Selected Co-Teaching Models and Effective Instructional Delivery Among Educational Management Teaching Staff in Public Universities in Rivers State

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Abstract

The study investigated selected co-teaching models and effective instructional delivery among educational management teaching staff in public universities in Rivers State. This study used correlational research survey design and comprised two specific objectives, two research questions and two hypotheses. The population of the study was 104 Educational Management teaching staff in all public universities in Rivers State. A sample size of 104 was derived from the population using census sampling technique. The data collecting instruments were two self-structured questionnaires titled Co-Teaching Models Questionnaire (CMQ) and Effective Instructional Delivery Questionnaire (EIDQ). A total of 104 copies of the instruments were distributed and all 104 were retrieved for analysis. The instruments were validated by one expert in the Department of Measurement and Evaluation from Ignatius Ajuru University of Education and two experts in the Department of Educational Management from Rivers State University and tested for reliability using Cronbach Alpha statistics which yielded reliability indexes of 0.78 and 0.82. Pearson Product Moment Correlation and z-ratio were used to answer the research questions and test the null hypotheses formulated for the study. Findings revealed that a high positive relationship exists one teach-one observe and station teaching and effective instructional delivery among educational management teaching staff in public universities in Rivers State. Results from the two formulated null hypotheses showed significant relationship between one teach-one observe and station teaching and effective instructional delivery among educational management teaching staff in public universities in Rivers State. Accordingly, recommendations made were that one teach-one observe model should be adopted in all the public universities in Rivers State for effective instructional delivery and the school administrators should provide all the instructional facilities needed for the effective application of station teaching model in public universities in Rivers State.

Keywords: Co-Teaching Models, Effective Instructional Delivery, Educational Management, Teaching Staff, Public Universities.

Introduction

Teaching is arrangement and manipulation of a situation in which there are gaps or obstructions which an individual will seek to overcome and from which he will learn in the course of doing so. According to Ayeni (2016) teaching can be defined as a systematic process of transmitting knowledge, attitudes and skills in accordance with professional principles as supported out by a teacher. It involves imparting information to the learner and the acquisition by the learner of specific knowledge, ideas, facts, skills and other relevant data condensed in the information for the learner’s academic and mental development. In the word of Onwuegbu (2012) the requirement for effective teaching depends on collective knowledge and richness of diverse perspectives, hence calls for the need for collaboration and co-teaching amongst the teaching staff.

Co-teaching presupposes two or more individuals who come together in a collaborative relationship for the purpose of shared work for the outcome of achieving what none could have done alone. It is a model which involves two or more teachers working as a team with a single group of students. According to Cook and Friend (2014), co-teaching is two or more professionals delivering substantive instruction to a diverse or blended group of students in a single physical space. To take it one step further, Aneke (2015) considers co-teaching as a restructuring of teaching procedures in which two or more educators possessing distinct sets of skills works in a coordinated fashion to jointly teach academically and behaviorally heterogeneous groups of students in an integrated educational setting. Co-teaching is an efficient way to reform education, bring struggling learners into the general classroom, reduce teacher isolation, improve instructional techniques, train future teachers, bridge student transitions, and create learning opportunities for complex problem solving across disciplinary boundaries (Ireh & Ibeneme, 2014). Co-teaching model has edge over other teaching models in terms of its effectiveness for improved cognition, social skills and motivation (Slavin, 2017). Slavin further identified two major attributes that have distinguished collaborative teaching from traditional teaching to include interdependence (positive) as well as accountability as each member of group is important for success. Each member of a team is responsible not only for learning what is taught by a teacher but also for helping teammates learn, thus creating an atmosphere of achievement. Fenty and McDuffie-Landrum (2016) provided an overview of foundational co-teaching models which includes, but not limited to one teach-one observe and station teaching for teachers to use when designing and implementing joint instruction for effective instructional delivery.

