Title	Infusing management education with design to foster resilience, adaptability and flexibility
Type	Article
URL	https://ualresearchonline.arts.ac.uk/id/eprint/12461/
Date	2017
Citation	Sadowska, Noemi and Dallas-Conte, Lorna (2017) Infusing management education with design to foster resilience, adaptability and flexibility. The Design Journal, 20. pp. 1106-1117. ISSN 978-1-138-09023-1
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Infusing management education with design to foster resilience, adaptability and flexibility

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Abstract: We reflect on the impact design education has on our management learners by equipping them with a different learning perspective; one that allows them to 'live their learning'. We maintain that the role of learning is to be owned and internalised for learners to feel responsible for its impact and outcomes. Where such an approach to learning instils in management learners' resilience, adaptability, and flexibility, highlighted by Harford (2011) as key in shaping the future workforce. Using an autoethnography approach we examine a Design Leadership module for its capacity to instil those characteristics through the synergy of design approach with management education catalysed by an exhibition opening event. Through observations at this event, we identify four impacts and propose that education should adopt 'lean start-up' principals (Ries, 2011) and become a 'platform for experimentation' for learners to have an impact and be in control for the next.

Keywords: design education, management learners, lean start-up, live their learning, autoethonography

1. Introduction

Developing inclusive economies that combine social and economic policy is not only a challenge for the United Kingdom (UK), following the Brexit vote, but one that requires a solution of fundamental reorientation of government to achieve a more balanced growth and more inclusive prosperity (Flanders 2016). Moreover, the focus on the future of UK education supporting knowledge economy, enables us to highlight how important design remains in shaping management graduates for the complexities of the employment market. Against this backdrop, we reflect on the impact design education has on our management learners by equipping them with a different learning perspective; one that allows them to 'live their learning'.

We investigate how the lean start-up model described by Ries (2011) combined with design processes can lead to management learners having the opportunity to redesign themselves as a workforce fit for the next. We question: how can design testing and reinventing approach combined with lean start-up model and applied within an educational context lead to new opportunities for the learners and potentially alternative teaching and learning methodologies. The paper explores a third-year module entitled Design Leadership on an undergraduate global management programme. The module's focal point is production of an e-portfolio, which brings together learners' achievements both in the module and outside of its delivery. The submission is accompanied by a gallery exhibition where on the opening evening the e-portfolios are presented alongside learners' other creative outputs. It is this event that carries quite a significance in the learning process where both the creative output and the context of the learners' studies come together. We consider that there is an opportunity here to map out what would 'lean education' look like where learners can fail earlier but succeed sooner.

2. Background

We begin by exploring how the 'lean start up' model thinking (Ries, 2011) can be embedded in educational context. It is argued that minimising risk by reducing resources required by start-ups is one way entrepreneurs can turn their ideas more swiftly into products. This process can be achieved by reducing the total time through the Build-Measure-Learn-feedback loop (Ries, 2011 p. 75). Putting the customer at the centre is not new but improving the understanding of their real needs through this cycle and developing iterative testing and feedback that bring further knowledge and understanding at speed is.

However, Reeves et al (2016) suggest that different risk environments require different approaches and that sustainability is achieved through the dexterity of an organisation having the six attributes derived from the human immune system: redundancy, diversity, modularity, adaptation, prudence, and embeddedness. These combined approaches encourage individuals and organisations to apply an adaption, variation and selection process to achieve resilience and success from failure (Harford, 2011). To enable those entering business organisations to implement such thinking, we argue that learners need to draw on learning experiences that offer: the ability to see around corners, rather than being reactive; a diverse network of people, knowledge and inspiration; and the courage to let go of ways of work that had previously been successful (Torres, 2014).

To understand the type of pedagogy required to embed the 'build-measure-learn' feedback loop, we turn to Moon (1999), who states that emancipation comes '… when a learner takes a critical overview and amasses further understanding of a professional situation or social situation or the self or their knowledge' (p. 153). Moon (2004) recognises the learners' framing and approach to learning can be shaped by its formal setting. Based on expectations of previous experience, the learning opportunity may be limited but by helping a learner to positively review aspects such as their perceptions of the demands of the learning task, their emotional orientation towards self-management and the task in hand, and their learning habits, new learning maybe achieved. Whereas, Illeris (2007) focuses on the difficulty for a learner to transfer learning from a variety of different spaces. He acknowledges that a variety of learning spaces such as e-learning, work based, everyday learning can create fragmentary lives generating multi-layered learning experiences that can be fractured making the transfer so much more complex (Illeris, 2007).

