Education, Design and Practice – Understanding skills in a Complex World

• Paper Title:
Integrating makerspace into the traditional classroom: An analysis on design students’ performance

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• Abstract (300 words):
Over the past few years, technology had made an impact on the educational sector around the world. Many universities in the developing countries are changing the teaching pedagogies by implementing the new media technologies in different areas such as engineering, medicine, design and automation. These technologies include social media networks, wearable technologies, internet of things, robotics and makerspace technologies. Presently, the design sector is one of the fastest emerging areas in India. This sector includes graphic designing, craft making, fashion, interior designing, toy designing, textile designing, leather designing and set designing. Many universities and institutes are implementing various new media technologies to teach these design sectors.

The purpose of this experimental study was to analyze the students’ performance in a traditional undergraduate course in applied arts by integrating makerspace in the classroom teaching. The class conducted the experiment named “Material exploration” in Semester I, at the Manipal University Jaipur in Jaipur, Rajasthan State,
India to 30 undergraduate students majoring in design education. The performance indicators were understanding the content, increasing the teamwork, enhancing the critical thinking, exploring the new concepts and ideas, improving the creative outcomes, engaging in solving the problematic tasks, making and sharing among other students and marks of the students. The study found that students were generally satisfied after the implementation of makerspace on the various aspects performance indicators were understanding the content, increasing the teamwork, enhancing the critical thinking, exploring the new concepts and ideas, improving the creative outcomes, engaging in solving the problematic tasks, making and sharing among other students. The study also found that the marks of the students have also considerably increased. Based on the findings, several suggestions were offered to implement the technology in other courses.

• Author(s) Biography (200 words each):

Dr Jampala Maheshchandra Babu is an assistant professor in Department of Business Administration at Manipal University Jaipur. He is associated with many interdisciplinary teachings in various courses from design to management in the university. In undergraduate studios at the Department of Fine Arts, he has implemented and experimented the teaching pedagogies using new media technologies in classroom teaching. He also has passion of photography and designing. He has implemented tablet learning among design students at the undergraduate level. He has pioneered new approaches to research that incorporate student performance after implementation of technologies. He has reviewed many international proposals in the field of emerging new media technologies in the education sector. His doctoral thesis studied how new media technologies are increasing the efficacy of higher education in the Indian education system. All of these factors were interconnected, and the thesis proposed that they consider holistically, and never in isolation. Dr Maheshchandra has also shared the knowledge by delivering the lectures at various universities. He has chaired many sessions in the international conferences in countries in Hongkong, Dubai and Singapore. He has presently guiding two research scholars to complete their research in the areas of sustainable development and e-wallets technologies.

“Dr Tina Shivnani is an associate professor in the Department of Commerce at Manipal University Jaipur. Her core areas in teaching are research methodology, banking, Accounting and interdisciplinary teachings in various streams in the university. She has received three Gold Medals during her studies for Meritorious student, best worker of National Social Service and active member of Women Study Cell. She has pioneered in various approaches of research towards student development and improvements in student performance. Her research developments were on Social Banking Experiments, Implementations of new technologies in the Indian banking sector, Goods & service Tax in Indian Economy. She has chaired many sessions in International conferences in foreign countries i.e. Hong Kong, Dubai, Singapore etc. She has shared the knowledge by delivering the lectures at various colleges and universities. She is good administrator
and leader and is an active part for international collaborations at the universities. She is being an active member in various committees at university level. She has received certificate of appreciation from Vice Chancellor at Manipal University Jaipur, for her dedicated contribution towards university. She has guided research scholars to complete their research. She has also conducted various sessions on SPSS software for research scholars". 