

The acceptability and effect of practical culinary classes through virtual platforms - A case study of IHM Goa

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Abstract. Virtual and online platforms have been constantly evolving with the advent of new technologies and have made major strides in education. The need for modern approaches to teaching methods in culinary education with wide outreach has become evident in recent times. Traditional methods of teaching have been the most common approach for academicians in culinary institutes. In the present scenario, increased accessibility to the internet provides the students with more resources for culinary information. As a culinary instructor, it becomes necessary to adopt relevant and modern teaching methods to enable the development of students further. This article attempts a study on various internet platforms that can be used to impart culinary education in a classroom. It emphasizes the importance of virtual internet platforms in the application of modern teaching methods for the development of the culinary skills of a student. This research is exploratory in nature and data was collected from current students of 2nd Year B.Sc. H&HA at IHM Goa to understand the impact of the study. A qualitative data collection strategy was conducted in the form of semi-structured interviews of academicians of culinary institutes and hotel professionals to understand the benefits and challenges in using internet platforms to apply modern teaching methods in a culinary classroom. Culinary education has to absorb the use of modern methods of teaching to help in the development of the culinary skills of the student. Internet platforms will help in developing new teaching aids to engage the student effectively in line with modern technology.

Keywords: educational websites, virtual, culinary, skills, online teaching aids

1 Introduction

The myriad resources of the online world also provide each classroom with more interesting, diverse, and current learning materials. The Web connects students to experts in the real world and provides numerous opportunities for expressing understanding through images, sound, and text. (Edutopia Staff: Why Integrate Technology into Curriculum? 2008). The internet is a constantly evolving resource and new applications with current technology are available at your fingertips. More than 60% of the world's population has access to the internet and the numbers are growing at a rate of 7%. In India, the use of the internet has grown over 111 times between 2000 and 2020 (www.internetworldstats.com). With this tremendous growth, numerous online applications have mushroomed in the field of education, which to an extent even customizes the teaching method to the needs of the subject or student. Culinary education requires different approaches to enable the student to develop knowledge and skill. Most institutes in India mainly rely on traditional teacher-centric teaching methods in a culinary classroom. Even though industrial exposure training is part of the culinary students' curriculum in India, there is a vast possibility of differences when you compare one food and beverage outlet to another. It can be with its usage of ingredients, type of cuisine, type of service, the capacity of outlet, the layout of the establishment, type of clientele, trends, preferences and the list goes on. Food production on a whole cannot be measured because of the diversity in the cuisines of one region to another. For a culinary student, it becomes a valuable advantage to gather as much knowledge and skill as possible during their culinary educational journey. To provide a high level of exposure to the students, it becomes a huge task for the culinary instructors due to the limited time and syllabus deadline to aid the examinations. This article explores the idea of using the current internet applications and integrating them into a culinary classroom and also to gather inputs about its effectiveness and barriers from the perspective of culinary academicians and hotel professionals.

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2 Literature Review

Bellow (2012) quotes “I think to define technology integration; it's really using whatever resources you have to the best of your abilities. Technology, it's a tool. It's what you do with that tool, what you can make, what you allow the students to make. That's really what technology is about. If you can do this lesson without technology, that's great. But if you can do it better with technology, then that's why you use it. That's why you use tools.” in a short video - An Introduction to Technology Integration by Eduto-pia.

The future of classrooms will use cloud computing, personalized virtual learning environments, open content, mobile and game-based learning (Jackson, 2011- The Atlantic). In 2020, if we compare the teaching aids used, the author had successfully envisioned the extensive use of virtual internet mediums and aids in education.

Polat (2003) states, those times have passed when the reproduction of acquired knowledge was the main goal of education. The main goals of education nowadays should be intellectual and moral development, creative thinking and the ability to work with information.

Starr (2011) in her brief article in Education World states that technology is recognized as an instructional tool, not as a subject of instruction. Many educators, less familiar and less comfortable with technology than their students, struggle to seamlessly integrate a growing list of technology tools into their regular curriculum. This clearly underlines the need for regular training sessions of academicians to stay in line with the use of new internet apps and technological advances on a timely basis.

Zounek and Sudicky (2013) in their paper describe the various advantages and disadvantages of online virtual learning against traditional active classroom learning. It is agreed that the best of both methods can be combined and customized as per the requirements of the student and the field of education.

Brown, Mao and Chesser (2013) infer that teaching culinary skills that require the use of all five senses and on-hand experience would not be possible through only recorded videos. But online teaching can be used to fill the gaps that come with traditional classroom-style teaching. They also state that in professional kitchens chefs require to work in teams to run their operations efficiently and that cannot be achieved only through online teaching.

