

# [The role of the teacher in teaching and learning mathematics](https://assignbuster.com/the-role-of-the-teacher-in-teaching-and-learning-mathematics/)

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The role of the teacher in teaching and learning mathematics Integration of maths across a range of learning areas The assessment also ensures integration of learning programs and normal teaching through different teaching aspects for use of summative and formative work evaluations. The teaching and learning responsibility of the early childhood teacher in mathematics includes integrating maths based on various learning areas. The focus also uses such information in making necessary instructional approaches and offering practice opportunities.
The teacher can integrate maths based on learning areas. Learning process perceptions at different levels are constructive aspects that inform the existing teaching practices while leading to the modification of learner perception of the mathematics environment (Norton & DAmbrosio, 2008).
Feedback is needed as students require information on their accomplishments for purposes of growing and progressing. Integration of maths in the learning areas is related to teaching mathematics and its outcomes.
For example, testing requires a consideration of opportunities for learning mathematics. Additionally, mathematics teachers should be aware of how students progress and troublesome areas (Cooke & Buchholz, 2005).
The use of questioning in a constructivist environment
The early childhood teacher has a critical role in teaching and learning mathematics through questioning of constructivist environments. For example, the roles of mathematics teachers in questioning can be group discussions to enhance students’ participation in different classroom activities, it is critical to appreciate roles of efficient.
Feedback that is related to the assessment of outcomes allows for learners to be aware of gaps existing between desired goals and current knowledge (Arthur, Death, Dockett & Farmer, 2012). The application of questioning within constructivist environment allows for feedback.
Further illustrations steered questioning in a constructivist environment involves relating to early childhood classroom. The approach enhances students’ participation in classroom activities while teachers play important roles for the enhancement of student’s participation in classroom activities.
A positive impact on mathematics teachers in childhood years promotes mathematics learning. The engagement of questioning through constructivist environment is related to sharing mathematics as an important component. The mathematics classroom assessment is defined a context created for students learners.
The use of play and hands on resources in a rich environment
The early childhood teacher has a critical role in the teaching and learning of mathematics and use of play resources and hands in rich environments. Understanding Mathematics skills guides students in advancing actions of achieving ascertained goals (Kamii & Ewing, 1996).
Explain the application of play as well as hands for resources within the rich environment. The considerations include teacher’s gender and approach to teaching mathematics as a subject (Miles Gordon & Williams Browne, 2011).
Teachers should encourage students to continue participating in mathematics activities as well as alternative studies conducted involved in defining problems for limit classroom activities through students participation. The engagement of play on resources in rich environments relates to integrations with mathematics.
Teaching styles in mathematics exert effects on the student achievement as an independent entrant of learner characteristics. An example of implementation of use of play resources in rich environment determines progress of early childhood classroom. The critical aspects of integration settings include teaching styles.
Developmental domains, dispositions and learning styles
Developmental domains on teaching styles in mathematics fit the attribution of teacher-centered styles. The learner-centeredness calls for models that respond to classroom challenges due to the viability involved in meeting diverse needs (Kamii & Ewing, 1996). Developmental domains are different roles of early childhood teacher in mathematics’ teaching and learning through the use of developmental domains, learning styles and dispositions. The teaching styles (learner and teacher-centered) appreciating through students factoring in the improved student achievement.
Learning styles are significant in influencing the scheme of understanding among the children. The teaching quality offers a significant prediction of student achievement through the control of mathematics concepts to students’ characteristics (Cooke & Buchholz, 2005).
Dispositions determine teaching mathematics. Teaching contexts are established based on preconceptions among the mathematics teacher regarding learning processes and how such elements are facilitated. The hands on resources have a statistical significance of achievement of mathematics goals at the classroom level on constructivist environments.
The combination of developmental dispositions, domains and learning styles complements each aspect towards achieving early childhood learning outcomes. In early childhood, the roles of teachers have been influential aspects in advancing their knowledge of mathematics. The Multiple Intelligences by Howard Gardner shows that classroom teaching approaches are unique activities geared toward helping students learn mathematics.
The use of assessment when planning and teaching
Issues are occurring when mathematics teaching styles are in conflict with the students learning styles while resulting in no learning or limited learning. The early childhood teacher shares responsibilities of teaching and learning mathematics through assessment based on planning and teaching. The approach may work for diverse student populations.
The mathematics teacher should have an approach that is centered on the control involved in learning the content and deciding what students learn and how teaching expertise is used in content knowledge (Quinnell, 2010). The application of assessment allows for planning and teaching.
Classroom questioning activities affect students achievement more than school level programs. The assessment approach determines planning and teaching while relating to teaching mathematics and its relevance on the scheme. This approach examines the roles and processes that teacher’s use in bringing the curriculum to contact with the students to achieve educational goals. The constent illustrates the expected quality of classroom teaching with a parade improvement of students learning.
An example of the way of implementing assessment for planning and teaching involves early childhood classroom management. The domain ranks come based on relevance of the domains perceived through participation in teaching style, classroom assessment, and quality of teaching, kinds of feedback on the basis of kinds of decision and assessment outcomes for mathematics homework performance.
References
Arthur, L., Beecher, B., Death, E., Dockett, S., & Farmer, S. (2012). Programming and planning in early childhood settings (5th ed.). South Melbourne, Vic: Cengage Learning Australia.
Cooke, B. D., & Buchholz, D. (2005). Mathematical Communication in the Classroom: A Teacher Makes a Difference. Early Childhood Education Journal, Vol. 32, No. 6.
Kamii, C., Ewing, J. K. (1996). Basing teaching on Piagets constructivism. Childhood Education;; 72, 5; ProQuest Central. pg. 260.
Miles Gordon, A. & Williams Browne, K. (2011). Beginnings and beyond: Foundations in early childhood education. Australia: Cengage.
Norton, A., & DAmbrosio, B. S. (2008). ZPC and ZPD: Zones of Teaching and Learning. Journal for Research in Mathematics Education, Vol. 39, No. 3, pp. 220-246.
Quinnell, L. (2010). Why are Mathematical Investigations important? amt 66 (3)