ASSESSMENT FOR THE CHANGING NATURE OF WORK:

TRAINING COOKS FOR MENU CHANGE IN A RESTAURANT CHAIN

Arthur Chia
Annie Karmel
Helen Bound

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IAL
institute for
adult
learning
singapore

Centre for Work and Learning

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Preamble

This is ONE of the six cases on assessment practices and the changing nature of work, undertaken by the Centre for Work and Learning (CWL). Each of the six cases highlights different aspects of innovative approaches to assessment, their possibilities and the challenges involved in assessment for, through and at work. Each case suggests different strategies, tasks and/or practices in assessment that can enable **meaningful** and **engaged learning.**

In this case study, we examine the training and assessment practices of a restaurant-chain organization, and analyse what cooks learn and how they learn to prepare newly launched menu items that meet certain standards or criteria set by the organization's chefs who design the menu as well as train and assess the cooks. Investigating the learning process enables the researchers to analyse feedback – an important aspect of formative assessment – and opportunities for sustainable assessment as well as summative assessment (all these different forms of assessment are explained below and in detail in the report). This case shows that the mastery, knowledge and skills of cooking cannot be boiled down easily into separate tasks. It also highlights the challenging business environment in which learning and assessment are situated. These findings suggest that in designing and implementing assessment for business concerns and vocations such as cooking, one needs to take into account the context of professional practice, organisational setting and nature of work, and its relationship with learning and assessment.

Figure 1: Learning and assessment are entwined

Source: http://www.123rf.com/photo_3706214_stock-photo.html

We think of assessment not as the "test" of what has been learnt at the end of a learning programme, course or set of experiences, but as **judging performance**. We go back to the original meaning of assessment which is "to sit beside". This means that we can think of assessment as working *with* our learners to guide them to meet the required performance. If we understand assessment like this, then learners also need to understand, to know what that desired performance is. In other words we do not hide from them the criteria or expected performance standards. So in other words we are talking about formative assessment – assessment *for* learning. We also acknowledge that assessment of learning – summative assessment – is necessary for accreditation and certification. The question is how we weave these two forms of assessment together. Examples are provided in some of our six case studies. We also discuss this in detail in our full report:

"Assessment for the changing nature of work", available at <url>, as are copies of the other case studies.

In addition to summative and formative assessment we introduce another purpose of assessment – sustainable assessment. Sustainable assessment equips learners not just for meeting, but preparing them for what might be required in the future, beyond the course and/or training. It includes "the capacity to evaluate evidence, appraise situations and circumstances astutely, to draw sound conclusions and act in accordance with this analysis" (Boud & Soler, 2016, 402).

These three purposes of assessment and the fact that we investigated assessment in the light of the changing nature of work, mean we also need to think of learning and assessment differently. Assessment serves different purposes including the testing of knowledge and learning yet "testing" need not be the sole purpose. When we think of assessment as only a test of the learning and/or something that happens (sequentially) after the learning, then we are separating assessment from learning and ignoring the fact that learning and assessment are very much in a "dialogic relationship" or **entwined together.** Figure one metaphorically illustrates this entwinement.

In the case studies, we describe what the course/programme/training is about and examine assessment in relation to curriculum design, implementation and the ways in which understanding, accomplishment and performance are achieved. We hope the case studies provide a glimpse into the different ways assessment has been carried out in design, planning and implementation for practitioners, researchers and policy makers. We hope that they highlight possibilities and contribute to new ways of thinking, designing and implementing assessment of, for and as learning. Different conditions and situations (context) will offer different kinds of opportunities for meaningful assessment.

The six case studies are:

- Workplace learning facilitators
- Firefighting: Rota commander course
- Menu change in the food and beverage sector
- Resident doctors
- Aircraft engineering programme
- IT network engineers

1.   Introduction

"The reality is survival" (Charlie, Training Manager).

This case-study focuses on the learning and assessment practices in a restaurant kitchen setting of a restaurant-chain operator based in Singapore. The character of the restaurant kitchen is typical in Singapore's food and beverage (F&B) industry with a multi-national workforce, global supply chain and variety of cuisine planned, produced and served. This case is set amidst wider economic re-structuring and labour crunch within the F&B industry. In this write-up we look at some of the teaching, learning and assessment practices that have been designed and used to support professional cooking in a restaurant kitchen environment. We examine how the restaurant-chain trains and assesses its cooks on a set of "menu-change" items. One of the challenges that the restaurant-chain encounters is how to achieve the standard for "taste" in their new dishes or menu-change items, and how learning and assessment could be designed to support the cooks' capacity for getting the/their "taste" right.

