

Adapting Design Instruction to Online Teaching and Learning Methods

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Abstract: In today's VUCA (Volatility- Uncertainty- Complexity- Ambiguity) world, traditional methodologies of instruction for subjects such as Design (a subject studied and learnt through a five-sensing process) is fast getting redundant. The changing scenario calls for a flexible and adaptable skill-set for teaching this sensitive discipline. This article aims to identify ways to develop motivation, relevance and effectivity in the learning experience and also suggest a structure for instructional strategy in the online modality. By Identifying and including online features that students find interesting/attractive and eliminating all cumbersome workload, develop smartly packaged tutorials that encourage self-study and exploration. Design being the future of everything, needs to be taught to attract maximum talent.

Practical Implications: Appropriate training and techniques for the online modality be developed and imparted to Instructors (for content delivery, mentoring, etc.) and learners (for receiving, interpreting, application, etc.) to ensure the practice of the desirable behaviourism in the online teaching-learning process. Learning outcomes will be achieved if the teacher and the learner find their comfort in this online learning environment.

Keywords: Design-sensitizing; Design thinking; Instructional Design; Online-instruction

1. Introduction

Unpredictability and uncertainty have become norms that everyone is learning to cope with more and more with each passing minute. Age old techniques and methods of accomplishing day-to-day tasks have become obsolete and redundant (Bhatt, 2001). Technology has in ways surpassed itself in surprising it's users with newer and newer innovations so often that slowly even the user has begun to feel left behind.

Over the generations, that came to be named as the Traditionalists or Silent Generation (Born 1945 and before), Baby Boomers (Born 1946 – 1964), Generation X (Born 1965 – 1976), Millennials or Gen Y (Born 1977 – 1995) & Gen Z, iGen, or Centennials (Born 1996 – 2015), there has been much transition in terms of the thought process, expectations, and perceptions (Dimock 2019).

The Gen Z category of learners are an informed lot. Accessibility to technological advancements that make the world much smaller thanks to the internet, social media and many more such attributes, renders them exposed but not necessarily well informed (Schwab 2017). Based on their interest, fancy and attraction they tend to indulge selectively and often do not choose wisely on content or extent (Bauman 2011).

Design has always been a subject taught and learnt in the modality of face-to-face (Nordin and Alias 2013). Principles from science and learnings from social studies taught in school were used as the basis of building further knowledge structures in higher education (Novak 2002). Using practical methods, the relevance and applicability of prior learnings were used to create higher level learnings. Communication through graphical, physical and verbal methods were generously used to help stimulate the five senses of the learner and creating opportunities for deep learning experiences (Gangwer 2009). This path of teaching and learning usually generated strong bonds of understandings and the perfect scenario to ensure that the learner resonated with the learnings.

With increasing pressures of the competitive scenario, the demand for becoming literate and qualified has multiplied. Also, the demand for Design thinking has been realized by all fields of industry as it pushes for innovation



Email corresponding Author: vikrammathur@ddn.upes.ac.in | Vol. 1 Issue 1 pp. 8-11

Cite as – Mathur V. (2022). Adapting Design Instruction to online Teaching and Learning Methods. *International Journal of Design and Allied Sciences*, 1 (1), 8-11.

and growth (Bjögvinsson, Ehn and Hillgren 2012). Design as a course of study has thus become very desirable to the youngster of today. In fact, even older professionals of the industry, who have never studied design are feeling attracted to indulge and explore (Kotler 2010). Though Design schools have been mushrooming all over, the quality of learning offered remain questionable. Thus, the pressure of providing this quality instruction comes on to the reputed schools who have their limitations. Moreover, with helpless situations like the pandemic, the need to develop other modes of instruction was realized (Mishra, Gupta and Shree 2020). Technology advancements has provided opportunities to address this challenge (Park 2011). This article looks at how design instruction in the online modality, can be effectively administered using Technology interfaces to achieve satisfaction and deep learning for the learner. It discusses the importance of emotional connect required for online instruction.

2. Method

Conventionally, for design instruction, the first level of infrastructure in the `face-to-face` instructional modality consists of lecture rooms where the teacher can provide theoretical inputs and then and studio spaces where students can work on assignments in the presence of their instructor respectively. The lecture rooms need to be furnished with furniture, white boards and gadgets like a ceiling mounted projector, speakers etc. These lecture rooms are typically meant to seat 20 to 30 students. Studios are larger spaces where larger tables are provided per student to facilitate drawing and physical modelling work. Natural light and ventilation are necessary in both cases. Apart from this, there are workshop spaces where hands-on instruction is provided on tool and equipment handling. In this modality, the student learns in an environment possessing an ambiance conducive to design learning.

When considered in the online modality, all the above-mentioned infrastructure transits into virtual online scenarios. Technology today offers the LMS or the Learner Management System. The LMS, available over the internet, offered over several teaching platforms like Blackboard, Canvas, Udemy, etc. A learning management system (LMS) is a software application or web-based technology used to plan, implement and assess a specific learning process (Brush 2019).

The LMS provides almost all the infrastructural support. The different courses of the program can be sorted into different sections. Each of these sections becomes the housing for a course of the program. Each course has subsections wherein the various components of the course are kept. The infrastructural support like course content, attendance records, gradebook and virtual classroom etc. are also housed in these subsections. Students are mapped to each of the courses so that they are able to participate with the instructor in certain subsections like the virtual room, gradebook etc. The virtual room provides for communication and sharing through audio and video modes. It provides for audio and video communications and facilitates sharing of documents, chat, and whiteboard. The screen sharing feature is very helpful as it provides for one to share his/her screen completely whilst keeping the mike on to explain what the screen share is showing.

