

A Study on Academic Performance of Secondary School Students Through Authentic Assessment Approach

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ABSTRACT:

Quality education is very important for a nation's prosperity and development. NEP 2020 has emphasized the holistic development of students. For quality education and holistic development innovative way of teaching as well as innovative evaluative systems are needed. Authentic assessment approach helps students to demonstrate their knowledge and skills in different ways. Authentic tasks may include making projects, creating artwork or videos or other products. In the present study, researchers try to find out the academic performance on the basis of an authentic assessment approach (doing project on infectious diseases) of secondary students of Uttar Dinajpur District of West Bengal in life science concerning location (rural and urban) and gender (female and male). Descriptive Survey Method was applied for this study. The data was collected from 202 students of 10th standard students of secondary schools in Uttar Dinajpur district of West Bengal in life science through a probability sampling technique. There are some socio-economic and school level variables that can influence performance, to control this researcher took some classes in rural and urban schools to guide them on authentic assessment approach. From the analysis and interpretations of the result it has been found that, the boys' students had better academic performance than the girls' students when an authentic assessment approach was applied. The urban students had better academic performance than the rural students in case of the authentic assessment approach. In this perspective, proper guidance, counseling and orientation programs for an authentic assessment approach should be organized for the teachers, and the students to know about the importance of an authentic assessment approach in the secondary school for holistic development, because when student apply their knowledge and skill at the practical situation then only the proper utilization of knowledge and skill can happen (Mueller, 2008). Thus, the government should take the initiative to apply the authentic assessment approach for better performance of the students in life science along with other academic subjects.

Keywords: Innovative Assessment, Authentic assessment approach, Academic performance, Holistic development.

INTRODUCTION

The National Education Policy (NEP) 2020 has emphasized the holistic development of students. For the holistic development of students, innovative ways of teaching as well as innovative evaluative systems are needed. To bring transformation in the school education system, reformation of school curricula, pedagogy, and transformation of assessment are important. Nowadays learners take control of their learning. It is often associated with the higher levels of Bloom's Taxonomy, which require learners to think critically and creatively. Many factors can contribute to learner autonomy, including: The teaching style of the instructor, The learning environment, and the learner's motivation and self-efficacy. Giving learners choices about their learning can help them feel more in control of their education. Teachers could give the opportunities to the learners to choose which projects they want to work on, or which resources they want to use. By using open-ended questions in assessments learners can think critically and creatively, rather than simply providing a memorized answer. Besides asking 'What', the teacher should ask 'Why'. Providing feedback that is focused on the learner's progress, rather than on their mistakes, can help learners feel more confident in their abilities. Teachers could focus on what the learner did well, and how they could improve their work in the future. It will create a supportive and collaborative learning environment. A supportive and collaborative learning environment can help learners feel comfortable taking risks and trying new things. Teachers could create opportunities for learners to work

together in groups, or to share their work and assess their work through peer assessment.

Innovative Assessment Approach

Innovative assessments can be done by computing the amount of paint needed to cover a particular room or to perform in a group. By doing the problems, students can use their knowledge effectively and creatively. The tasks are like the kinds of problems faced by adult citizens (Wiggins, 1993, p. 229). Innovative assessments give students the freedom to create what they have learned. In innovative assessment students have to perform some practical tasks that have some realistic contexts which makes problems more engaging for learners. Innovative assessment helps to practice higher-order cognitive skills. Innovative assessments have an authentic task and a rubric. Students perform the authentic task and the rubric is used to evaluate their performance.

Authentic assessment approach

Traditional assessment processes (e.g. written tests and viva) can effectively determine whether or not students have acquired the knowledge. Whether in authentic assessments (e.g. reports, assignments etc.) often ask students to analyze, synthesize and apply what they have learned substantially, and students create new meaning in the process as well (Mueller, 2005).

Authentic assessment has differed from traditional assessment procedures because authentic assessment means assessing the learning that students might carry out in the real world, as opposed to the kind of tasks traditionally learned in classrooms (Herrington and Herrington, 2006).

