

Tinkercad: A Blended Teaching and Learning Tool

Manisha Vibhute

HOD, Department of E&TC

Y. B. Patil Polytechnic, Akurdi, Pune, Maharashtra, India

Abstract: *Tinkercad is a teaching and learning tool which could be used for electronic circuit implementation, software coding and 3D model designing. Technical skill sets improve by practicing designing and coding using Tinkercad simulation. The realistic view of the components gives real time feeling like students doing practical in laboratory. This paper will elaborate the design and development of basic electronic circuit, Arduino based circuit and a 3D model. An effective blended pedagogy which will help the students to understand the designing concept and its implementation. Tinkercad is an open-source free -ware simulation tool hence it's possible to every student to practice lab work with it. In the situation where physical laboratory work was not possible, Tinkercad provided a helping hand for Teachers and students to perform practical virtually.*

Keywords: Tinkercad, Simulation Tool, Blended, Pedagogy, etc.

REFERENCES

- [1] Selami ERYILMAZ and Gülhanım DENİZ, Gazi University, Ankara, Turkey, "Effect of Tinkercad on Students' Computational Thinking Skills and Perceptions: A Case of Ankara Province", TOJET: The Turkish Online Journal of Educational Technology – January 2021, volume 20 Issue 1.
- [2] Alex Reyes, Electronic Circuit Basics with TinkerCAD 2, Digital Maestro Magazine digitalmaestro.org.
- [3] EnjangAkhmadJuanda*, Falah Khairullah, Universitas Pendidikan Indonesia Bandung, Indonesia, "Tinkercad Application Software to Optimize Teaching and Learning Process in Electronics and Microprocessors Subject", Advances in Social Science, Education and Humanities Research, volume 520, Proceedings of the 6th UPI International Conference on TVET 2020 (TVET 2020).
- [4] Radha Abburi, Manne Praveena, R.Priyakanth, BVRIT HYDERABAD College of Engineering for Women, Hyderabad, Telangana, India, "TinkerCad - A Web Based Application for Virtual Labs to help Learners Think, Create and Make", Journal of Engineering Education Transformations, Volume 34, January 2021, Special issue, eISSN 2394-1707.
- [5] Dr. Semin Kim & Prof. Hyung-Jin Mun, Korea, "Design and Development of a Self-Diagnostic Mobile Application for Learning Progress in Non-Face-to-Face Practice Learning", Applied Science 2021, 11, 10816.