Based on observations in the kitchens, interviews with learners, trainers, assessors and training manager, and review of assessment documents, the case-study seeks to:

- Describe the assessment practices in professional cooking, under challenging conditions of work and learning, and the formation of learning experiences;
- Explain some of the elements of the assessment criteria and core competencies, for example "taste" as standard of performance and mastery of skill and knowledge;
- Suggest ways to support the learning of "taste" through formative assessment practices.

1.1   Background: training and assessment for menu change

To fulfil operational needs like menu changes and quality assurance, the restaurant-chain conducts its own in-house training and assessment sessions for cooks who are deployed at the various restaurant outlets. The design of the training and its content are an ongoing and evolving endeavour. The training manager who is responsible for learning and assessment also wears multiple hats as the company's Marketing and Human Resource Director, and he works with the Development Chefs who plan and design the menu as well as teach and assess the cooks. Both workplace and work-based learning models have been used, modified and experimented in tandem with developments and perennial challenges in the industry such as rising costs and manpower constraints.

The goals of the training are to enable cooks to deliver the desired quality and consistent standards of newly launched (or modified) menu items in a timely manner. The cooks are expected to achieve the same aesthetic and taste criteria or standards as the Development Chefs. The training goals and learning outcomes are conceived with fundamental business concerns in mind like meeting customers' needs, business costs and resource constraints. The thinking about outcomes begins at the stage of planning and designing of the new menu, and rolls into training and final delivery of the new dishes:

> *When it comes to training (policy), I think in terms of customer needs: they want quality food, consistent standards, and during lunch time they want to be done very fast. So as far as the cooks are concerned, it is not just about the cooking and learning per say but finding a way to make it easier for the cooks to learn and to improve cooking efficiency. We usually look at the process and workflow with a bit*

*of redesign here and there. And when we develop certain products/menu items; the cook is at the back of our minds – we think about how to make it easier for our cooks to learn [these new products/menu items] , how are they going to deliver quality food within the time required or expected by customers, and maintain consistent standards. We would love to be very well-defined whether its 'competency based' or 'task based' etc. but it is so difficult right now. I think for me it is more of a customer needs based because manpower is so tight. And we do have concerns because in Singapore the rental and manpower costs are a killer. Our food costs we can still manage (*Charlie, Training Manager).

Based on these intertwined concerns of business demands and training needs under trying market conditions, and the dialogic nature of learning and assessment where policy/strategy/performance and outcomes are iteratively determined, the training strategies, outcomes and expectations (of training) are also constantly changing. The perspective of training managers like Charlie towards training/learning and assessment is a highly pragmatic, adaptive and experimental one rather than based on altruistic principles, high values or idealistic assumptions about learning.

Given these challenges, our study highlights the need (for designers in particular) to attune professional training and assessment with the different but entangled purposes of business and training/learning, the highly situated and embodied modes of learning and cooking within the constraints of a production kitchen. These dilemmas and entanglements confront Charlie as the primary training manager who wears multiple hats. Charlie has to juggle different needs and priorities of the business, training/learning and cooks' welfare. He continuously seeks different methods and ideas as well as ways of thinking to develop and drive training/learning and assessment in the workplace.

1.2   Observations of Assessment and Learning Practices

The training of cooks for a new promotional menu takes place at the restaurant-chain's centralised research and development (R&D) -cum-training kitchen. The R&D-cum-training kitchen is located in an industrial-commercial complex. This is a one-day training session conducted by the restaurant-chain's Development Chefs who teach and assess the cooks' performance during the training. Development chefs are primarily responsible for the development of (new) menu items. They also train the cooks on the preparation of these new items/dishes (see Appendix 1 Field-note observation of training session).

By conducting training in the R&D-cum-training kitchen, the intention is to provide a conducive and uninterrupted space for the cooks to learn better. But there is also the 'cost' involved in pulling these cooks away from the outlets for a full-day of training because they play a vital role as the overall in-charge of the outlet kitchen, which typically comprises of a lean crew of two junior cooks with two to three part-time kitchen assistants. While the cooks might have been away from the crucial lunch-time crunch, they still have to return to the outlet after training to prepare for the dinner crowd. From a business perspective, the offsite training 'costs' include productive man-hours lost (for lunch), and from an employee welfare perspective it uses up the cooks' rest time (between lunch and dinner), entailing additional commute time and resources for them.