Within the one teach-one observe model, one teacher is accountable for the instruction of the whole class, while the other is engaged in the process of collecting data. These data may include academic or behavioral data on individual students, groups, or the classroom as a whole (Fenty & McDuffie-Landrum, 2016). One teach-one observe is accepted as an effective model in supporting social acceptance of the students with special needs into the general education environments therefore, teachers may implement this model when working with specialists, such as speech-language pathologists and interpreters who are serving students in the classroom setting or
media specialists collaborating within the classroom (Bailey & Williams-Black, 2018). Co-teachers can also collect data on each other in order to engage in reflective practice. In this model, one teacher is primarily responsible for delivering instruction to the entire class, while the other teacher is serving as an intentional observer. While observing, this teacher can observe and record student behavior, student understanding, or even the teaching teacher's style and behaviour. One teach-one observe contributes to the development of classroom management and effective teaching skills of the teachers who teach in inclusive classrooms (Sileo, 2017).

During station teaching, the students are divided into two or more small groups. The groups of students rotate through different stations of instructional activities. Both the general and special education teachers provide direct instruction at their stations, while the remaining groups work independently on an assigned learning task (Sileo, 2017). The station co-teaching model provides teachers with opportunities to integrate varied instructional tasks into their lessons. The stations may teach or reinforce concepts through inquiry-based learning, hands-on activities, and high interest materials (Oranu, 2013). Before engaging in station teaching, co-teachers consider the pacing of the activities, potentials for noise, and the number of days it will take to complete a full rotation. It also allows each teacher to work with smaller groups of students. Sileo (2017) opined that station model contributes to the development of classroom management and effective instructional delivery of the teachers who teach in a particular station.

Effective instructional delivery is a significant tool needed for teaching and learning of school subjects to promote efficiencies. Okoye and Eze (2013) stated that effective instructional delivery is the unique method adopted by teacher for imparting knowledge and skills to the learner. It refers to the structure of teaching-learning process to accomplish stated objectives effectively. It was further stated to mean a combination of two or more unique methods for appropriate instruction. Effective instructional delivery ensures that students receive instruction that is delivered effectively and in a manner that allows content mastery. The primary goal of effective instructional delivery is to ensure that educators have skills and knowledge necessary to provide students with effective teaching and determining a teacher's proficiency in effective delivery of content knowledge.

**Statement of the problem**

Teaching is plagued with numerous problems including the choice of the right teaching models. This has resulted in poor instruction delivery among the teachers. Teachers cover a wide range of topics or specialized areas that a single teacher finds it a bit difficult to teach very effectively without the use of different co-teaching models. Also, the urgency to meet the need of diverse students requires teachers to use diverse models as against the one size-fits-all approach which no longer meets the diverse needs of today’s learners. Unfortunately, many schools are understaffed and some available teaching staff lacked the experience to apply some of the models especially, the ones that involve the use of technology. Thus, making it difficult to achieve effective instructional delivery in schools. Hence, the study investigated selected co-teaching models and effective instructional delivery among Educational Management teaching staff in public universities in Rivers State.
Purpose of the Study

The main purpose of the study was to investigate selected co-teaching models and effective instructional delivery among Educational Management teaching staff in public universities in Rivers State. Specifically, the objectives of the study were to:

1. identify the relationship between one teach-one observe and effective instructional delivery among Educational Management teaching staff in public universities in Rivers State.
2. ascertain the relationship between station teaching and effective instructional delivery among Educational Management teaching staff in public universities in Rivers State.

Research Questions

1. what is the relationship between one teach-one observe and effective instructional delivery among Educational Management teaching staff in public universities in Rivers State?
2. what is the relationship between station teaching and effective instructional delivery among Educational Management teaching staff in public universities in Rivers State?

Hypotheses

The following null hypotheses were formulated for the study:

1. There is no significant relationship between one teach-one observe and effective instructional delivery among Educational Management teaching staff in public universities in Rivers State.
2. There is no significant relationship between station teaching and effective instructional delivery among Educational Management teaching staff in public universities in Rivers State.

Methodology

The research design used for this study was correlational research survey design. The study population was 104 teaching staff from the three public universities namely; University of Port Harcourt, Rivers State University and Ignatius Ajuru University of Education. A sample size of 104 teaching staff was determined using census sampling technique. A self-structured questionnaires titled: Co-teaching Models Questionnaire (CMQ) and Effective Instructional Delivery Questionnaire (EIDQ) were used to collect data from the respondents. The instruments were divided into two sections each, section A and B. Section A of both questionnaires covered the profile information of the respondents while section B of CMQ had 15 items, the section B of EIDQ had 10 items. A four-point modified Likert rating scale was adopted in responses on sections B. The responses were weighted thus; Strongly agreed – 4; Agreed – 3; Disagreed – 2 and Strongly Disagreed – 1. All 104 copies of questionnaires distributed by the researchers and their three trained research assistants were properly filled and retrieved.

