DIFFERENT ASPECTS AND DIMENSIONS OF ACTIVITY-BASED CURRICULUM: A REVIEW

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Abstract

Curriculum is a framework of the knowledge and understanding that a pupil gains through the manifold activities that happens in schools, classroom, playground, laboratory, library, workshops as well as the informal contacts between the teachers and the students, apart from formal education. The new concept of curriculum has variety and flexibility and an ideal curriculum is moulded and tailored according to the present needs of the learners of different age groups. By reviewing some selected past and present significant articles, this review article is aimed to provoke and fortify insights for the due improvements and standardization in the futuristic aspects towards incorporation of the cognitive, affective and psychomotor domains at a time during reformation of new curriculum. This is a sincere effort to present the existence of various types of curriculum in current textbooks and validate its significant aspects by keeping the various stakeholders in mind. It is hoped that this article would help motivate the academicians, researchers and new generation curriculum developers for recognizing the challenges in developing an ideal curriculum according to the needs of the different age group learners and for developing an urge to take the initiative to research various aspects of this topic to bring in the appropriate advancement in the curriculum.

Keywords: Curriculum, Textbooks, School education, Activity-based curriculum

Introduction

School education necessarily provides students with structured learning experiences. Providential and favourable educational experiences when provided to the learners make them passionate. An appropriate planning of objectives and methods of teaching as well as the outcomes of learning are called for [1]. The learners at operational and concrete operational stages are almost incapable of formal reasoning and cognitive development at this stage is very important. Activity based learning is very useful at this stage to make their learning experiences joyful [2]. Learning of prescribed materials through various activities is a means of imparting knowledge and skills on an equal weightage to the students and helps the learners to grasp the concepts easily and effectively. Activity based curriculum involves the simultaneous use of 3H (Head, Hand and Heart). Activity based approach is a paradigm shift in the field of education because the focus is diverted from teacher-centric and subject-centric curriculum to learner-centric curriculum [3].

Teaching through different activities develops in the student independent and critical thinking opportunities. The students learn to work in peer groups in their own learning settings as well as discuss and share ideas among themselves which eventually helps in collaborative learning. Although activity based learning has been nurtured in the present curricular settings by the curriculum developers, it has been only minimally implemented in schools which could not gather much attention for the scientific research studies. For this purpose, the teachers have to be trained to conduct these activities in classrooms efficiently within designated time periods.

Objectives

The objectives of this review study are:

1. To see the different types of work that has already been done related to activity-based curriculum.
2. To find out any development or findings related to curriculum studies.
3. To study the effectiveness of activity-based approaches by comparison with traditional-lecture methods.
4. To find significant future opportunities for research related to activity-based teaching-learning methods.

Methodology

It is a kind of meta-research, which includes the key words for the literature search like curriculum and activity-based curriculum. A total twenty-five relevant authentic articles were identified. After examining the abstracts, contents and subject-matter, the significant twenty articles were considered for this review.

Studies undertaken for reviewing

International Perspectives:

Fallon et al. (2013) formulated a study on "An activity-based approach to the learning and teaching of research methods: measuring student engagement and learning". In this study, the research work was carried out with 82 final and third year undergraduate students who were learning different methods before preparing their undergraduate thesis during 2010 and 2011 academic years. The objectives determined for this study were: (a) research methods based on activity for learning in a group environment, (b) active participation of all students in the learning methods. First, research methods were introduced through lecture-based format. But it was found out that through the traditional lecture method, the student's involvement was poor and learning was limited. So, to overcome the limitation, a series of activity-based research methods were introduced like workshops, brainstorming, mind-mapping, presentations, peer-critiquing, seminar and self-reflection. To assess the student's learning, a questionnaire was devised which showed that 63%-96% of students were actively engaged and the two objectives were successfully met [4].

Amuthavalli et al. (2014) investigated the "Impact of activity-based learning on learning science at primary level". The purpose for this research work was- to study the effectiveness of adopting activity-based teaching methods for science teaching at primary level, to determine the extent of achievement in science of class V students, and to accordingly develop activity-based learning design for teaching science to class V students. The methodology used in this study was Activity-based teaching module and Achievement test: Pre-Test/ Post-Test of both control group and experimental group of Panchayat Union Elementary School. The control group and experimental group were identical i.e. each 30 in number. The means of pre-test scores and post-test scores of control group as well as experimental groups differ significantly with the post-test mean being considerably greater than the pre-test mean. This implies that activity-based teaching in experimental group amplified the acquisition of basic skills by the students in science [5].

Akkus (2015) carried out a research work on "Activity-based teaching in Social Studies education: An action research". The purpose of this study was to determine pre-service social studies teachers' skills to plan and implement the activity-based teaching and contribute to their development of these skills. For this, action research design of qualitative research was used. Six pre-service teachers who were fourth-year students of Ataturk University Kazim Karabekir in the fall semester of 2014-2015 participated in this study. The data were gathered via document analysis, observations and interviews (semi-structured interview consisting of three open-ended questions). These data obtained were analysed using content analysis. It was found out that the pre-service teachers' skills for planning and implementing activity-based teaching were not satisfactory before the action. But after the action, they gained navigational skills and knowledge on activity-based teaching which will contribute in effective teaching-learning process [6].