The training can also be quite a stressful experience for the cooks who are put under the spot-light and scrutinized by the Development Chefs and their colleagues from other outlets. During our observation, we noticed the overall mood to be friendly, and the learners were

cooperative and highly supportive of each other. There was an easy camaraderie (rather than competition) where the learners helped each other out with the smaller tasks such as washing the utensils, laying out the plates, and wiping off the kitchen counter.

Figure 1 shows the training process, activities and points of assessment at pre- and post-menu launch: the Development Chef-led presentation/briefing and demonstration are meant to show learners the new recipe; to introduce the ingredients used, and to instruct and/or reinforce some fundamental cooking techniques and procedures used in the new recipe. The learners are expected to be in attendance throughout the training session; they have to demonstrate what they observed and learned from the Development Chefs' cooking demonstration, and they are expected to teach their colleagues in the outlet kitchens what they have learned at the training session. Once the new menu items have been launched, the Operations Chefs and/or Development Chefs would visit the outlet restaurants to conduct on-site assessment on the cooking, and also to address operational issues such as supplies and other logistic matters for the new menu items. According to the Training Manager Charlie, the current training and assessment process which gathers learners at the R&D-cum-training kitchen is a change from the previous process where the Development Chefs would visit the individual outlets to teach and assess the cooks.

Case 2 F&B menu-change training

2. Intent of course and assessment design

Assessment is an important component of the training. The learner's performance is "formally" assessed by the Development Chefs who fill out an assessment form/document. Learners are scored on a continuum along a 5-point scale on the horizontal axis. On the vertical axis, the criteria for evaluating the standard of work are as follows:

- Ability to demonstrate food preparation before actual cooking;
- Ability to follow steps and processes in the recipe;
- Ability to plate/present dish according to recipe standards;
- Ability to complete dish under the required time,
- Dish meets taste test of the assessor.

The assessment criteria relate directly to the fundamental knowledge, conduct and skills required as a cook in a restaurant chain. That is, as a chain there are pre-prepared items supplied to the kitchens (prepared by the Development Chefs) to which cooks add fresh ingredients, and make up pre-mixes. Thus assessment criteria constitute factors against which "performance" is being evaluated at a basic level for cooking in a professional kitchen. Even though the criteria are written using verbs such as "to demonstrate, to follow, to present, to complete", what is taught and assessed are individual tasks and atomized knowledge as presented in the Development Chef's cooking demonstration.

The assessment documents functions primarily as a record of the cooks' learning. It is filled in by the Development Chefs/assessors after each cook has completed his/her assessment. The purpose of the assessment is summative: it seeks to evaluate learner's cooking ability broken down into task components like getting organized, observing hygiene rules, following recipes, and completing on time, but it also includes a judgment based component which is the quality of the final product or dishes in terms of aesthetics and taste. The assessment scores are tabulated and submitted to management for review and record-keeping.

Assessment needs to satisfy three different but intertwined needs or priorities of the organisation/company: first, it functions to enable accountability and compliance with company regulations. Here is an excerpt from an interview transcript:

> *'Interviewer: Can you tell us more about what you use the (assessment) documents for? Are the feedback and results given back to the learners?*
>
> *Charlie: Actually, sometimes it is (used) like a so-called penalty tool. For instance, when they come for training there's a form they have to fill up. Then in the event that one day a customer complains about your food saying that it is no good, so what I do? I go back to the (form) and check to see if this guy is in the training list or not, if not why not? So it enables me to go back and find out what's going on you see. Then I investigate and realise - oh, manpower issue, no choice: this guy just came on-board and was (immediately) put into the kitchen without any training. How? So how do you determine what went wrong – is it the system? It's more towards that (rather than a learner or training issue). But it's also a deterrent for our operations and staff. The staff knows that somebody is watching so he/she jolly better be doing his/her job well, make sure that everything is properly done, this and that.' (Charlie, Training Manager).*

Second, assessment is envisaged to help or enable the cooks to improve and/or become better in their job. Charlie the Training Manager expressed training and assessment to be developmental. He said, '*I always feel that once you train them, you assess them, (to me) assessment should be a build-up rather than a final sort of thing*'.

Third, Charlie highlighted issues about the 'loss' of know-how and investments made in learning/training when a trained staff member leaves the company. Faced with these challenges, he surmised that the least training and assessment could do is to achieve its summative goals of testing and thereby making sure that the cooks are able to do their job:

> *'My staff keeps on changing. So how? And do they transfer learning down the line? They don't. So when they leave, they leave. Can the other staff come another day for another training done by the chef? Not possible. So assessment to us is this: it must ensure that whatever we teach the learners, we make sure that they know what they are doing, and we leave it as that first' (Charlie, Training Manager).*

The visible, named assessment is the summative assessment. However, in our observation, we found that there were more formative aspects of assessment that took place outside of this formalised (summative) assessment structure: the Development Chefs were coaching the cooks by closely observing, correcting and reminding the learners on the spot as they were cooking, and the Development Chefs sometimes re-demonstrated certain steps and techniques that the learners might have done wrongly, and the Development Chefs were also constantly tidying, making space and fixing the order of things for the learners.

