Online Education: Our best friend and worst enemy in the pandemic times

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Bio note:
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Her core interests lie in History of Architecture and Design, Gender studies, Design for Differently Abled, Sustainable Design practices, Visual Geometry, Paper Folding, Materiality in Architecture, and Material Chemistry owing to which she offers courses to discover aspects of these subjects through design projects and application model.

In her core discipline she teaches courses related to Product Design in complex contexts, Material and Methods specifically in glass, Material and Form and Elements of Space to Bachelor's and Master's students. Owing to her interest in paper folding and visual Geometry, she teaches Geometric construction to the under graduate students in there foundation year.

She has headed large scale projects, pertaining to craft cluster development, documentation, product diversification, landscape design and residential design.

Introduction:

" Whoever teaches learns in the act of teaching, and whoever learns teaches in the act of learning."
Paulo Friere P., Book: Pedagogy of Freedom: Ethics, Democracy, and Civic Courage"

Sometimes it takes a mighty calamity to shake the status quo that throws open a chance for humanity to evolve and upgrade constructively, humanely in the face of an adversity. Sudden, extremely wide spread and fatal onslaught of pandemic due to corona virus has shaken the foundation of human existence. The current situation has forced us to introspect about our practices, behavior and our relationship with all other elements of earth. Surviving this requires taking radical measures in the way we move, interact, live, produce, dispose and govern. Physical distance emerges as the foremost requirement to control the spread.

All aspects of our lives has taken a hit. Education in these times has been pushed into distance learning realms to avoid congregation of large numbers of vulnerable people in one place. This decision has direct bearing on how education is dispensed now. It especially puts education in the Design discipline in a peculiar place where Learning through making is a critical pedagogy. This mode of teaching places emphasis on learning through experiencing, rather than on the "banking" concept of education (Freire P., 1970)

The model of teaching-learning has inadvertently shifted to " an E- classroom" model where the focus is not on the teacher, it's on the student (Bergmann & Sams, 2012) and the onus of learning has shifted to students through self-motivation and self-directed efforts(Lai & Hwang, 2016, Blaschke, 2012). In an E- classroom mode, engagement on a digital platform is a student-centric activity, where active learning is encouraged through experiential, exploratory, collaborative and peer-assisted learning

For most teachers and students, there first brush with Online education has been fairly recent, that too sudden in the last few months. For the purpose of this paper, "focused study" was conducted through "qualitative surveys" with 38 students from various design disciplines located in diverse locations and from varying backgrounds the National Institute of Design, Ahmedabad,. To gather a teacher's perspective, "Personal interviews" through a discussion mode were conducted with10 teachers.

A comprehensive assessment of the impact of change in learning environment from a student's perspective right now can be made through the responses received from them. The findings will help in navigating through the challenge of offering course content in an equitable way to students facing varying issues during this time.

The purpose of these Qualitative surveys and Personal interviews was to understand the efficiency and equity in digital learning in Indian context. The inquiries were,

- What are the factors that affect when the learning is in a face-to-face classroom setting
- Challenges of offering and receiving online education for faculty and students from different backgrounds.
- What might be the benefits of changing the context of learning from campus to home
- What might be some considerations to be kept in mind when designing course content to be delivered through an online medium that is accessible to all the students equally, is engaging enough to provoke significant learning and is multi-modal.

In a university setting the diversity of backgrounds of students remains reasonably hidden. Access to common facilities on campus irons out unequal availability of gadgets, infrastructure, mobility, personal space that students face. It was found that at home all these differences plus added responsibility of contributing to home chores, which is a common practice in Indian homes, come to surface. 90% students had to perform chores while at home. Maintaining equity and providing equal opportunity for a student to learn and perform in this situation becomes a challenge for a teacher.

It's imperative that an enabling environment is created for teachers to adapt to a new pedagogical approach using current tools and platforms available and students to accept the situation, adapt to changes and respond to a different model of learning proactively.

Factors that affect learning efficiency when the education is in a classroom setting

A high degree of learning in Design Education happens through hands-on approach, working in workshops, through material explorations and during formal/informal discussions with peers, teachers, and skilled workshop staff. Qualitative survey with students revealed that the association of enhanced learning experience for a student in an academic university setting is due to following reasons.

- Unrestricted peer learning
- Constant monitoring of student's growth, learning pattern by teachers
- An underlying sense of competition with peers, that stimulates the urge to do better, push oneself and set higher benchmarks for performance
- Easy access to workshop facilities,
- Access to a vast knowledge resource and reference material in the library
- Availability of people with different expertise to solve problems, answer queries, to debate discuss and unload anxiety

- Overall environment that consciously/ subconsciously stimulates, provokes a certain attitude, mind set to absorbing knowledge actively and passively.
- Other curricular activities that borders core education and aids in destressing, diversifying from core discipline of expertise and subscribe to individuals interests that helps in overall development of students
- Informal anytime conversations with people of same age group/ inclinations
- No distractions and responsibility other than education
- The intangible resources (skilled staff, architecture, landscape, routine that revolves around receiving education)

One of the focuses of the survey was to find out what might be the challenges students faced when learning from home. Survey conducted also disclose the understandable anxiety and uncertainty a student feels because of sudden loss of access to familiar surroundings associated with education. A lot of dissatisfaction and subsequent demotivation was from lack of personal space and the state of communication infrastructure. Listed below are some of the findings.

