

Pedagogy Approaches and Instructional Technology Methodologies for Teaching Catering Craft Practice in Technical Colleges in Edo State

By

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Abstract

This paper discusses the emerging pedagogy and instructional methodologies for teaching catering craft practice in technical colleges in Edo State. It focused on methods such as Inquiring Based Learning, ICT Project based instructional technique, such as Jigsaw Co-operative Learning, Peer Tutoring and Reciprocal Peer Tutoring as new methods capable of changing the sequence of events in the field of catering craft. It also focused on the changes that have taken place in catering craft with the use of technology. It further focused on various instructional technologies in the teaching and learning such as internet, intranet, virtual classrooms, online database, software technology, smart phone, computers, social media, email, and scholarly websites. Various ways of utilizing technology in enhancing lesson planning was also mentioned in this paper. Besides, benefits derived from the use of instructional technology in the teaching and learning of catering craft was clearly outlined.

Introduction

Catering Craft is one of the trades courses taught in technical colleges (Senior Secondary School). It is a Technical and Vocational Education and Training (TVETS) skilled acquisition subject solely for the provision of foods and drinks, hospitality management for guest and customers. Thus the objectives of this subject as indicated in the Nigerian Educational Research and Development Council (2007) are for the;

- development of professional attitude, appearance and acquisition of skills
- development of knowledge and understanding of all food commodities in terms of cost, quality and use
- understanding the methods of cooking and being able to produce dishes of the required quality, colour, consistency, seasoning, temperature, quality, and presentation
- understanding essential necessity for healthy hygienic and procedures at all times in the storage, preparation, cooking and serving of food.

- acquisition of the necessary skills required for the production of pastry, bakery and confectionery products.

Emerging Pedagogical Approaches in Catering Craft Classroom

Pedagogy relates to the art and process of instruction and skill acquisition. However, Wlodkowski and Ginsberg (2017) identified pedagogy as any activity consciously designed by teacher towards bringing about effective learning in the students, with the aim of motivating and making the students journey, successful and productive throughout life. At different times in human history, various theories were enacted to support better styles of teaching and learning. For instance, early protagonists of the old-style model methods argued that the Socratic method of teacher – student interaction is the best – suited instruction for teaching learners. Where the teacher is at the center of the entire process, it is also claimed that learning takes place when teachers teach using the non-verbal and mannerism. In practice, how much of learning go in such classroom where students are not involved, they are inactive and docile especially in a skill acquisition programme such as catering craft. Recently, meeting the needs of all learners, learner centered classroom, students as learners, users, and producers of digital content, learn technologies, globalized teaching, use of smartphones, blog, digital, collaborative teaching, and use of other technologies (Cox, 2019)

Therefore, teaching and learning catering craft ought to be functional utilizing the best teaching method for better achievement. It has been observed that the worth of teaching involvements and level of achievement of students of TVET is below standard Wordu & Puyate (2022). As indicated by (Khan & Ghosh 2016) Teacher centered method of teaching is the foremost pedagogical approach in most schools has resulted to a growing consciousness among educationists; that innovative teaching methods that are learner centered, which will inspire and help creative commitment among learners should be utilized in teaching. The present teaching methods in technical colleges are not able to meet the objective of the programme consequently; a need arises to change teaching and learning style for heightening of TVET quality (Pavlova and Chen, 2019). The search for such instructional approach, that is focused on resulting in the development of suitable strategies, premised on the construction of knowledge by the student, not only emanates from their individual experiences, but is interactive and collaborative. Some of such methods are:

The Inquiring Based Learning; Inquiring based learning is an innovative learner centered strategy; this strategy places students at the center of learning experience. The nature of an activity, the process, end product and how it is shared is dependent upon the developmental level of the students.

Teachers play an important part of appropriate feedback and support so that students are able to build on the knowledge they already have. The process is; the student select a topic with the general curriculum theme, build basic understanding based on background knowledge, talk to others to gather information, find guides such as online library catalogues, online subject directories, subject searches. Then create a basic report or presentation. The crux is the students utilize technology to locate ideas to enhance their report and present to the class.

