Effects of cooperative Strategy and Traditional Lecture Strategy Towards Improving Students’ Practical Skills Performance in Building Trade At Science And Technical College in Adamawa State, Nigeria

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ABSTRACT: The Purpose Of This Study Was To Determine And Compare The Effectiveness Of Cooperative Strategy To Teaching And Traditional Lecture Strategy On Students’ Practical Skills Performance In Brick/Blocklaying And Concreting Trade In Science And Technical Colleges. The Design Used For The Study Was Quasi- Experimental, Non- Equivalent Group Design. Bricks/Blocklaying And Concreting Two (II) Students From Two Science And Technical Colleges In Adamawa State Formed The Population For The Study. The Total Population For The Study Was One Hundred And Eighty Six (186) Students. All The Students Were Used. The Population Was Divided In To Two Groups Government Science And Technical College; Numan Formed The Experimental Group While Mubi Formed The Control Group. Seven Topics Were Selected From The Bricks/Blocklaying And Concreting II Syllabus Of Nabteb Curriculum For The Treatment. Nabteb Students’ Practical Skills Performance Instrument For Testing Practical Skills Was Adapted For The Study. The Collected Data Were Analyzed Using Mean, And Z-Test. Two Research Questions Were Asked And Two Null Hypotheses Were Formulated And Tested At 0.05 Level Of Significance. Z-Test Was Used In Testing Hypotheses 1, 2. Hypotheses 1 Was Rejected While Hypotheses 2 Was Accepted. Cooperative Strategy Yielded The Highest Post-Test Mean In The Skills Performance Test In Nabteb Practical Skills Performance Test Instrument Than The Traditional Lecture Strategy. There Was No Gender Influence On The Cooperative Strategy. The Researcher Recommended The Use Of The Cooperative Strategy For Teaching Practical Lessons In Science And Technical Colleges Because The Strategy Shows More Effects In Teaching Practical Skills In Brick/ Blocklaying And Concreting Practical Skills Performance. The Researcher Also Determined The Influence Of Gender On The Strategy And Found That Gender Has No Influence On The Strategy. The Researcher Recommended That, There Should Be Training And Retraining Of The Teachers And Provision Of An Enabling Environment. The Study Also Revealed The Need For Student’s Full Participation In Teaching And Learning Process.

Keywords: Workshop, Strategy, Traditional, Skills, Practical, Performance And Test.

I. INTRODUCTION


Jonassen (2000) Argued That The Cooperative Strategy To Teaching Also Provides Students With A Way To Understand A Point Of View Outside Their Own Point Of View. Kércher, Swallow And Woodruff (2006) Stated That Cooperative Teaching And Learning Strategy Does Not Just Entail Sharing A Workload Or Coming To A Consensus, But Allows Learners To Develop, Compare And Understand Multiple Perspectives On An Issue. When Students Collaborate, They Articulate Their Goals And Plans Which Encourage A Kind Of Reflection Which Can Lead To Learning Cooperative Strategy To Teaching, Also Known As Collaborative Learning/Work Skills, A Mode Of Teaching, With A Set Of Common Attributes And Features (Bendner, 2010). It Was Cooperative In Nature, The Following Are Its Essential Features: Students Work In Teams To Master Academic Materials, Teams Were Made Up Of High, Average And Low Achievers And Were Racially And Sexually Mixed And Reward Systems Were Group-Oriented Rather Than Individually Oriented. This Study Sought To Compare The Use Of The Cooperative Strategy And Traditional Lecture To See Whether It Could Improve Students’ Practical Skills Performance And Whether The Process Could Be Gender Sensitive. Specifically The Study Sought To Determine If:


II. METHODOLOGY

The Method Used For This Study Was Quasi-Experimental Design, Specifically The Non-Equivalent Type. The Area Of Study Was Adamawa State. One Hundred And Two (102) Students From Government Science And Technical College, Mubi And Eighty Four (84) Students From Government Science And Technical College, Numan Formed The Population. Two Technical Colleges Out Of Four Were Purposively Sampled. The

### III. METHOD OF DATA ANALYSIS

The Method Of Data Analysis Involved The Use Of Mean, Standard Deviation, And Z-Test. Mean, Standard Deviation And Z-Test Were Used To Compare The Practical Skills Performance Of The Students And Test For Significant Difference In The Performance Of The Two Groups. The Two Formulated Null Hypotheses Will Be Accepted If The Calculated Z-Test Is Less Than The Z-Critical But If Greater The Alternative Hypothesis Will Be Up Held.

### IV. RESULTS

H0₁, there Is No Significance Difference Between The Mean Posttest Scores Of Students Taught Using Workshops Practical Skills Strategy And Those Taught Using Traditional Lecture Strategy. See Table 1.