- Large families and constant interruptions
- Shared devices amongst family members
- Lack of personal space for studying
- Sense of isolation due to loss of communication with batchmates
- Unstable internet network,
- Frequent power cuts
- Inability to understand instructions in the absence of any other indicators such as materials/ tools etc.
- Outdated gadgets

Much success of learning on the digital platform is dependent on the quality of infrastructure available to the student both in terms of gadgets and internet connectivity.

Challenges and opportunities for teachers to evolve teaching pedagogy to respond to needs of time

In today's scenario there is an abrupt, dramatic and sudden shift in teaching pedagogy where the interaction of a teacher with students has moved from face to face to digital thumbnails. It poses unique challenges to the teacher who has to quickly adapt to a completely different way of teaching ensuring quality of education isn't compromised.

Personal Interviews conducted with teachers for the purpose of this study gave an insight into the challenges faced by them, apart from juggling with anxiety of keeping oneself and family safe from the disease. On one hand it could be exhaustive and stressful for the teacher to adapt to different digital platforms in a very short time for teaching on the other this also presents an

opportunity for them to quickly upgrade themselves by learning digital tools to break away from conventional methods of teaching and find innovative methods of teaching in the process discovering unexplored aspects of the design process, people and systems.

There is a steep learning curve for both the student and the teacher in the given situation.

Through the responses received by teachers one realizes that teaching digitally has its own Challenges.

- It requires much planning to design course content for online dissemination, (Schlairet, Green, & Benton, 2014).
- It requires monitoring and motivating demotivated behaviors by some students (Sun, Wu, & Lee, 2017), appropriately modify evaluation parameters for performance and
- help schedule time to understand out of class learning activities of some underperforming students (Lai & Hwang, 2016).

Considerations to be kept in mind when designing course content to be delivered through an online medium

While adapting to a new platform for teaching in a short time is a challenge, it also poses a creative challenge to improvise and innovate in terms of assignment construction. Teacher responses in the interviews conducted, point towards some considerations that can help create assignments suitable to be offered in digital learning.

In historical sense the education of design began from home, through the processes and professions practiced at home, synced organically with the natural environment, other practices in the vicinity and responding to the needs of the local people. This process of learning began to change by the end of eighteenth century to specialized skill for machine production and for context of higher complexity and beyond the closer confines of an individual's home. (H Kumar Vyas, Design the International Movement, 2009) This resulted in people moving further away from their places of residence for learning and for work in the process losing touch with the local context. The association of learning came to be associated with designated spaces called institutions of education away from home.

In a way this pandemic has pushed us back to home as a learning space however in a very different context with different expectations. Many studies have been made to create pedagogical models that use the local context for learning. However in an abruptly changing landscape for education, practices, mobility, compounded with financial uncertainties one of the important aspects of learning is the need to impart life skills.

- Fink's taxonomy of significant learning that layers six types of learning, addresses aspects such as helping students learn how to learn and develop life skills that impact communication, interpersonal relationships, and the ability to adapt to change (Fink, 2003). Foundational Knowledge, Application, Integration, The human Dimension, Caring and self-direction cover the six types of learning..
- Facilitators can enrich the learning experience on a digital platform and significantly enhance learning for a student by creatively developing innovative assignments or activities that require collaborating and communicating with other students (Lumpkin, Achen, & Dodd, 2015) online on platforms like Miroboard, Jamboard, Slack etc. This approach may help create local student groups who can support and collaborate with each other not only during courses but also in future.
- The chance of engaging students through highly structured small groups "with accountability measures built in" is higher than large group discussion (O'Connor, 2013).
- While digital learning can bring in learning benefits, it is important to choose the right platform and carefully design and explain activities to optimally use that platform and engage students(Cheng, Yan, Chang, & Kuo, 2016).
- Through discussions and Interview with teachers it was found that engaging the student in Resource mapping exercise on a platform like google maps, as a data library, will help them to understand the local context. Discovering places that aid a student's requirement in terms of material supply, production services, networking can empower student to become self-reliant and resourceful. Every city has a rich bank of skilled indigenous communities, local culture, specialized markets, city layout and landmarks that can be ready resources for a student to rely upon.
- Consistency of network, internet bandwidth, quality of audio and video transmission for an uninterrupted communication, regular electricity supply governs the success of synchronous, asynchronous or blended learning experience for a student. Interruptions in communication leaves the student feeling frustrated, isolated and detached and consequentially demotivated (Moore,1993). Choice of platforms that address these issues become important for facilitators to reduce if not fully avoid the disruptive experience.

With time newer models for learning will be created. Albeit unfortunate, the restrictions posed by the current global calamity has also opened doors for facilitators to evolve in a short time, reevaluate and calibrate pedagogical approaches to use available platforms for teaching learning, diversify our methods for teaching to adapt to a distance learning context. As a conclusion responses gathered through the study of focused surveys and interviews, raised some pertinent questions.

- Who needs to be trained first for effective education in this time? Teachers or students? Or both can co-learn or co-teach together?
- How can equal opportunities for learning be made available without access to equal resources?

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