

The multiple affordances of micro-credentials – turning potential into possibility

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Abstract

Purpose – The study aims to consider the multiple affordances of micro-credentials as a means of creating agency and making a positive contribution to the human experience, through the voices of practitioners and stakeholders.

Design/methodology/approach – Multiple case study, narrative inquiry, using Reflexive Thematic Analysis to identify themes was the approach used. Qualitative Descriptive Research is employed to present and analyse the re-told tales.

Findings – Micro-credentials possess numerous characteristics which coalesce to create multiple affordances, which are identified as follows: Micro-credentials as: Urgent and Emergent, Critical and Transformative, Promoting Equity, Access and Participation, and Servicing Traditional Qualifications. These concomitant multiple affordances possess the core affordance of micro-credentials making a difference to the lives of learners. The more powerful affordances a micro-credential has, the more powerful it is and the greater the difference it can make to the human experience.

Research limitations/implications – Practitioners will arguably do well to consider these multiple affordances in the future development of micro-credentials. Equally, those working in urgent or emergent spaces, in critical or transformative areas of practice, those engaged in a social justice environment or in the re-development of curricula, would do well to consider micro-credentials as a means of creating agency in the development and recognition of knowledge and skills. This study has focused on the voices of practitioners and their storied professional lives. However, the learner voice is limited to one and the employer voice is absent. Future research will benefit from a consideration of the employer voice in the development of micro-credentials as well as the voice of the end user, the learner.

Practical implications – It is hoped the study will assist practitioners in the judicious development of micro-credentials that possess agency and make a positive contribution to the human experience.

Social implications – It is hoped the study will shed light on how micro-credentials can afford equity, access and participation to priority learners, and to all learners, in the development of cognitively manageable, affordable, time-achievable micro-credentials, that enable learners to see success quickly, whereby encouraging them to further their life-long and life-wide learning journeys.

Originality/value – This study unusually gives voice to practitioners and other stakeholders in the micro-credentials arena. Most studies to date have focused on the potential of micro-credentials. This study considers their actuality and new ways of 'doing' micro-credentialing based on the voices of experience.

Keywords University, Higher education, Quality assurance, Higher education evaluation and development, HEED

Paper type Research paper

Introduction

When I started this study in 2018, micro-credentials, small parcels of learning and assessment, were a relatively new concept. The term *micro* was not readily applied to many concepts; *micro-economics*, *microwave*, *microscope* and *microphone* were perhaps the only other *micro* terms I had readily come across. Now, from *micro* learning to *micro* banking, we live in a *micro*

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world where news items are tik-tok short and attention span is often equally transitory. Micro-credentials have their critics: they are reductive for lower order skills only (Lewis and Lodge, 2016), accelerate the drive towards the privatisation of higher education (Wheelahan and Moodie, 2022) or are even “a moral hazard” (Ralston, 2021, p. 95). *Micro-credentials* for an ever increasing (or rather *decreasing*) *micro* world full of people with *micro* attention spans. However, there are those that travel in hope, that micro-credentials can promote equity, access and participation in education because of their *micro* characteristics (Desmarchelier and Cary, 2022; Hanshaw, 2024), or bridge the digital divide of a world where tens of millions live in digital poverty or illiteracy (Oliver and UNESCO, 2022). Educators were previously bound by our terms (Oliver and UNESCO, 2022) and did not know how to define micro-credentials let alone agree or even understand their possible affordances. Today, there is general agreement on how to define them, if considerable disagreement on how they are best deployed; or if they should be deployed at all (McGreal and Olcott, 2022).

In this article I attempt to answer the question: *What are the possible affordances of micro-credentials?* I begin by exploring some basic definitions of micro-credentials, before outlining my research methodology and methods. A literature review of the current writings around micro-credentialing is presented. I then move on to telling the re-told tales, in the form of nine stories, which I consider in relation to my research question and, where appropriate, the current literature. My summary of key findings is presented with analysis. Finally, I conclude with a re-consideration of my research question and, looking backwards so as to move forwards, consider the limitations of my study and recommendations for future research.

Rationale

This paper is purposed to enable scholars and practitioners to provide guidance on micro-credential development in order to have the greatest impact upon priority learners, indeed all learners, in the judicious and timely development of micro-credentials.

Definitions

The European Commission (2020) defines a micro-credential as a small, specific piece of learning and assessment, awarded by a trusted body, with agreed learning outcomes and standards of achievement, which is quality assured, articulates credit volume and is aligned with a national qualification framework and the European Qualification Framework.

