

# Disruption as a Way Forward: Resilience and Adaptation to Prepare Bakery Students for the Future

Noel Remacle

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Correspondence: [noel.remacle@toiohomai.ac.nz](mailto:noel.remacle@toiohomai.ac.nz)

Practice Paper



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Contact:  
[epress@unitec.ac.nz](mailto:epress@unitec.ac.nz)  
[www.unitec.ac.nz/epress/](http://www.unitec.ac.nz/epress/)  
Unitec | Te Pūkenga  
Private Bag 92025, Victoria Street West  
Auckland 1142  
Aotearoa New Zealand

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## ABSTRACT

Ever since the first humans accidentally mixed grains with water to ferment dough, the bakery profession has embraced social, cultural and political disruptions to advance its understanding and practices. During the last five years, the Level 5 Bakery Programme at Toi Ohomai has employed project-based learning (PBL) pedagogies to create real-world learning environments and provide baking students with 21st-century skills. In March 2020, Covid-19 created significant disruptions to this learning environment, with the programme and its learners being forced to quickly pivot their traditional practices to ensure contemporary and pedagogically responsive learning continued. Here, I discuss anecdotal findings around PBL and the work-ready preparedness of bakery students in a post-Covid landscape, with broader implications for PBL environments and responsive pedagogy.

## KEYWORDS

Project-based learning, vocational study

## INTRODUCTION

Learning outcomes are crucial in shaping the educational content and assessment methods used in courses, as they ensure that courses remain relevant to industry requirements. In vocational subjects, hands-on assessments are commonly used to teach these outcomes, with the teaching environment simulating scenarios that closely mimic work environments. In the Level 5 Diploma in Baking at the institution at which I teach, there are two overarching learning outcomes:

- Prepare, bake, and present/sell a specialist range of baked bread products based on traditional production techniques.
- Plan for and lead a team in a bakery, complying with current legislation and safe work practices.

As a third-generation European baker-pâtissier with 36 years of experience owning businesses, leading teams, managing bakeries, working in boutique establishments, and teaching for six years, I seek to emulate the essence of the baking and pâtisserie experiences and scenarios that are central to this industry. However, the Covid-19 pandemic presented an unprecedented challenge as the campus was locked down, disrupting the teaching process. The institute had to adapt to ensure that the learning of students was not compromised, which involved teaching more theory-based content online.

When the lockdown period ended, assessments had to be conducted in a socially distanced configuration to emulate the 'new normal' under Level 2 restrictions. The following year, under Level 3 restrictions, which the government described as 'Restrict' in their Covid response system (New Zealand Government, 2022) the teaching team had to be creative and responsive, given that the pandemic was expected to remain a challenge in the future. This paper provides an overview of how these challenges were met under the different levels of lockdown. Many businesses and bakers had to learn to adapt quickly to changes in supplies, numbers, deliveries and people power, as well as compliance, adaptation, community support and mutual aid due to the pandemic.

## BACKGROUND

The evolution of baking has been marked by disruption, beginning with the accidental discovery of fermented dough through the mixing of grains and water by humans (Baking Industry Research Trust, 2021). Through these disruptions, bakers have continuously adapted their practices to navigate new challenges and arrive at a new place of practice. Drawing on the histories and traditions of baking, I have personally witnessed these disruptions and heard the stories passed down by three generations of bakers in the family. One notable disruption occurred during World War Two, when my grandfather and his peers risked their lives to source flour on the black market and bake bread for the Belgian Resistance after their bakery was bombed, resulting in the setting up of makeshift and 'underground' bakeries. These stories demonstrate resilience, hard work, adaptation and problem solving in response to various scenarios beyond their control, leading to the baking of different kinds of bread and other products.

Another significant disruption was the era of general stores and supermarkets. While less dramatic, this disruption had a troubling impact on the livelihoods of numerous bakers (Blythman, 2004). I witnessed this first-hand as the son and grandson of bakery owners. This period marked a pivotal moment in the evolution of the industry, as it brought about a new wave of consumer convenience and choice, with the availability of pre-packaged and processed goods, including baked goods. This shift away from traditional methods and locally sourced ingredients presented a formidable challenge for bakers, who were compelled to adapt to the changing demands of the market to remain competitive. As such, the rise of general stores and supermarkets had far-reaching implications for both bakers and consumers, underscoring the ongoing evolution and transformation of the baking industry over time. Once again, bakers were forced to reinvent themselves in various ways to counter these challenges and ensure their survival.