We also noted that meeting the taste test (final criteria on the assessment document) is one of the most vital but most challenging 'thing' to teach and learn, and it poses a challenge for assessment – what is "taste"; how is it learned, and how can it be assessed? Taste as a form of knowledge

highlights the different modes of knowing/learning involved in assessment. It cannot be boiled down to categories of skill and knowledge, and its learning cannot be easily distinguishable from the learner and that which is learned. Cooking like other types of skilled work such as masonry and carpentry is *"communicated, understood and negotiated between practitioners largely without words, and learning is achieved primarily through observation, mimesis and repeated exercise"* (Marchand, 2008, p. 247). The "know-how" of cooking is not easily conveyed through formal teaching/learning processes or outside of the professional kitchen setting. Much of what the chefs and cooks do, know and learn is tacit in nature – the work that they do and the knowledge they possess are intuitive, cannot be described easily, and is highly contextualised. For example, the nature of "knowledge" such as taste is not limited to or reducible to some "thing" that could be easily codified and demands different modes of understanding and raises questions about "standards" as (valid) indicators of competency and performance, and/or drivers and factors of learning in different production settings. The concept of embodied learning which highlights the significance of the body as (socially) constituted and malleable is helpful in thinking (differently) about learning and the notion of tacit 'knowledge'.

Because taste is embodied and requires learners to be able to discern for and by themselves, effective assessment should therefore not only entail opportunities for learners to observe, mimic and practice repeatedly (as indicated by Marchand, 2008 above), it should also aim to help learners foster a better understanding of their own capabilities and standards (of taste), and for learners to '*draw on whatever they need to continue learning effectively beyond the end of the course and be able to make judgements about their own learning outcomes*' (Boud & Soler, 2016, p.2).

3. Formative Assessment of Taste

As highlighted in the previous section, there are moments that constitute assessment for learning but these may not have been formally structured into the assessment process or document. There are aspects of teaching for learning that provide direct and immediate feedback to the learners, a key aspect of assessment *for* learning. This feedback occurs outside of the summative assessment even though the process of the summative assessment structure creates affordances for assessment *for* learning. On one hand, Charlie and the Development Chefs "commiserate" about the profound difficulties in capturing and conveying "taste", and they voice concerns about training and ensuring knowledge and standards (of taste) in their restaurants. On the other hand, they express reservations whether taste could be trained, learned and assessed through curricula design and assessment practices. "Taste" highlights for learning and assessment the issue of judgement as a form of assessment that transcends competency, and it is perhaps not well-considered within a cognitive-behavioural oriented assessment system. While standards of taste are to be achieved and could more or less be easily incorporated into assessment criteria, taste as a form of knowledge or concept and core competency is not so easily grasped.

The following sub-sections suggest opportunities for *sustainable assessment*. We therefore also address concerns about developing these other aspects of "taste" as knowledge and competency.

Sustainable assessment

Sustainable assessment equips learners not just for meeting but preparing them for what might be required in the future, after graduation. Sustainable assessment includes 'the capacity to evaluate evidence, appraise situations and circumstances astutely, to draw sound conclusions and act in accordance with this analysis' (Boud & Soler, 2016, p.19). The qualities of judgement that need to be developed are similar for students and for teachers; it is only the subsequent ends to which these judgements are put that differ. Key elements of developing informed judgement from the perspective of the students include: (1) identifying oneself as an active learner; (2) identifying one's own level of knowledge and the gaps in this; (3) practising testing and judging; (4) developing these skills over time; and (5) embodying reflexivity and commitment. Sustainable assessment demands that learners make conscious comparisons between self-assessments and assessments by teachers, peers and other stakeholders, and that responsibility for the assessment process must gradually shift from the teacher to the students, because, after graduation, people themselves need to drive their own learning. (Boud & Soler, 2016)

3.1 Authenticity

Authentic assessment involves a focus on:

- performance (Darling-Hammond, 2014);
- students using and applying knowledge and skills in real-life settings (e.g. simulation of role play of a scenario, completion of a real-world tasks or assessment in a workplace setting) (teaching.unsw.edu.au; Mueller, 2016)

As such it involves higher-order cognitive activity and the collection of direct evidence of performance (Darling-Hammond, 2014; Mueller, 2016; teaching.unsw.edu.au).