The instruments were subjected to face and content validation by three experts. One expert in Measurement and Evaluation from Ignatius Ajuru University of Education (IAUE) and two experts in Educational Management from Rivers State University
Cronbach Alpha statistics which was used to test reliability of the instruments yielded reliability indexes of 0.78 and 0.82. The data collected for the study were analyzed using Pearson Product Moment Correlation Coefficient (PPMC) formula. Research questions were answered based on the value and direction of the correlation coefficient. Correlation coefficients between 0.60 – 1.00 were considered to be High (H), 0.50 – 0.59 are Moderate (M) while correlation coefficients between 0.00 – 0.49 were Low (L). Hypotheses were tested using z-ratio at 0.05 level of significance with 284 degrees of freedom. This was further tested by transforming the coefficient of correlation (r) to z-ratio in order to establish the significance or otherwise of the r-value.

**Results**

**Research Questions 1:** What is the relationship between one-teach-one-observe and effective instructional delivery among educational management teaching staff in public universities in Rivers State?

**Table 1. Pearson Product Moment Correlation Coefficient on the Relationship Between One-Teach-One-Observe and Effective Instructional Delivery**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Σ</th>
<th>Σ²</th>
<th>ΣXY</th>
<th>Df</th>
<th>z</th>
<th>r-cal</th>
<th>r-crit</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>One teach-One observe (X)</td>
<td>104</td>
<td>478.05</td>
<td>2309.24</td>
<td>2359.46</td>
<td>102</td>
<td>0.05</td>
<td>0.83</td>
<td>0.195</td>
<td>High Positive Correlation</td>
</tr>
<tr>
<td>Effective Instructional Delivery (Y)</td>
<td>104</td>
<td>503.63</td>
<td>2464.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Researcher’s Field Result, 2023

The result in Table 1 shows a high positive relationship between one teach-one observe and effective instructional delivery among educational management teaching staff in public universities in Rivers State. This is shown on the correlation coefficient of 0.83, which means that one teach-one observe has a strong association with effective instructional delivery among educational management teaching staff of the public universities in Rivers State.

**Research Questions 2:** What is the relationship between station teaching and effective instructional delivery among educational management teaching staff in public universities in Rivers State?

The result in Table 2 shows a high positive relationship between station teaching and effective instructional delivery among educational management teaching staff in public universities in Rivers State. This is shown on the correlation coefficient of 0.86, which means that station teaching has a strong association with effective instructional delivery among educational management teaching staff in public universities in Rivers State.
Table 2. Pearson Product Moment Correlation Coefficient on the Relationship Between Station Teaching and Effective Instructional Delivery

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>( \Sigma )</th>
<th>( \Sigma ^2 )</th>
<th>( \Sigma XY )</th>
<th>Df</th>
<th>( \alpha )</th>
<th>( r_{cal} )</th>
<th>( r_{crit} )</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Teaching (X)</td>
<td>104</td>
<td>513.14</td>
<td>2691.87</td>
<td>2572.92</td>
<td>102</td>
<td>0.05</td>
<td>0.86</td>
<td>0.195</td>
<td>High Positive Correlation</td>
</tr>
<tr>
<td>Effective Instructional Delivery (Y)</td>
<td>104</td>
<td>503.63</td>
<td>2503.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Source: Researcher’s Field Result, 2023</td>
</tr>
</tbody>
</table>

Hypothesis 1: There is no significant relationship between one teach-one observe and effective instructional delivery among Educational Management teaching staff in public universities in Rivers State.