ICT Project based instructional technique; This is an instructional technique that allows students to facilitate, access deeper knowledge and skills about a concept. It is a student centered pedagogy that use collaboration tools. Project based learning provides students with practical application of concepts that allows for students to make connections between the content being learnt and the real world. Project based technique requires students to learn and focus on the curriculum rather than be added as a supplement at the end of the traditional instruction. In this technique, the teacher play the role of a facilitator working with the students to engage in a worthwhile project, structuring meaningful task and develop social network skills, support collaboration, give students opportunity to execute project and carefully assess what the students have learnt based on their experience. A topic such as how our school serves healthier lunches can form a project topic. Teacher can create blog to discuss and encourage them to visit different online websites and links so as to simplify their difficulty. Students are encouraged to consult internet and go through email or Facebook to consult experts and other social media tools for reliable information. A What Sapp group can be created by the teacher to reach students and exchange experiences. This increases the brightness of the learner, motivate them to learn and attract academic effectiveness and cognitive engagement. The teacher gives sufficient guidance; provide direction on how to develop the project. Teacher must plan well and be flexible to assist students on which software to use.

Jigsaw Co-operative Learning; Jigsaw cooperative learning approach enhances group learning by making each student in the classroom responsible for teaching some subject matter of a topic to the group. The arrangement is such that students are made members of two different groups, called the 'home group and expert group'. They would first gather as home group, and each member of the home groups is assigned a portion of the subject matter to learn in order to become 'expert' in that subject. Then the home groups are broken up and one person from each of the broken group are brought together like pieces of a jigsaw puzzle to form the jigsaw group. The jigsaw group then consists of 'experts' from each home group who have been assigned some portion of the subject

matter in the topic and would have been equipped with an in-depth knowledge of that subject matter that is to be taught. Then a leader is chosen from among the jigsaw group that would be able to teach the home group, while the teacher facilitates and guides the process.

Peer Tutoring; Peer tutoring is an instructional technique in which the student teacher teaches a concept to another student or a group of students under the leadership of a teacher. It is an interaction between two or more students in a group where one of the students acts a tutor for the other group mates. Peer tutoring evolved from group discussion as an effective method of instruction, among students in modern times when the teacher uses students as resources for other students. This is based on the belief that the students can learn better and faster from fellow students who have mastered the concept of the skill. Students show improved friendship and assist each other in the learning when studying together in group, using more similar friendly utterances. Yurt and Aktas (2016) posited that peer tutoring brings about increase in learning rates contributing to social skill advancement, develop a range of other activities and provide emotional benefit to the student.

Reciprocal Peer Tutoring; Reciprocal Peer Tutoring is another form of cooperative learning technique, in which students switch roles between tutee and tutor. Students get to be the learner and the teacher when using this technique. Debacker, Van-Keer, Moerkerke and Valcke (2016) defined reciprocal peer tutoring as the considered switch over of the tutor responsibility among peers in groups and allow each student to practice the exact benefits derived from providing and receiving academic assistance. In reciprocal peer tutoring, two or more students alternate roles as tutor and tutee in a learning situation with acceptable time in each role. Other higher performing students are paired with average and low performing students. Students in reciprocal peer tutoring class may prepare instructional materials and may be responsible for monitoring and evaluating their peers.

The emergence of technology in lesson delivery started almost a century ago with the use of projector. A few years later, other devices such as calculators and computers were invented. Today technology is extensively used in schools and other public places; besides educators have found that technology has the ability to create insightful changes in teaching, learning, thereby creating openings for incomparable collaboration. It has also become a tool for support among teachers and their students. In the view of Gagne (1986), instructional technology is a systematic, interactive process for designing instruction or training learners so as to improve performance. He also sees it as a stream of apparatus that encourage the use of systems, environments, tools, products, and

strategies that can enhance human learning and competence. Consequently, instructional technology is a rudimentary initiative in the field of education that promotes and aid the application of validated procedures in the design and delivery of instruction for the benefit of teachers and learners..

