Teacher-initiated student-peer assessment: A means of improving learning-assessment in large classes

By

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Assessment has been viewed by a number of scholars, to be an effective tool of promoting student achievement (Onuka and Oludipe, 2006, Frempong, 2005, Afolabi, 2005 and Adeoye and Okpala, 2005).

- It is, however, well known that there is overcrowding in many classrooms in Nigeria. Thus, there is no doubt that such situation does not make for easy assessment and except a participatory assessment mode is devised; the assessment process and indeed effective classroom interaction become a mirage.

The teacher-initiated and guided-student-peer-assessment can, in our context, be viewed as a test that the teacher gives to the students in class, gives them time to do the test, collect the papers, and then work out the solutions on the chalkboard, and in a guided distributes these papers to the students making sure that no student gets his/her own paper.

He then supervises the scoring them.

He takes records of the scores for further use.

- Thus, this investigation examined how teacher-initiated/guided-student-peer-assessment can facilitate learning in large classes, such that the teacher can use teacher-initiated/guided student peer-assessment to enhance student learning and the subsequent achievement in junior secondary school Mathematics and English Language.

- Hypotheses
- The following hypotheses were formulated in order to find answers the problem of the study as stated above:
- Ho1: There is no significant difference in the achievement in Mathematics of students of large classes with teacher-initiated/guided –student-peer-assessment and those without it.
- Ho2: Ho1: There is no significant difference in the achievement in English Language of students of large classes with teacher-initiated/guided –student-peer-assessment and those without it.

- Methodology
- Research Design
- The research was carried out adopting the pre-post test quasi-experimental/control groups design.
- Sampling and sample
- Cluster sampling was used to select four secondary schools out of the 65 secondary schools in Kogi Central Zone. Two were used as the quasi-experimental groups while the remaining two served as the control groups for each of the two subjects.
- One intact junior secondary 11 class was randomly chosen from each of the four schools.
- The Mathematics or English Language teacher in the class was used in the study either as teacher in the experimental or the control group (English Language or Mathematics).
- 280 students were involved in the investigation.

- Instrumentation

The two instruments used in the study were designed by the researcher, and piloted tested using a similar but non-participatory sample of 30 each for the two subjects.

- The exercise yielded reliability co-efficients of 0.79 and 0.81 for the English Language and Mathematics respectively using the test-retest method pruning the pool of items from 70 to 50 item English Language and Mathematics test respectively.
- The two tests was again administered on another two samples of 30 each yielding validity co-efficient of 0.77 and 0.76 respectively (cronbach alpha method).
- Data collection strategy
- The research was conducted by giving treatment to the experimental groups and control groups were not giving any treatment.
- Whereas at beginning of each lesson a short test was given on the previous lesson, collected the scripts which he/she redistributed to the students after he/she had worked the solutions on the board, however, ensuring that no student got and marked his/her paper and the teacher works out the solutions on the chalk or whiteboard and then request the student to randomly exchange their notebooks and mark strictly under his supervision with assistance of the research assistants. The results are later collated and recorded at the end of the lesson. The teacher then proceeds to teach. The exercise lasted for eight weeks and did take place during prep in the afternoon. A pre-test was given to each subject groups (experimental and control) at the beginning of the investigation and at the end of the eight weeks exercise a post –test was administered to find out whether or not the treatment had any effect on the students' performance in the respective subjects.
- The data were analysed using the t-test statistic to test for differences in the achievement of the treatment group and the control group.

- The results of the study indicate that the experimental groups achieved better results than the control groups in both Mathematics and English Language.
- The experimental group in Mathematics had a mean increase rate of 5.7 in achievements (from 56.4 to 62.1 mean rates in the pretest and post-test respectively), while the control group recorded mean achievement rates of 58.2 and 59.9 respectively in Mathematics culminating in a difference (an increase) of 1.7 in mean rate of achievement between their achievement in pretest and post-test respectively. This shows that the rate of performance by the experimental group is higher than the performance of the control.
- The difference between the achievements of both is significant at 0.01 level of probability with a t-value of 20.40

- The experimental group in English Language had a mean increase rate of 5.3 in achievements (from 55.6 to 60.9 mean rates in the pretest and post-test respectively).
- While the control group recorded mean achievement rates of 55.9 and 57.9 respectively in English Language resulting in a difference (an increase) of 2.0 in mean rate of achievement between their achievement in pretest and post-test respectively.
- This result depicts the fact that the rate of performance by the experimental group is much higher that of the control.
- The difference between the achievements of both is significant at 0.01 level of probability with a t-value of 15.94. These results provide answer to hypothesis 2 above.

- The results of this study agree with the findings of Onuka and Oludipe (2004; 2006) that feedback, which is an outcome of evaluation, and systematic school based assessment (a variant of continuous assessment) do assist in *remediating* student poor performance and in *achieving* cognitive learning objectives respectively. The findings as reported earlier in this study are in consonance with the views of Wosyanju (2005) who states that assessment of large classes when well-managed can improve, even though it is an onerous task because of magnitude involved, learning and the subsequent performance in Kenya.
- They also conform to inference of Oberholzer (2005) that there was a positive correlation between good assessment and life-long learning in South Africa. Put differently assessment and learning vary in the same direction. In other words, a good assessment procedure does in almost cases leads to improved learning. These positive changes in the achievement of both experimental groups in the study as against low positive changes in achievement recorded by the control groups can be attributed to several factors among which are: the students had participated in peer-assessment of their own work; the transparency attendant to this system of assessment; the release the teacher had to concentrate on other forms of preparation and the fact that the assessment always took after the lesson had taken-thereby confirming the observation of Anikweze (2005) that assessment takes place after learning had taken place, which process in itself enhances the learning process outright.

- Conclusion and Recommendations
- The study has clearly demonstrated that if teacher-initiated/guided student – peer assessment is well planned, utilized and recorded, because it provides immediate feedback to the student and possibly his/her parents/guardian. This in turn allows the student to address his weaknesses and to improve on his/her strengths almost immediately.
- It has also been proved in the study that apart from the fact that Teacher-initiated/guided student – peer assessment (TISPA) improves teaching and learning, it saves time, energy and fund and it is a teacher/student co-operative teaching and learning method.
- Consequently based on the outcome of the study as presented above, the following recommendations were made:
- Teacher – initiated/guided student-peer assessment should become part and parcel of instructional strategy in the education system in Nigeria, particularly in large class situation.
- Teachers should be given the necessary training that would facilitate implementation of the incorporation of this form of assessment into the various instructional strategies in use in the Nigerian education system.
- Further study should be carried out in a more global form in order to confirm the efficacy or otherwise of the strategy.
- The student should also be given orientation on the conduct and utilization of this assessment strategy. Immediate feedback on students' performance it provides should be taken advantage of and utilized to engender students' learning and achievement particularly in the cognitive domain of learning.