The New Zealand Qualifications Authority (NZQA, 2020) has defined micro-credentials as “a sub-set of training schemes that certify achievement of a coherent set of skills and knowledge and that have evidence of need by industry, employers, iwi [community of people] and/or the community.” These characteristics of micro-credentials invariably lead us on to the multiple affordances of micro-credentials, which emerge through the data of the stories re-told in this paper.

Research methodology and methods

New ways of documenting experiences emerge by the merging of Case Study and Narrative Inquiry, providing structure and agency within the storied lives of practitioners (Sunday *et al.*, 2020). From these stories, I attempt to create *narrative meaning* (Polkinghorne, 1988), to answer the research question: What are the multiple affordances of micro-credentials? I conducted semi-structured interviews to “mediate stories” into being (Kim, 2016, p. 151). There are nine stories in total. The participants were either practitioners, learners or other stakeholders in micro-credentialing in Aotearoa New Zealand and Canada, interviewed between 2021 and 2024. Reflexive Thematic Analysis was used to code my data set and generate themes using a six stage process (Braun and Clarke, 2022): (1) familiarisation with the data set, (2) generating initial codes to organise the data into meaningful chunks, (3)

searching for themes within those codes, (4) reviewing the themes to test whether they are valid, (5) defining and naming the themes to determine their scope and content, (6) writing up the narrative strands and data within a clear context. This is done to capture a shared meaning organised around a central concept (Braun and Clarke, 2022), which I articulate as the multiple powerful affordances of micro-credentials, as they emerge from the stories I shall re-tell here. These are presented using Qualitative Descriptive Research. The re-told stories will give due consideration, where appropriate, to factors such as time, personal and social interaction and place (Clandinin and Connelly, 2000). By re-telling, I hope to “offer possibilities for re-living, for new directions and new ways of doing things” (Clandinin and Connelly, 2000, p. 189); in this context, new ways of leveraging micro-credentials, “to focus on experience and to follow where it leads” (Clandinin and Connelly, 2000, p. 188).

Professional identity is fluid and fundamental to how one sees oneself in relation to others within a professional practice context (Neary, 2014). In this study, I am known to the participants as a colleague. One can make a distinction between insider (emic) and outsider (etic) perspectives within an organisation (Huberman and Miles, 2002). At the time of the study, I was in the emic position to the New Zealand stakeholders and etic to the Canadian participants; however, as a practitioner within the same domain, there was arguably a multi-agency of inter-professionalism (Floyd and Morrison, 2014) between all participants and me as researcher.

Review of the literature (literature review)

Affordance theory

Gibson (1979) is largely attributed with the development of Affordance Theory and creating the term *affordance*, which he defines as that which can be provided to a party by an agent. He gives the example of the environment, which provides the animal with good or ill; the agent and party are complementary, as the animal complements the environment and vice-versa (Gibson, 1979). In the context of micro-credentialing, the agent is the micro-credential and the party/parties are the learner/learners, the various stakeholders of micro-credentials.

Affordance Theory “implies that to see things is to see how to get about among them and what to do or not do with them” (Wells, 2002, p. 9). I used this as a framework to consider the multiple potential of micro-credentials, and how those potentialities have been turned into reality by the practitioner voices in this paper. Like other sagacious theories, Affordance Theory is intuitive and yet difficult to fully fathom (Wells, 2002). However, it, itself, assists us in *affording* an understanding of how the various characteristics of micro-credentials coalesce into a series of highly concomitant, complex and powerful affordances, which can empower the learner environment.

“Just-in-time” modalities and high-stakes domains

Micro-credentials can afford flexibility and “just-in-time” training modalities to enable learners to function in new and emerging critical areas of practice (McGreal and Olcott, 2022). Therefore, they can potentially afford the development of knowledge and skills in emergent areas of theory and practice which are required urgently. The traditional degree, by nature of its integrative design and macro characteristics, does not always provide this urgent acquisition in the emergent space (Hanshaw, 2024). Micro-credentials can be readily deployed to develop workforces in critical areas of practice (McGreal and Olcott, 2021). The competency-based nature of micro-credentials lends itself to the development and assessment of the critical, high stakes domains, where those being assessed can either deliver (and are awarded *achieved*) or not (awarded *not achieved*). There is little room for subjectivity as, with competency-based assessment, as opposed to criterion-referenced, the assessment outcomes are limited to these two possibilities. Micro-credentials have also been used to plug skills gaps in high stakes environs, such as providing educators with the necessary continuing professional development

credentials, just-in-time, to avoid being removed from the teaching register (Tooley and Hood, 2021).