In authentic assessment teacher assesses by knowing if the students can interpret literature, calculate potential savings on sale items, test a hypothesis, develop a fitness plan, converse in a foreign language, or apply other knowledge and skills they have learned, then authentic assessments will provide the most direct evidence (Mueller, 2005).

Implementing authentic assessment is the reason behind the success of teaching learning process in higher education institutions (Fook and Sidhu, 2010).

In authentic assessment students have to do some real-world tasks by which they can apply their knowledge and skills. Authentic assessment is a type of assessment where students are asked to perform real-world tasks by applying their knowledge and skills (Mueller, 2008).

Authentic assessment includes evaluation of the product which students create in groups, or in individuals. This type of assessment, where the aspect of 'doing' is emphasized, decreases the level of exam anxiety (Fook & Sidhu, 2010).

In authentic assessment the products students create to demonstrate authentic learning on the same task might take different forms (e.g., posters, oral presentations, videos, websites). Or, even though students might create the same authentic product, there can be a chance of variation. For example, writing a good essay requires a common set of skills from students, but there is a chance of variation in how that essay is created by different students (Mueller, 2005).

Authentic Assessment Approach in Life Science

In authentic assessment teachers want their students to be able to use the acquired knowledge and skills in the real world. So, in assessments students should apply what they have learned in authentic situations. In life science if a teacher teaches the students about nature parks, then the teacher should not check what they have learned through a written test, the teacher should send the students to a nature park and tell them to write a report. In life science authentic tasks can done by experimenting, drawing a picture, analyzing the natural world etc.

In this context, researchers try to find out the academic performance based on the Authentic Assessment Approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal in life science

concerning location (rural and urban area) and gender (male and female).

OBJECTIVES OF THE STUDY

In this context, the present paper intends to highlight the findings on the academic performance on the basis of the Authentic Assessment Approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal.

The objectives of the study are as follows : 1) To analysis the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect to location (rural and urban area).

2) To analysis the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect to gender (male and female).

Hypotheses of The Study

The hypothesis of the study in null form was as follows:

1. Ho1: There is no significant difference between the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect to location (rural and urban area).

2. Ho2: There is no significant difference in the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect to gender (male and female).

METHODOLOGY

Descriptive Survey Method was applied to analysis the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal.

4.1 Population of the study : The population of the study consisted of 10th standard students including boys and girls students, rural and urban students of government aided secondary schools of Uttar Dinajpur district of West Bengal.

4.2. Sample of the study : The researcher used the probability sampling technique for the collection of data which consisted of 4 government aided secondary schools in the Uttar Dinajpur district of West Bengal.

4.3. Tools used in the study : Researchers conducted an authentic task (doing project on infectious diseases) on 10th standard students in selected schools, then the researcher collected the scores to know the academic achievement of the selected sample of 202 students of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal in life science.

4.4. Data collection and data analysis method : For analyzing and computing the result of the authentic assessment approach in life science based on the authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal, the researcher used measures of t-test for computing the results.

RESULT AND DISCUSSION

Objective - 1: To analysis the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect

to location (rural and urban area).

Hypothesis - 1: There is no significant difference between the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect to location (rural and urban area).

Table-1: Analysis of the academic performance in life science on the basis of authentic assessment approach (doing project on infectious diseases) of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect to location (rural and urban area).

Table – 1

	N	Mean	Standard deviation	t- value
Urban area students	101	84.69	9.85	25.98
Rural area students	101	74.02	11.46	

Interpretation: From the Table no. 1 it is found that the computed t-value is 25.98 which is greater than the criterion t-value 1.97 at .05 level of confidence for 200 df. The study has found that there is a significant difference, so t-value 25.98 is significant at .05 level of significance. Therefore, the formulated hypothesis “There is no significant difference between the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect to location (rural and urban area)” gets rejected. From this it is understood that there is a significant difference in the academic performance on the basis of the authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal in life science with respect to rural and urban area. It was found that urban area students perform well in life sciences by authentic assessment approach in secondary schools of Uttar Dinajpur District of West Bengal. It signifies that the urban learners performed better than the rural learners according to their respective mean scores which have been shown in the above Table no. 1. These findings will be helpful to know how an authentic assessment approach is important to create holistic development of students of secondary schools and for establishment of quality education in schools.