In the absence of physical presence in a face-to-face session, the online session facilitates the teaching and learning quite smoothly if handled confidently and sensibly (see [Figure 1](#)). Design instruction needs more interaction and technology has provided for additional plug-in devices such as the Tab (with stylus) that facilitate online communication in graphical format. There are many software like Paint, Sketch-Up, Lumion, AutoCAD, Rhino etc. that this medium facilitates sharing in. An instructor needs to hone his/her skills in the use of these different tools to achieve a parallel level of instruction as is achievable in the face to face modality. Physical demonstration of working with materials, equipment and machines in a workshop/Laboratory being an essential part of design learning can be facilitated by showing videos (YouTube, etc.) and other instructional material available on the internet.

Having all the above-mentioned offerings of technology to deliver a course satisfactorily, it is important that the instruction is offered with empathy and care is taken to factor in the aspirational needs of the learner. It is pertinent to add that the important element of constant discussion (using all communication tools to advantage) between the learner and teacher be promoted at all times. The online modality as well as its stakeholders need to be primed and conditioned sensitively for successful facilitation of the best teaching and learning experiences. Each stakeholder needs an emotional connect with this modality, for which certain behavioral norms and values need incorporation.

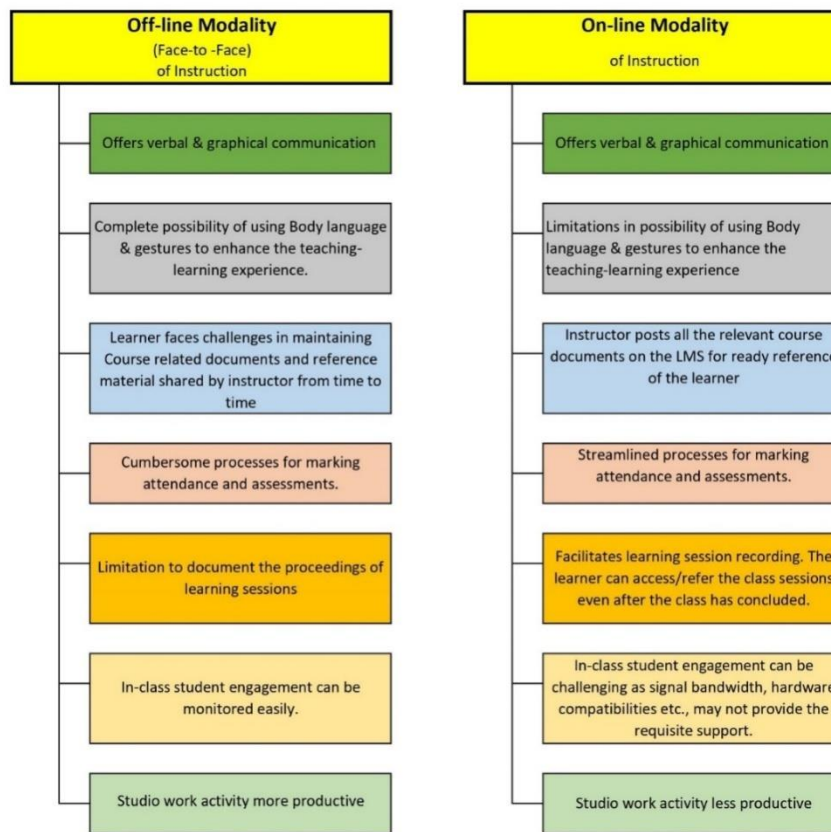


Figure 1. Comparison between On-line and Off-line Instructional Modalities

3. Results and Discussions

The online modality of instruction can be as effective as the face to face modality. The online approach pushes the learner as well as the instructor to indulge and explore the technological sphere more in-depth and this prepares them better for the future. The learner who will soon be an industry professional will need to be extremely adept at communicating and delivering services in more challenging scenarios of time management, precision and quality outputs. Managing long distance projects with deftness will not be an impediment in his role as a global professional. Using technological tools shall enable the practitioner to improvise in future to develop better and more efficient working styles.

Through teaching in the online modality, instructors too shall be able to improvise and develop newer and better teaching methodologies that can prove beneficial in teaching larger cohorts. The institutions that they are a part of can then offer fully online courses in design instruction to aspirants who cannot afford to enroll at the full-time course due to paucity of time, funds or location.

4. Conclusion

The Online modality for design program instruction is theoretically as capable as the face to face modality. Examining the case from a practical standpoint, there seems to be an issue with the 'emotional connect' aspect. The face-to-face teaching-learning environment easily promotes an emotional connect in the subject, for both the learner as well as the teacher. Ordinarily, the online learning environment unfortunately is not able to promote it likewise. This may be happening as both learner as well as the teacher are mostly looking at their laptop screens and more than often the videos of either are turned off, maybe to preserve signal bandwidth. The absence of mood-thrust due to absence of body language, makes the communication rely solely on the verbal exchange. Thus, the communication and learning experience suffers. Even if the teacher is visible, s/he will soon loose enthusiasm as the learner is not visible or

participative. In order to make these online sessions as successful and desirable as the face-to-face sessions, it is very necessary that the learner and teacher engage and communicate in a more complete manner no matter what the modality. For fruitful design instruction and learning, the correct attitudinal alignment is essential. If design is to be taught and learnt in different modalities, strong techniques for each modality need to be developed through exploration, discussion and testing to build appropriate behaviorism for all concerned stakeholders.

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