Bugaje and Abubakar (2016) studied "The effect of activity-based instructional approach on the academic performance of student in Integrated Science Education in Katsina State College of Education, Nigeria". The purpose of this study was to significantly point out

the differences between activity-based instructional strategy and conventional lecture method. Thirty students of the college participated in the study who were randomly divided into control group and experimental group. The control groups were taught via conventional lecture method and the experimental group was taught via activity-based approach. The instrument used for data collection was Integrated Science Process Skills (ISPS). The quasi-experimental design revealed that post-test scores were significantly greater than pre-test scores which imply that the use of activity-based methods is effective in both teaching and learning science [7].

Acosta & Slotta (2018) conducted a research paper on "CK Biology: An Active Learning Curriculum Design for Secondary Biology". The motive behind this study is to present the planning of a lively learning curriculum and corresponding software CKBiology. They adopted a design-based research methodology in which they collaborated with a high-school biology teacher and a team of technology developers to design the software CKBiology which will implement the activity-based learning guided by knowledge community and inquiry (KCI). Analysis of student and teacher perspectives on the activity elements as well as the CKBiology software was done qualitatively and the results noted. This was proved effective for designing principles which would suffice the active teachers, researchers and practitioners [8].

Wongdee (2019) investigated a study on "The development of activity-based learning model to enhance research skills for pre-service teachers of industrial education, Faculty of Industrial Education and Technology, KMUTT". The sample consisted of twenty-nine pre-service teachers who were studying in the first semester of 2015 academic year and fifty pre-service teachers of first semester of 2016 academic year. It was found out that the activity-based academic learning enhanced the research skills of pre-service teachers and also developed team-working skill and self-reflection [9].

Albadi (2019) carried out a dissertation work on "The Impact of activity-based learning on student's achievement- A study among 12 grade science and environment student in a public school in Onam". The purpose of this study was to determine the effect of activity-based learning on student's achievement as compared to conventional lecture methods and also to perceive student's views towards activities. The sample included twenty-four twelve grade male students. Quasi-experimental design i.e. pre-test scores and post-test scores of both control group and experimental group was implemented. Control group was taught through traditional lecture methods and experimental group through activity-based teaching. The result was that activity-based learning had positive impact on student's understanding and achievement [10].

Anwer (2019) conducted a research on "Activity-based Teaching, Student Motivation and Academic Achievement". A sample of 120 students in higher secondary humanities-education combination group was divided into control and experimental groups (30 students randomly selected). The research tool used was two MCQ-achievement tests as pre-test and post-tests. The experimental group showed more achievement as activities

involved increased the student's motivation as compared to control groups which had lecture-based teaching [11].

Kuyate (2019) formulated "A study of effectiveness of activity-based teaching method in the English subject of Standard IV". The purpose of this study was to compare the learning effects of lecture methods and activity-based approach. Thirty candidates from PCMC area participated in this study. Quasi-experimental design was used in which candidates were divided into control and experimental groups and evaluated through pre-test and post-test scores. The experimental group achieved higher by teaching English concepts using activity-based approach compared to control group that taught the same concepts through traditional lecture methods [11].

Zamir (2020) carried out "The comparative analysis of activity-based learning system vs lecture method on students' performance". Activity-based teaching-learning process enhance creativity and critical thinking skills of a learner. This approach helped students to connect the gained knowledge to practical life. T-test analysis was done on the academic performance of control and experimental groups for comparison between lecture methods and activity-based learning. The experimental group performed considerably better than their counterparts which is due to activity-based teaching strategy [12].

National Perspectives:

Mishra and Yadav (2013) conducted a study on "Effect of activity-based approach on achievement in science of students at elementary stage". The purpose of this study was to determine the enhancement in the achievement of class VII students by activity-based approach. Quasi-experimental design i.e. pre-test and post-test scores were used for both control and experimental groups where control group contained 18 boys and 12 girls, and experimental group contained 17 boys and 13 girls. Experimental groups performed better as they taught through activity-based approaches compared to control groups in science [14].

Awasthi (2014) conducted a survey on "Activity-based learning methodology can bring improvement in quality of education in India". The downfall in the quality of education provided to students in especially Government schools is worsening more due to traditional lecture methods. So curriculum and syllabus should be designed in such a way that it should have enough time and space for activity-based learning. It was concluded that activity-based learning methodology can be useful in Indian context and also can enhance the understanding, motivation and skills in students [15].

