

# Effectiveness of Activity-Based Learning in Primary School Education

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**Abstract:** Primary school education plays a foundational role in shaping children's literacy, numeracy, problem-solving ability, social skills, and long-term attitudes toward learning. Yet many education systems continue to struggle with low levels of foundational learning despite expanding enrolment. Global evidence on learning poverty and foundational skills has intensified the search for teaching approaches that move beyond passive, lecture-dominated classrooms and promote deeper student engagement. Activity-Based Learning (ABL) has emerged as one such learner-centred approach. It emphasizes participation, exploration, collaboration, practice, and learning through meaningful tasks rather than memorization alone. In the primary years, where children learn most effectively through doing, observing, discussing, and experimenting, ABL offers strong pedagogical promise. UNESCO and World Bank materials on foundational learning stress that literacy, numeracy, and socio-emotional competencies are the building blocks of later educational success, making classroom pedagogy especially important in the early grades.

This article examines the effectiveness of Activity-Based Learning in primary school education through a model empirical framework. The study is designed to assess the influence of ABL on academic achievement, classroom participation, motivation, attendance, and collaborative learning. A quasi-experimental design is presented in which 120 primary school students are divided into an experimental group taught through ABL and a control group taught through conventional methods over a twelve-week period. The article includes objectives, a review of literature, methodology, numeric result tables, and a discussion structured around the study objectives. The illustrative findings show that students exposed to ABL perform better in post-test achievement scores, demonstrate higher participation rates, report stronger learning motivation, and display modest gains in attendance and teamwork. These outcomes align with broader research showing that active and playful pedagogies can enhance engagement and improve learning when supported by effective scaffolding, suitable classroom tasks, and teacher preparation.

The article concludes that ABL is an effective pedagogical strategy for primary education when implemented systematically. Its strengths lie not only in improving test performance but also in making learning more interactive, meaningful, and inclusive. However, successful implementation depends on teacher capacity, classroom management, availability of learning materials, and alignment between activities and curricular objectives. The study therefore recommends wider integration of ABL in primary classrooms, supported by teacher training, formative assessment, and context-sensitive planning.

**Keywords:** Activity-Based Learning, primary school education, student engagement, academic achievement, learner-centred pedagogy, classroom participation, foundational learning

## I. INTRODUCTION

Primary education is the stage at which children acquire the foundational competencies that support all later learning. Reading with comprehension, basic numeracy, communication, curiosity, and the capacity to work with others are not

peripheral outcomes; they are central to educational development and social participation. International education agencies have repeatedly highlighted that access to school alone is not enough if children do not learn effectively once enrolled. UNESCO notes that foundational learning is essential because weak early skills are strongly associated with later exclusion and poor progression through school. The World Bank likewise defines foundational learning as the literacy, numeracy, and socio-emotional capacities that underpin future knowledge acquisition, productivity, and civic participation.

The urgency of improving primary school pedagogy becomes even clearer in the context of the global learning crisis. The World Bank and UNESCO's learning-poverty framing highlights the proportion of children who cannot read and understand a simple text by age ten, while UNICEF has noted that a large share of children in low- and middle-income countries remain unable to achieve minimum reading proficiency. These concerns suggest that traditional systems often succeed in enrolling children without ensuring meaningful learning. In such a context, classroom methods that increase participation, conceptual understanding, and learner motivation deserve serious attention.

Activity-Based Learning has attracted sustained interest because it shifts the classroom from transmission to participation. Rather than placing the teacher as the sole source of knowledge, ABL organizes learning around activities such as problem-solving tasks, experiments, games, role play, storytelling, peer work, manipulative use, and project tasks. Students learn by doing, discussing, reflecting, and applying concepts. This is particularly relevant in primary education, where children typically learn more effectively when concepts are linked to concrete experience and social interaction. ABL therefore resonates with constructivist assumptions about learning as an active process in which understanding is built through engagement rather than received passively. These broad pedagogical principles are also reflected in contemporary reviews of playful learning, game-based learning, and scaffolded active learning in school contexts.

The educational significance of ABL is not limited to academic achievement. Supporters argue that it can improve attention, motivation, confidence, creativity, and classroom relationships. When students manipulate objects, speak in groups, solve problems, or perform learning tasks, they may become more invested in the learning process. In primary schools this matters because engagement is closely related to persistence, attendance, and the development of positive attitudes toward school. Recent research on primary school makerspace activities, active learning environments, and playful learning points toward a broader pedagogical benefit: learner-centred classrooms can strengthen both cognitive and affective dimensions of learning, provided that activities are purposeful and teacher support is strong.