3 Present Structure of Food Production Curriculum at IHMs and Scope of Virtual Platforms in a Practical Culinary Classroom

The curriculum for food production at IHMs is extensive where theory and practical classes are defined into step by step completion of topics. But due to a large number of students enrolled and scheduling reasons the theory and practical classes are seldom linked and the syllabus is completed independently.

Each food production practical class usually consists of a set menu for which standard recipes are provided to students in advance. The students have to prepare the dishes on the menu and present them during the practical class. The instructor is present throughout the class monitoring and providing inputs and corrective measures.

Even though the conduct of the practical classes is done efficiently, some gaps arise in the understanding of the culinary concepts by the students which are often overlooked during the class. There are times when the right ingredient is not available locally or it is too expensive to be procured for the entire class and the students have to make do with alternatives. Certain food preparation methods and techniques are complicated or time-consuming and cannot be possibly incorporated into a regular practical class. It is also observed that due to the time interval between theory and practical classes the students often fail to recollect information that was already covered earlier. Virtual internet platforms have the capability to reduce these gaps by providing tools for educators to convey culinary concepts and to personalize the class to a certain extent. For a practical culinary class, virtual platforms can be used in a flipped classroom technique through a pre-class live or recorded lecture with a set of instructions that can be provided to

students through an online medium, which gives them more time to understand the subject topic before the actual practical class. They can make the most of the time during the class and apply the instructions and receive corrective feedback from the instructors in the practical classroom. For example, types of ingredients, standard recipes and demonstrations can be recorded or live-streamed to students at home. In practical classes, the student can use the cognitive abilities to the highest level and implement those recipes by preparing those dishes and analyze the differences. The culinary instructor will have more time to evaluate the techniques, give timely corrective feedback and help students to try out new variations or create new recipes.

3.1 Internet Applications for use in a Culinary Classroom

Online education is progressing at a rapid pace and many universities and professionals are providing complete online classes to increase the reach globally and to capitalize on the advantages of online education.

Massive Open Online Courses (MOOCs) like Coursera, edX, Swayam, etc. offering free as well as paid certificate courses with online classes available at your convenience. Web conferencing applications like Zoom, Google Meet, Cisco Webex, etc. are widely used to connect the students with instructors in face-to-face interactions. These apps provide a platform for discussions, webinars (online seminars) and lectures. Interactive online presentation apps like Prezi, Ludus, Visme, Google Slides, etc. can be used to deliver the lecture in an interesting and organized manner. Polls and surveys can be conducted online with help of apps like Slido, Google Forms, SurveyPlanet, etc. Game-based learning can be used to make online learning more interesting, competitive and to improve the cognitive skills of the student. In a classroom, we can use it as a recapitulation and evaluation tool and understand the gaps in the teaching process. Kahoot, Crowdprur, etc. are excellent online trivia game based educational platforms. Youtube, Periscope, Livestream, Vimeo are live video streaming apps and you can conduct virtual tours of a winery, cheese factory, etc. Virtual classroom management apps like Google classrooms, ClassDojo, etc. help in communicating notes, assigning tasks, collecting and reviewing assignments, etc.

3.2 Virtual Reality and Augmented Reality in the Future Culinary Classroom

Virtual Reality (VR) and Augmented Reality (AR) are hailed as the next big thing in the technological revolution. Virtual reality (VR) uses a special headset or glasses to immerse into a 3D virtual environment and provides realistic scenarios that enable learners to react to situations and understand the outcomes of their actions in a simulated environment. Augmented Reality (AR) involves realistic interactive 3D designs or elements that can be embedded in a real environment and is visible through a display device. Both VR and AR have already made major strides in the food industry like virtual menus in restaurants, training modules in the services sector, etc.

“The real promise of AR and VR for the training industry is its ability to provide new training environments and experiences that directly affect user engagement, skill and knowledge transfer and retention. Shared virtual and augmented experiences are already being used in gaming and entertainment and could transfer well to organizational and educational training experiences” (Oesch, 2017- trainingindustry.com).

Giglioli, Vidal and Raya (2019) in their research article used a cooking task to assess the behavioural and physiological functions in comparing virtual reality versus augmented reality. AR is already being used in an online teaching environment but limitations exist with issues of cost, few designs, supporting software and equipment, etc.

4 Research Objectives

- To underline the importance of the internet and the use of virtual platforms in practical culinary class and suggest steps or methods to close the gaps observed in a traditional active learning culinary classroom.
- To elaborate on new technological advances in the field of online education and the barriers affecting the learning of students in a culinary classroom.
- To organize an experimental culinary class presentation using current internet platforms to collect data on student experience and suggestions for understanding the emphasis of virtual platforms in a culinary classroom.

