

Action Research on Impact of 21st Century Pedagogy in Teaching and Learning

Abstract

The importance of educational transition towards its reform from traditional way to modern way in teaching learning is in much demand for effective teaching and learning process for the 21st century children in school.

This study begins with a discussion on the features of the 21st century pedagogy in effective teachings and learnings. It then analyses the finding of the surveys done for the students of grade IV- VI students (38 boys and 48 girls) of Rinchengang Primary School on the impact of 21st Century pedagogy.

It was mainly focused on the general interest of the children on the new 21st century pedagogies and the old traditional pedagogies. Since the study being focused on the impact, the quantitative method has been adopted to collect data and the purposive sampling with dialectic action research spiral techniques was used for the selective groups from each section.

The result was highly significant with difference between the old and new teaching learning pedagogy. For this particular study the four major components of Kagan's 21st century Pedagogies like the **CL structures, sitting arrangement, brain breaks and traffic signals** were found effective in teaching and Learning.

Key word: Pedagogy ,Teaching , Learning

1.0 Introduction

With the developments, teaching the children of 21st century has become most challenging. The old way of teaching has become obsolete being dominated by the 21st century pedagogical skills.

Chalkiadaki, A. (2018) views the 21st century as an era majorly characterized by the evolution of technology and ICT, globalization and a need for innovation, consequently highlighting the need for students to develop relevant skills and competencies. Therefore its important to find the impact of the new pedagogical skills used in teaching learning that has been introduced and focused recently into the Bhutanese Education system with Kagan's Transformative Pedagogy.

Dorji, K. & et al (2020) I their study on the implications reported that transformative pedagogy makes the classroom learning interactive and collaborative in nature. It is also further proved by Harrel-levy and Kelperman (2010) have posited that learning in the transformative class is —furthered by the community that is developed within the classl (p. 80).

The one which is in much focus amongst many is the cooperative learning (CL). The definition of CL is suggested by Slavin in Syafini and Rizal (2010). He describes CL as still working in small group and are given rewards and recognition based on the group performance. Compare to the CL, the Traditional learning (TL) has less advantage in process of learning. It is in line with the statement suggested by Felder and Brent. They say:

“relative to student taught traditionally- i.e. with instructor entered lecture, individual assignments, and competitive grading cooperatively taught students tends to exhibit higher academic achievement greater persistence through graduation, better high level reasoning critical thinking skills, deeper understanding of learnt materials, greater intrinsic motivation to learn and achieve, greater ability to

view situation from others perspective, more positive and supportive relationship with peers, more positive attitude towards subject areas, and higher self-esteem (Felder and Brent, 2007).”

Kagan’s corporative learning is not only a powerful set of instruction strategies, it provides an ideal context for teacher that easily perform authentic and representative assessment. We can see without the difficulty what the students can do and what they can’t do. Therefore, the researcher have focused to study the impact of Kagan’s 21st Century Transformative Pedagogy on teaching and learning. The focused CL- structures are **sitting arrangement, traffic signal and brain breaking.**

Review of Related Literature

The essentiality of cooperative learning structures has been crucial for the teaching learning process in the 21st century. Several studies on the impact of new transformative pedagogies like Kagan’s Cooperative structure has been given much focus in many schools across the globe which has positive impact in students’ academic performance.

Kocabas & Erbil (2017) suggests that teachers who use KCLS as instructional strategy postulates a positive impression in terms of learning and engagement of the students. A study conducted by Rabgay (2018) on ‘The Effect of Using Cooperative Learning Method on Tenth Grade Students’ Learning Achievement and Attitude towards Biology’ indicated an increased level of understanding on the various biological concepts in Secondary School. The study also showed that the use of CL methods in classroom teaching brings a positive impact on students in achieving the intended learning goals.