Singh (2014) investigated the "Importance of Science in School Curriculum". Activities in science make it well-suited to active younger children. The lessons in science were well-structured and interesting. Most teachers included group work with hands-on practical tasks during the lessons. Many schools also collaborated with experts in particular areas of science

to work with teachers and pupils. So, relevance of science in school curriculum is that the students can connect the gained knowledge to their everyday life [16].

Sankaran (2015) formulated and investigated on "Indian Education Crisis: Challenges in Curriculum Building". The purpose of this paper was to focus on the nature of our school curriculum, pedagogy and evaluation and also to determine their impact on overall education process and outcomes. The assumptions in the process of curriculum design which we never challenged were questioned- based on Vivekananda's and western philosophy of education. The curriculum planners are responsible for their operations and the consequences they generate [17].

Patil et al. (2016) studied on "Activity-based teaching-learning: An experience" for undergraduate students. Monotonous lecturing and absence of activities make traditional lecture methods not so effective to the learners. The framework for the activity-based curriculum includes teaching through games in Digital Communication course for 6th semester ECE students and worksheets in Basic Electronics for 1st year students. The analysis resulted in the enhancement in the course learning through Activity-Based Teaching Learning (ABTL) [18].

Rathee and Rajain (2017) conducted a study on "Activity-Based Teaching in Higher Education Institutions". The purpose of this study was to analyse how the students in higher educational institutions perceived activity-based teaching methods. 212 students from government and private institutions participated in the study and they were samples using non-probability sampling methods. It was concluded that the students positively perceived the activity-based approaches for their overall development. Also there was no significant difference between the perception of female and male students [19].

Dalwadi & Shah (2018) studied the importance of "Students' Preferences for Activity-Based Learning in Accountancy Subject: A study of Anand District". Generally for teaching accountancy, the chalk and talk method is very popular, but to make learning more interesting, they developed an activity for cost accounting. Five colleges were selected and B.Com students were sampled who participated in pre-activity and post-activity tests and primary data collected. After analysis of the data, it was found that there was a significant impact of activity-based learning methods on students' performance and majority of students found it interesting and useful [20].

Kundu (2018) conducted "A study on Indian Teachers' Roles and Willingness to Accept Educational Technology". For this research purpose, 175 primary and secondary teachers from various schools in West Bengal, India were launched to focus on their perception to their new roles. It was found out that the teachers who were in facilitator and delegator roles were more willing to adopt educational technology [21].

Barai (2018) carried out "A study on effectiveness of learning physical science through activity-based methods at secondary level in Alipurduar district of West Bengal". The

purpose of this study was to determine the effectiveness of low-cost teaching aids from the local and activity-based experiments that be used in Physical Science class by both teachers and learners, also both boys and girls. The sample consisted a total of 200 students, 100 in each control and experimental group, with 50 boys and 50 girls in each group. It was concluded that low cost materials improves the achievement of students in Physical Science irrespective of gender through ABTL [22].

Batra (2020) investigated a recent study on "Reimagining curriculum in India: Charting a path beyond the pandemic". This paper is reflected on the role that curriculum can play in enabling an ecologically and socially just world post-pandemic. The current pandemic situation will lead us to re-construct the curriculum into a relevant one which will address the question "what knowledge has the most worth?" anew [23].

Conclusion

Curriculum development process is basically the systematic organization of what will be taught, who will be taught, and how it will be taught. Each of these three components are affected by one another. Methods of what will be taught is influenced by who it will be taught i.e. the subject (target group). Also, methods of how the content will be taught also depends on the target group and the setting. These components are much more significantly affected by each other in activity-based teaching-learning methods. Activity-based approaches requires the continuous engagement of the teachers as well as the students. This approach enhances the cognitive, affective and psychomotor domain of the individuals. Activity-based methods have been, therefore, proved to be quite an useful tool starting right from kindergarten education to higher studies (colleges and universities). The shift from traditional lecture method to activity-based teaching methods has brought about a dynamic change in the existing curriculum and will continue to do so in the future curriculums to be made. Although, this process can be time consuming and may not suit in each and every subject under consideration, but it surely shifted the focus of teaching-learning from teacher or subject-centric to learner-centric, which was the need of the hour. Specially post-pandemic, to bring the learners to the main education field again after two years has not been an easy task for the teachers, but through various activities being conducted in blended mode has surely helped a lot of learners to re-focus on their studies and the curriculum has taken a significant turn for the well-being of the learners. Not to mention the fact that activity-based methods facilitate learning beyond educational environment, this gained knowledge lasts for a long time and enhances the learner's performance greatly in every field. In nutshell, activity-based teaching-learning methods should be designed in such a way that the learners are able to grasp the concept easily and keep it in their long-term memory, keeping in mind the individual differences of the pupils.

Future Perspectives

There is a scope of further improvements and redesigning the curriculum by incorporating more fun-based activities for the learners, taking into consideration the time period of a particular session. Researches involving the loopholes in the existing curriculum can be

undertaken so that the quality of knowledge received by the learners is enriched and they can come in terms with the recent advances and trends in education.

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