The utilization of technological tools in catering craft span from the fact that catering involve cooking, and cooking has come a long way from the simple roasted animal, using the earliest technologies known to man to rubbing of sticks or stones to create a spark of fire. Over times, cooking technologies have changed and with those changes, the demand for skilled cooks, able to use technologies has increased. Professional cooking schools has become part of the educational process where caterers, nutritionist, dieticians and home economist are trained. In their practice, they are expected to use technology in restaurants, hotels, schools and other food service outlets for record keeping, catalogue management purposes, recipe design, and food production. Therefore, the student in training should be familiar with this technology they are to encounter in the workplace as well as knowledgeable about food preparation. It is therefore paramount for the catering craft educator to provide access to that technology as part of the teaching process.

Instructional Technology in the Teaching and Learning of Catering Craft

The use of technology has become a fundamental part of modern life and workplace and therefore appropriate to the educational enterprise. In particular, digital technology is now such an integral part of teaching, learning, research and scholarship that ignoring it in the field of catering will be ignoring an essential aspect of the development of both students and teachers in the area. Rutkowski (1999) examined the structure, spaces and systems in the electronic environment that can empower the learning process in general and can be a source of information in Hotel management and tourism (catering craft) with reference to the internet, intranet, and web technologies.

The Internet

The internet is breaking down walls and helping to redesign learning structures. Technopedia (2020) defined the internet as a globally connected network system facilitating universal communication and access to data resources through a vast collection of public, business, academic and govern ment networks. It is governed by the Internet Assigned Authority (IANA) that establishes universal protocols. While the intranet is a computer network for sharing information, it is a collaboration tool, an operational system involving computing services within an organization; usually to the exclusion of assess by outsiders. These tools are very important in the retrieving and

dissemination of information in the field of catering management. The internet avail students the opportunity to assess continental recipe from different parts of the world by utilizing search engine such as Google and others, in their classes. Array of information are in the different websites about hotels and how to effectively manage hotel businesses. These are to the benefit the students and teachers. In addition, the internet and the World Wide Web bring together students, instructors, experts and vast global resources in hotel management and tourism scattered around the word into new clusters, colonies and communities of learning. Teachers can now develop and teach classes from the comfort of their homes.

Intranets are breaking down divisions within schools and bringing together teachers of different levels, different classes and different department for collaboration by utilizing the intranet connective tendencies towards effective learning process. The digital environments represent new boundaries that may not necessarily be physically situated or time scheduled or restricted. Learning in catering can presently take place in virtual classrooms rather than in physical ones. The structure, electronic infrastructure and systems are many and ever evolving. Schools and training institutions can benefit enormously from the developing digital tools, technologies, systems and situations to increase achievement levels among students in the teaching and learning processes.

Virtual Classrooms

The digital system has resulted to fundamental alteration in human action, reactions and interactions. Human actions and interactions have become global. Education and educational institutions and individuals can now be truly and practically globalized in a way that teaching and learning can occur across borders, countries, continents. The virtual classroom situated in the virtual planetary, exist for all academic levels. The primary objective is to provide students or pupils from different physically dispersed locations with new and more interactive information as an alternative replacement to the traditional distant learning programmes. Students are able to assess online courses freely with access to the World Wide Web (www). Interestingly, it can integrate even conventional classrooms into collaborative learning global networks. It is noteworthy that virtual classes can effectively be integrated into hospitality management since education is becoming a virtual reality. A practical example is a situation where students watch the instructor, and follow his or her procedure to prepare a dish through the web. They are able to do this in the

luxury of their own kitchen. This perfect practice is far better than the conventional school food practical.

On line Database

These are new electronic frontiers that students and teachers in catering and hotel management cannot afford to ignore. Many of these databases are free while others are subscription based. Institutions can decide to subscribe to some websites. The department can even identify a website of interest and subscribe to it for limitless learning. There are comprehensive database designed to address the hospitality needs of the community.