Herrmann, K. J. (2013) pointed out that the students’ attitudes toward cooperative learning were highly dependent on the tutors’ classroom management skills. Fajriyah (2014) conducted the study on reading is the one of the skills that should be mastered in English. It is needed not only for learning purpose but also in a daily life. The objective of the research was to describe the implementation of a corporative learning. *Think pair share to teach reading*

news items text. This study is conducted for four times in descriptive qualitative manner. It is done in class X which consist of 32 students. She uses observation sheet, students task, and questionnaire as the research instructions. The finding declared that the technique is successfully implemented in the classroom. The student can do it well and help each other comprehension in the share stage. It is also supported by the result of the student'' task which show that the reading ability is better after the implementation of the technique. The result of the questionnaires presents that they like the technique because it can increase their reading ability. Beside that it can also motivate the student to be more active since the activity is interesting and not boring. They agreed that if the teacher use the cooperative learning strategies in the class learning activities, it will enhance the academic performance.

Margiyanti (2014) carried out the study to find out the implementation CL structure - the Write-Pair-Square in teaching a descriptive text and to investigate the improvement of the student participation and writing achievement. This study used classroom action research that was carried out through a pre-test, first and second cycle activities. The result showed that the student progress of participation improved. The average score of pre-test was 11.27, post – test 1 was 20.13, and post –test 2 was 30.24. it also showed that students mastering descriptive improve. The average achievement of student pre-test was 63.27, first cycle test was 70.23 and post-test was 77.66.

According to this study, it was concluded that teaching descriptive test by using the CL structure-Write-Pair-Square has been found helpful for students. It is recommended for English teacher to use this type of CL strategy for student's improvement of their writing skills.

Rationale of the reviews:

Corporative learning is generally defined as a teaching arrangement in which small, heterogeneous groups of students work together to achieve a common goal. Students

encourage and support each other, assume responsibility for their own and each other's learning, employee group related social skills, and evaluate the group progress. The basic element are positive interdependence, equal opportunity and individual accountability. Human beings are social creature by nature and corporation has been used throughout history in all aspects of our life. Therefore, it follows that the corporative learning groups in school would be used as a logical teaching method.

Based on many researchers as **Kurnia Wati (2013) Fajriyah and Abdullah (2014)** found out that corporative learning is effective in teaching and learning. The schools in Bhutan are also facing problem old way of teaching that affect the teaching and learning. The study sought to make assessment of impact 21st century Pedagogy Teaching and Learning in the schools of Bhutan. To identify the areas of the improvement required. It also seeks to bring out the implication to help government to amend and revamp the existing curriculum. In order to achieve the purpose of the study, the following research questions have been generated:

- Do Kagans 21st century Pedagogy applicable in our education system?
- Do Kagans CL structure effective in teaching g and learning?
- Do new sitting arrangement comfortable in classroom teaching and learning?
- Do brain breaking helpful in teaching and learning?
- Do traffic signals helpful for acknowledging the learners understanding of the lesson?

2.0 Statement of the problem:

The problem undertaken to be studied has been entitled as-

“Impact of 21st Century Pedagogy in teaching and learning”

3.0 Objectives of the study:

The main objective of the study was to make an assessment of, 'impact of 21st century pedagogy in teaching and learning' with regards to the following particular aspects or dimensions:

- To study the impact of cl- structure in teaching and learning.
- To study the impact of sitting arrangements in teaching and learning
- To study the impact of brain breaking in teaching and learning.
- To study the impact of traffic signals in teaching and learning.

4.0 procedure adopted

- Selection of the problem was done.
- Reviews of previous related studies were collected.
- Selection of sample was done using appropriate sampling techniques.
- Administration of tool was done on the sample and data will be collected.
- Preparation of a data sheet was done in tables, graphs and charts.
- Percentage analysis was done as per objectives
- Finding of the interpretation and discussion were done in the light of previous studies.
- Results of the study are reported with implications for students, teachers, educationists, policy planners. Recommendations for further study for future researchers have been given at the end.

