Review Paper*

Pivoting Culinary Arts Education During COVID-19 Part One: Setting the Pedagogic Scene

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Abstract

As culinary educators, we have a long history of teaching our craft within a hands-on, master-apprentice learning environment (Deutsch, 2014; Mitchell, Woodhouse, Heptinstall, & Camp, 2013). Since the dark ages, it has been typical for the trainee chef to physically stand by the side of their master and be guided in the development of their technical and cognitive skills (Stierand, Dörfler, & Lynch, 2008). Through the onset of COVID-19 in early 2020, the traditional 'hands-on' master-apprentice mode of learning was disrupted by lockdown and the inevitable distance learning. In response to this disruption, the Food Design Institute at Otago Polytechnic, New Zealand quickly pivoted its mode of curriculum delivery from on-campus, face-to-face learning to online distance learning.

This paper discusses the move to distance education in culinary arts and produces several strategies and considerations for vocational educators who wish to produce curricula and learning experiences that are student-centred and responsive to online learning environments. With the coronavirus remaining a critical factor within our immediate futures, developing strategies for delivering educational programs via distance is not only practical to develop but also necessary if we are to keep abreast of our learners' educational, social, and individual needs.

Keywords

Culinary Arts, Pedagogy, COVID, Disruption

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Introduction

This is the story of COVID-19 and the pedagogic response from the teaching in the Bachelor of Culinary Arts program at Otago Polytechnic, New Zealand. The story is split into two parts. Part One sets the scene of the Food Design Institute's approach to culinary pedagogy and focuses on a review of literature relevant to culinary education and distance learning. Part Two focuses on the response to COVID-19 as the teaching team transitions their pedagogy from on-campus Project-Based Learning (PBL) to an online connectivist pedagogy.

To begin the story, we return to the early days of COVID-19 and the Food Design Institute (FDI).

> *For weeks we had all watched COVID-19 ravage destruction around the globe. Yet, through our isolation at the bottom of the world, we never really believed COVID-19 would disrupt our daily routines or the ability to teach our students. This would all change at 3pm on Friday the 20th of March 2020, when the FDI staff were summoned to a meeting with a member of Otago Polytechnics teaching and learning team to discuss the possibility of a lockdown and the school's ability to move to distance learning. The mood in the room was fun and relaxed, with many staff only concerned about the perishable food items in the fridges and what would happen to them in the event of a lockdown. There were some initial thoughts bantered around about possibly utilizing Microsoft Teams and Facebook to communicate with the students, but in all reality, we didn't really know what to do, and there was no firm plan in place.*

*__Review Papers__ Review papers provide a balanced synopsis of the current literature within a specific area of inquiry. These papers summarize the literature comprehensively and identify outstanding questions and areas for future inquiry.

Setting the Scene of Traditional Culinary Arts Pedagogy

For centuries, trainee chefs have learnt their trade by standing at the side of their master and observing and mimicking their master's approach to their work (Deutsch, 2014; Mitchell, Woodhouse, Heptinstall, & Camp, 2013). This approach to culinary arts education is heavily applied in nature, with each step of the learning process typically guided by the practices and knowledge of the chef master. Through time, observation, and repetition, the trainee chef eventually acquires the technical and cognitive skills of their chef master (Stierand, Dörfler, & Lynch, 2008).

This approach to culinary arts pedagogy has changed very little throughout the centuries (Emms, 2005), with the master-apprentice methodology directing the learning process in many formal and informal sites of culinary education (Deutsch, 2014; Woodhouse, 2015; Woodhouse & Mitchell, 2018). It is within this learning environment that two critical factors occur in the skill and knowledge development of the trainee chef. The first is the development of the trainee chef's technical cookery ability, whereby trainee chefs apply their tools and techniques to transform everyday food items into commercially viable dishes. This skill is often developed through behaviourist pedagogies overseen by a chef master (Mitchell & Woodhouse, 2019).

The second area of skill acquisition is the trainee chef's cognitive development. This skill is often developed through the trainee chef applying their technical knowledge to solve everyday problems in a contextually appropriate manner. These culinary skills are often witnessed in culinary activities like organizing sequencing and timing of food production as well as having to adapt culinary techniques and recipes in response to ingredient and equipment availability.

