

Comparison of Multi-grade Teaching with Mono-grade teaching at Primary Level

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ABSTRACT

The study was aimed at comparing multi-grade teaching with mono-grade teaching at primary level. The following objectives were achieved: (1) to investigate the influence of multi-grade strategy regarding educational attainment of students in primary classes in the subject of English; (2) to compare multi-grade teaching strategy with mono-grade teaching strategy at primary level. To achieve above objectives null hypotheses were formulated and tested.

Sample of this research work included 60 students of classes IV and V of Army public School Nowshera (Class IV=30; class V=30). These students were separated through pre-test as multi grade teaching group and mono grade teaching group. Each group had 30 students (Class IV=15; class V=15). First group was called Experimental group which was taught by multi-grade teaching strategy whereas second group was called control group in which mono-grade teaching was applied. Data were collected by administering two post-tests (separate for class IV and V) at the end of treatment. The data collected through pre-test and post-test were analyzed through the statistical tools which were calculated for each group.

Data analysis and findings revealed that the achievement of mono-grade teaching group was better as compare to investigational cluster (multi-grade teaching). Recommendation of this research work is that if at all multi-grade is to be continued the teachers should be equipped with multi-grade strategy through in-service training.

KEYWORDS: Multi-grade teaching, Mono-grade teaching, control group, experimental group

INTRODUCTION

Multi-grade teaching may be defined as the strategy which a teacher adopts to teach the students of more than one grade at a time at the same place. Multi-grade strategy can be compared with mono-grade teaching where a teacher is in-charge of only one grade. Mono-grade is arranged grade wise [2].

The term multi-grade describes a situation where students of various grades are positioned together for guiding purpose. This comprises multi-grade classes in both multi-grade schools, where multi-evaluating is a response to the way that there are less teachers than grade levels, and bigger schools, where multi-reviewing is a reaction to uneven student consumption. Rare different terms might be used as a part of writing to mean to a multi-grade classroom. It is similarly significant to distinct between multi-grade classes to which students can't be called on the principle of such things as capacity or mentality (non-deliberately doled out) and multi-grade classes to which students can be selected (intentionally assigned). [3] Presented these two terms to explain why many investigations of multi-grade settings discover no change in psychological accomplishment when contrasted and mono-grade settings. Students are dependably non-intentionally doled out to a class that has two or more grade level of children in a school where groups of students of different grades are taught in a single class room. Investigations of things of multi-grade classroom association have not generally made this difference obvious [5].

A class that includes children of a solitary class, yet ordinarily of blended capacities is called mono-grade class. Ordinarily such classes include students of a comparative age group, however in nations where repeat and rushing is normal, a mono-grade class may likewise be of blended age. The term single age class is once in a while used to distinguish classes that have children of a predefined age extend harmonious with grade level [1].

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Statement of the Problem

Multi-grade teaching is common in schools especially in remote and rural areas of Pakistan. However, multi-grade teaching is adopted as necessity in the country. There was a dire need of research in the area of multi-grade teaching in context of Pakistan and the researcher decided to conduct a study on comparison of multi-grade teaching with mono-grade teaching at primary level.

Objectives of Research Work

1. Investigate the influence of multi-grade strategy in the academic achievement of students at primary level in the subject of English;
2. To compare multi-grade teaching strategy with mono-grade teaching strategy at primary level;
3. To find out the effectiveness of multi-grade teaching at primary level;
4. To give recommendations to suggest suitable method of teaching English through multi-grade teaching at primary level.

To Achieve the above Objectives Following Hypotheses Tested:

1. No significance difference is there between the mean scores of experimental and control groups of class V and Class V on post-test.
2. No significant difference is there concerning the mean scores of less scored students of both groups taking place in post-test.
3. No significant difference is there between the mean scores of high achievers of experimental and control groups on post-test.