Bayles and Orland (1993) identify personal issues such as pretending, perfectionism, uncertainty and imagination that need to be addressed for art to be made. They identify 'wanting to be understood'

as a basic need of affirmation of humanity and that by sharing the 'real you' you might not be understood and are thus exposed (p. 40). However by taking this risk it is possible to dare to articulate the ideas beyond the limitations of the imagination of your audience and overcome being limited by the views of others (Bayles and Orland, 1993). We argue that our learners encounter these issues when they are asked to create their e-portfolios, and to identify images or objects for display at the exhibition. By daring to engage fully with the process the learners can show a deeper level of response and to discover or unlock a bigger more audacious vision of their future or what we refer to as 'live their learning'.

3. Methodology

The paper is underpinned by autoethnography and draws on narratives of attending learners and those who teach and support the module by mapping out the transformation opportunities afforded by the opening event of the gallery exhibition linked with the module. Denzin (2003) '… is credited with actually establishing the initial connection of performance ethnography, autoethnography, pedagogy, and theory' (in Hughes, 2008, p. 127). Adams, Jones and Ellis (2015) describe autoethnography as a qualitative method that offers '… nuanced, complex and scientific knowledge about particular lives, experiences, and relationships rather than general information about large groups of people' (p. 21). Crucially, autoethnography recognises the researcher as part of the research process, a quality that has been particularly valued in this study. As Hughes (2008) observes '… [r]ather than seeking to escape subjectivity, authors considering autoethnographic techniques should do so precisely because of the qualitative genre's capacity to engage first person voice, and to embrace the conflict of writing against oneself as he or she finds himself or herself entrenched in the complications of their pedagogical positions' (p. 128). Furthermore this method has enabled questioning of the facilitators own subjectivity and understanding of the learning process that occur during class times and the exhibition opening event. As Foster et al (2006) and Sparkes (2000) maintain '…. The experiences of the researcher are presented as narratives of the self that seek to extend understanding of the issues raised' (p. 47). Thus, this method enables us to tell the story of learning that occurs whilst questioning our own understating of the complexities of that process where conflicting agendas and power relations mix and interact. In particular we unpack, the opening event of the exhibition and explore the way it acts as a platform for the learning experiences.

For purpose of this study we acknowledge that there have been to date at least six such opening events that are part of the module delivery. The events take place always in the last week of the module that runs twice in an academic year. The participating learners are in their final year of undergraduate study on a BA (Hons) Global Management degree. They are in their early twenties and represent a wide selection of cultural, social and national backgrounds. To position ourselves in this study, we acknowledge that we are white, female and brought up in the Western tradition and have conducted this research in an established University setting. However, our subtle differences in education and professional experience provide nuances to our approach and analysis. We believe that the detail of our different routes and experiences to get us to our roles are important and illustrative of the changing times and influences, the way we value learning as well as the way we argue the value of 'lean education' as conceptual framing of design education for next.

4. Fostering resilience, adaptability and flexibility

Design Leadership module pedagogy offers learners a chance to develop a personalised 'container' and then build the components of content in quick succession. As the learners develop their content they begin to find fault with the container template and improve it, often remaking it several times to better represent themselves and also making it more intuitive to use – so they use a design thinking process intuitively while following the feedback loop of building, measuring and learning, recognised by Ries (2011). Thus, they understand themselves as customers of their own learning with needs beyond their expectations, and so experience a deeper level of comprehension.

The assessment output is an e-portfolio (the container) incorporating each learner's own interpretation of design leadership and other content such as a Book Shelf, their own visual brand archetype, vision, mission and CV plus external projects and interests that they may wish to incorporate. This e-portfolio captures a very personal design/business view, which is further augmented by a physical, rather than virtual public facing exercise. Each learner generates a selection of image/s or artefact/s (often very personal travel snaps, art works or cultural artefacts) for the exhibition hosted by the University's gallery and to which learners invite guests to the opening evening. It is this final form of publishing that seems to give the learners a final boost of confidence. As though the whole process has enabled the learner to validate themselves as individuals in a way that they are happy to be represented to their wider worlds and one which offers them understanding and more control over that representation going forward. This more holistic view combining inner life with their student persona provides a new confidence that noticeably impacts on the wider staff's impression of the individuals, which we explore below.

4.1 The transformational learning event

The culminating event of the module delivery is the opening event where learners present their e-portfolios alongside other artworks that they have produced. We argue that this event year on year has become a catalyst for our learners to move beyond the process of portfolio creation to experience of 'living their learning'.

Analysing the participant's responses and engagement during the event reveals that it has impact in the following four ways:

- New understanding of learners' own identities through the development of personal brands
- Emergence of meaningful connections for learners between their external activities and learning on the module
- Emergence of confidence in applying creative processes in business contexts
- Development of skills to navigate socially dynamic public environments

The following sections will explore in greater depth how we as facilitators of participants learning observe the emergence of the four categories from this event leading possibly to pedagogy that supports 'lean education'.