Objective - 2: To analysis the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect to gender (male and female).

Hypothesis - 2: There is no significant difference in the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect to gender (male and female).

Table - 2: Analysis of the academic performance in life science on the basis of authentic assessment approach (doing project on infectious diseases) of 10th standard students of secondary schools of Uttar Dinajpur District of West Bengal with respect to gender (male and female).

Table – 2

	N	Mean	Standard deviation	t- value
Boys’ students	102	84.52	9.57	23.81
Girls’ students	100	74.08	11.29	

Interpretation: From the above Table no. 2 it is found that the t-value is 23.81 which is less than the criterion t-value 1.97 to .05 level of confidence for 200 df. The study has found that there is a significant difference, so t-

value 23.81 is significant at .05 level of significance. Therefore, the hypothesis “There is no significant difference in the academic performance in life science on the basis of authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal with respect to gender (male and female)” gets rejected. From this, it is understood that there is a significant difference in the academic performance on the basis of the authentic assessment approach of 10th standard students of secondary schools of Uttar Dinajpur district of West Bengal in life science with respect to gender (male and female). From the result it can be found that the boys students performed better than the girls students according to their respective mean scores which have been shown in the above Table no 2.

From the analysis and interpretations of the result it has been found that: 1. Boys’ students had better academic performance than the girls’ students. 2. The urban students had better academic performance than the rural students. In this perspective, proper guidance, counseling and orientation programs for an authentic assessment approach should be organized for the teachers, and the students to know about the importance of authentic assessment approach in secondary school for holistic development, because when student apply their knowledge and skill at the practical situation then only the proper utilization of knowledge and skill can happen.

Controlling of different variables: There are some socio-economic and school level variables that can influence performance, to control this researcher took some classes in rural and urban schools to guide them on authentic assessment approach.

CONCLUSION AND EDUCATIONAL IMPLICATIONS

For a nation’s prospering and development, quality education is very important. For quality education innovative ways of teaching as well as innovative evaluative systems are also needed. By evaluation system everyone knows about student's success, improving the evaluation system is particularly relevant as a means to recognize excellence in teaching learning process. Evaluation systems must be of high quality for measuring the status of students’ performance. In the present study, researchers try to find out the academic performance on the basis of authentic assessment approach of 10th standard school students of Uttar Dinajpur district of West Bengal in life science in relation to location (rural and urban) and gender (male and female). The authentic assessment approach helps students to apply their knowledge, so this is a student centric approach. Thus, the government should take the initiative to apply the authentic assessment approach for better performance of the students in life science along with other academic subjects.

Educational implications in reference to academic performance on the basis of an authentic assessment approach in life science are as follows : 1. The study would help the teachers of secondary schools to know about the student’s performances in life science and their level of achievement on it.

2. The study would help the teacher to use the teaching learning materials to make the teaching learning process more interesting on life science subjects so that the learner can perform better.

3. It is found that boys’ students performed better than girls’ students, so to minimize the anxiety for examination of girls’ students there should be proper guidance to develop positive attitude towards their learning.

4. The study would help the curriculum framers frame the life science curriculum at the secondary school level on the basis of the findings of the study.

5. The study would help secondary school teachers strengthen the quality of education and give more emphasis on authentic assessment approaches to deal with the students of secondary schools’ level in life science subjects.

6. Necessary attention should also be accorded to the conduction of an orientation program for all the secondary school teachers, and students about the importance of authentic assessment.

7. In the study, it is found that the learners are interested in authentic assessment where student can apply their cognitive knowledge to solve daily life problems. From the study it has been found that not only urban students but the rural students also interested in authentic assessment. The girl students also should be given proper

guidance and counseling for their academic performances.

8. The study would help to give orientation and counseling programmes for the learners whose parents are less educated, which will help the students to perform better in the study.

9. The study would help the teacher to make the students more active in life science subjects along with other subjects, because most of the students have anxiety and are less performers in science subjects.

Although innovative assessments and traditional assessments, both assessments are useful for the holistic development of the students. By applying this type of transforming assessment procedure education system will be more holistic and competency based.

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