Transformative qualities

Oliver and UNESCO (2022) posit that micro-credentials should be human-centric, effective in promoting equity (United National Sustainable Development Goal Four) and leveraging digital transformation to help bridge the digital divide. Micro-credentials have been observed to date as a contributor to digital transformation in education (Ozbek, 2019). There is little evidence to date of them having a transformative effect upon the lives of individuals or communities; an effect I will be exploring further in the text.

Promoting equity, access and participation in education

Micro-credentials can go some way to promoting equity and access to education on the grounds of time and financial affordability (Tehan and Cash, 2020) and academic and cognitive manageability, when compared with larger, macro qualifications (Hanshaw, 2024). They provide life-long and life-wide learning alternatives to the lengthy and costly degree (Desmarchelier and Cary, 2022). Affordability has become one of the drivers in the growth of micro-credentials (European Commission, 2020).

Micro-credentials as supporting existing learning

Micro-credentials can assist institutions in moving away from a seat-time model of learning, where learners attend, for example, 15 h of lectures a week, to a competency-based curriculum (Wilson et al., 2016). Integrating micro-credentials into the curriculum can provide added value to multiple stakeholders and this is readily achieved given the validation metrics of them (McGreal and Olcott, 2022). To embed them into the curriculum can assist students to uncover and understand their potential worth (Pollard and Vincent, 2022). It can enhance learner success to repackaging qualifications into a series of stackable micro-credentials where one is seeing low levels of admission or high levels of learners dropping out (Hanshaw, 2023). However, there are those that argue that, rather than empowering learners, micro-credentials disempower institutions, “contribute to the privatisation of education by unbundling the curriculum and blurring the line between public and private provision in higher education” (Wheelahan and Moodie, 2022, p. 1288), or are even “a moral hazard” (Ralston, 2021, p. 95).

Key findings

In Table 1, I outline the nine participants in this study, with a description of their role and significance, in chronological order.

Micro-credentials as urgent and emergent

D’s story

D works with the Canadian Government in the development of micro-credentials. He has focused extensively on the stackability and transferability of micro-credentials and the connections between micro-credentials and competencies. In 2020, the world was in the throes of the global pandemic, Covid-19, and health systems in Canada, and around the globe, were stretched to the point of failure. The Canadian health system lacked capacity. Hospitals were full of patients suffering the effects of Covid-19. D told me that respirators were critical to saving lives and there was a lack of health care professionals who knew how to safely and correctly fit and use them. The number of respirators in circulation soon greatly exceeded the number of professionals who could competently use them. A micro-credential in the safe operation of a respirator was quickly developed in partnership with some of the technologically based polytechnics in Canada. This enabled 25,000 people to be trained up

Table 1. List of participants in this study

Participant	Role and significance	Implications for study
D	Canadian Government expert in the development and deployment of micro-credentials	Developed micro-credentials to train 25,000 people in the safe use of respirators during Covid-19, demonstrating that micro-credentials are highly effective in developing and recognising knowledge and skills in <i>urgent</i> and <i>emergent</i> frames of practice D also developed a digital health and artificial intelligence competency framework for a group of research universities based in Geneva, further evidencing micro-credentials as effective in developing and recognising knowledge and skills in the <i>emergent</i> space, at up to doctoral level
S	A product innovation manager developing micro-credentials for the construction industry in New Zealand	The timely development of micro-credentials in the construction industry enabled <i>just-in-time</i> upskilling for those displaced by COVID-19
J	Former college leader in vocational education in Canada with considerable experience in micro-credential development in a community setting	Developed micro-credentials to upskill and train support workers who could support the most vulnerable who had been dying alone during COVID-19, demonstrating that micro-credentials are highly effective in developing and recognising knowledge and skills in <i>critical</i> and <i>transformative</i> areas of practice
K	Micro-credential developer and assessor based in New Zealand	Speaks of the <i>transformational</i> nature of micro-credentials in the <i>critical</i> space
T	Heads a Non-Governmental Organisation (NGO) in New Zealand specialising in developing workplace literacy	Developed micro-credentials in <i>Speaking up for health and safety on the construction site</i> and <i>Money management</i> . These had a <i>transformational</i> effect (high impact) on learners in <i>critical</i> (high stakes) areas of practice
B	Micro-credential learner in New Zealand who undertook a micro-credential in money management	Accounts how the <i>Money management</i> micro-credential <i>made a positive difference</i> to her life
P	Former tertiary leader in New Zealand and one of the key ideators of micro-credentialing in Australasia	Comments on the power of micro-credentials in <i>servicing traditional qualifications</i> by enabling quicker wins for learners, who upon seeing success, continue their learning journey, as well as using micro-credentials to redesign programmes where institutions are seeing low levels of participation or low levels of retention
N	Head of Business and Digital Technologies at a tertiary institution in New Zealand	Developed a series of stackable micro-credentials that learners could undertake in combination with, or between, periods of work, as well as to sample an area of study without committing to a macro programme, whereby <i>promoting equity access and participation</i> in education and <i>servicing traditional qualifications</i>
A	An expert in qualification frameworks and developing awards in the health and bioscience arena in Canada	Developed a micro-credential which was required <i>urgently</i> , in an <i>emergent</i> and <i>critical</i> area of practice, which <i>transformed</i> the lives of billions, <i>promoting equity, access and participation</i> for many, the learnings of which were integrated into existing curricula, whereby <i>servicing traditional qualifications</i>