In South Asia and other developing contexts, ABL has also been discussed as a strategy for reducing rote learning and making classrooms more inclusive. Evaluations of Activity-Based Learning initiatives in Tamil Nadu and related discussions of child-centred reforms have suggested that structured activity sequences may help younger learners progress more autonomously, especially when the pedagogy is supported by appropriate materials and teacher facilitation. At the same time, implementation is not automatic. Large class sizes, limited resources, examination pressures, and variable teacher preparation can reduce the quality of ABL in practice. Consequently, the effectiveness of ABL should be examined not as an abstract ideal but as a practical classroom strategy whose impact depends on how it is designed and delivered.

The present article therefore explores the effectiveness of Activity-Based Learning in primary school education through a model research structure. It asks whether ABL improves academic achievement, participation, motivation, attendance, and collaborative skills in comparison with conventional teaching methods. By combining conceptual discussion, literature review, and a model results section with numeric tables, the article aims to provide a complete academic framework suitable for coursework, research planning, or adaptation into a field-based study.

## **II. REVIEW OF LITERATURE**

A strong body of scholarship suggests that active, participatory, and playful forms of teaching can improve learning in school settings, though the nature and strength of impact vary across age group, subject, implementation quality, and assessment design. One important contribution is the study by Anwer (2019), which examined activity-based teaching

in relation to student motivation and academic achievement. Using an experimental design, the study found that activity-based teaching had a positive effect on learners' motivation and performance compared with conventional approaches. Although the context was not primary school, the findings remain relevant because they support the broader proposition that participatory learning can produce measurable academic benefits when instruction is intentionally designed around learner activity.

In a study more closely tied to school-age mathematics learning, Çelik (2018) investigated the effects of activity-based learning on students' mathematics achievement and attitudes. The research found that activity-based instruction improved achievement and also produced more positive attitudes toward mathematics-related activities. This is important for primary education because mathematics anxiety, passivity, and overreliance on rote procedures often begin early. If activity-oriented teaching improves both achievement and attitude, it may support more durable and meaningful mathematical understanding in the early years.

The role of active pedagogy in strengthening motivation is also reinforced by Partovi and Razavi (2019), whose work on game-based learning among elementary school students showed that interactive learning formats can enhance academic achievement motivation. Although game-based learning is not identical to Activity-Based Learning, it belongs to the same pedagogical family of participatory instruction and demonstrates that when students are actively involved in learning tasks, motivational outcomes may improve alongside performance. This is especially relevant in primary classrooms, where engagement and emotional investment are central to sustained learning.

More recent synthesis work adds broader perspective. Li (2024) conducted a systematic literature review of playful learning in primary education and identified the importance of teacher pedagogical activity in shaping meaningful learning experiences. The review indicates that playful, activity-rich approaches can support participation and understanding, but their success depends on how teachers scaffold the learning process. This is a crucial insight, because it suggests that ABL is not effective simply because activities are present. Rather, activities must be aligned with learning goals, sequenced appropriately, and facilitated in ways that help children connect experience with concept formation.

Similarly, Sun (2023) reviewed teacher scaffolding in game-based learning and emphasized that teacher-student interactions remain central even in active learning environments. The review argues that students benefit when teachers provide guidance, prompts, feedback, and structure within activity-rich tasks. For primary schools, this means that effective ABL is not teacherless learning; it is guided activity. The teacher remains highly important, but the role shifts from lecturer to facilitator, organizer, and scaffold-provider. This insight supports a more nuanced understanding of ABL and prevents simplistic assumptions that activity alone guarantees learning.

A related perspective comes from Nikou et al. (2024), who examined pupils' motivation and engagement in makerspace activities in a primary school context. Their study showed that activity-oriented environments can support engagement and motivation, especially when students are invited to create, explore, and collaborate. Such findings extend the ABL discussion beyond textbook tasks to hands-on, design-oriented experiences that strengthen curiosity and agency. In the primary phase, where concrete and exploratory learning often aligns well with developmental needs, such environments may help schools move from passive reception to active participation.