4.2 New understanding of learners' own identities

As part of the portfolio content, learners are asked to develop their personal brand, as Figure 2 demonstrates. The exercise asks them to name particular information in order to shape this personal brand of nine categories including colour, animal, iconic object and favourite artist.
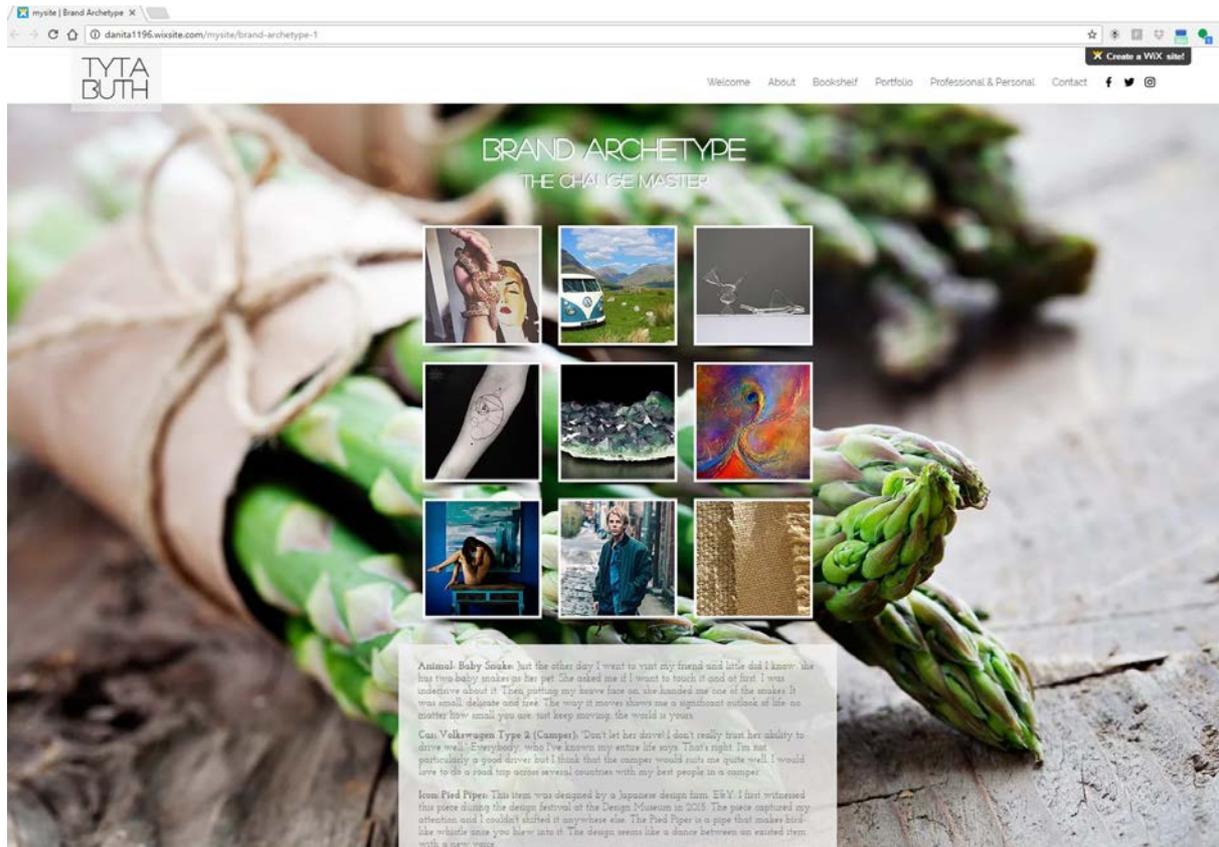
Figure 2. Brand archetype page from Keoinmorokot Buth's e-portfolio exploring her personal identity. (December, 2016)

During the event learners often talk about their personal brands to engage their audience with their portfolios. It is particularly noticeable how fluent the learners are in justifying their choices. In particular, they are able to explore their personal characteristics and their fit with the personal brand. Our conversations at the event highlight how learners realise how often they trade in stereotypes, but they acknowledge this process quickly. As one of the learners observes that his choice of blue colour is not just a happy sky blue as that is not what represents him best. Rather he has chosen the image to represent more accurately the emotional meaning the colour carries as well as the underlying significance of the colour itself.