Software Utilization

Technology has turned out to be an integral part of food service and hospitality management; therefore educators should stay current with the new exciting applications in the catering industry. Software such as CorTec application can be customized for use in catering craft classes. All the capabilities of CorTec are relevant to catering craft. Whether, the student is to work in hotel, tourism, hospitals or schools, the application is very relevant. It will expose the students on how to manage data with ease in the catering business. It is worthy to note that a broad spectrum of technology are available to choose from for use in the classroom and kitchen/ laboratory, but good caterer should be well informed before selecting any software. Software have also become handy in restaurants, hotels and other food service environment for it to offer opportunities for streamlining service such as recordkeeping, inventory management functions, menu design, evaluation and production of food services. Another application that can be useful is the Personal Digital Assistants (PDAs). PDA is far less cumbersome in the management of data in hotel industry than physical management. The PDA is also a recipe database, having ability to import recipe from Master cookbook.

Similarly, the Quantity Production Management (QPM) software is spectacular applications that can help managers of restaurant operate human and material resources automatically. It analyses food service operation, generate report, sales trends, and inventory and can quickly create food or supply orders accordingly. It alerts the kitchen staff when to start cooking and when food has been held past the prescribed time limit. This software encourages creativity for food service professionals. A host of other software has been designed to interact with our mobile devices in

food establishments. Food industry specific software and programs are option for a recipe books and other information.

Computers

The use of computers is a fundamental part of food service outlets. According to Mandabuach and Harrington (2019) computer usage experience is considered essential for culinary graduates and that a variety of applications are available which should of necessity, be integrated into the teaching and learning of Catering Craft programme. Graduates of catering craft are now expected to be computer literate and should be able to use the computer for processing and analyzing of data effectively. Topics such as food costing, spreadsheets, recipe development and other related topics should be taught using the computer.

Smartphone

A smart phone or tablet computer is a digital device having series of functions. It allows one to send and receive emails, texts, snap photographs, and multimedia messages. It registers contacts, calculate currencies, gives alarm, function for browsing the internet using a mobile browser. It is also used for playing games, video chat, and function in point of sale terminal when buying of goods or services. It allows for scanning. Teachers and students will find this device very useful, for it is a mini computer at their disposal at any time of the day. This technology is useful to travelers, tourists, customers and hotel managers alike, in that customers are able to locate and assess hotels all over the word and confirm hotel reservations. Additionally, business men and women are utilizing the mobile devices to carry out orders and even pay for their purchases using mobile device.

SocialMedia

Social media platforms provide vast and flexible opportunities for contact, communications and cooperation. They are useful for educational activities such as scheduling examination, and information sharing among teachers and students. Their advantage is very effective on mobile technologies such as smart phone. The advent of the Facebook marked the golden age of the social media. Today departments are creating Facebook for groups for their academic staff for easy administration through information disseminations or sharing. The use of whatSapp has been

tremendous. Also teachers are using social media platform to schedule classes and course administration, assignment submission and delivery of learning resources. In addition, video can be sent into students' whatsapp group which is referred to as steaming. Steaming Video is a form of technology which allows for images to be sent to computers without needing to be downloaded. In most instances, there is sound attached to the video images. The streaming video can be repeated in a loop, constantly played, or upon demand. Steaming video with recipes and instructional information can be integrated into the catering craft classroom. The video instruction can be added to the video clips to help them focus their attention during the lesson. This allows the lesson to be taught in a multitude of times by watching over and over again. Another example is a student watching a video of a procedure, for example a procedure of proper cutting of chicken, then goes into the lab for practice. Other forms of social media are:

- Blogs with comment functionality to share and discuss information
- Twitter and course hash tags to encourage open forum and debate
- Skype to engage more deeply with the material and each other
- Interest for sharing clever ideas, inspiration, and valuable resources
- Amongst students Google Docs, Wikis and other collaborative document
- Tools to store and refine data: Project Management Apps to foster and
- Streamline collaboration.

Email

Teachers of catering craft can maintain contacts with students through their email. With an addition of a microphone and camera, he or she can present the lesson in the form of a podcast, either in real time or on demand movie for students to view at convenience.