Holistic Outcomes

Assessment that focuses on holistic outcomes aims to embed the ways of being of the occupation (including wider ethics and values of the occupation), and provide opportunities to integrate concepts, experience, develop language and deep understanding.

It emphasizes performance broadly conceived as ways of being, for e.g. use of relevant senses, appropriate professionalism, 'soft' and 'hard' capabilities etc. appropriate to the scope of the intended learning.

For the cooks in this case study, assessment took place in both a simulated environment – the research and development kitchen – and in the workplace. Assessment was authentic. The following provides the details of this authentic assessment as well as highlighting the nuances that need to be attended to in assessing authentically in this environment. The first of the nuances is that in order to reflect the 'real-world' it is necessary to 'know' the practices and the context in which these practices take place. Another nuance is the difference between whole task assessment – an important aspect of authentic assessment - and breaking down the task in small components. Every task can be broken down into its components but authentic assessment needs to focus on the whole.

Assessment mirrors closely the kind of learning that typically or "traditionally" takes place in a busy restaurant kitchen where learners observe the masters, participate in the kitchen, learn certain skills or specialise in certain aspects of cooking. The cooks carry-out cooking under the watchful eye of more senior and experienced staff who control the work flow, instruct the team, and are able to take prompt corrective actions. But unlike professional kitchens in which the work is highly segregated and task-oriented, for example in a Chinese restaurant *where 'the wok guy is a wok guy, the dim-sum guy is a dim-sum guy. You tell the dim-sum guy to hold a wok is like (gasp) – no!' (Charlie, Training Manager, designer)*, the cooks in this restaurant-chain have to "multi-task". They are expected to master all the dishes on the menu, demonstrate ability to handle a variety of ingredients from garden greens to pasta, meats and seafood, and be proficient in all the cooking techniques involved including grilling, sautéing, and frying. These cooks work more or less autonomously without the close guidance and supervision of a master chef on a daily basis, and they do not necessarily have the reference point to "standards" or "criteria" of taste; such criteria or standards are not easily grasped and communicated. Moreover, the cooks are fairly inexperienced: they are in their early to mid-twenties and have only a few years of professional work in a kitchen. For any new menu launch, the restaurant-chain provides one training session at the R&D-cum-training kitchen, and the cooks are expected to be able to prepare the food for cooking; follow steps and processes according to the

recipe; complete the dish within required time, and meet taste and presentation (plating up the dish) requirements/standards.

The current assessment practice reduces the complexity of professional cooking into specific tasks like preparing food and following recipes, and objectives such as completion within time and meeting taste standards. Yet our observations suggest that professional cooking is much more than these step by step tasks; it also involves deep interaction and cooperation with colleagues in the kitchen, and relies on close coaching/mentoring by chefs. We noted the profound impact business challenges have on these dynamic relationships and interactions; something that needs to be better understood. These observations highlight that **authentic assessment is much more than simply saying assessment takes place in the work context or draws heavily on the context of the work**. In relation to the cooks, there is **opportunity for authentic assessment to take into account the participatory nature of work, collective efforts and interactive aspects** of professional cooking. The opportunity exists in practices already in place, namely, the observations of the chefs and also when peers are asked to taste each other's dishes. This latter, for example, could be extended to include peer assessment of each other's contributions to working collectively and supporting of each other. Including assessment criteria against which chefs and cooks can make such judgements would also be a means of giving recognition and valuing of this currently silent but necessary aspect of the work of the cooks. Including criteria such as these would contribute to the assessment being holistic; that is, capturing multiple aspects of the work of the cooks.

3.2   Feedback

The feedback that was given to the cooks by the chefs during their cooking demonstration/assessment was mainly corrective - addressing techniques and specific actions rather than explanatory. For example:

> *During the second group's assessment session, Chef Timothy quietly mentioned to one of the cooks to clean the prawn off the cutting board as she had put the salad bowl on the board.*

> *While preparing the third dish, the feedback from Chef Timothy was to coat the chicken to the edge with the sauce, that the vegies needed more colour, and to stack prawns higher. Chef Timothy called another cook over to listen to the mistakes before his turn starts. Chef said, "You must listen- if the first group makes mistakes it is still ok, the second group should improve, and by the third group there should be no mistakes"…' (Field notes, 06-Oct-2015).*

While encouraging particular behaviours learners are not given explanations about why, or encouraged to think about their actions and the consequences for themselves. The way current assessment has been designed is such that feedback is triggered by mistakes the learners make, and the feedback only addresses immediate and visible errors and/or actions. Any 'deep knowing' could only come with further practice and experience in the restaurant kitchen, and the onus is on cooks/learners to seek feedback rather than the instructors or assessors or peers to construct and provide feedback or for the cooks to reflect on their performance against known standards.