Source(s): Table by author

and credentialed rapidly in the safe use of a respirator. Prioritising the use of respirators had a significant impact on controlling the effects of Covid-19 (Ngonghala *et al.*, 2021). This urgent upskilling and capability building in what was, for many, an emergent (and critical) field of practice, no doubt saved lives.

This story demonstrates the power of a *micro-credential* at being rapidly developed and strategically positioned to, in this case, help alleviate a global health crisis. Though critics of micro-credentials accuse them of being “dangerously reductivist” (Ralston, 2021, p. 95), in this story it is the very reductive nature of the targeted, focused micro-credential which is powerful and enabled it to be quickly and judiciously deployed. The learning that constituted this micro-credential in the operation of respirators has been no doubt integrated into the curriculum of current medicine and nursing degrees, for practitioners to be ready-trained, in time, to respond to future respiratory based pandemics. However, it is the *just-in-time* training element, the urgent affordance of this micro-credential which had the greatest impact: saving the lives of patients who would have died as a result. As we strive to capture the multiplicity of the voices in a story, “we need to consider the voices heard and the voices not heard” (Clandinin and Connelly, 2000, p. 147). This brings to mind the sense of the hidden curriculum (Jackson and Walker, 1968), learning from that which is unseen and from those who are unheard. Perhaps they speak loudest of all.

D’s next project was to develop micro-credentials to support a competency framework for digital health and artificial intelligence in healthcare for a group of research universities based in Geneva.

It’s an emergent field, right? People are shifting delivery of health to digital. Everything that they want to do is going to be emergent. And it is geared at those at doctoral level. But it’s [micro-credentials] the perfect place for stuff like that.

These micro-credentials are serving an emergent field in a highly complex area of practice at many levels, including the doctoral level. This is strong evidence that micro-credentials are not just for lower order thinking (as posited by Lewis and Lodge, 2016; Ralston, 2021) and are limiting and disciplining Higher Education (Wheelahlan and Moodie, 2022). In this story, they are empowering a group of research-intensive institutions at the highest level and in urgent, emergent (and critical) practice. Rather than generating “a consistent stream of revenue through planned obsolescence, perpetual servicing, and moral hazard” (Ralston, 2021, p. 95), the result is the opposite: emergence, the bringing into being that which was not before: emergent knowledge, urgently required.

S’s story

S works as a product innovation manager in New Zealand, developing micro-credentials for the construction industry. After Covid-19 arrived, it was thought that there would be a downturn in the construction industry. This was not the case, S explained, as the industry “moved into a bit of a boom time rather than a bust time” and had to rely heavily on immigrants and people from other sectors to meet the needs of the labour market. A series of micro-credentials were created “to upskill people quite quickly into small areas [of practice]”. These included areas of learning such as constructing walls, roofs, plumbing and carpentry. S explained that the micro-credentials attracted people who had been displaced as a result of the Covid-19 pandemic, such as those working in the tourism, hospitality and airline industries. These micro-credentials were often undertaken on-the-job, and S reported that they gave those that undertook them the necessary confidence to work comfortably and safely on the construction sites and provided a valuable learning pathway to those that wanted to complete an apprenticeship.

Rather than dismissing micro-credentials as low order and vocational, which is often perceived as second choice (Keevy, 2020), we can learn from S’s story of the value of micro-credentials in urgently upskilling displaced and newly arrived workers in discrete vocational

skill areas. Those that take aim at micro-credentials for developing only reductive and easily observable skills from within their privileged, *invited spaces* (Powercube.net, 2023, Online), greatly benefit from the walls that have been constructed by those they subjugate.