5.0 operational definition of the terms used:

Impact of 21st century pedagogy; it refers to the response obtained by respondents after assessment on 'impact of 21st century pedagogy in teaching and learning' in relation to the following aspects or dimension:

- CL- structures
- Sitting arrangement
- Traffic signals

- Brain breaking

6.0 Delimitation of the study:

The study was delimited to the selected twenty four students of class six in Rinchengang Primary School. The study was aimed to research on impact of 21st century pedagogy in teaching and learning.

7.0 Methodology

7.1 Research Design

This present research has used qualitative methodology in the study. Open ended questionnaire and structured interview was used to collect data from the class six students of Rinchengang primary school.

7.2 Sample:

The purposive sampling was chosen due to the fact that selected sample is believed to be the representative of a given population. Researchers selects the sample using their experience, knowledge and good in the English language.

7.3 Participants:

Total of Eighty Six students of class four - six were selected based upon their grades.

Too to be used:

Self-develop questionnaire and interview on impact of 21st century pedagogy in teaching and learning: there researchers has constructed and develop a tool on impact of 21st century pedagogy in teaching and learning, which is focus in four areas. It comprises the interactions in the three areas of kagans cl-structure, sitting arrangements, brain breaking and traffic signals.

7.4 Data collection techniques:

The data are collected twice from the same twenty four students. The preliminary round of data collection is done through interview. The post- round of data collection is done through the questionnaire.

To collect the data, dialectic action research spiral is used. It comprises of four components, insight into area of focus can be gained through self-reflection, descriptive activities, and explanatory activities.

7.5 Data analysis technique:

The qualitative data analysis was done. The data was analysed in the descriptive and explanatory analysis. It was also represented in tables, graphs and charts.

8.0 Scope for future research:

In the light of the study conducted on ‘impact of 21st century pedagogy in teaching and learning’ the researcher would like to make few recommendations for future researcher can be made. These include the following.

- This study could be replicated using same methodology but in different schools of Bhutan with same grades. This would make the results more generalizable.
- Further research project can be conducted to investigate the ‘impact of 21st century pedagogy in teaching and learning’ with different grades.
- It is also recommended to examine with same gender wise.

Researcher can also be conducted in the others areas of same problem such as gambits, classroom building and team building etc. The data analysis done in the tables, charts, graphs and percentages analysis.

9.0 Data organization and analysis:

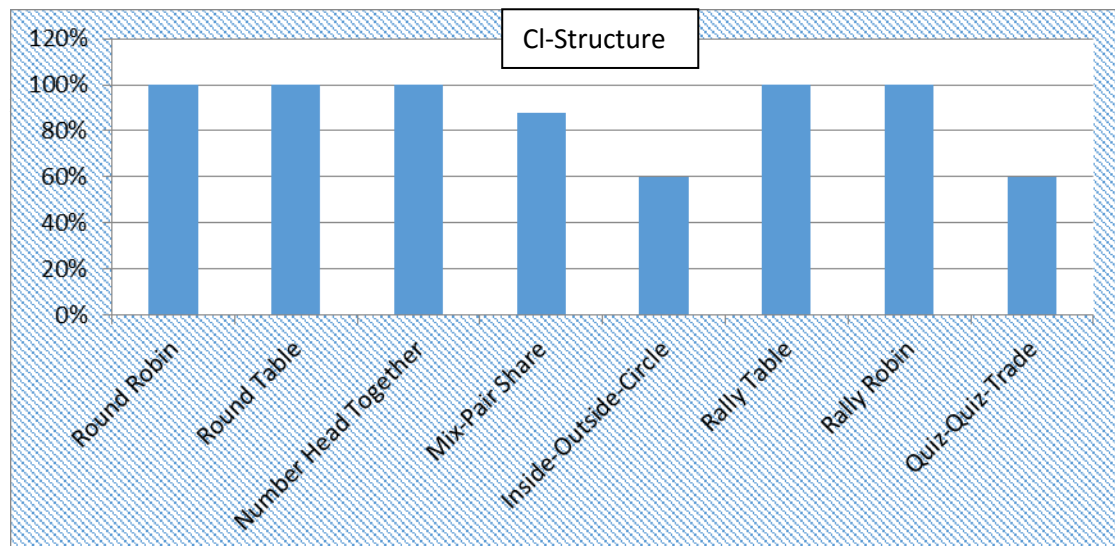


Fig. (1) CI- structure learnt by our students presented in the graph

The graph above depicts that maximum respondents are in hundred percentage line and lowest is in sixty percentage line. The result indicates ci- structures are effective in teaching and learning.

