to the efficient instructional development, management and organization of content, interventions, and monitoring in the teaching learning space [12; 13]. The instructional leader must possess adequate learning, aptitudes, and expertise [14] to ensure sufficient learning action, scope of syllabus in time, and be an astute supervision [12].

Additionally, the results from the statistical analysis showed that there is no statistically significant difference in the scores of the composite dependent variables (instructional resource provider; maintain visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on school level, capacity served and gender. Thus, the multivariate main effects of school level, capacity served and gender on the combined dependent instructional leadership variables were not statistically significant. The capacity served and school level served by a principal influences the effectiveness of the principals' instructional supervision [15]. These factors influence technical, human, and conceptual skills of supervision. These consist of a set of skills required for the planning, staffing and coordination of supervision. That is, skills that are concerned with the use of knowledge and methodology required to carry out established tasks. These skills also include forming productive relationships with people and the ability to see the school through the lens of system thinking.

Research shows that gender influences different patterns of instructional leadership [16, 8, 18-19]. Their results revealed a small but statistically significant effect of gender on instructional in instructional leadership practices which are meaningful. Additionally, research suggests that female leaders tended to achieve higher ratings on transformational leadership as well as engaging in more contingent reward behaviours associated with transactional leadership [20].

Conclusion

The findings of this study revealed that educators strongly rated the instructional leadership dimensions of; maintain visible presence; professional development; feedback on teaching learning and curriculum implementation high. This result shows that

these dimensions of the instructional leadership scale were highly effective when used during the Covid-19 pandemic while implementing virtual learning. The implication of this finding is that educators will continue to use these attributes in similar and novel situations in all levels of schools. In addition, the seven dimensions of the instructional leadership scale: instructional resource provider, maximize instructional time, and monitoring students' progress were moderately rated. The lessons from these findings are that these dimensions of the instructional leadership scale can be effective during the Covid-19 pandemic while implementing virtual learning, but they could be improved upon. The implications are that educators will continue to use these attributes in similar and novel situations in schools. Further research is needed to provide information on how administrators and policy makers can effectively implement these dimensions in their practice. As an instructional resource provider, the principal must share the school's vision and its objectives by providing teachers with essential resources and ongoing professional development for students' success. To do this, the principal must manage instructional forecast effectively to support the effective implementation of the curriculum. This requires the principal to be visibly present and must be felt through supervision and evaluation of teaches instructional practices and professional development in an effort to assess learning targets, exhibition of practices of learning, and establishing programs and exercises on guideline.

Another implication of the finding of this research is that principals must ensure that instructional time is maximized by managing and planning for instruction, assessment and other teacher-student activities while developing strong relationships with teachers and students by rewarding them for achieving targets. Principals must monitor student learning progress to gather data pertinent in making instructional decisions and provide

feedback to students and parents on their progress and learning achievements through regular classroom inspection, set and communicate clear evaluation criteria, give feedback on teaching learning through collaboration with staff and students. Thus, the dimension of providing feedback on teaching and learning becomes paramount as teachers must be updated concerning their growth and capacity development. It must be noted that giving praise and feedback to parents is essential and other activities on student's behaviours helps to ensure instructional time is maximized. In relation to curriculum implementation, the principal must seek to provide an environment that caters to the efficient instructional development, management, and organization of content, interventions, and monitoring in the teaching-learning space [12-13].

Another finding of this study is that there is no statistically significant difference in the scores of the composite dependent variables (instructional resource provider; maintaining visible presence; professional development; maximize instructional time; monitoring students' progress; feedback on teaching learning; curriculum implementation) based on school level, capacity served and gender. Nevertheless, it must be noted that the capacity served and school level at which the principal operates influence the effectiveness of the principals' instructional supervision [15]. Therefore, principals must develop technical, human, and conceptual skills of supervision. These will provide the principal with a set of skills required for the planning, staffing, and coordination of supervision. This will provide the principal with the knowledge and methodology required to carry out established tasks forming productive relationships with staff and to see the school through the lens of system thinking. In addition, gender influences different patterns of instructional leadership

[16, 8, 18, 2,19]. Their results revealed a small but statistically significant effect of gender on instructional in instructional leadership practices which are meaningful. It is also established that female leaders tended to achieve higher ratings on transformational leadership as well as engaging in more contingent reward behaviours associated with transactional leadership [20]. Thus, further research is needed to ascertain how gender influences principals' instructional leadership using larger sample sizes and diversity at all levels of the education system.

Conflict of Interest

The researcher is a Vice Principal who has been trained by NCEL in the course Virtual Instructional Leadership.

Acknowledgments

This article would not be a success without the help of the following persons and organizations:

Cadabba Brown-Bernard- School Psychologist, the USA for her intellectual guidance in developing this topic as it relates to my areas of interest in research.

Special thanks to the Ministry of Education, Youth, and Information, Planning and Development Division for allowing me to engage in this research on the Impact of Training on Virtual Instructional Leadership in Jamaica during the Covid 19 Pandemic.

The National College of Educational Leadership (NCEL) for the help rendered in sharing the forms for completion with all participants.

Principals, Vice Principals, and other senior teachers whom I reached out to for help personally in completing this article.

Research Guide, Professor Disraeli Hutton for his guidance.

Statistician, Dr. Devon Crossfield for his help in analysing the data.

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