Micro-credentials as critical and transformative

J's story

J was a leader in vocational education in Canada, running a community college, and worked tirelessly to support her community with educational innovations during the Covid-19 pandemic. Stories of the elderly and vulnerable dying alone at home or in care homes filled the front pages of the newspapers in many parts of the world, and Canada was no exception. There was a shortage of personal support workers who were able to go into people's homes or care homes, to carry out many physical and critical duties. J and her team gained funding to turn the personal care worker training into a series of micro-credentials, enabling them to be more rapidly achieved, resulting in more personal care workers entering work sooner.

[normally] it's a year-long programme. And with the micro credentials, it can vary, it could be as short as a month, if the person came in with a huge number of skills having worked in the field as an unqualified personal support worker. And so, what we're able to do is turn out personal support workers to meet the needs of our community, especially during COVID.

The competency-based micro-credential had both virtual and hands-on learning and assessment. J and her team partnered with nursing homes to get the newly qualified staff into practice quickly, where they were able to support the ill and the dying, provide much needed pastoral care and human contact at this very sad time.

Looking at older people in nursing homes dying, and dying alone, was unbelievably horrible. And I think the ability for us to offer these credentials made us feel so much better, that we were able to do something quickly.

Again, it was the rapid deployment of these micro-credentials, this time in highly critical areas of care, which had a transformative quality to those whose lives they touched. Though there are those that claim micro-credentials do not provide "the rich educational experience" or the "mutually edifying conversation" between the learner and the learned (Ralston, 2021, p. 92), J's story tells of micro-credentials of a transformative nature in a critical space. Ralston's (2021, p. 92) posits that with micro-credentials, "Also abandoned is the higher purpose of education: namely, to serve society-at-large, not simply corporations and industry." However, I cannot think of a better example of education being afforded a higher purpose than saving, and improving the quality of, lives.

K's story

K led the development and assessment of micro-credentials in one of New Zealand's tertiary vocational institutions. She was tasked with supporting a client in the development of micro-credentials at level 1 and 2 in budgeting, so that learners would know how to manage their pay packets, understand debt, interest rates and develop smart financial goals. The video evidence, which constitute part of their assessment to obtain the micro-credential, was often uploaded onto the system by third parties, as the learners did not know how to do it themselves. K described her reaction when she listened to the video evidence from the learners.

These were people who were deeply hardworking, but also deeply unaware of how to manage their money. Once you teach someone, how to do a basic budget, you empower them to make different decisions.

Is this perhaps playing into the hands of those that argue that micro-credentials are for lower-order skills that can be easily noticed (Lewis and Lodge, 2016)? Micro-credentials *can* be for such skills, however, that does not mean we should dismiss them for this. K's story speaks of

the immense power of the simple (not reductivist) micro-credential that can be quickly deployed, resulting in immediate outcomes in a critical area; outcomes which are of an empowering and transformative nature to individuals, families and communities.

T's story

T leads a non-government organisation (NGO) on the north island of New Zealand which specialises in workplace literacy. T and her team worked with a polytechnic provider to develop a micro-credential in speaking up for health and safety on the construction site. Most of the learners were Māori and Pasifika with English as their second language.

So, writing up an incident for speaking up [for health and safety], that's about being able to complete a form and having the confidence and competence to stand up at say, a toolbox meeting, and talk about health and safety on a construction site. But it could equally be speaking up to a supervisor if they see something happening that's unsafe.

T said that the learners were immensely proud of their achievement, in being awarded a national qualification. This is a high stakes, critical area of practice that, again, saves and improves lives: critical and transformative. She and her team also developed the micro-credential in money literacy, which we were introduced to above, empowering individuals to manage their money better:

The health and safety micro-credential is probably in the high stakes camp. But it is also transformative. The other micro-credential [money management], it's transformative, opening up learning opportunities for people who otherwise would not be given these opportunities, or would not go out and look for them.

This story also speaks of creating educational and self-advancement opportunities where before there were little or none. What Ralston *et al.* are perhaps missing in their critique of micro-credentials, is an appreciation of individuals outside of the traditional academic model, for whom the micro-credential is instrumental as a capability building vehicle, and their sense of immense achievement to receive their first ever academic credential.

B's story

B, in her own words, was born and raised in western Auckland and is a mum of one. She said she never had role models in how to spend money wisely and found it hard to stick to a budget, largely because she did not know what her budget was. She completed the money-confidence micro-credential. She said she uses the budgeting tool she was taught to print out her budget for the month, laminates it and keeps it in her room, so she can refer to it on regular occasions:

My saving, my discipline, in terms of saving, has just skyrocketed. I mean, if I was doing this interview two or three years ago, no way I'd have any money, I wouldn't, I would have no money saved.