5 Methodology

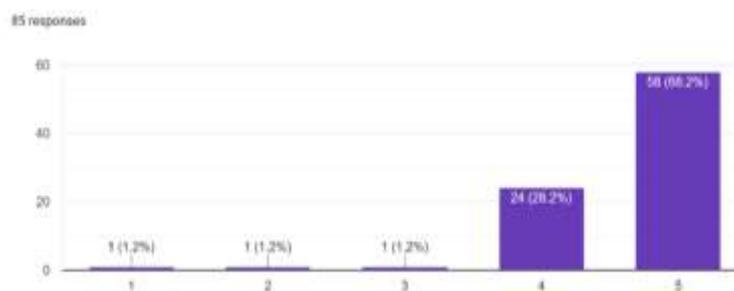
To understand the importance of incorporating virtual internet platforms into traditional teaching, an exploratory dual approach was made to collect data from students as well as academicians and hotel professionals.

- In the first method, a quantitative data collection strategy was used and the sample consisted of 85 students of 2nd year BSc. H&HA at IHMGOA. Prezi Present, an online presentation app which uses motion and smart structures were used to present a culinary topic on Staple Ingredients of Goa (<https://youtu.be/Vd1GWSakbiQ>). This presentation also used personalized videos and a small virtual tour of the Mapusa Fish Market, Goa. The class was conducted online through Zoom and feedback was collected from the students in form of an online questionnaire with help of Google Forms.
- The second method was a qualitative data collection approach consisting of semi-structured interviews with 5 academicians and 2 kitchen executive chefs to understand the gaps in traditional classroom-style education, the benefits and challenges faced through the virtual mode of education.

6 Results and Analysis

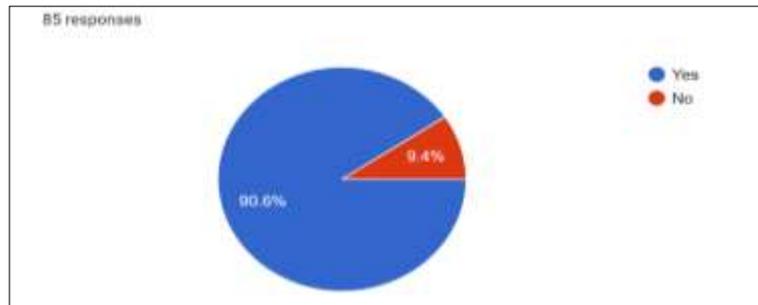
Data collected from students after the online class on Staple ingredient of Goa:

1. On a scale of 1 to 5, how would you rate this virtual presentation on Staple Ingredients of Goa with respect to topic information in comparison to a traditional class session? (1- poor, 5- excellent)



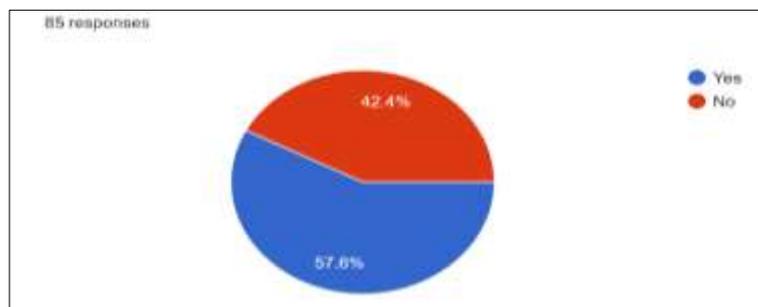
Analysis: Over 96 % of the students found the virtual presentation to be more informative than a traditional classroom session.

2. Were you able to understand the presentation on Staple ingredients of Goa better through a virtual online platform?



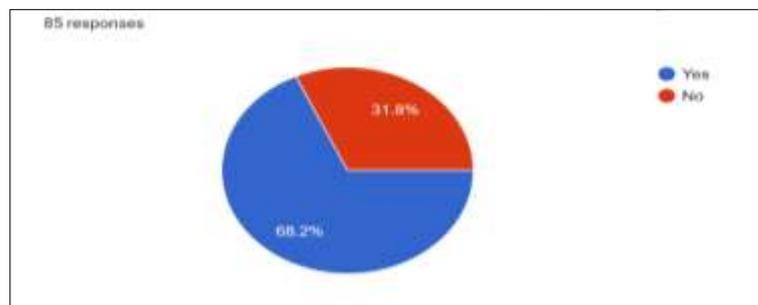
Analysis: Most of the sample population understood the concepts better through this online mode of presentation emphasizing the need to blend the use of virtual platforms along with practical training.

