

REMODELING: FROM EDUCATION TO CREATIVE INDEPENDENCE

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ABSTRACT

Lessons from the pandemic have realized that the education needs to become more predictive to withstand future uncertainties. It has made us look out for options beyond online or offline learning spaces to a more flexible learning environment. Future forecasters suggest that transformation and remodeling of the learning environment is the only way to meet future education needs. New tools, approaches, and models to design learning experiences will increase our capacity to personalize learning and maximize teaching effectiveness in different learning environments. This research investigates a model that integrates a virtual learning environment and practical hands-on execution in a real-world scenario done remotely by the students of Interior design. Interior Design is a field wherein creativity, knowledge construction, and skill-building go hand in hand; therefore, learning combines these aspects for a better experience and understanding of the learner.

The research takes a case study approach in an interior design and construction studio class (balcony makeovers), wherein the inputs are delivered asynchronously, and the feedback is given synchronously in the virtual learning environment. After that, they execute their learnings in a practical, real-world scenario remotely from their own homes. The virtual interactive platform used was Blackboard Collaborate. The virtual learning environment gave them better control of their learning at their own pace, space, and a one-on-one discussion with the tutor, while the practical hands-on implementation enabled them to develop the skill set required to handle materials, people, and sites. The shift from knowledge transfer to an experiential, interactive method of learning enabled the students to make informed decisions regarding the design and execution of the project on-site.

Results depict that the students were engaged and receptive to this hybrid approach to learning. The knowledge gained in this process was comprehensive as it taught them the technical know-how and the soft skills required in the profession. Apart from gaining knowledge of the subject matter, this approach also enhanced the learner's ability to think critically and engage with the various stakeholders. It also helped them learn to organize

resources and materials and deal with the challenges on the site, thus creating a more holistic learning environment for a skill-based course like interior design.

While we do not know how the future unfolds, we, as drivers of change, can strategically design flexible and adaptable learning models which would work well for all kinds of learners. At adversity, one can switch from one mode to another without pausing in the students' learning graph whether they are in a face-to-face, virtual, or remote learning environment. By reimagining and designing alternate models for education, we will be able to develop a more responsive and agile education system prepared for any future crisis.

Keywords: Interior Design education, Virtual Learning, Build to learn.

1 INTRODUCTION

The pandemic has taught us to be prepared for the future's uncertainties. M. Tesar [1] points out that Covid-19 had been one of the accelerators that could bring us closer to the future. In their paper, H. Coates, Z. Xie, and X. [2] Hong affirm that there is a need to redesign the model of higher education post the disruption caused by the pandemic in the year 2020. They point out the shift that it has created in higher education concerning the mobility of people (students and faculty), systems, and educational reconfiguration. As per the OECD learning framework 2030 report [3], a personalized learning environment that encourages students to pursue their interests and connects diverse learning experiences is the way we need to rethink our education system's future. Amongst the chaos emerged innovative learning environments that were more flexible and efficient in terms of time, place, and space for learning. In their chapter, K. E. Linder, L. S. Bruenjes, and S. A. Smith [4] talk about how hybrid learning has benefited the teachers in designing an interactive and engaging learning environment and the students in terms of flexibility of the pace of learning. This paper discusses a hybrid model that integrates virtual Learning and practical hands-on learning for the students of interior design.

2 LITERATURE REVIEW:

2.1 STUDY ON THE LEARNING ENVIRONMENT:

2.1.1 *Virtual learning environment:*

In their paper, H. Coates, Z. Xie, and X. Hong [5] emphasize the urgency to reconstruct higher education using technology-infused learning to make it more productive, accessible and engaging to the learners, which will help build sustainable societies. M. Tesar [6] in his paper, states that "We have confirmed and accepted this year that education is not just about the physical place and space, but that there is a virtual space of education that is equally important to consider." According to M. J. D. Sutton, C. Francisco, and B. Jorge, [7] "To dramatically increase the value proposition of our higher education systems for learners, we should rethink new approaches for digital delivery of experiential education."