B said the micro-credential had made a significant difference (to her life). This resonated with something T, who leads the workplace literacy NGO, told me in her story, that micro-credentials need to make a difference. [Oliver and UNESCO \(2022\)](#) argue that micro-credentials need to be *useful*, however, this concept of *making a difference*, goes one step further by improving the quality of the human experience. I think there are two points of consideration here.

The concept of making a difference to someone's life is not limited to only micro-credentials in the education arena: any number of qualifications and learning experiences can do that at any level from first credential to doctorate. However, perhaps it is the unique affordances of micro-credentials to be urgently deployed in emergent or/and critical areas and potentially transformative spaces, providing opportunities where perhaps before there was none, where the true power of micro-credentials lies.

Micro-credentials as promoting equity, access and participation

J's story

We will now return to J's story. In serving her Ontario community during Covid, J and her team developed a portfolio of micro-credentials free for her community, to learn and complete during lockdown.

We took one piece of learning, one competency, so maybe it's how to bake a cake, maybe it's how to do this one financial piece, and we all developed them during COVID and offered them for free to our community, to build that community relationship with micro-credentials. I think we had 17,000 registrations – for a small town was huge. It was opening a door, though, to those people who never thought they could be successful in college, and all of a sudden, now they want to take a diploma programme or a certificate, or whatever.

The competency-based nature of micro-credentials served this initiative well, as it was likely relatively straightforward to develop them competency by competency. This initiative was not limited to baking cakes, however: there were micro-credentials on how to keep fit at home, DIY around the home, how to cook a pasta dish, indeed many areas of practice that were hugely beneficial and of ready interest during lockdown. They were a captive audience, perhaps. However, what differentiates this from the “university of YouTube” model is that the learners engaged with the assessment element of the micro-credential and uploaded their evidence of their competency in their newly discovered or improved skill. It started to build the community's relationship with micro-credentials, which, J reports, continues today. Therefore, micro-credentials can be a powerful conduit to macro qualifications.

J said that the lower cost of a micro-credential over a larger qualification and the shorter period of time to complete it, was an important factor in the subsequent success of micro-credentials in her community: “The biggest thing is Time, time, time, time, time. They don't have to spend as much time and they get what they need. So, they get it fast.”

This is a clear example of micro-credentials serving the community with localised, specialised up-skilling. This contrasts with the “one size fits all” degree programme, which the community has likely neither the time nor the money to undertake. J explained that employers benefited as well as learners:

Employers were happy about working with us because of the time, the cost and their ability to get to market quickly. I think the students were thankful for the same reasons. You know, the sooner they could get out into the workforce, the sooner they could make money.

P's story

P was one of the ideators behind micro-credentials in Australasia. He led a large, successful tertiary education institution. He came to realise that micro-credentials were one way of breaking the curriculum down into smaller, more manageable pieces of learning with advantageous effects:

The fear of no success keeps a lot of people out. Failure to get success drives them out. The ability to put together packages of learning that are smaller in scope, not necessarily in time, enable people to experience success.

P said that as opposed to making learners complete 60 credits in a semester, to give them the opportunity to undertake four stackable micro-credentials. Such a model will also serve learners living disruptive lives.

When micro learning takes place over a shorter chronological time, then one minimises the risk of life's events getting in the way. That's the case for our priority learners, where the life is constantly being disrupted. So, I think we have got a tool for success. We're looking at stackable design. I can look in the mirror and see success. And then I do the next bit. And I can see more success.

The micro nature of micro-credentials should fit well with learners who face disruption and need to see quick wins. T spoke of a learner on the speak up for health and safety course who were called away from the training at short notice:

There was a knock on the door of the training room, and it was his boss. And he said: “Look, I need to take care away, because there’s been an accident at the machines where I work”. Luckily it was not the day we were uploading the evidence [on to a micro-credentials assessment hub].

T also reported that some of her learners went on to undertake further qualifications, having seen success in the mirror, just as P predicted.