Scholarly Websites

Traditional pattern of scholars' point of contact is the physical institution. Scholarly websites are now emerging as new frontiers for contact, communication and cooperation. Human and intellectual resources are now accessible to scholars through such websites where scholars can assess information. The electronic frontiers provide scholars and researchers with the appropriate platform to network and together in research groups. The emerald research register provides researchers around the world Webbers to update their status, register their work with appropriate field for research. The frontiers are many and still evolving. They include electronic publishing, online catalogues, periodicals and journals. Also available are communication platform, net

conferencing, storage facilities of the products of various fields of study including hotel management and tourism in digital devices like CD-ROM, zip devices, hard disc and data bases.

Smart School Technology and the Digital Age

Digital technology is the driving force of this age, and it is moving human activities and endeavor to the digital frontiers. These days there are digital classrooms, digital economy, digital television, digital phones, cameras used for teaching and learning. Remarkably, digital technology has equally developed smart systems and tools from smart phones, to smart televisions, cameras, smart boards, smart laboratories, and smart videos recorders. Traditionalism or maintaining the status quo slows down the pace of the development and advancement of smart system. Traditional educators are not shielded by the universal impact and penetrations of smart systems. For education shifting to smart schools technology is the ideal systems of teaching and learning and it has become persuasive necessities.

Ways of Enhancing Lesson Planning with Technology

One of the problems traditional teachers encounter in the use of technology is the ability to plan the lesson to integrate technology. The following ways are suggested by Class Craft (2019) for teachers to use technology include:

Lesson Organization: Computers help the teachers to better organize and present their information. Typing your notes in a Microsoft word or Google Docs , or creating a PowerPoint presentation, helps you focus less on how you are going to teach and more on what you are going to cover. During class activity, the teacher can project those notes into a big screen to give students an indication of where the lesson is going. If the teacher has a tendency to take rabbit trials or if the class is especially proficient at finding them, it's easy to refocus and redirect when the lesson content is neatly organized on the screen.

Visual Aids: Visual aids are very essential part of lesson delivery; a teacher should use as many visual aids as much as he can to make the lesson a reality. Fortunately the internet provides more opportunities than ever to find relevant images so that the teacher can give students concrete context for the subject. Pre-selected images can also be projected or shown on individual computers to reinforce the lesson while the teacher talks. At the very last, the teacher can print pictures from the off the computer and show to the class.

Videos: A short entertaining, instructional video is a great way to get students excited about learning. Some favorite sites are available in the website. YouTube also has a lot of videos on food preparations that can be very useful. You can use these videos to quickly introduce the subject, supplement your own lessons, and review the material before the examination.

Board work with the SMART Board: This technology is an amazing one. With this technology, instructors can easily project their computer screen into the board while still retaining the functionality of a traditional classroom white board. This means that you can display any picture, notes, or practice work from your computer and then write all over them as you discuss different element of the lesson. Students love coming up and writing on the board; this makes the lesson interesting.

Games: Educational games are great ways to reinforce your lesson and engage your students. Students can play pre-selected games on individual computers or teachers can project one game into the smart board and play to the class, especially a related game to the lesson. For example, class crafts (https://marketplace.classcraft.com/en?Hstc=753710.b4e01e2f7cd0f3f5c11c7f80f48e30bb.1602931822925.1602931822925.1602931822925.1&_hss). This offers both pre made and make your own quest that can be used to guide students through a particular lesson or unit. To make these quests even more engaging, one can include a company online game or short video.

Research: Internet has expanded the range of available resources and made research easier than ever before. Students no longer have to flip through hundreds of pages to find what they are looking for. Computers enable students to quickly and easily collecting formation from a wide range of credible online resources. Students can also use local library web pages to more efficiently search for relevant hard copy sources

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Presentation: In presenting the lesson, the use of computer provide fun, power point is definitely a favorite that can be used for all ages. Students can write a recipe, display graph of a standard kitchen from different parts of the world, display graph and pictures of kitchen utensils and practice bread making through the slides. Prezi is another excellent online presentation resource for students for students. It gives them more freedom and creativity in how they choose to present the information and transition between slides. Students can also present what they have learnt by using tools such as Microsoft publisher to create brochures, posters, or post cards. There are programmes for students on how to develop their websites. Teacher can provide portals or any other platform

where questions and dialogue about assignments. It also enables teachers to give immediate feedback.