2.1.2 *Physical learning environment:*

According to K. Baynes [8], students must express three-dimensionally with actual materials to form a strong connection between thought and action. He describes that all human cognition is based on sensory inputs. Sensory information is used to create causal

models in the large brain. As per the OECD framework, [9] "Learners should be able to link their learning experiences to the real world and have a sense of purpose in their learning. Learners should be given opportunities to discover how a topic or concept can link and connect to other topics or concepts within and across disciplines, and with real-life outside of school." As Baynes proposes making requires collaboration and communication with others, detailed planning, dealing with challenges and resource issues, and arriving at a real-world result that can be evaluated.[10] According to the author's theory, practice, personal expression, and societal awareness are all realistically intertwined.

2.1.3 Hybrid learning environment:

A. S. Ackerman [11] states that "The key feature of hybrid learning is that it can be adjusted according to the needs of the learner, the course, and the other significant indicators, such as pace, time, and space". Bhattacharjee combined the traditional classroom approach and the flipped model in a hybrid format and summarized that the hybrid pedagogical approach is a more effective way to retain knowledge, improve communication and increase problem-solving skills.[12] In a hybrid classroom setting, face-to-face activities are often combined with technology-mediated activities so that there is more active learning in the physical space and focused guidance in the virtual space. She also accentuates how it can benefit the teachers in designing a more interactive and engaging learning environment and the students in terms of flexibility of the pace of learning.[13]

2.1.4 Interior design education:

As suggested, designing and making the need to be unified as presented by Baynes [14]. He also identified that Design and Technology should play a fundamental part in design education. The role of Interior design education is to translate ideas into practical outcomes by using materials and techniques of construction. Students understand the practical reality of the field. Interior students usually progress without direct experience with materials and are limited to only prototype models of sun board. Materials are the media for translating ideas into reality in interiors. Because the properties of materials, alone and in combination, are the basis for designing any interior space. M.T. Konkel [15] confirms the positive benefits of 'build-to-learn' in internal design education, arguing that these experiences can only push our students to grow, learn, and prepare for their transition into practice. In courses that stress materiality, construction, technical knowledge, and the design of those experiences, the Go Out and Build It models are more frequently reported with a positive learning outcome. He further emphasized how build-to-

learn in real-world experiences helped students comprehend materiality, details, and structure. Jitender Singh believes that the students were more receptive to active learning in the hybrid environments and concluded that using active learning strategies by the instructor can help develop critical thinking and problem-solving skills in students.[16] The Instructor's roles have expanded from being information repositories to facilitators who may set up projects, coordinate access to appropriate resources, and provide support to help students succeed.[17] According to Bhattacharjee, in Interior Design, students should learn by experiencing, reflecting, thinking, and acting.

3 BRIEF OF THE EXERCISE:

Interior design employs studio-based teaching and learning strategies in subjects like design and construction techniques by almost all the design educators in higher education. According to Konkel, [18]"Interior design is a method of generating ideas and putting them into action." At the time Covid-19 spread, post the lockdown, there were still restrictions on the movement of people, and learning had shifted totally onto the virtual platform. The outstation students had returned home, and the entire teaching and learning were being done on the virtual mode through an LMS (Learning Management System), i.e., Blackboard Collaborate. A model was worked out in which the classes were conducted in the virtual mode both Synchronously and Asynchronously using an LMS, i.e., Blackboard Collaborate, and the application of the knowledge was done in the real-world scenario remotely by all the students in their own homes.

As an exercise, the students were asked to design or remodel their own balcony spaces from the inputs given in interior landscaping and styling. They were supposed to develop a conceptual design of the room based on the theoretical information, study material, and resources delivered online using lecture tutorials, videos, and reading material to read at their own pace and time. In-class PowerPoint presentations, construction process videos, one-o-one discussions, and feedback on design exploration, materials, look and feel, choice of plants, etc., were conducted synchronously in real-time through the LMS as a scheduled class. Once the conceptual layout and design were finalized, the students were asked to make the drawings and build the design solution further. For this process, the students had to explore the market, find the material vendors, and connect with various stakeholders (vendors, carpenters, masons, painters, contractors, gardeners, etc.) to get the job done on-site. Once the design was executed in the balcony space, various styling elements and lighting were added to complete the final look. The students had the flexibility to discuss their progress and take feedback through the virtual platform, i.e., the LMS. The students were asked to document their process and write a reflection on their

understanding and the challenges they faced while executing the work. The diagram below (figure 1) represents the conceptual hybrid model.