LITERATURE REVIEW

Multi-grade teaching means to teach students of different grades, ages and abilities in the same group. It is different from mono- grade teaching in which students within the same grades are seemed to be more similar in term of age and ability. It is also different from multi-grade teaching; in multi-grade setting students of the same grade have variation in age [11]. That is why [14] said with full confidence that multi-grade teaching occurs when a single teacher teaches more than one grade at the same time in the same room. [19] Explains that multi-grade teaching is a teaching setting where one teacher has to take charge for teaching the students across more than one curriculum grades within the given time of period. [4] argue that multi-grade teaching is an educational setting where a single teacher is responsible for students of different age, grades and who study different curricula.

[11] States that in Finland about 53% primary schools have less than 50 students where they are taught in multi-grade setting. In the year 2000-2001, there were 42% of the primary schools in Norway. In Australia, 25% of primary schools have multi-grade teaching and Greek has 31% of primary schools with multi-grade teaching.

[16] Are of the opinion that in Switzerland about 23% of all classes were with multi-grade teaching. [8] reported that in African Counties, almost all countries have this type of teaching. These countries include South Africa, Colombia, Burkina Faso, Uganda, Zambia and Fiji etc. In the USA the prevalence of multi-grade teaching is not more than 3% of the primary schools [14]. Multi-grade teaching is also prevalent in Australia where 40% of schools in the Northern areas are multi-graded and in Canada about 20% of the students up to class seven are taught in multi-grade schools. During the period of 1999, in Sri Lanka, 18% of the primary schools had multi-grade teaching where 4 or less teachers had been teaching from prep to grade-V.

As highlighted by [13] that in Pakistan, in the province of Sindh 65% of the primary schools have only two rooms available for different five grades, which results in multi-grade teaching. More than 80% of primary schools in Northern area of Pakistan and Chitral in Pakistan are operating in multi-grade setting where two or three teachers have to teach from grade prep to grade five. The above mentioned facts prove that multi-grade teaching prevails worldwide, it is a common feature of primary schools in Africa [10] but it is unfortunate that data on this phenomenon is insufficiently published and not systemically evaluated the world over.

According to [19] report, the teachers have to face a number of challenges while

teaching in multi-grade setting. Following challenges in multi-grade teaching are indicated:

- i. Lack of teachers training.
- ii. Inadequate teaching material.
- iii. Inflexible curriculum.
- iv. Non-availability of school facilities.
- v. In-sufficient incentives for the teachers.
- vi.

METHOD AND PROCEDURE

Population

All 17,037,700 students studying in primary classes in Pakistan constituted population of this research work.

Sample

Thirty students of grade-IV and thirty students of grade-V of Army Public School Nowshera were comprised the sample for this study. These subjects were separated in 2 clusters, i.e. the experimental group (Multi-grade teaching), control group (mono-grade teaching). These clusters were equally separated by applying pre-tests (separate for class IV and V) scores. The distribution of students was made by applying pair random sampling technique.

Research Instruments

Following research instruments were used for study

- i. Two teacher made pre-tests (one each for class IV and V)
- ii. Two teacher made post-tests (one each for class IV and V)

Validity

All items included in the tests were on the basis of text of the units taught to the students of class IV and V. The pre-tests and post-tests were approved by doctoral research committee.

Reliability

The reliability of the tests was found to be 0.85 and 0.85. The reliability was determined by applying split half method.

Research Design

“The pre-test post-test equivalent group design” was selected for this study. This design comprises minimum two groups.

Treatment

Treatment of study involved the following steps:

The researcher visited the selected Army Public High School for explaining the significance of study to the principal and requested his approval to conduct the experiment. With the co-operation of principal of the school, a committee was constituted with following membership:

- i. Principal, (Chairman)
- ii. Section Head of Primary Section (Member)
- ii. Three English teachers and the researcher (Members)

The function of the committee was to appropriately conduct the experiment and co-ordinate during the experimentation. Teacher-made pre-tests, duly approved by the supervisory committee, were administered on the sample of 60 students. On the basis of pre-tests scores, students were allotted to experimental group and control group by using pair random sampling method. Each group had 30 students. During experiment, two diverse treatment techniques were utilized. Control group was taught through mono-grade teaching in class, while the second group was taught through the multi-grade teaching system. The experiment lasted for six weeks. The researcher continuously observed the teaching activities of both experimental and control groups during the experiment.