3. Have you used virtual online applications in the preparation of presentations and assignments?



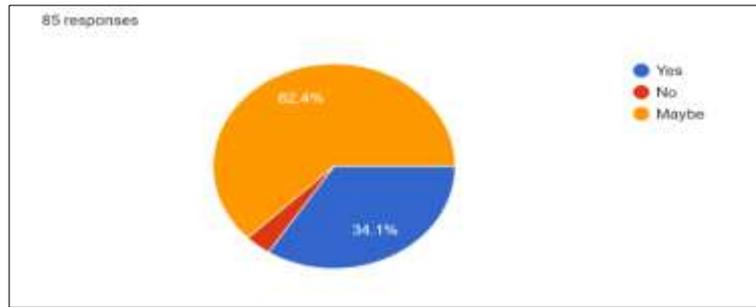
Analysis: The majority of the students are familiar with virtual platforms for educational purposes even though it highlights the concern for students with less online competence, internet connectivity and lack of equipment required for regular internet use.

4. Would you like to experience learning through virtual online platforms combined with traditional classroom methods in practical culinary education in the future?



Analysis: A majority of students are interested in experiencing blended virtual and hands-on learning in future culinary education.

5. Do you think virtual reality (VR) or augmented reality (AR) may be used to understand culinary concepts in the future?



Analysis: A majority of students were positive about virtual reality and augmented reality applications being used for understanding culinary concepts in the future.

Opinions from students during the virtual presentation:

- Many students opined that this mode of presentation was very informative and enjoyed the visuals better than a traditional classroom. Many found the virtual tour of the market helpful in knowing the various ingredients used in Goan cuisine.
- Students also mentioned that this range of ingredients was not usually provided in the usual practical classroom and the audiovisual description of the ingredients helped them to conceptualize better. The students also felt connected with the presentation as the information was in line with the syllabus and personalized to the need of the classroom.
- Some of the students also mentioned that online session helps in understanding the theoretical aspects of culinary arts better. These theoretical aspects could benefit when they can apply in an active practical classroom.

Data collected from interviews with academicians and hotel professionals:

- Academicians mentioned the challenges of students in understanding exotic ingredients and culinary techniques, especially in international cuisine.
- The faculty also suggested motivating students to do research, assignments and the internet as a big resource for information and tools are available to assist instructors to incorporate them in their teaching methods.
- The inputs for challenges faced by instructors in online education were unanimous with issues like internet connectivity, costs of subscriptions towards procuring online educational apps, developing infrastructure to accommodate video recording, editing, and interactive features. But a positive outlook was present towards combining online and traditional teaching methods and to work for a progressive transition to be open to inculcate new technology into teaching.
- Another challenge stated by a faculty was that a high number of students enrolled in culinary institutes does not help in providing student-centric teaching methods. This barrier could be curbed to an extent by using internet applications to assign projects, tasks and activities to collect online resources supporting their culinary syllabus.
- Hotel professionals feel that from a culinary aspect specialization of the field should be provided to students and new recruits are well informed about the theoretical concepts in the culinary fields. It can be inferred from the interview that the students should receive more exposure to practical skills and techniques. And the line between challenges and classroom learning can be narrowed by using online tools or aids and incorporating with active traditional classroom style of teaching.

7 Conclusion & Suggestions

With this study, it can be said that it is difficult for culinary arts education to be conducted online in its entirety. But a culinary classroom instructor could use the benefits of the internet and interactive online applications to provide an informative and interesting audiovisual experience to the students. This form of blended learning involves the best of both worlds of traditional classroom-style teaching and virtual online educational applications.

It is evident that to implement such measures in culinary classrooms, instructors should be up to date with new internet applications emerging from time to time. The cost of equipment and subscriptions of online applications are indeed a challenge for some educational institutions but it can take progressive steps to be able to facilitate blended modes of learning.

The high number of students enrolled in culinary institutes in India also proves as a barrier to personalize culinary topics as per the requirement of the student. In these circumstances, internet applications provide a powerful resource that could be molded as per the requirement of the culinary instructor and used to develop the knowledge and skills of a culinary student.

It is suggested to use internet applications like web conferencing to meet industry professionals, live streaming of videos from the local fish market or spice garden, a virtual tour of a hotel kitchen to understand an efficient layout, culinary educational games to generate interest of students, which are just some of the virtual methods that can be used by an instructor in a culinary classroom.

8 Limitations

The study has potential limitations due to less available sources of previous research in the use of current online education tools in culinary arts. This study only includes a small sample of participants and the findings can be subject to bias due to barriers like varied speeds of internet connectivity and level of digital competence of the participants.

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