While the cooks are encouraged to look, feel, touch and taste the food, and gather tactile feedback on their cooking based on their own senses, it may not be clear what the desired taste ought to be, what the distinctions/gaps between the learners' dishes and Development

Chef Timothy's or their peers were, and what the connections between the cooking process and the outcome of tasting could have been. Taste is not only a difficult matter to grasp but also a complex concept, and the chefs understand taste as a matter of cultivation acquired through years of practice and experience that is not easily 'technicalised' and captured in assessment criteria. But there are opportunities for taste to be grasped more effectively and for its learning by developing an understanding of and cultivating the sensorial capacities that are part of being a cook by using 'holistic outcomes'. This is explored in detail in the following section.

3.3   Judgement

The tasting session provided excellent opportunities for the chefs to introduce and develop language that could be used to communicate and assess the taste of their dishes to the cooks. However, this important aspect of the cook's professional judgment was a missed opportunity for the development and scaffolding of taste. For example, the chefs had the opportunity to initiate discussions about what was being tasted (or not), how dishes ought to taste and why some dishes tasted better than the others. Here is a field-note observation that sums up the situation with the tasting exercise:

> *The engagement in the taste testing… was not used as a platform to discuss differences in taste and technique. The initial tasting of Chef Timothy's food also didn't introduce descriptions or key taste 'tones' to communicate the desired flavours of the dish. This makes it difficult for the trainees to share the desired taste with their kitchen staff back in their outlet. It also means that the chef and operations manager are unsure whether the trainees are acknowledging, experiencing, or tasting the things that they think make the dish good – What is the desired outcome, and how can you know that the trainees are on the same page? The marketing department shared that talking is not something that may be comfortable with the kitchen staff but are there other ways to facilitate this judgement making and knowing what makes 'good' for example giving dishes a score, self or peer assessing and providing justification (Field notes, 6-Oct-2015).*

Developing informed judgment which requires not only the language and some form of criteria but also the self-responsibility and self-knowledge outlined in sustainable assessment (see Box, p.7 of this report) would enable cooks to understand and grasp taste. For example, one dish aimed to achieve a 'sea-foody' taste achieved through searing the prawn. Discussing this aspect would also lead to a discussion about why one dish achieved it better than another, and thus the development of a deep knowing of the importance of searing as opposed, for example, to tossing the prawn as in Chinese cooking. Such discussions lead to not only deeper knowing but also the development of a common language to describe this taste. Development Chefs would have to be comfortable with such discussions and also be able to verbalise the taste requirements to assist an evolving dialogue.

The conditions for sustainable assessment where people could perform and receive feedback, voice their opinions, ask questions, and build a 'community of practice' are there already – there seems to be a strong bond and high level of trust between the chefs, managers and cooks, and opportunities abound to share, consolidate and convey key learning points. The setting therefore provides rich opportunities for understanding and recording something more about the cooks that could enable them in gaining some form of qualification. It seems that the working conditions, management styles and nature of the work encourage this development of trust - a key requisite for learning.

4. Possibilities

In this case we have identified a number of potential possibilities to build on and further develop existing possibilities. These include the potential to:

- develop pedagogies for developing "taste" capabilities;
- design taste capabilities into assessment reporting;
- improve the transparency of assessment;
- use existing assessment opportunities to assess wider, deeper capabilities desired of the cooks, and
- acknowledge and make use of the many possibilities in the work and the structured teaching for learning and development and feedback that contribute to summative assessment.

4.1   Assessment for learning to develop taste capabilities

As indicated there are a multitude of possibilities for developing "taste" capabilities. A key component of this is to scaffold opportunities to develop the language of taste – examples of such language are captured in the taste wheel in Appendix 2. The chefs have this knowledge and with some simple strategies they could readily support the development of this knowledge and ways of knowing about cooking.