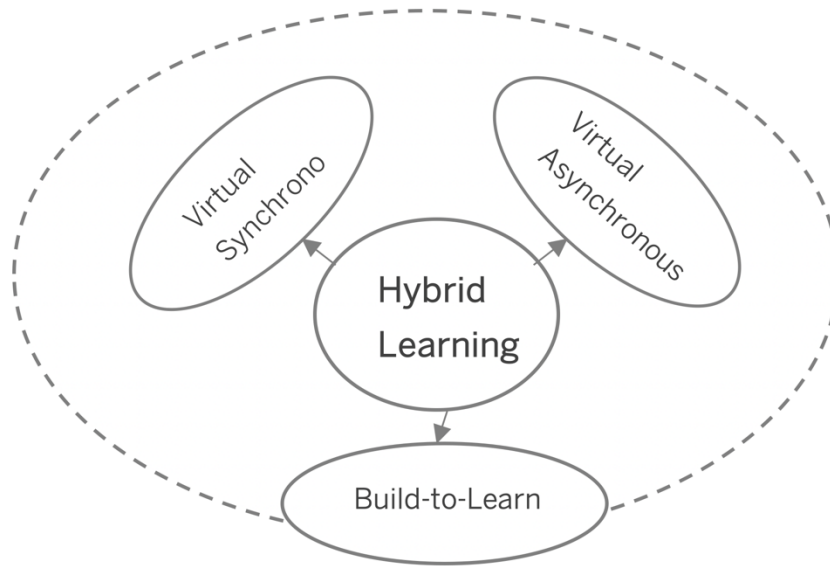


Figure 1: A proposed hybrid model for the study. Source: Author

4 RESEARCH FINDINGS:

Student feedback was collected to evaluate the overall effectiveness of the design of the hybrid learning experience. The students found the brief to be a welcome change as they were exhausted from attending the virtual sessions throughout the day. Students also found the exercise to be an engaging and satisfying experience. Images of some makeovers are attached in figure 2.



Before

In-process

After Image

Figure 2: Images of live execution in a student's balcony

A questionnaire was floated to understand the student's responses to this activity. These were students of the Post Graduate batch of Interior design and styling from Pearl Academy, New Delhi. The questionnaire mainly consisted of a multiple-choice and rating scale matrix (1- 5, where one was the least preferred and five the most preferred) for the answers.

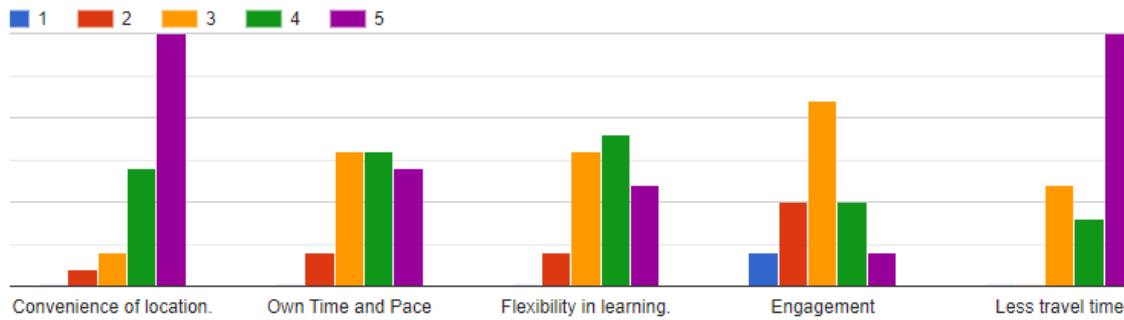


Figure 3: Survey result showing virtual learning factors

The main findings from the survey showed that in the case of virtual Learning (figure 3), the respondents (N=25) voted on the convenience of location or space and less travel time. They believed that they could continue their learning from the comfort of their homes and were able to save on the travel time to the college. Using the LMS for one-on-one feedback helped them finalize their designs and take individual feedback on their queries, thus making the learning more personalized and inclusive.