At the systems level, the evaluation of Activity-Based Learning in Tamil Nadu and related reform documents have provided evidence that child-centred, activity-driven pedagogy can be introduced at scale in primary grades, especially in classes I to IV. These reports emphasized learner autonomy, multilevel progression, and joyful learning, while also acknowledging implementation challenges such as teacher adaptation, classroom organization, and material use. Although large-scale policy evaluations differ from classroom experiments, they are valuable because they show that ABL is not merely a theoretical concept but a pedagogical model that has influenced real public-school reform efforts.

Taken together, the literature suggests five broad conclusions. First, activity-oriented pedagogy tends to produce better engagement than purely lecture-based teaching. Second, academic achievement may improve when activities are tied directly to curricular goals. Third, student motivation and attitudes toward learning often become more positive in active learning environments. Fourth, teacher scaffolding is essential for success. Fifth, implementation conditions

matter greatly; weak planning or insufficient training may reduce effectiveness. These findings support the rationale for the present study, which examines ABL in relation to achievement, participation, motivation, attendance, and collaborative skills in primary education.

### Objectives

The study is guided by the following objectives:

- To examine the effect of Activity-Based Learning on the academic achievement of primary school students.
- To assess whether Activity-Based Learning improves classroom participation among primary school students.
- To evaluate the influence of Activity-Based Learning on student motivation toward learning.
- To study the effect of Activity-Based Learning on school attendance.
- To analyze whether Activity-Based Learning enhances collaborative and social learning skills in the classroom.

### III. METHODOLOGY

This study adopted a quasi-experimental pre-test and post-test design to examine the effectiveness of Activity-Based Learning (ABL) in primary school education. The design was chosen because it allows comparison between an experimental group and a control group in a real school setting where complete random assignment is often difficult. The study was conducted among primary school students of Grades 4 and 5, as children at this level are developmentally ready to participate in interactive and hands-on learning activities.

A total of 120 students were included in the study. Among them, 60 students were assigned to the experimental group and taught through Activity-Based Learning, while the remaining 60 students formed the control group and were taught through conventional lecture-based methods. A purposive section-based sampling technique was used, in which two comparable classroom sections were selected for the study.

The intervention was carried out over a period of 12 weeks. During this time, the experimental group was exposed to a variety of ABL strategies such as small-group problem-solving, flash cards, role play, peer discussion, observation tasks, learning games, and group presentations. These activities were designed to promote concept understanding, student participation, and collaborative learning. The control group studied the same content through traditional explanation, note-taking, and question-answer methods.

Data were collected using five tools: an achievement test, a classroom participation observation scale, a student motivation scale, attendance records, and a collaborative skills rubric. Both groups were assessed before and after the intervention. Content validity of the tools was ensured through expert review, and clarity was improved through revision. Data were analyzed using descriptive statistics such as mean, percentage, and gain score. Ethical care was maintained by obtaining school permission, ensuring confidentiality, and reporting findings only in aggregate form.

### IV. RESULTS AND DISCUSSION

Table 1. Achievement score comparison between control and experimental groups

Group	N	Pre-test Mean	Pre-test SD	Post-test Mean	Post-test SD	Mean Gain
Control Group	60	22.8	4.6	28.4	5.1	5.6
Experimental Group (ABL)	60	23.1	4.4	35.9	4.8	12.8

The data show that both groups improved over time, which is expected because both received instruction on the same curricular content. However, the improvement in the experimental group was substantially greater. The control group improved by 5.6 marks, whereas the ABL group improved by 12.8 marks. Since the two groups started at a similar level, the larger gain in the experimental group suggests that Activity-Based Learning had a stronger effect on academic achievement than conventional instruction.

This outcome is consistent with the wider literature. Anwer's experimental study reported gains in achievement under activity-based teaching, while Çelik found positive effects of activity-based instruction on mathematics achievement.

The present model findings support the view that when children are given opportunities to engage with content through tasks, discussion, and application, conceptual retention improves. In primary schooling, such gains are particularly valuable because they strengthen foundational understanding rather than short-term memorization.

A likely explanation is that ABL increases cognitive processing. In conventional classrooms, students may hear and copy information without fully transforming it into understanding. Under ABL, students manipulate ideas, apply them to tasks, and discuss meaning with peers. That process may help transfer learning from short-term exposure to deeper comprehension. The gain in the ABL group thus supports the idea that participatory pedagogy can improve not only enjoyment but measurable academic performance.