Table 3. Transformed z-value on the Relationship Between One-Teach-One-Observe and Effective Instructional Delivery

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>( \Sigma )</th>
<th>( \Sigma ^2 )</th>
<th>( \Sigma XY )</th>
<th>Df</th>
<th>( \alpha )</th>
<th>( z_{cal} )</th>
<th>( z_{crit} )</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>One teach-One observe</td>
<td>104</td>
<td>478.05</td>
<td>2309.24</td>
<td>2359.46</td>
<td>102</td>
<td>0.05</td>
<td>15.06</td>
<td>±1.96</td>
<td>Sig. Reject Ho</td>
</tr>
<tr>
<td>Effective Instructional Delivery</td>
<td>104</td>
<td>503.63</td>
<td>2464.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Result from Table 3 reveals that a high positive relationship exists between one teach-one observe and effective instructional delivery among educational management teaching staff in public universities in Rivers State. To establish the significance of the relationship, a transformed \( z \)-value was computed and an index of 15.06 was obtained. This was compared to the critical \( z \)-value of ±1.96 at the 0.05 level of significance with a degree of freedom of 102, indicating that there is a significant positive relationship between one teach-one observe and effective instructional delivery among educational management teaching staff in public universities in Rivers State. (Calculated \( z = 15.06 < \) critical \( z = ±1.96 \) at \( p < 0.05 \) and df = 102). Therefore, the null hypothesis of no significant relationship between one teach-one observe and effective instructional delivery among educational management teaching staff in public universities in Rivers State is rejected. This implies that there is significant positive relationship between one teach-one observe and effective instructional delivery among educational management teaching staff in public universities in Rivers State.

Hypothesis 2: There is no significant relationship between station teaching and effective instructional delivery among Educational Management teaching staff in public universities in Rivers State.
Table 4: Transformed z-value on the Relationship Between Station Teaching and Effective Instructional Delivery

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Σ</th>
<th>Σ2</th>
<th>ΣXY</th>
<th>Df</th>
<th>α</th>
<th>r</th>
<th>z-cal</th>
<th>z-crit</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Teaching</td>
<td>104</td>
<td>513.14</td>
<td>2691.87</td>
<td>2572.92</td>
<td>102</td>
<td>0.05</td>
<td>0.86</td>
<td>17.01</td>
<td>±1.96</td>
<td>Sig. Reject Ho</td>
</tr>
<tr>
<td>Effective Instructional Delivery</td>
<td>104</td>
<td>503.63</td>
<td>2531.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sig. Reject Ho</td>
</tr>
</tbody>
</table>

Result from Table 4 reveals that a high positive relationship exists between station teaching and effective instructional delivery among educational management teaching staff in public universities in Rivers State. To establish the significance of the relationship, a transformed z-value was computed and an index of 17.01 was obtained. This was compared to the critical z-value of ±1.96 at the 0.05 level of significance with a degree of freedom of 102, indicating that there is a significant positive relationship between station teaching and effective instructional delivery among educational management teaching staff in public universities in Rivers State. (Calculated z = 17.01< critical z = ±1.96 at p < 0.05 and df = 102). Therefore, the null hypothesis of no significant relationship between station teaching and effective instructional delivery among educational management teaching staff in public universities in Rivers State is rejected. This implies that there is significant positive relationship between station teaching and effective instructional delivery among educational management teaching staff in public universities in Rivers State.

Discussion

Results from research question 1 and hypothesis 1 shows that there is high positive and significant relationship between one teach-one observe and effective instructional delivery among educational management teaching staff in public universities in Rivers State. The finding is in agreement with Sileo (2017) who opined that one teach-one observe contributes to the development of classroom management and effective teaching skills of the teachers who teach in inclusive classrooms.

Results from research question 2 and hypothesis 2 shows that there is high positive and significant relationship between station teaching and effective instructional delivery among educational management teaching staff in public universities in Rivers State. This corroborates Sileo (2017) assertion that station teaching model contributes to the development of classroom management and effective instructional delivery of the teachers who teach in a particular station.

Conclusion

Based on the research finding, co-teaching models have shown different degrees of relationships between independent variables (selected co-teaching models) and dependent variable (effective instructional delivery). Therefore, there is high and positive relationship between selected co-teaching models and effective instructional delivery among educational management teaching staff in public universities in Rivers State. The hypotheses revealed that there is a significant relationship between selected
co-teaching models and effective instructional delivery among educational management teaching staff in public universities in Rivers State.

Recommendations

Based on the findings, the following constitute the recommendations:

1. One teach-one observe model should be adopted in all the public universities in Rivers State for effective instructional delivery.
2. The school administrators should provide all the instructional facilities needed for the effective application of station teaching model in public universities in Rivers State.

References