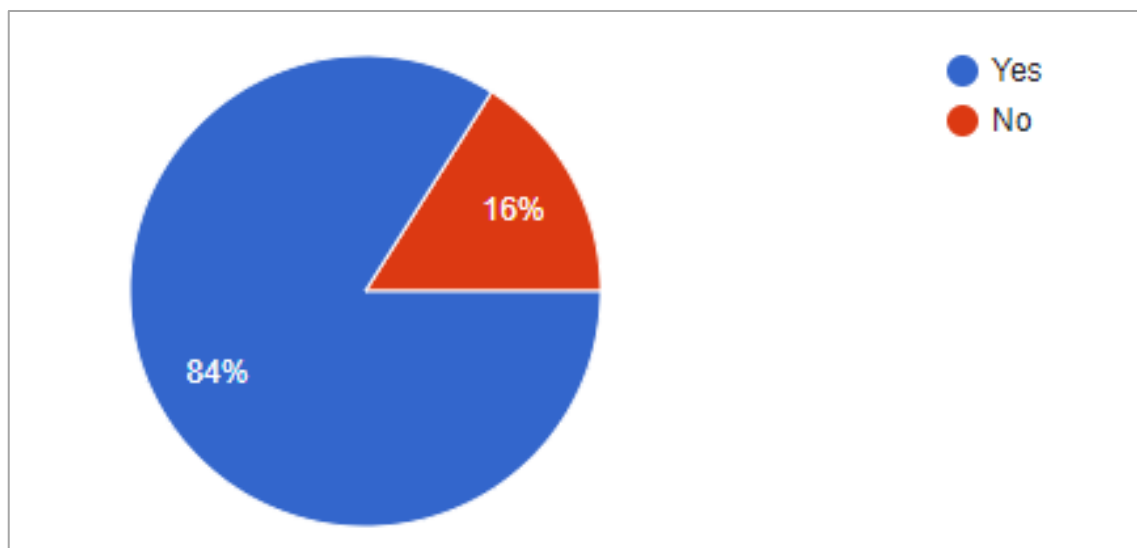


Figure 4: Survey result for hybrid learning

Given an option of learning in a partly virtual and partly hands-on mode, 84 percent of the respondents agreed to it (figure 4). They found the flexibility of time and place in the virtual model and experiential learning in the 'built-to learn' approach to be very effective in knowledge creation and retention. 92% of the respondents preferred the 'built-to learn' approach using practical real-scale construction exercises to assignments written on paper or virtually in theory. Apart from the content knowledge, the respondents also agreed that they learned to deal with the challenges at the site, and their problem-solving skills were enhanced (figure 5) while working practically. Most of the respondents also pointed out that their ability to communicate and their market know-how also improved while doing this exercise.

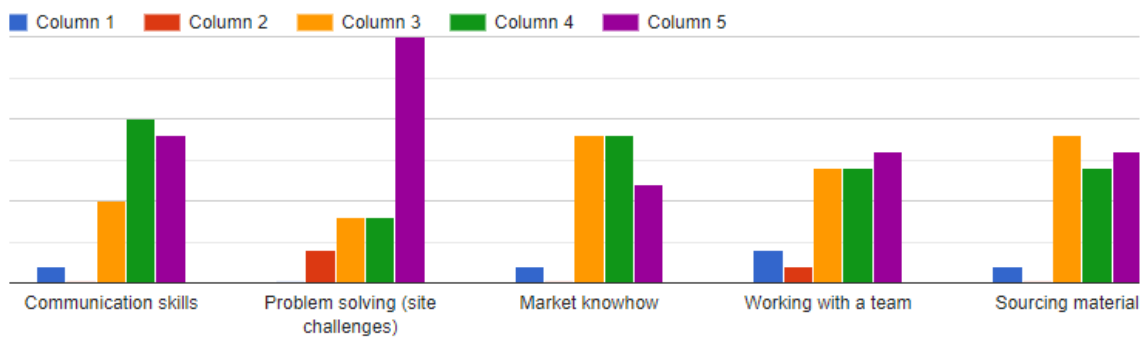


Figure: 5 Learnings from the build-to-learn exercise

The students had unanimous consent as they wanted to have assignments based on real-life execution with live materials as future exercises for teaching construction techniques in Interior design.