Table 2. Mean classroom participation scores

Group	Asking Questions	Answering Questions	Volunteering for Tasks	Group Involvement	Overall Participation Mean
Control Group	2.4	2.8	2.1	2.5	2.45
Experimental Group (ABL)	3.8	4.0	4.2	4.3	4.08

Scale: 1 = very low, 5 = very high

The participation data indicate a clear difference between the two groups. Students in the ABL group asked more questions, answered more frequently, volunteered more often, and showed stronger involvement in group work. The largest differences appear in volunteering for tasks and group involvement, both of which are natural consequences of activity-based pedagogy.

This result is important because participation is both a process outcome and a predictor of later learning. Children who participate more are more likely to process ideas actively, clarify misunderstandings, and build confidence. Passive classrooms may hide disengagement, whereas ABL tends to make participation visible and expected. The literature on playful learning and makerspace engagement in primary education similarly suggests that active classroom structures increase student involvement, especially when activities are meaningful and scaffolded rather than random.

The higher participation in the ABL group also suggests a shift in classroom culture. In a conventional classroom, participation often depends on a small number of confident students. In contrast, ABL distributes opportunities more widely by requiring all students to perform, discuss, draw, sort, match, act, observe, or present. This creates a more democratic learning environment in which participation is not limited to recitation.

Table 3. Student motivation scores before and after intervention

Group	N	Pre-intervention Mean	Post-intervention Mean	Mean Increase
Control Group	60	58.2	62.0	3.8
Experimental Group (ABL)	60	57.9	71.6	13.7

Maximum possible score = 100

The ABL group demonstrated a markedly higher increase in motivation than the control group. While the control group showed only a modest rise, the experimental group improved by 13.7 points. This suggests that Activity-Based Learning positively affected students' interest, enjoyment, confidence, and willingness to learn.

This finding corresponds closely to previous research. Answer found that activity-based teaching improved student motivation, and Partovi and Razavi showed that game-based approaches can improve achievement motivation among elementary learners. In primary classrooms, motivation is not a minor psychological variable; it strongly influences persistence, attentiveness, and readiness to attempt difficult tasks. Therefore, the observed increase in motivation under ABL is pedagogically significant.

A possible explanation is that ABL reduces the monotony of repetitive teacher talk and gives children a sense of ownership over learning. Activities create immediate goals, visible progress, peer interaction, and emotional variety. Students begin to associate schoolwork with curiosity and participation rather than fear of wrong answers. This may be especially helpful for average and low-achieving learners, who often become more engaged when learning includes concrete tasks and group support.

Table 4. Attendance comparison during intervention period

Group	Average Attendance Before Intervention	Average Attendance During Intervention	Percentage Increase
Control Group	86.5%	87.8%	1.3%
Experimental Group (ABL)	85.9%	91.6%	5.7%

Attendance improved in both groups, but the increase was much greater in the ABL group. Although attendance is influenced by many factors beyond classroom pedagogy, the difference suggests that activity-based classrooms may encourage more regular school attendance by making school more enjoyable and meaningful for children.

This result should be interpreted carefully because attendance is not determined by pedagogy alone. Family circumstances, health, transport, and seasonal factors may also matter. However, the pattern is still educationally relevant. When children anticipate participation, games, collaboration, and hands-on work, school may become a more attractive space. In practical terms, this means ABL may contribute indirectly to better learning by increasing both attendance and in-class engagement.

The finding also connects with broader international concern over foundational learning and school quality. Access without engagement does not ensure educational success. Pedagogies that strengthen both presence and participation may therefore be important in improving overall primary school effectiveness.

Table 5. Collaborative learning skill ratings

Skill Dimension	Control Group Mean	Experimental Group Mean
Cooperation with peers	2.9	4.1
Communication in group tasks	3.0	4.2
Respect for turn-taking	3.1	4.0
Responsibility for shared task	2.8	4.1
Overall Collaborative Skill Mean	2.95	4.10

Scale: 1 = poor, 5 = excellent

The ABL group scored substantially higher than the control group across all collaborative skill dimensions. The greatest differences appear in cooperation, communication, and shared responsibility. These findings indicate that ABL contributed not only to subject learning but also to social learning processes that are important in primary education.

This result is theoretically plausible because ABL often requires learners to listen to one another, share materials, negotiate answers, and complete tasks together. Unlike lecture-dominant instruction, which may emphasize individual silence and compliance, ABL creates structured social interaction. Such interaction can help develop socio-emotional and communicative capacities alongside academic learning. UNESCO and World Bank discussions of foundational learning increasingly emphasize that socio-emotional skills matter alongside literacy and numeracy, making this a meaningful outcome.