The Covid-19 pandemic brought new challenges through disrupting the practice-based learning (PBL) (Thomas, 2000) landscape of our bakery students, as well as its impacts on the wider industry. The quote "LIFE IS PAIN au chocolate" (INDEPEST, 2021) resonates with me on many levels. It suggests a humorous way of looking at life's challenges by adding the phrase 'life is' to the name of a classic French pastry, the pain au chocolat. The intricate layers of the pastry require effort, much like adapting to difficult situations in life. This interpretation emphasises the importance of finding joy and humour in tough times, and reminds us that life is not always easy, and adaptation is a very important tool.

## IMPLEMENTING THE NEW LEARNING ENVIRONMENT

The bakery industry already faces significant staffing shortages, and adapting to the pandemic has presented additional difficulties. However, by introducing innovative training methods, we can demonstrate that resilience comes in many forms, and problem-solving is one of them. Adaptation and creative thinking are also forms of resilience, and witnessing first-hand how to make the most out of difficult situations can be highly beneficial to students in training. Moreover, being able to work with technology beyond the realm of baking, such as generating order sheets and delegating packing and delivery under unique circumstances, is a valuable skill that students can develop and they had the opportunity to experience a good example of PBL in the 21st-century teaching model (Stauffer, 2022).

As educators, we were faced with a situation that required problem-solving skills not related to the wrong ingredient in a recipe, but, rather, how to handle the unexpected challenges that arose due to the Covid-19 pandemic. Specifically, we had to determine how to proceed with Level 5 Diploma in Baking assessments while incorporating in-person, practical assessments and ensuring that our PBL students were not compromised.

The Level 5 Diploma in Baking required 20 students to plan, lead, and operate a bakery shop on campus, with on-campus staff and students serving as consumers. Under Level 2 restrictions, social distancing measures were implemented, including one entry and one exit point for the sales counter. However, during Level 3 restrictions, social distancing was no longer an option. To address this challenge, we considered the 'click and collect' model,

which is a form of contactless selling where businesses receive online or telephone orders, prepare them at a specific time, and have customers pick them up at a designated spot. This model was inspired by supermarkets, which were already running a similar model before the pandemic. We decided to implement this model with our students as a real-life learning experience that would prepare them for the world they would graduate into (Chan, 2011).

We announced on the school platform (an online service where students and staff can follow what is happening on campus grounds) that the students would still operate the shop, but in a click-and-collect configuration. Students were responsible for preparing orders, arranging pick-up times, handling safety measures, managing their appointed staff, and managing food orders and production. The students were required to record the events during the assessment and provide an e-portfolio with photo evidence of how they resolved problems and managed other situations.

To evaluate the effectiveness of this new assessment approach, I observed and recorded the events in the classroom during the teaching and learning experience, by keeping notes and taking photographs. The results of this evaluation, including how our students responded to the reinterpretation in assessment, working conditions and supply chain, are discussed in detail below.

## RESULTS AND OBSERVATIONS

During our collaboration with the students, we observed and documented their problem-solving abilities, individual resilience and teamwork, which shone through even in challenging situations. All the students had positive reactions to the changes, as these allowed them to submit their assessments within the designated timeframe, eliminating the need for deadline extensions. By analysing and recording the events that took place throughout the project, we were able to gain insight into the students' responses to the modified assessment, working conditions and supply chain.

We saw numerous examples demonstrated in the new teaching initiative, such as students communicating very well, and delegating and working as a team as they had to:

- Take the orders.
- Calculate the recipes for the expected yields.
- Work with no waste, as they had the exact yields given.
- Delegate the packaging and labelling, and make sure orders were ready on time, as customers had given pick-up times.

Having the students being able to witness these situations first hand while still being in training was beneficial in showing them how important it is to be adaptive, creative, problem solving and resilient. I received feedback in the form of emails from students, after the assessment, acknowledging that this had given them the opportunity to finish the assessment in the required time, which would not have been possible without the click-and-collect system. Two notable emails are quoted below:

Student 1:

*"I am writing to inform you about how utilising the click-and-collect method has facilitated the completion of my management assessment. Due to the Covid-19 lockdown, my focus on completing the assessment had dwindled, and I was struggling to complete it while simultaneously adjusting to the requirements of the next term.*

*The click-and-collect method not only allowed for the efficient filling of orders but also enabled us to work collaboratively to ensure the accuracy of each order. Furthermore, this process helped to reduce the wastage of unsold products by providing an avenue to continue selling our finished products. As time progressed, our group's ability to fulfil orders has improved significantly, and we have become more adept at working efficiently."*