5 EXTRACTS FROM THE GROUP DISCUSSION:

A group discussion was initiated to understand the student's experience while doing this exercise. The talks were documented in the form of notes. Some of the extracts from the conversations and the experiences shared by the students were; "LMS (Blackboard Collaborate) enabled us to understand the process and construction techniques with synchronous live classes in real-time and also enabled individualized feedback face to face on a virtual platform thus eliminating the need for any physical classroom...". Reflecting on material sourcing, "finding the right material at a minimal cost without compromising on the quality was a challenge... "I had to explore different vendors and look for contractors before finalizing the material and the workers. This exercise helped me to understand market dynamics in terms of money...."

Another student said that "Getting work done is more difficult than working independently. You need to have good communication skills and should be able to lead the team into working and generating the output. Communication is an essential skill. It imparts a certain degree of confidence, and willingness to ask questions and make your point" Others made their point as; "There were numerous site challenges that we encountered when we started with the execution, which made us do revisions in the design to make it workable. These refer to realizing the difference between designing and detailing required in real-life scenarios over designing on paper." A student's reflection on the site challenge, "While working with cement, a simple thing like getting the right mix of cement to water came after many iterations."

6 INFERENCES:

The Inference, survey questionnaire, and a group discussion with the students engaged in this exercise. Using the LMS (Blackboard Collaborate) synchronously and asynchronously for theoretical inputs and one-on-one feedback in real-time kept the students connected and engaged.

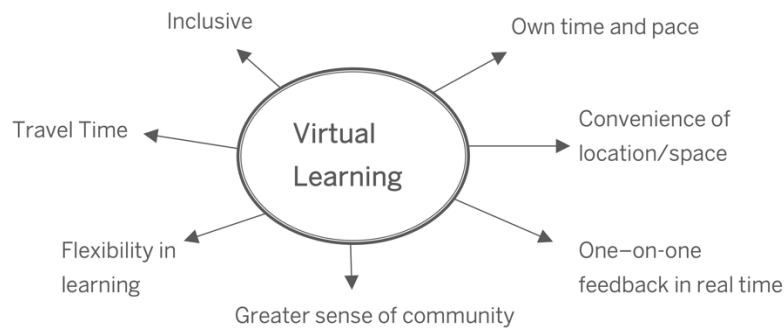


Figure 6: Summary of the benefits of virtual learning using an LMS. Source: Author

Virtual learning, (figure 6) enabled the students to learn from the convenience of their location in their own space and time. They had a greater sense of community on the virtual platform as they could interact with one another and were more participative and engaged in the online discussions. The session recordings were available to the students, which helped them go through the content again at their own pace and enabled a better understanding of the concepts, thus making the learning inclusive. Virtual learning also eliminated the travel time to the college, thus making the teaching more flexible in terms of space.

The students displayed higher enthusiasm when asked to build their design practically. Learning is challenging as students must integrate both knowledge and skill to develop a

solution. According to Konkel [19], in design-related practices students, ideation skills are frequently enhanced when implemented and brought out of the domain of thought and into the sphere of action in the physical reality.

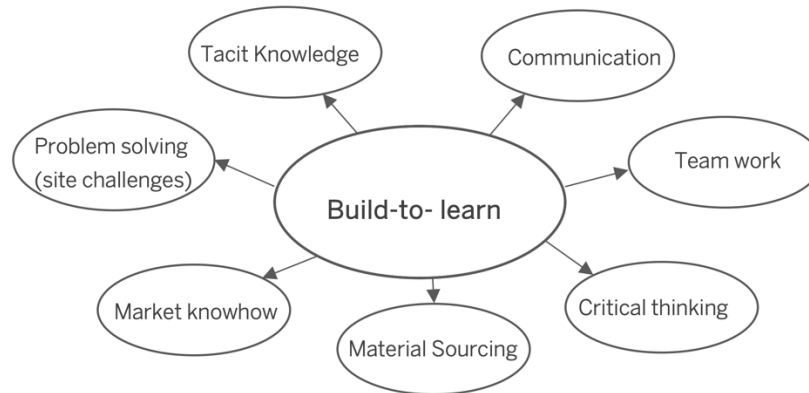


Figure 7: Summary of Learning through build-to-learn exercise. Source: Author

As depicted in figure 7, the build-to-learn model contributed to developing skills beyond content knowledge in terms of problem-solving ability, communication skills, critical thinking ability, and market know-how in terms of financial management, thus giving a holistic learning experience to the students. They understood the dynamics of money and how to use it optimally. According to Kolb's theory, [20] knowledge is obtained by shared experience rather than imposition from an authoritarian teacher and students learn by thinking, acting, and reflecting on their actions.