Data Collection

The data was collected in two ways. Teacher-made pre-tests, dully approved by the supervisory committee, were administered to the sample of 60 students before the treatment was started. On the basis of achievement scores of pre-tests, students were distributed into multi-grade teaching group and mono-grade teaching group. Each group comprised 30 students (class iv =15; class v = 15). On the termination of treatment the post-tests were administered on both experimental and control groups to collect data for achievement scores of students for comparing both groups on the basis of achievement scores on teacher-made post-tests.

Analysis of Data

The data collected through pre-tests and post-tests were tabulated, analyzed and interpreted by applying *t*-test. Results obtained by statistical analysis were tested on 0.05 level of significance.

H₀ 1 No significance difference is there between the mean scores of experimental and control groups of class IV on post-test.

Table 1 Comparison of the mean scores of experimental and control groups of grade-IV on post-test.

Group	N	Mean	SD	SE _D	t-value	D	Effect size
Experimental	15	36.93	4.00	1.45	3.31	1.20	Very Large
Control	15	41.73	3.97				

Table value of *t* at 0.05 = 2.145

It appears from Table 1 that the calculated *t* value was found to be 3.31 which is greater than the table value at 0.05 level and is labeled as significant. Hence, null hypothesis is rejected. It is obvious from above table that significance of difference is found in favour of control (mono-grade) group. It means that the students of grade-IV taught by Mono-grade teaching (control group) showed better achievement as compared to those in experimental group.

H₀ 2 No significance difference is there between the mean scores of experimental and control groups of class V on post-test.

Table 2 Comparison of the mean score of experimental and control groups of grade-V on post-test

Group	N	Mean	S D	SE _D	t-value	D	Effect size
Experimental	15	37.60	3.94	1.41	2.82	1.02	Very Large
Control	15	41.60	3.84				

Table value of *t* at 0.05 = 2.145

It is evident from table 2 that the calculated *t* value (2.82) is greater than the table value and the difference between the mean scores of experimental and control groups was found significant at 0.05 level. It means null hypothesis is not accepted. This significant difference was in favour of control group. It means that the students of control (mono-grade) group of grade-V demonstrated better than those of experimental (multi-grade) group of grade-V on post-test.

H₀3 There is no significant difference between the mean scores of low achievers of experimental and control groups on post-test.

Table 3 Comparison of mean scores of low achievers of experimental and control groups of grade-IV on post-test

Group	N	Mean	S D	SE _D	t-value	D	Effect size
Experimental	7	33.57	0.97	0.46	11.07	5.97	Very Large
Control	7	38.71	0.75				

Table value of t at 0.05 = 2.447

It is evident from Table 3 that the t value (11.07) was found to be greater than table value (2.306) and the difference between the two means was found to be significant at 0.05 level. Hence, the null hypothesis is rejected and the control group of grade-IV was found to be better than experimental group on post-test.

H₀ 4 There is no significant difference between the mean score of high achievers of experimental and control groups of grade-V on post-test.

Table 4 Comparison of mean score of high achievers of experimental and control groups of grade-V on post-test

Group	N	Mean	S D	SE _D	t-value	D	Effect size
Experimental	8	40.75	2.49	1.25	4.34	1.54	Very Large
Control	8	44.62	2.55				

Table value of t at 0.05 = 2.365

Table 4 depicts that the calculated t value (4.34) is not less than the table value, therefore, difference between the two means was found to be significant at 0.05 level and the null hypothesis is rejected. This significant difference is found in favour of high achievers of control (mono-grade) group of grade-V. It means that performance of high achievers of control (mono-grade) group of class V was much better than those of experimental (multi-grade) group of same class. Mono-grade teaching led to better achievement of high achievers than the high achievers of multi-grade teaching group.