10.0 Sitting arrangements

Respondents are clear about the new sitting arrangement. It was reflected that face to face partner and shoulder to shoulder partner. The extra member must be shadow.

11.0. Brain Breaking

Respondents are very positive of the brain breaking. Brain breaking helps them to prepare to stay alert, active and attentive for the session. Some of the brain breaking that they have reflected are master chief, evaluation Bok tok, passing balloon, click click, zukha zukha.

12. 0 Traffic Signals-

Respondents have shared positive about traffic signals. It was found that traffic signal is effective in in teaching and learning. Children are cleared about the traffic signal as mentioned below.

Table 1. Traffic Signals

Fully understood	Thumbs up
Half understood	Thumbs centre
Not understood	Thumbs down

Table 2 Difference and the new and old Pedagogy in teaching and learning, presented in the table below:

New teaching strategies	Old teaching strategies
Student centred Students are active participators Corporative learners Share the ideas in a group members Traffic signal help all children's understanding Opportunity of sharing and speaking Brain breaking helps in keeping active Discuss and get answer from friends Four in group are comfortable in doing group work Interesting and effective Soothing and acceptable noise	Teachers cantered Lecturer method Passive learning Individualize idea Copy and the answer and idea from other Could check some children's understanding Can't speak and share No brain break Feels bore/ lazy and sleepy Teacher tell the answer Many members in group are uncomfortable in doing group work Boring and not effective Very noisy

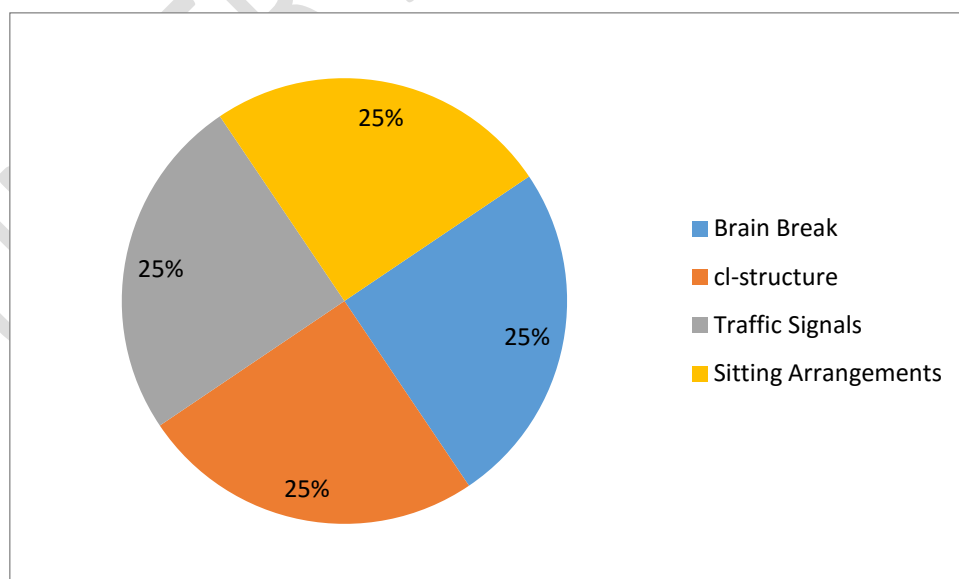


Figure 2. Percentage analysis of respondents in favour of Kagans 21st Pedagogy in four areas, represented in pie chart:

All twenty four respondents are 100 per cent in favour of all the four areas of 21st Pedagogy. Which indicates the Pedagogy is effective in teaching and learning.