<table>
<thead>
<tr>
<th>Teaching Methods</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N</th>
<th>Df</th>
<th>Z-Cal.</th>
<th>Z-Crit.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperative Strategy</td>
<td>2.77</td>
<td>0.16</td>
<td>102</td>
<td>184</td>
<td>1.41</td>
<td>0.19</td>
<td>significant</td>
</tr>
<tr>
<td>Traditional Lecture</td>
<td>4.55</td>
<td></td>
<td>84</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategy</td>
<td>2.77</td>
<td>0.55</td>
<td></td>
<td></td>
<td>1.41</td>
<td>0.19</td>
<td>rejected</td>
</tr>
<tr>
<td></td>
<td>3.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table One Show That The Experimental And The Control Groups Had Pretest Mean Of 2.77 And Posttest Mean Of 4.55 And 3.16 Respectively, This Showed That There Is Appreciable Difference Between The Two Groups. The Result Also Shows That Z-Calculated (1.41) Is Greater Than Z-Critical (0.19). Hence The Null Hypothesis Was Rejected.


<table>
<thead>
<tr>
<th>Instructional Approach</th>
<th>Gender</th>
<th>N</th>
<th>Df</th>
<th>Mean</th>
<th>Stddev</th>
<th>Std Error</th>
<th>Z-Calc.</th>
<th>Z-Crit.</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperative Strategy</td>
<td>Male</td>
<td>114</td>
<td>184</td>
<td>33.94</td>
<td>2.93</td>
<td>0.40</td>
<td>0.35</td>
<td>1.30</td>
<td>Not Significant</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>72</td>
<td>2.08</td>
<td>32.80</td>
<td>0.54</td>
<td>0.35</td>
<td>1.30</td>
<td></td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Table 2 Shows The Mean Performance Of Male And Female Of (33.94) And (32.80) Respectively. This Shows That There Is No Appreciable Difference In The Performance Of The Male And The Female Students. The Result Also Shows That The Z-Calculated (0.35) Is Less Than The Z-Critical (1.30). Hence The Null Hypothesis Stated Is Accepted And The Alternative Rejected.

### V. DISCUSSION

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This Study Also Found That Both Male And Female Students Are Of Near Equal Performance In Practical Whenever Cooperative Strategy Was Used As A Strategy For Teaching Practical Skills. This Was Revealed By The Statistical Analysis Of Data Showing Mean Performances Gain Of Male And Female To Be 33.94 And 32.80. The Z-Test Also Revealed Z Calculated And Z Critical Of (0.250 And (1.30). This Finding Therefore Shows That There No Significant Difference In The Mean Performance Of The Males And Females Students.

Issues Relating To Gender Have Attracted Much Attention That Scholars Are Interested In Finding Out The Human Attributes That Are Gender Dependent. One Of The Purposes Of This Study Is To Find Out Whether There Is Significant Influence Between Strategy And Gender On Students Practical Skills Performance In Building Trade Practical. However, The Study Has Shown That No Significant Influence Exists Between Strategies And Gender On Students’ Performance In Building Trade Practical. Since Gender Is Not A Factor For Poor Performance Of Students In Building Trade Practical But Rather Teaching Strategy Used In Teaching Practical Significant Influence Was Not Expected. The Finding Of This Study Supports That Of Francis (2010) Whose Study On Effect Of Gender Attitude And Achievement In Genetics, Found No Significant Effect Of Gender On Attitude And Achievement. This Implies That Gender Is Not A Factor For Lack Of Students’ Performance In Studying Building Trade Practical But The Uses Of Strategies That Cannot Effectively Guarantee Participation Of Students In Practical Classes Make Them Show Poor Attention Leading To Poor Performance. This Is In Line With The View Of Haris And Zhang (2001) That Teaching Strategies Used That Are Teacher-Centered Make Students To Lose Interest In Level Of Performance In Practical Skills Performance, But Are Usually Discouraged By The Manner And Strategy In Which The Course Was Taught, Ogbeba And Eje (2013).

VI. CONCLUSION

From The Findings Of This Study, It Is Concluded That There Was Similarity In The Practical Skills Performance Of The Students Regardless Of Their Gender. This Implies That Teaching Strategies, Not Sex Of Students Is A Cardinal Factor For Stimulating Positive Gain In The Practical Skills Performance Of Students Of Brick/Blocklaying And Concretingtrade. That Student Performed Better When Taught Using The Cooperative Strategy In Comparison With Those Students Taught Using The Traditional Lecture Strategy. Most Importantly There Was No Significant Effect Of Influence Found Between The Strategy And Gender On Students’ Practical Skills Performance In Building Trade Practical. This Means That The Sex Of The Students Is Not A Factor For Lack Of Positive Gain In Practical Skills Performance In Brick/Blocklaying And Concreting Trade Practical But The Use Of Strategies That Cannot Effectively Guarantee Participation Of Students In Practical Lessons.

VII. RECOMMENDATIONS

The Following Recommendations Were Made Based On The Finding Made:

(1) Brick/Blocklaying And Concreting Trade Teachers Or Instructors Should Be Encouraged To Use Cooperative Strategies In Teaching Brick/Blocklaying And Concreting Trade Practical Regularly In Other To Improve Students’ Skills Performance.

(2) Stakeholders In Education Should Organize Training, Workshops And Seminars To Train Teachers On Cooperative Strategies To Teaching.


(4) Cooperative Strategies Should Be Used In Brick/Blocklaying And Concreting Practical Lessons As A Way Of Eliminating Gender Difference.

(5) Students Should Be Made To Participate Maximally In Brick/Blocklaying And Concretingpractical Since This Tends To Generates Positive Gain In Their Practical Skills Performance Which Would Probably Lead To Great Performance.

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