The opportunities for formative assessment (assessment for learning) are there – there is a high level of camaraderie and cooperation amongst learners; the instructors/assessors are highly supportive (and sincere) about learning, and the R&D-training kitchen provides a conducive environment for learning away from the demands (and possibly disruptions) of work. The main challenge here is how to improve the communication of taste to and amongst learners. Verbalisation also helps to reveal what the desired or required components and standards of taste are. But more importantly, it is the open and participatory manner of communication through the verbalisation process that encourages learners to engage with their peers and instructors, to inquire and seek an understanding of taste that learners as individuals could comprehend, and as a group could possibly make sense of what the "gold" or "good" standards of taste ought to be. Verbalisation helps to make tacit knowledge like taste more visible and therefore more enabling of formative assessment. The tacit modes of knowing and learning remain fundamental, and we recognize that such knowledge and skills are developed over time, and where opportunities to learn are enabled primarily through doing and participation in the kitchen.

A simple way to implement making taste more visible and developing verbalisation capabilities in relation to taste is suggested here:

When the cooks taste the chef's meal, the chefs could ask, how would you describe the taste? Responses are likely to be varied, so the next step is to build on these responses by explaining how they (the chefs) would describe the taste, then to ask if anyone has any thoughts about why or how these tastes are achieved. Verbalisation of taste could be based on a 'taste wheel' which is provided in Appendix 2.

This preliminary explanation is then built upon when the cooks complete their dishes and taste each other's. Each cook should receive feedback from peers about the taste of his/her

dish. This is likely to highlight the obvious, that different people taste differently. However the focus should be on the key tastes to be achieved such as the seared prawn. If this is not achieved, then it is an opportunity to discuss why, what cooking techniques were used, repeating, for example, in different ways what has been said earlier in the day about searing, not flipping. This is an application of Bruner's spiral curriculum where the same concept is returned to a number of times, but each time from a different angle thereby developing deeper knowing.

Those designing the learning session could identify several key words to describe the tastes that are key to the desired quality of the dish. The learning can be deemed as successful if the cooks are using these words appropriately by the end of the session, and again in the working kitchen.

So three simple actions can be put into place to develop the language and understanding of "taste" before the session; identifying the key tastes to be achieved and the words/phrases to describe these tastes; posing appropriate questions, and giving feedback on responses. Questions and feedback can be repeated in various ways and in different venues and over time. Reflexive communication skills are essential to this process whereby questioning and working with alternatives as well as variations are emphasized. And this could be enabled through a combination of training and implementation of workplace learning strategy such as "community of practice".

4.2   Developing wider deeper capabilities – holistic assessment

The existing assessment opportunities can be used to capture a range of other capabilities as discussed above, for example, reading the environment, working as a team, supporting each other and so on. Clearly these capabilities appear to be already quite well developed. This then becomes an opportunity to perhaps identify a national qualification or module(s) within a qualification that the cooks could be given recognition of prior learning for. For those whose capabilities are not so advanced, a learning plan could be developed with them and goals set. The potential advantage of putting this in place is to improve the perceived status of those in the sector generally, and of the individual cooks in particular. The research literature shows that those who are given such recognition and/or support to obtain a partial or whole qualification do gain in confidence and capability.

There is a business decision to be made here about the level of capability that the restaurant-chain requires and what it means for their staff in terms of reward and recognition when they are successful in gaining these partial or whole qualifications, and if such recognition would contribute to improved retention of staff. If the sector were to consistently implement such processes and reward cooks appropriately, then issues of staff retention may not be so great.

4.3   Reporting and transparency

The reporting form could be developed to capture these aspects of taste and the additional capabilities mentioned in section 4.2.

This could change the purpose of reporting from a "so called penalty tool" (Charlie, Training Manager) to:

- an artefact that cooks, chef (and possibly HR) could use to discuss and deepen their understanding of the complexity of the work;
- an artefact that contributes to the standing and self-confidence of cooks as it gives recognition to a wider range of capabilities, and
- potentially contribute to a formal part of qualification.

Conclusion

In conclusion, the role of "taste" and the issues it highlights for learning and assessment such as the capacity for "judgement" do present challenges particularly to accepted forms of cognitive-behavioural assessment practice. By understanding "taste" as a form of knowledge that requires the development of judgement in learning, this case-study contributes in some way to the creation of sustainable assessment skills. It showcases cooking that illuminates complexities of the broader learning process where mastery, knowledge and skills cannot be easily reduced into separable tasks in and by themselves. It highlights how learning cannot be easily distinguished from the learner, and knowing inseparable from the doing. These observations present opportunities for sustainable assessment approaches and strategies such as designing "holistic outcomes" in assessment which pay attention to the development of learners' judgment for their work in order to develop wider and deeper capabilities. Business concerns and/or constraints and the mode of production in the restaurant kitchen that emphasise consistency and productivity do present challenges to deeper and more engaged forms of learning but these could be addressed with formative assessment approaches like enabling and designing feedback, and improving transparency of assessment.