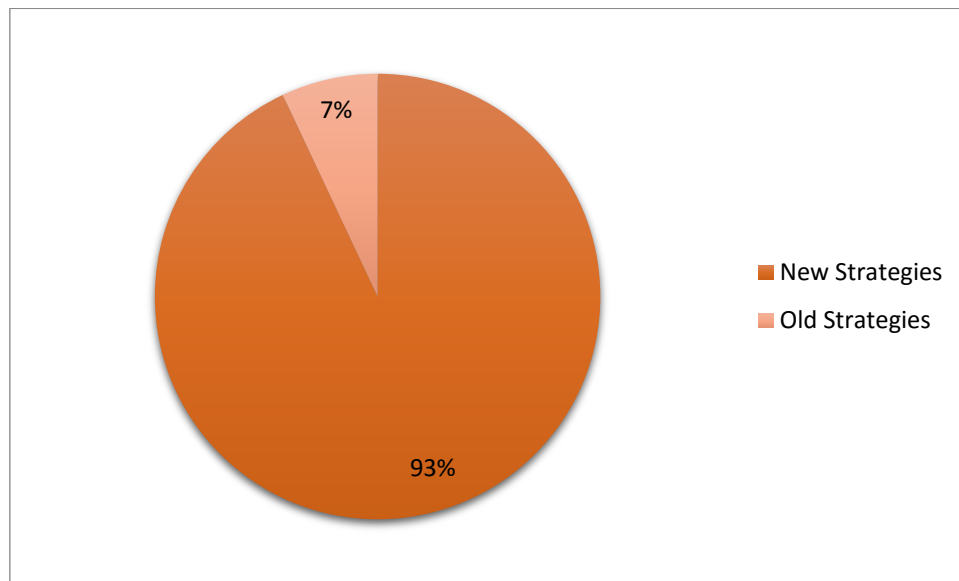


Figure 3. **Percentage analysis of number of respondent in favour of old and new strategies represented in the pie chart:**

Ninety Three percentages (93%) of respondent are in favour of new teaching style. Seven percentages (7%) of respondents are in favour of old teaching style. The finding declared that new teaching style is effective in teaching and learning.

13.0. Areas required for improvement area are:

Sometimes teachers can't recognise the traffic of the children and left without clarification of their problems. Teachers are required to give equal opportunities to all the members in the group for sharing and discussing the ideas. Some members get repeatedly and some don't get the opportunities for sharing the ideas. Side group face difficulty in seeing green board while writing.

14. 0 Findings:

Study conducted by **Kurnia (2013) and Margiyanti (2014)** is in relation to the mixed pair share and round table structure of Kegans pedagogy, which is very effective in writing

text. Moreover, **Fajriyah** (2014) studied was in favour of all the CL structure of the Kagans pedagogy which is very helpful for thinking and sharing their views and ideas in the group. Thus, Kagans pedagogy was observed very effective, interesting and appropriate strategies which can use in this 21st century world of children.

15.0. Summary and discussion:

The result was found out that there is no significant difference between preliminary and post round of the data collected. The CL structure, sitting arrangement, brain breaking and traffic signals are found very effective in teaching and learning. There is a significant different in new and old method of teaching and learning. New pedagogy is more effective the old styles of teaching.

Conclusion:

When the world is developing and changing at an epidemic rate in the 21st century. It is much more interconnected and has become small with digitalised technology. Learning has evolved and teaching has become much easier with abundance of information at a click of a button. Every child has become wise and smart as they are brought up with digital gadgets.

Thus with these changes as proved in the study, teaching and learning has to be much livelier with more of transformative pedagogies of 21st century rather than struggling with Traditional way of teaching/learning. Now the teachers' role has become much easier but complex if not kept updating. The roles of the teachers in 21st century teaching and learning are to guide and facilitate the learning.

Therefore, with these trends of technological revolution, social, economic and globalization changes have intended for new changes and developments in 21st century teaching and learning.

Consent

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

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