Culinary Pedagogy at the Food Design Institute

Since 2007, the culinary programs at Otago Polytechnic have transitioned from the traditional master-apprentice pedagogy to a design-led Project-Based Learning (PBL) pedagogy. Like culinary arts master-apprentice pedagogy, PBL allows for technical skill and cognitive development; however, it allows for greater student agency and independent learning. The adoption of a PBL had been a pedagogic response to criticisms of traditional behaviourist and technocentric culinary education where the sole focus on technical skill development has often been at the expense of culinary arts students developing their creative problem-solving abilities (Hegarty, 2011).

As a teaching and learning strategy, PBL initially commences with a phase of heavy teacher guidance and direction before moving into a phase of students' self-regulated learning and knowledge generation (English & Kitsantas, 2013). In practice, this means the culinary arts teacher introduces technical skills and/or culinary concepts to the student before the student is given the opportunity to explore these skills or concepts independently. The PBL learning process concludes with the student reflecting on their learning (English & Kitsantas, 2013).

Adopting PBL at the Food Design Institute (FDI) has allowed the culinary teaching team to transition their approach to teaching from the sage-on-the-stage culinary master to the guide-on-the-side chef mentor. This is due to the fact that PBL is philosophically situated within the constructivist pedagogies of Dewey (1959), whereby the social and cultural perspectives that are unique to each student are integrated into the student's learning (Bell, 2010). By creating a learning environment that respected the unique nature of each student, Dewey believed that students would take a greater role in the ownership and motivation of their own learning (Swan, Garrison, & Richardson, 2009). As Dewey (1959, p. 20) once stated, "The educational process has two sides—one psychological and one sociological; and that neither can be subordinated to the other or neglected without evil results following."

As an approach to teaching and learning, PBL is an inquiry-based pedagogy that engages students in the acquisition and application of skills and knowledge through real-world projects that eventuate in authentic workplace artifacts (Thomas, 2000). Through this pedagogic approach, PBL has been proven to be effective in developing students' technical skills as well as their soft skills such as communication, collaboration, and creativity (Warren, 2016). These skills are often referred to as the 21st Century Skills and are considered fundamental to acquire if one is to successfully operate within the contemporary workplace (21st Century Schools, N.D.). It is within the PBL pedagogic environment that the culinary student is able to develop the full suite of professional skills and knowledge required to practice as a chef (Mitchell & Woodhouse, 2019).

Developing a PBL environment requires the educator to create authentic and real-world learning environments for the student to develop their soft skills (Warren, 2016). This means that PBL projects (and their associated assessments) require culinary students at the FDI to operate in a collaborative and creative manner to solve everyday, real-world culinary problems. FDI culinary arts projects often require students to undertake desktop

research (such as exploring new food culinary trends and culinary techniques via the internet) as well as applied research practices in the commercial kitchens where they create dishes and food products that are served to real-world customers.

As a student-centric pedagogy, PBL allows the FDI teaching staff to act as student learning facilitators while, at the same time, enabling the student's agency within their learning. FDI culinary arts students are encouraged to bring their cultural identity and food passions into their food projects, which help to socially and culturally develop students' culinary aspirations within the wider food landscape (Mitchell & Woodhouse, 2018).

PBL projects at the FDI typically culminate in students integrating their technical skills, culinary problem-solving skills, and collaborative skills to create culinary outcomes that have a real-world purpose within the community. This can be seen in culinary outcomes such as running food trucks at large events, designing and cooking food for pop-up dinners for charities, and developing new food products for the local artisan food community. When assessing the multiplicity of skills demonstrated by the culinary student, a holistic assessment philosophy is applied as it is a recognized means to value the diversity of skills evident in the student's work (de la Harpe & Peterson, 2008).

> *On the 25th of March at 12.21pm, the jovial mode within the school ended abruptly as the New Zealand government announced a national emergency and placed the country into a four-week lockdown. As hospitality professionals, we set about emptying the fridges and distributing the food amongst our students and community. Soon after, questions arose about our students and how we would best manage their learning via distance delivery?*
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> *Our immediate response was to connect with those within our teaching community who had previous experience in distance learning. We contacted Dr. Selena Chan, an ex-bakery lecturer and recognized leader in blended vocational education at Ara Institute of Canterbury, for advice. Selena provided us with some initial ideas to quickly transition our teaching, but more importantly, she pointed us in the direction of relevant distance learning literature to inform our teaching going forward.*

The insights from the advice we were given included the following.