DISCUSSION

According to [5], teacher should be able to plan, prepare and present the lesson to his/her class effectively. Teacher should apply and practice teaching skills according to the principles of education. He or she has learned and employed various forms of communication effectively to motivate students to learn. The researcher found that in multi-grade teaching there was difficulty/deficiency to organize the lesson plans in logical manners by giving daily life examples. In mono-grade, teaching teachers demonstrated and presented subject matter attractively and effectively. Researcher observed that control group teachers' presence in classroom was satisfactory and teachers came to the class and left the class well in time. Teachers were friendly in the classroom. There were no proper awareness about the multi-grade teaching among the principal of school and teachers. It required refresher courses regarding multi-grade teaching to utilize this method to improve the shortage of teachers.

[18] proposes that in a program of teachers' education, teachers thinking have more importance as teachers view new concepts by their obtainable thinking and they only activate those concepts that are matching with their thinking. In this study, it was observed that teachers had command over their subject in mono-grade teaching group; they provided sufficient time to the students for discussion; they respected opposing viewpoints of students; they used appropriate teaching aids effectively.

Under the present circumstances, it can fully be apprehend that there was a dire need to target the multi-grade teaching. As the teachers of mono-grade, teaching group monitored the performance of the students regularly. Weekly tests were regularly managed. The study reflected

that assessment system in both the groups was satisfactory. The results of mono-grade teaching were better than the multi-grade teaching. Teachers covered courses in time in both set up. Teachers assessed student's level of understanding and re-taught if needed. It was also observed that students of the mono-grade teaching competed well with the students of multi-grade teaching.

The researcher observed that teachers of the Mono-grade group prepared their lesson plan before taking classes. They were satisfied with the content and subject taught in the classrooms. They used A.V aids in the classrooms and teaching learning process was better in mono-grade teaching as compared to multi-grade teaching. Teachers of mono-grade teaching were found more aware of the content/course/subject being taught in the classrooms and were more aware of the factors that make learning effective in the classroom. They were sensitive to the student's emotions, thoughts and attitudes as they affect their learning. They were able to present and create situations for the effective learning. They were able to identify one's own areas of weakness in the teaching situation and they think critically and creatively about one's own lessons. [17] observes that theory is not connected with the practice. Due to this reason, fresh teacher did not understand the importance of the theory.

It was further explored that teachers of the multi-grade teaching and mono-grade teaching were experienced but there was a need to conduct training session for the teacher of multi-grade class. Therefore, it was optional that teachers of multi-grade group should be given chance of regular teachers training program so that they can minimize their weakness/problems.

CONCLUSION

After data analysis and based on findings of this research work, the researcher reached the following conclusions:

Findings of the study revealed that there was significant difference in favor of mono-grade teaching group on post-test scores. It was concluded that the practice of multi-grade was not successful in Pakistan prevalent rural areas.

Students of mono-grade teaching group of 4th and 5th class performed better than the students of multi-grade teaching group on post-test. In a mono-grade teaching set up, organization of multi-grade class was more difficult for a teacher to teach more than one grade in the allotted time of period and complete the course in given time.

RECOMMENDATIONS

Based on conclusions following recommendations were suggested:

The first and foremost step should be to minimize multi-grade teaching by provision of teachers for every class by selection of new teachers.

Government should encourage multi-grade teachers with awards; incentives for students of elementary level with well-equipped material provided for teaching of multi-grade teaching. In context of Pakistan majority of primary and elementary schools have shortage of trained teachers. The obvious reason is allocation funds for education. The government should increase the budget for education so that the shortage of teachers, especially in the rural areas, be eliminated. If the multi-grade teaching is need of the day then strategies to be adopted should be included in the curriculum of future teacher education programmes and the teachers already concerned with multi-grade teaching should be given ample opportunities for in-service teacher education.

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