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Appendix 1: Field note observation of training session

In the session we observed, there were 7 learners comprising of cooks, supervisors and operations chefs from different restaurant outlets in Singapore. The cooks were the primary target learners of the training session. They were in-charge of the outlet kitchens. The cooks were in their early to mid-twenties and had a few years of experience working in a professional kitchen.

The session started off with a briefing conducted by Chef Timothy – one of the 2 Development Chefs conducting the training. He explained the training process and distributed the recipes of the 'new' dishes to the learners. These dishes were not exactly new – they were modifications of current items already on the menu but re-designed for a series of promotional lunch sets.

On a wide-screen television in the training kitchen, Chef Timothy flashed studio pictures of the 'new' dishes and talked about the ingredients used e.g. type of prawns that the learners were already working with in the outlet kitchens, and cooking techniques that they should be familiar with e.g. crumbing and how to avoid sogginess. He also emphasized that the processes/methods (of preparation and cooking) were *'fast, do not take many steps and…very simple'*.

This was followed by a cooking demonstration by Chef Timothy. The learners gathered around him at the kitchen counter and whipped out their mobile phones to video-record the chef as he was going through the paces. He showed the learners how to slit and trim the fish into the required serving portion and grammage; how to cut and clean the river prawn, and gave specific instructions like when to marinate the prawn and other seafood items, and whether to trim the excess fat off the sirloin steak. He also demonstrated a few cooking techniques such as whisking to emulsify the olive oil into a dressing sauce; high-salting the meats; loosening the flour and dusting off the excess; pressing and packing the crumbs onto the fish fillets; and tossing the salads. While sautéing the vegetables, pan-frying the chicken chop, searing the steak, deep-frying the fish fillets and chips, stir-frying the pasta and baking the prawns, Chef Timothy constantly instructed the trainees to smell, hear, look, touch and taste: 'make sure the smell comes out' from the sautéing of garlic in oil; (take note of) 'the sizzling sound' of steak on a hot pan/grill; 'colour the skin' of the chicken chop; 'brown the crumbs'; 'if sauce is too dark add a bit of cream…add some cream to adjust the colour'; 'crumbs should feel like desecrated coconut'; 'the steak should have a nice crust' etc.
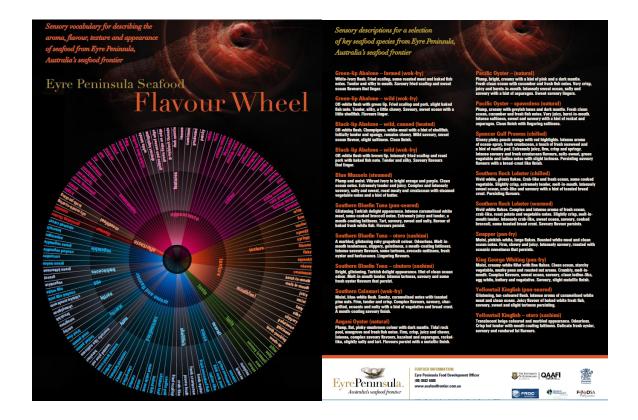
After lunch, the cooks (paired up with a colleague who might be a supervisor from the same outlet or an operations chef) took turns to cook the dishes they had observed earlier under the watchful eyes of the Development Chefs and their peers from the other outlets. The Development Chefs hovered close by sometimes instructing the cooks on certain techniques or steps in the process, and also helping the cooks along with simple preparation work like putting the chips into the fryer, boiling the pasta, laying out the plates etc. Mistakes were quickly identified by the eagle-eyed Chef Timothy who corrected the learners on the spot.

When each group was done with the dishes plated up and laid out on the table, everyone gathered around and applauded. The chefs then commented on (mainly) the appearance of the dishes, highlighted mistakes the learners made during the cooking process, and took the opportunity to

update/correct any earlier instructions. The learners' performances were then 'formally' assessed by the Development Chefs who filled out an assessment form/document.

It was already late afternoon (4pm) when all the groups completed their cooking demonstration and individual assessment. The learners needed to head back to their respective restaurant outlets and prepare for the dinner crowd. All the dishes were laid out on a table and everyone was asked to taste the food. The operations manager remarked that the presentation looked good but it did not mean that the food (would) tasted good, so everyone must taste. Chef Timothy did a quick de-brief to tell the learners that they had done a good job, asked if anyone had questions (there were none), and concluded with one or two administrative reminders.

Appendix 2: The Taste Wheel

http://frdc.com.au/knowledge/Factsheets/Seafood_Flavour_Wheel.pdf