Micro-credentials as serving traditional qualifications

N’s story

N is head of business and digital technologies at a post-secondary institution in Canterbury, New Zealand. He was looking for alternative means of study for people “who don’t want to sign away three years of their lives” and wish to mix learning and studying, what he terms “a portfolio approach” to education with portfolio evidence of learning and earning. He therefore developed a series of stackable micro-credentials that learners could undertake in combination with, or between, periods of work. This enabled learners to discover, in a low-risk environment, whether information and communications technology, for example, was really a career they wanted to pursue: “we’ll get people to sign up to a three-year degree and inside of six weeks realise what a terrible mistake they may have made.” [Desmarchelier and Cary \(2022, p. 6\)](#) presciently observe that micro-credentials can assist students by “dipping their toes in the water.” Micro-credentials are therefore a pathway out of, as well as a pathway into, learning, in the best sense. However, there were also students, N said, who went on to do undertake graduate diplomas and beyond, upon seeing success in the mirror. Micro-credentials were a pathway to success. The smaller the award, the more frequent the success.

Summary of main findings

I had hoped that the retold tales in this narrative would illuminate new ways of using micro-credentials to improve the human experience, and to see where the voices of experience might lead us ([Clandinin and Connelly, 2000](#)), in respect of the multiple affordances of micro-credentials. I thank the story tellers for the light they have shone on what were previously dark spaces, full of potential affordances but largely lacking actuality.

Micro-credentials lend themselves to urgent times and emergent fields, to, for example, alleviate the effects of a global pandemic as well as operate at the highest academic level, as D’s stories taught us. They can have an empowering effect upon immigrant and displaced workers by enabling timely re-skilling and capability building, as S explained in their story. However, what if that power can be thwarted by the regulatory landscape, slowing down the development and recognition processes? Micro-credentials should not be over-regulated ([Oliver and UNESCO, 2022](#)), however, there is evidence that in some countries, such as New Zealand, they are ([Hanshaw, 2023](#)). With over-regulation, the moment may have passed and the power of the micro-credentials to respond with urgent need to emergent fields of knowledge and practice – what I term *emergentsy* – is lost.

Micro-credentials can have a transformative effect upon the most vulnerable, such as the ill and the dying, in critical areas of practice, as J’s story taught us, with competency-based micro-credentials quickly developed to train personal support workers during Covid-19. K, T and B’s stories told of micro-credentials that in some cases transformed, and in others at least made a difference to, people’s lives. These were in critical areas of practice such as money management and speaking up for health and safety on the construction site. The micro-credentials also afforded learners in many cases their first ever academic award, which proved to be a pathway into learning as they went on to pursue other awards. These stories told of how

micro-credentials can *make a difference* to a person's life, which is one step further perhaps than simply *being useful* (Oliver and UNESCO, 2022).

Micro-credentials serve the agenda to promote equity, access and participation in education by encouraging and enabling more learners to learn more in an affordable, time-friendly and accessible manner. They can develop pathways into learning, as demonstrated by the large number of enrolments and subsequent re-enrolments, as told by J, in developing a series of free micro-credentials to her community in Ontario, Canada. Micro-credentials are arguably more manageable as an undertaking than a macro award, as P taught us, promote quicker wins and, due to their brevity, suit learners with disruptive lives; such as the learner T spoke memorably of, who was pulled out of class by his manager to return to work.

Micro-credentials can be used to enable learners to taste a subject or field of practice without having to commit to a full-time programme, as N's story showed us. This provided a pathway out of learning, for those whom the subject matter was not to their taste, as well as a pathway into learning for those who found the means of study conducive.

What is interesting is the concomitant nature of these multiple affordances of micro-credentials. A micro-credential that responds urgently to an emergent field of practice in a pandemic is also in the critical space, has a transformative effect upon those whose lives they touch – those who survive – and reminds us of the equity of the hospital ward, just like that of the mortuary. The micro-credential that gave construction workers a voice to speak up for health and safety on the work site (critical and transformative) also bestowed them with their first academic award (promoting access and participation in education) and encouraged some to go on to study further (pathways into learning, serving the traditional qualification). For the 17,000 learners who completed a free micro-credential in Ontario, Canada (promoting equity, access and participation) many of them likely discovered that it *made a difference* to their lives in a positive way at a time of great fear and uncertainty; some of whom went on to further study and larger qualifications (promoting participation, serving traditional qualifications).

If a micro-credential is not useful, it will likely have little if any uptake (see Hanshaw, 2023). However, when it possesses any of the foregoing affordances, it contains an inherent power to have a positive effect upon the human experience and to *make a difference*. The *greater* number of these affordances a micro-credential possesses, the *more* power it has to make a difference to the lives of others. Figure 1 (below) is a diagram which depicts the multiple affordances of micro-credentials, circling around the key affordance of *making a difference*.