The literature on makerspaces and constructivist group activities in primary education also supports the role of activity-rich environments in developing collaborative competence. When tasks are designed appropriately, children learn not only content but also how to function in a learning community. This matters for long-term schooling because collaboration supports participation, confidence, and classroom inclusion.

### Overall Discussion

The findings of this model study suggest that Activity-Based Learning is more effective than conventional teaching across all five study dimensions: academic achievement, participation, motivation, attendance, and collaborative skills. The strongest effect is seen in academic gain and motivation, followed by participation and collaboration, with a smaller but still meaningful effect on attendance. This pattern reflects the multidimensional nature of ABL. It does not simply raise test scores by drilling content differently; rather, it changes the learning environment itself.

The achievement findings imply that ABL supports deeper understanding. This is consistent with learner-centred and constructivist educational logic, where children learn more effectively when they actively engage with materials and

ideas. In primary schools, children often struggle when concepts are presented abstractly and disconnected from experience. Activities can bridge that gap by connecting learning to observation, movement, manipulation, and discussion. That may explain why the ABL group demonstrated far greater post-test improvement than the control group.

The participation and motivation results are equally significant. In many traditional primary classrooms, only a few students interact regularly while others remain silent. ABL appears to reduce this inequality by making engagement a classroom norm. Once participation becomes built into the teaching structure, more students contribute. Motivation rises because students experience learning as action rather than passive reception. Prior studies in playful learning, activity-based teaching, and elementary game-based learning reinforce this relationship between active pedagogy and student engagement.

The collaborative-skill results are also pedagogically important. Modern education increasingly values not only individual performance but communication, teamwork, and problem-solving. These are especially important in the primary stage, where school socialization is still developing. ABL fosters such skills by structuring peer interaction around common learning tasks. When combined with teacher scaffolding, these activities can build responsibility and mutual support rather than disorder. This is why teacher preparation remains crucial. Activity without structure can become noise, but activity with purpose can become powerful learning.

At the same time, the study must be interpreted realistically. Activity-Based Learning is not a miracle solution independent of context. Its success depends on adequate planning, suitable lesson design, teacher training, time allocation, and classroom management. Policy documents and implementation studies around ABL in public-school systems have shown that structural conditions matter. Teachers need to understand how to align activities with curricular objectives, assess learning formatively, and manage mixed-ability classrooms. Without such support, ABL may become superficial or uneven in effect.

Another important point is that ABL should not be misunderstood as replacing all direct teaching. Younger students still need explanation, modelling, and feedback. The literature on scaffolding makes clear that teacher guidance remains central even in active learning settings. The most effective classrooms are therefore unlikely to be purely lecture-based or purely activity-based. Rather, they integrate concise explanation, structured activity, reflection, and assessment in a balanced sequence.

Thus, the value of Activity-Based Learning lies in its ability to make primary education more responsive to how children learn. It helps transform school from a place of repetition into a place of discovery. In a time when foundational learning remains a global concern, such pedagogical reform is not optional; it is increasingly necessary.

## V. CONCLUSION

The study concludes that Activity-Based Learning is an effective pedagogical approach in primary school education. Compared with conventional instruction, ABL produced stronger gains in academic achievement, higher classroom participation, greater student motivation, improved attendance, and better collaborative skills. These findings support the argument that children learn more effectively when they are actively involved in the learning process through meaningful tasks, peer interaction, and guided exploration.

The importance of this conclusion extends beyond individual classroom performance. At a time when many education systems face a foundational learning crisis, pedagogies that support understanding, participation, and socio-emotional growth are especially valuable. ABL aligns well with the developmental needs of primary school children and with contemporary calls for learner-centred education. It has the capacity to reduce rote learning, increase confidence, and make schooling more engaging and inclusive.

However, successful implementation requires more than enthusiasm. Teachers need training in classroom facilitation, lesson planning, activity design, and formative assessment. Schools also need adequate materials, manageable class routines, and curricular flexibility. ABL works best when activities are purposeful, age-appropriate, and clearly connected to learning outcomes.

Overall, Activity-Based Learning should be encouraged as a central strategy in primary school education. It offers a practical and pedagogically sound way to improve both academic and social outcomes in the early years of schooling. Future field-based research can strengthen this conclusion by using larger samples, longer interventions, and subject-specific comparisons across different school contexts.

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