Student 2:

*"I am writing to express my belief that implementing a click-and-collect system would be a highly effective means of conducting daily operations not only for Level 5, but also for other departments and levels within the kitchen.*

*There are several compelling reasons why I hold this belief, which I would like to outline below. Firstly, the ordering process is simplified and streamlined through the use of a click-and-collect system, resulting in increased efficiency and productivity. Additionally, health and safety standards can be more easily upheld, as there is no need to set up tables or other equipment that may pose a risk. Furthermore, this approach enables customers to order larger quantities, while maintaining appropriate physical distance during the ongoing Covid-19 pandemic.*

*Finally, utilising a click-and-collect system ensures that customer orders are prepared and packaged with utmost care, in accordance with health and safety protocols. I believe that this would lead to increased customer satisfaction and loyalty, while also facilitating smoother and more effective day- to-day operations within the kitchen."*

As a tutor, the ability to train students in technology proficiency is regarded as a favourable opportunity. This is particularly relevant in situations where the technology can be utilised in tasks outside of the culinary domain, such as the creation of order sheets and the delegation of packaging and delivery responsibilities in specialised conditions. Such training can enable students to develop skills that are applicable in a diverse range of contexts and enhance their overall employability. For example, receiving online orders, having to collaborate on setting up a workplan, sending food orders through the technician, and all that from home in a lockdown situation without being in the same room to communicate. These are transferable skills that can be used in many industries as well as in a teaching environment, combining homework with practical situations, without any physical contact.

## THE CHANGE IN PROCEDURE – DISCUSSION AND CONCLUSION

Disrupting habitual teaching practices had surprising results. Embracing a change in our usual teaching procedures was successful, and the adaptations from our usual teaching model ensured we prepared bakery graduates with relevant skills even in a pandemic landscape. Baking is already facing a large shortage of staffing and, having to deal with these extra measures, the industry is struggling. Training people with innovative alternatives shows them that being resilient does not only mean being tough, but that resilience also comes in other forms, and that problem solving is in its own way a resilient thing to do (Hayes, 2020).

The importance of the "4Cs" in 21st-century learning (Levin-Goldberg, 2021) are perfectly aligned with the baking industry, as well as being essential for modern learning environments. These 4Cs are:

- Critical thinking
- Creativity
- Communication
- Collaboration

These were demonstrated during the adapted assessment in the following ways.

- **Critical thinking:** How are we going to set up our bakery space inside the campus to be able to do contactless serving? (It was up to the students to work that out.)
- **Creativity:** Select the packaging compatible for small and big orders, how to advertise it on the institute platform, how to register the orders.
- **Communication:** Get the food orders to the technician for ingredients, delegate the jobs between each other.
- **Collaboration:** Pack everything when products are made and cooled, have it all in named bags and boxes, ready at the exact pick-up time.

To conclude, I can say without doubt that the arrival of Covid-19 inadvertently provided a great opportunity for implementing new initiatives into the Level 5 Bakery classes. Embracing the impacts of a fluid and ever-changing 'obstacle' – the pandemic – and responding to and overcoming those challenges provided real-life scenarios as impactful as those responded to by bakers throughout history. The modern iterations of learning in the form of the 4Cs model, paired with resilience and problem solving, are the perfect combination to set our students apart when applying for jobs and starting their baking careers (Bente Elkjaer, 2006). The hard and soft skills they were taught in response to the lockdowns we found ourselves negotiating, and that the students embraced and excelled at, are also very transferable skills that will stand them in good stead no matter what path they choose to follow in life.

The present discourse is aptly summarised by the sagacious words of John Dewey. As a prominent philosopher and educational reformer, Dewey's insights continue to resonate in contemporary scholarship. His notable aphorism encapsulates the essence of the preceding exposition, and serves as a fitting coda to the ideas discussed herein: "The interaction of knowledge and skills with experience is key to learning" (Dewey, quoted in Sengupta & Blessinger, 2022).

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## AUTHOR

Noel Remale is a Senior Academic Staff Member teaching Bakery and Pâtisserie at Toi Ohomai | Te Pūkenga, with 43 years' experience in the pâtisserie field, including a role as a product developer for Guylian chocolates. Other roles have involved managing bakeries, and training managers and chefs, and his career has taken him from his homeland of Belgium to Paris, Dubai, Abu Dhabi, Alexandria, Shanghai, Seoul, Sydney and now Aotearoa New Zealand.