I could ask, how is this truer of micro-credentials than any other qualification? If we return to the key characteristics of micro-credentials that coalesce to constitute these affordances, we can see the differential in that power commodity. To return to where we began, micro-credentials are small, specific pieces of learning and assessment, awarded by a trusted body (European Commission, 2020). They are therefore *micro* (small and specific) and *credentialed* (assessed and trusted). It is these characteristics that give micro-credentials the power to swiftly make a difference with a trusted credential in one or more of those afforded ways manifested within and conveyed by the retold tales in this narrative.

A – *Final Story* A is an expert in qualification frameworks and developing awards in the health and bioscience arena in Canada. They were asked to rapidly develop a micro-credential to serve the needs of the medical profession during a critical health event. Doctors, nurses and first-responders were pre-occupied with the critical incidents unfolding. Therefore, what was needed was more non-health professionals, as well as students and retired health professionals, to be trained and credentialed in an emergent field of knowledge, urgently required, that was in a critical area of practice, high stakes, with a transformative quality for the lives of millions, if not billions, high impact, that promoted equity, access and participation in the best way possible – enabling people to return to their lives – and which, in due course, served the traditional qualifications in this field by its inclusion in mainstream programmes: in four weeks a micro-credential was developed, and in six weeks it was delivered, in the following: the safe transportation, administration and disposal of the Covid vaccine.



Source(s): Author generated

Figure 1. The concomitant multiple affordances of powerful micro-credentials

This story speaks to all of the powerful affordances of micro-credentials as posited in this paper: the urgent, the emergent, the critical, the transformative, promoting equity, access and participation, and serving the traditional qualification. I think it can be argued that this micro-credential made a difference to the human experience, given that it contributed to a vaccine roll-out that enabled many of us to reclaim our lives.

Conclusion

In this paper I have attempted to answer the research question, “What are the multiple affordances of micro-credentials?” As shown in [Table 2](#) (below), the affordances that have been identified are as follows.

These affordances are often concomitant – each of the re-told tales has revealed numerous of the foregoing affordances, symbiotically layering the power of each affordance in an accumulative and positive contribution to, and endowment of, the human experience. Micro-credentials need to be useful ([Oliver and UNESCO, 2022](#)). However, I argue that the re-told tales have shown us that to be powerful, they also need to make a difference to at least one individual and, in some cases, even to a community; or conversely, when they make a difference, they can be powerful; in the strongest cases, they can have a transformative impact. The more of these powerful affordances a micro-credential possesses, the more it can make a difference to the human experience, and the more powerful it is. When a micro-credential contains all of these identified affordances, it is arguably most powerful.

Perhaps [Ralston et al.](#) do have a point after all, that micro-credentials are reductive and do not develop soft skills. However, perhaps that is not the point of them. Therefore, they are both equally right and wrong, in that micro-credentials are simply not comparable with the degree; they are different beasts. Micro-credentials can possess power in affordances that the

Table 2. A summary of the multiple affordances of micro-credentials

The multiple affordances of micro-credentials themes	A description of them
Micro-credentials as urgent and emergent	Enabling the development and recognition of knowledge, skills and capabilities in emerging areas of practice, required with some urgency; what can sometimes be termed <i>just-in-time</i> training/credentialing
Micro-credentials as critical and transformative	Enabling the development and recognition of knowledge, skills and capabilities in critical (high stakes) areas of practice with the power to transform the quality of life (high impact)
Micro-credentials as promoting equity, access and participation	Enabling equity, access and participation in education where previously there was limited, insufficient or no opportunity (promoting social justice)
Micro-credentials as serving traditional qualifications	Enabling learners to select or stack a series of micro-credentials, sometimes to trigger a macro-award, and to “taste” a macro-qualification before committing to a full programme of study

Source(s): Table by author

traditional degree does not have; the multiple powerful affordances considered in this paper. Micro-credentials can serve the traditional degree, however, the latter does not serve the former. Therefore, perhaps it is the degree which is limiting, not the micro-credential. This is a debate that will no doubt continue for the foreseeable future.

To return to practice, practitioners might do well to consider these multiple affordances in the development of micro-credentials in future. Equally, those working in the urgent, emergent, critical, transformative and social justice arenas might wish to consider micro-credentials as a means of creating agency in leveraging the development and recognition of specific knowledge and skills to make a powerful contribution to improving the human experience, whenever and wherever that should lead us.

Limitations and areas for further research

One limitation of this research is that, while it has focused on hearing the voices of practitioners and stakeholders, the voices of employers were only heard as a tale within a re-told tale. Future research will benefit from exploring the employer voice in the development of micro-credentials. More in-depth research to uncover the voices of those on the receiving end of micro-credentials (learners) would also be welcome.

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