Grades Rather than recording grades on individual papers and in a grade book, and then sending out results at the end of the term, teachers can post the grades in an online portals that is assessable to students and parents. This allows everyone to get immediate idea of how the student is doing.

Benefits of Instructional Technology in the Teaching and Learning of Catering Craft

Technology in the teaching and learning of catering craft offer several benefit that are not available not available in the traditional classroom besides. Technology offer students more learning opportunities, making the process of learning a fun – filled one. Other benefits discussed by Emekwu, (2019) include:

1. Easy access to information

The application of technology gadgets that have internet connection such as mobile phones, laptops and tabs makes it easier for students to gain access to information from the internet. These students would have all the information they want to know. Any topic of interest. Teachers are not left out, they are able to learn outside the syllabus as well and this only enriches them further

2. Taking notes on a digital medium

One of the beauties of technology is that students can take their notes by using digital devices such as pens and tabs. This way, they are able to save significant amount of their learning time as well. They no longer need to carry all those heavy note books and text books to class. Technology such as Google Docs has also made it a lot easier for the teachers to come up with documents and presentations. This can add more value to their student's education.

3. A better understanding of topics through digital tools

Technology helps to increase students' chances of making better presentations. Thus, the learning sessions at these classes normally use many visual aids. This includes PowerPoint presentations, word documents, audio sessions, and video screenings to name a few. They play a major role in conveying the lesson in a way that it will be more understandable. At times, a simple picture is good enough substitute for a thousand of words

4. A great option for students who are absent

The fact that lessons taught through the use of technology is recorded creates opportunities for those who are absent to during classes. This means that those who miss a couple of sessions need not to feel bad because there would always be the video recordings to fall back on. They can go through the videos and also email the teachers in case they happen to have any doubt about the same. In the traditional classroom the students always find it difficult to copy all information the teacher has provided

5. Learning in a dynamic Manner

It is a common knowledge that not all students in a class have the same power to grasp things. As far as the weak student is concerned they always find it difficult to hard in the traditional classroom. But in the use of technology, by being dynamic, made it easier for those students to learn at a pace they are comfortable with. This makes the entire lesson a lot clearer to the weak in particular.

6. A teaching environment that is interactive

The digital tools are now an integral part of technological classes. This is why the teaching environment over here can be called interactive in the truest sense of the term. It is one where students and teachers have roles to play. This kind of learning makes the entire process a lot more transparent. It is a lot better than what it would otherwise have been. This improves interaction between students and teachers in a significant way as well. It also improves the bound between these individuals as well. This is because they are able to communicate outside the school with the help of email and other social network.

7. Paper replaced by other digital tools

Each year students use tons of paper in other to take notes. These days there is a lot of emphasis on being environmental friendly and this is the reason most of the businesses are going paperless as well. In fact, by facilitating note taking on digital instrument it is now actually possible for the environment to be saved as well. . They are creating a way to replace usage and wastage. In such a way, there are no photocopies and printouts. And this is helping reduce the carbon foot prints as well.

8. They are easy to maintain

In traditional classroom, students have to spend a lot of money each year buying educational item such books and pens to name a few. Even, as they go up these cost increase as well.

However, with technology such expenses can be kept to the bare minimum. In these classes, all you need to do in

Conclusion

Catering craft as a profession is extremely technical, where a caterer need knowledge and skills to thrive as an entrepreneur who will be self employed and in turn employ others. Therefore, suitable methods are needed to teach the needed skills. The usage of Inquiring Based Learning, ICT Project based instructional technique, Jigsaw Co-operative Learning, Peer Tutoring and Reciprocal Peer Tutoring have been beneficial in enhancing performance in most skilled subjects. In addition the use of instructional technology cannot be underestimated.

Way Forward

1. Teachers of catering craft should be retrained so as to expose them to the emergent methods and technologies in teaching and learning
2. Technical colleges should be equipped with technological facilities to provide enabling environment for technological literacy among catering craft students.
3. Workshops and seminars should be organized by government and stakeholders in education to equip catering craft teachers with global practices in their field.

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