Distance Education and Connectivism

Whether it is a book, radio, television or the internet, educators have used various mediums and modes to facilitate distance learning throughout the generations. Distance education (DE) has been a responsive means for teaching learners who, for various reasons, cannot engage in the traditional, on-campus learning environment. Throughout history, the various iterations of DE have been socially and culturally situated within the technologies and pedagogies of those who have developed it (Anderson & Dron, 2011). As technological advancements have evolved throughout time, the pedagogy of DE has also evolved in parallel (Anderson & Dron, 2011).

In recent times, DE has predominantly moved online and adopted interactive technologies, such as audio chat, digital text, video, and real-time web interaction. The transition of DE to online delivery modes has allowed educators to adopt connectivism, a pedagogy, where it is the educator's role to guide students to open-source information and help them navigate their way through this information (Anderson & Dron, 2011; Siemens, 2005). Within a connectivist pedagogy, students work in connected learning communities to seek out information online and share new knowledge with their peers (Siemens, 2005). As such, connectivist pedagogy is premised on the belief that the learning process is situated within a process of building networks of information, contacts, and resources that can then be creatively applied to real-world problems (Siemens, 2005). Furthermore, a connectivist pedagogy assumes that information is accessible and plentiful and that the learner's role is not to memorize or even understand all of the information. Instead, connectivism pedagogy believes that students need to develop the intellectual capacity to find and navigate knowledge and use it where and when it is required (Siemens, 2005). As Pecina and Marinič (2021) argue, while connectivism is still emergent within vocational education, its ability to facilitate constructivist pedagogies and problem-solving skills within online learning environments provides it with radically reformed vocational education.

An important aspect of connectivist pedagogy is that the decision-making process is based on rapidly changing foundations. Underpinning this position is the concept that new information is always entering the knowledge landscape; therefore, it is important to learn to draw distinctions between what information is and is not important (Duke, Harper, & Johnston, 2013).

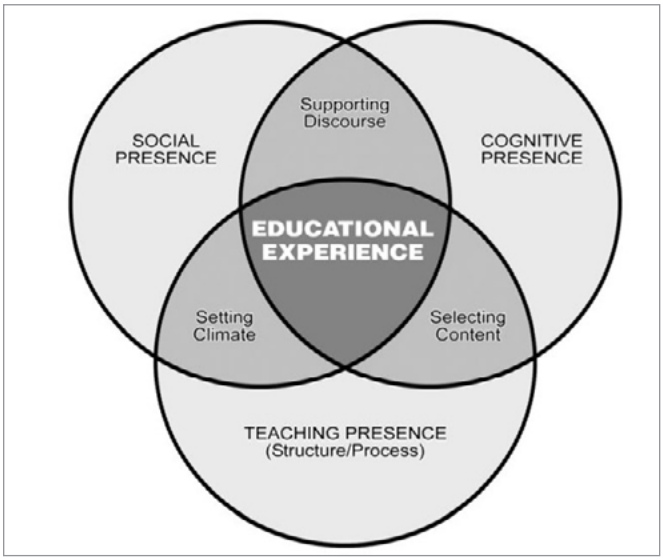
The Importance of Developing Students' Social and Cognitive Presence in an Online Learning Environment

One of the pedagogic challenges identified with distance learning is for the educator to design a learning environment that enables the development of the student's social and cognitive presence

(Lowenthal, 2010). As Archer (2010) argues, developing the student's social and cognitive presence within all educational contexts is important; however, it is particularly important within online DE environments due to the student's physical dislocation.

According to Garrison, Anderson, and Archer (2001), the construction of the social presence occurs when students connect with their respective learning community and engage in meaningful, open, collaborative, and cohesive discussions. Likewise, the construction of the cognitive presence occurs when students are able to construct new knowledge and meaning through shared discussions and debates (Garrison, Anderson, & Archer, 1999). Central to the development of a successful social and cognitive presence is the teaching presence of the educator (Garrison et al., 1999). Through the development of the teaching presence, the online educator is responsible for the design of the cognitive and social presences through facilitated discourse and instructional management systems (Garrison et al., 1999).

