

# 3D PENS: 3E (ENGAGING, EXCITING AND EFFECTIVE) TOOL FOR TEACHING AND LEARNING

**\*S. Raja Kumar**

\*Ph.D. Research Scholar, Department of Education,  
Madurai Kamaraj University, Madurai, Tamil Nadu, India

**\*\*Dr. C. Shirley Moral**

\*\*Assistant Professor, Department of Education,  
Madurai Kamaraj University, Madurai, Tamil Nadu, India

**ABSTRACT:** At the current stage of human growth, 3D technology is flourishing. A 3D pen can print or produce in three dimensions for the first time. All of these technologies contribute to the advancement of current technological courses. This paper explores the novel technological tool 3D pens for 3E in teaching and learning and it explains the following questions, what is 3D pen?, why should one use 3D Pens?, how to use the 3D pen? and how it is used in teaching and learning?.

**Keywords:** Learning, Teaching, Technology, Tool, 3 D, 3 E.

## INTRODUCTION:

Instead of the simple textbook and chalkboard dynamic combination that we were all accustomed to as students, classroom teaching and learning has transformed into a lot more engaging and exciting experience, owing mostly to technological innovation. Although there are many other tools instructors may use to make studying more fun in the classroom, one of the most popular alternatives among both students and teachers is convenient 3D pens.

3D pens are highly interesting and useful instruments that operate by melting plastic threads like filaments into a real, multi-dimensional mass that can be used to construct anything users want. This instrument, whether used on a hard surface or straight in the air, provides users with the mobility and flexibility to express their creativity and creative abilities by producing a solid 3D item in only a few minutes. It's no surprise that it's such a popular tool in schools today. It's useful during the learning process and highly enjoyable to use.

## Picture 1

*3 D Pen working format*



## MATERIALS NEEDED FOR 3D PEN:

ABS and PLA plastic filament are the two types of important things used with 3D pens. PLA is created from sugarcane and corn starch, which seem to be natural resources, and because it is non-toxic, it should be utilized for whatever food-related Components.

## CREATING CONCRETE MODELS AND EXAMPLES:

While visual learning is one of the oldest and most successful teaching methods, the medium for displaying visual help to children has evolved dramatically over time. 3D pens are a very useful tool for bringing any model for example to life, as well as rapidly transforming any basic drawing from a 2D notion into an object that can be handled, touched, and examined from all angles. For

smaller kids who can use 3D pens to bring their tales and sketches to life, to older students who can better comprehend ideas of astronomy, architecture, and design, 3D pens may easily be utilized to produce a physical model that will be valuable in many fields of education.

**Picture 2**

*Making model with a 3D Pen*



**EDUCATING CHILDREN WHILE THEY ARE YOUNG:**

Even toddlers can begin to learn more about their surroundings by using new pedagogical tools, especially if they are allowed to register in a great Playgroup where qualified teachers will not only help them learn and understand through play but will also ensure their security and noise by monitoring and controlling them while they work. Small kids, for example, may use 3D pens to create simple geometric forms, blocks, and shape sorters, which will help them improve their problem-solving abilities. They may even show their creativity via art or easy DIY projects like creating stamps or cookie cutters. When engaging with 3D pens, the creative possibilities are limitless, and there is no disputing that any child, regardless of age, will fall in love with learning via these exciting educational toys.

**MAKING FUN OF HOMEWORK:**

Most children will begin to dislike homework at some point in their educational journey, which can negatively influence their personal growth and motivation to study. Schools can enable specific assignments and projects where students can use a 3D pen at home to generate something for marks, extra points, or extra credit to keep homework exciting and engaging. Apart from rekindling their love of studying, initiatives like these might enable youngsters to explore their creativity, permitting students to discover a new pastime or perhaps a passion.

Furthermore, when children are given such interesting activities, they may be even more eager to bring their work, to school the next day and proudly display it in front of the class. (These days, teachers encourage the usage of a 3D pen, which helps pupils sharpen their creative abilities while also enhancing their grades (marks) at a certain point. However, the students may determine your grade point average instantaneously by using this easy but incredibly effective GPA calculator.)

**MAKING LIVE PROJECTS AND COMPETITIONS:**

Every school activity that must be accomplished may be rendered more enjoyable and engaging by using educational equipment such as handy 3D pens. Whether the youngsters are working alone or in couples or groups, they may simply make stencils to help them develop their ideas or mock models to enhance the presentation and quality of their creations using 3D pens. Hosting informal tournaments among kids is another excellent way to boost morale and enthusiasm in the classroom. Special 3D pen contests may be a terrific method for instructors and students to discover how innovative the pupils have become and how effectively they implement their ideas. Furthermore, the 3D model's students create in class are ideal for taking home as a gift for their families or as a displayable keepsake.

**OUTPUT OF 3 D PENS:****Picture -3****Picture-4****Picture 5****Picture 6****CONCLUSION:**

Using 3D pens to enhance any project or assignment done in school, making it that much more engaging and captivating, is a terrific means of completely transforming the way current teachings are handled. No doubt incorporating this useful tool in any classroom will have a good influence on how students learn and apply their information.

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