A hybrid learning environment in this study enhanced the learning experience of the students and gave them more control over their learning. Students became self-directed learners. It provided them with an excellent interactive environment and thus promoted better cognitive understanding and engagement. Combining virtual and hands-on learning gave them more time to apply their knowledge from theory to a real-world scenario. This study discovered increased student involvement, a positive attitude, and timely completion of assignments. This hybrid learning environment provided better engagement, a positive learning attitude, high performance, student-centric experiential learning, social skills, and critical thinking abilities, thereby imparting a more holistic learning experience to the students of interior design.

Some students expressed dissatisfaction with their inability to adapt to this new instructional method. Students were also apprehensive about changing their established personal learning styles in a short time. Some showed reluctance to do this exercise as it required them to move out of their comfort zone and explore the market. Dealing with

workers and contractors was also a challenge voiced by some. A few also expressed monetary and infrastructure challenges while doing this exercise.

7 WAY FORWARD:

As the uncertainties of the future grow up, a flexible and adaptable learning environment independent of the time, place, and space for learning needs to be designed. We need to rethink how we can make learning a skill, like interior design, independent of the physical space of a classroom to create a more flexible and agile learning environment convenient for all? How can a student learn interior design from his region or town without moving to cities and centralized places for learning? How can we scale hybrid learning as an independent education model?

The scalability of this hybrid model is depicted in figure 8 below, which represents learning as an independent act free from the bounds of formal educational spaces. For build-to-learn exercises, the institutes and universities can tie up with separate establishments like makers spaces, practicing designers' studios, workshops, labs, etc. In one's location to enhance experiential learning in the physical area, virtual education can be made independent of physical space constraints. The Proposed hybrid experiential learning model is shown in figure 8.

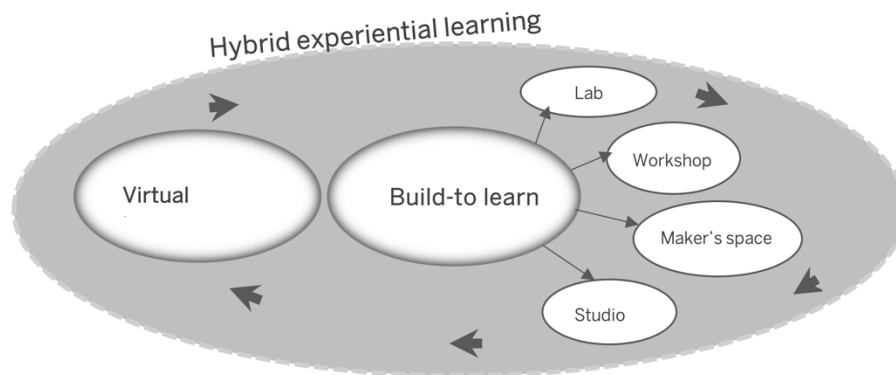


Figure: 8 Proposed model for hybrid experiential learning. Source: Author

8 CONCLUSIONS:

As Tesar [21] suggests, we need to employ foresight and design ways to chart our futures so that disruptions might be anticipated, envisioned, and planned. Before a disorder occurs, education must consider the future to be proactive rather than reactive. The findings of this study can help create a roadmap for future research on Hybrid learning in a skill-based course like interior design. There is scope for designing the virtual and physical spaces to make the learning more experiential. Experiential learning in the hybrid space is

becoming more popular as a form of education because, apart from focusing on technical skills, it gives students a more holistic learning experience. As Tesar [22] identifies that future research will be interested in looking at and considering how our individual experiences might become more focused on our collective futures. The essential condition that we will need to address is our intellectual involvement with our current circumstances and take on the task of charting our educational futures. While we do not know how the future will unfold for us, we as drivers of change can strategically design flexible, adaptable, and alternate learning models which would work well for all types of learners and are more responsive and agile to the uncertainties of the future.

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