When developing online and blended educational experiences, Garrison, Anderson, and Archer (2001) recommended that effective educational design occurs when the social, cognitive, and teaching presences successfully overlap. Garrison et al. (2001) have framed this theoretical position as the Community of Inquiry (CoI) model whereby students learn to work collaboratively to create new meaning and mutual understandings through open dialogue and critical reflection.



(Online Community of Inquiry Model from Garrison et al. 2001)

Similar to PBL, the CoI pedagogic model is situated within the philosophy of Dewey and consistent with a constructivist approach to learning (Garrison, 2007). Dewey's perspective on pedagogy was that the social and cognitive aspects of a student's learning were central to their success (Dewey, 1959). Students' social and cultural considerations are evident within a PBL environment (Bell, 2010) as well as the CoI model of practice (Swan et al., 2009).

Online Student Motivation and Feedback Mechanisms

Motivation has been described by Turner and Paris (1995, p. 217) as the 'engine' of learning. Motivation can influence what students learn, how they learn, and even when they choose to learn (Schunk & Usher, 2012). Ryan and Deci (2000) further argue that motivated learners are more likely to undertake challenging learning activities, be actively engaged in class, and adopt a deeper approach to their overall learning. By tapping into a student's motivation, teachers often witness enhanced student performance, task persistence and expressions of creativity (Ryan & Deci, 2000). Nevertheless, keeping students engaged and motivated within online learning environments has been identified as one of its most significant challenges (Hartnett, 2016).

Online students are more intrinsically motivated than their on-campus counterparts (Wighting, Liu, & Rovai, 2008), yet online learning still has a higher student dropout rate compared to similar face-to-face courses (Park & Choi, 2009). One of the key reasons for higher dropout rates within online learning environments is that students often experience feelings of isolation (Paulus & Scherff, 2008). One of the best ways to alleviate feelings of isolation in online DE is to provide regular and personalized feedback to learners (Savvidou, 2018). Savvidou (2018) suggests that this feedback should focus on the students' strengths and accomplishments while at the same time offering constructive criticism for student improvement. Savvidou (2018) further comments that accessible, focused, and motivating feedback is also critical for student success in an online learning environment.

Discussion

The following literature is only but a fraction of the knowledge which exists within the domain of distance education. It is the immediate literature that we drew upon as we hastily moved our teaching into an online mode. Still, it provided us with a pedagogic direction as we were forced to transition our pedagogy from PBL to connectivism within a rapidly changing world. What, at first, appeared as a threat to 'our way of doing things' soon turned into an opportunity to reposition our future teaching and learning practices. As a teaching team, we quickly realized that there were many overlaps between our traditional on-campus PBL pedagogy and online connectivism pedagogy. Central to these overlaps was

the CoI pedagogic model, which provided us with the theoretical framework to redesign our students' projects to ensure their social and cognitive learning needs continued to be met.

The online learning literature taught us that we needed to develop strategies to foster student interaction and critical debate and that timely, responsive teacher feedback was important in maintaining student engagement. Subsequently, research by Mulyatiningsih, Palupi, Ekawatiningsih, and Firdausa (2021) on culinary arts students' satisfaction with online synchronous and asynchronous learning during COVID-19 in Indonesia also noted that 93.6% of students preferred the blended learning approach to traditional face-to-face learning. This insight also supports the research of Brown, Mao, and Chesser (2013), who conclude that offering asynchronous (in this case, watching dish demonstrations online before class) and synchronous (students preparing the dishes in the classroom with lecturer supervision) options increase student satisfaction and outcomes.

Finally, with the hospitality sector in New Zealand now turned upside down, our attention needed to focus on how we could redesign our culinary projects so that students could still possess a sense of purpose and a sense of direction within their chosen profession.

In Part Two of this narrative, we recall the response from culinary teachers to meet the learning needs of the students and the changing priorities of the industry using a story-telling approach. As the classrooms emptied and the students dissipated to the solace of their homes, it was time to reimagine what 21st Century culinary education might be.

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