Walking from learner to learner at the event, it becomes clear that the way they have shaped their personal brands plays out a dual role. The brands capture learners current understanding of who they are as third year student, as well as, present their aspirations of who they wish to be as perceived by others, see Figure 3. Again, here the learners choose to explore interplay between stereotypes and more direct representations. A good example of this is their choice of representative animal. In discussions, some learners explain how they have chosen animals for their brands because of who they aspire to be. These are often wild animals such as cheetahs, lions or pumas described as representing strength, leadership or insight. Alternatively, learners explain how they chose animals that they own or see themselves as providing real characteristics such as a loyalty or trust.
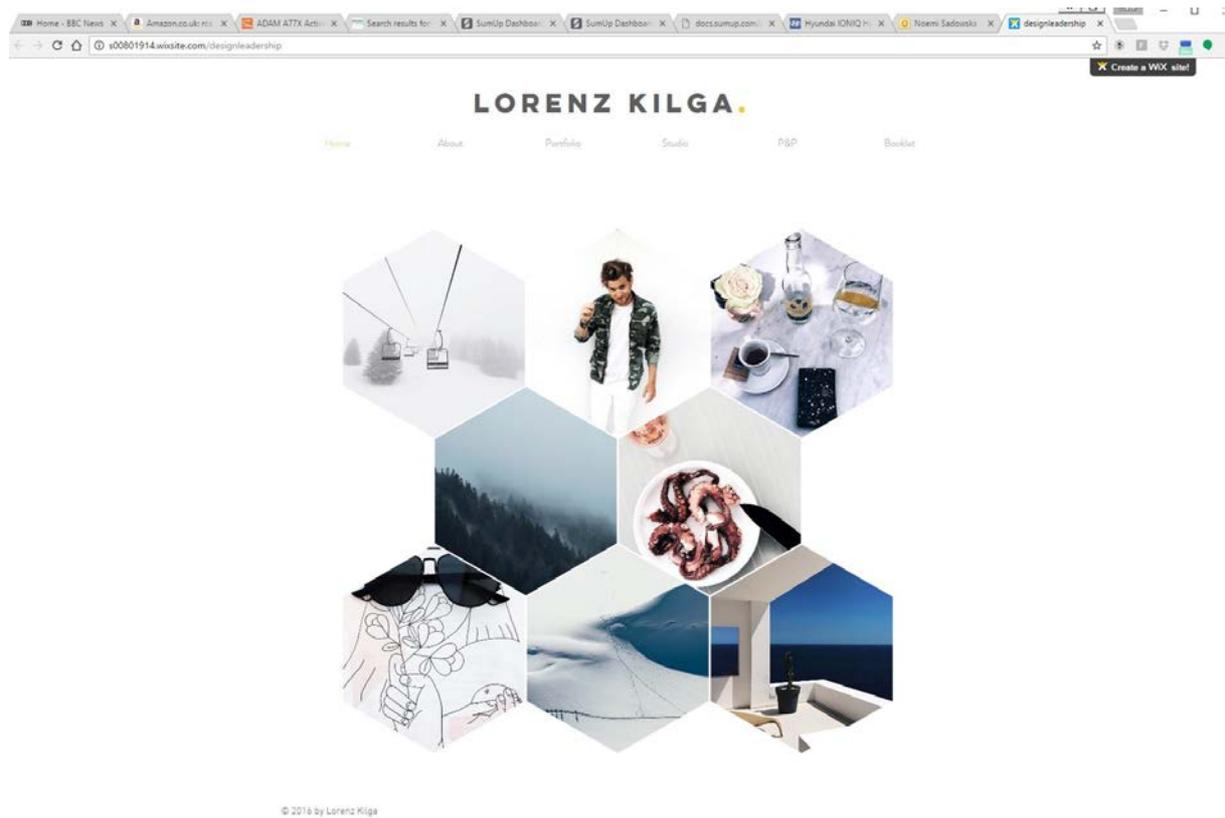
Figure 3. Homepage from Lorenz Kilga's e-portfolio, used by the student to express visually values that matter to him for others to consider and engage with. The interactive element of the page enables viewers to view each image individually and respond to it on emotion and intellectual level. (December, 2016)

In summary, by including the personal brand element in the portfolio, learners can position themselves in relation to the rest of their work and capture how they perceive their own identities as business management learners, alongside how they wish others to perceive them. This knowledge provides a talking point at the opening event, giving the learner the ability to offer a more connected view of who they are and what they contribute and a new confidence to share more of themselves socially with a wider audience

4.3 Meaningful connections between external activities and learning

The accompanying exhibition includes learners' artwork that is made externally to their studies. The opening event provides a launch pad for the learners to demonstrate how their creative interests or business activities can link with their studies and together form part of their achievements. Over the years, the exhibition has included a whole range of artworks from photography, painting, drawing and lithographs, to batik textiles, embroidered traditional ethnic costumes, urban wear and ceramics. The exhibited works present learners' hobby activities, outcomes created as part of internships or contribution to family businesses. By inviting this external output to be presented alongside the portfolio, these two worlds (external and educational) come together and offer those attending the opening event a glimpse of the richness of the learners' interest and engagement with the world around them (Figure 4).
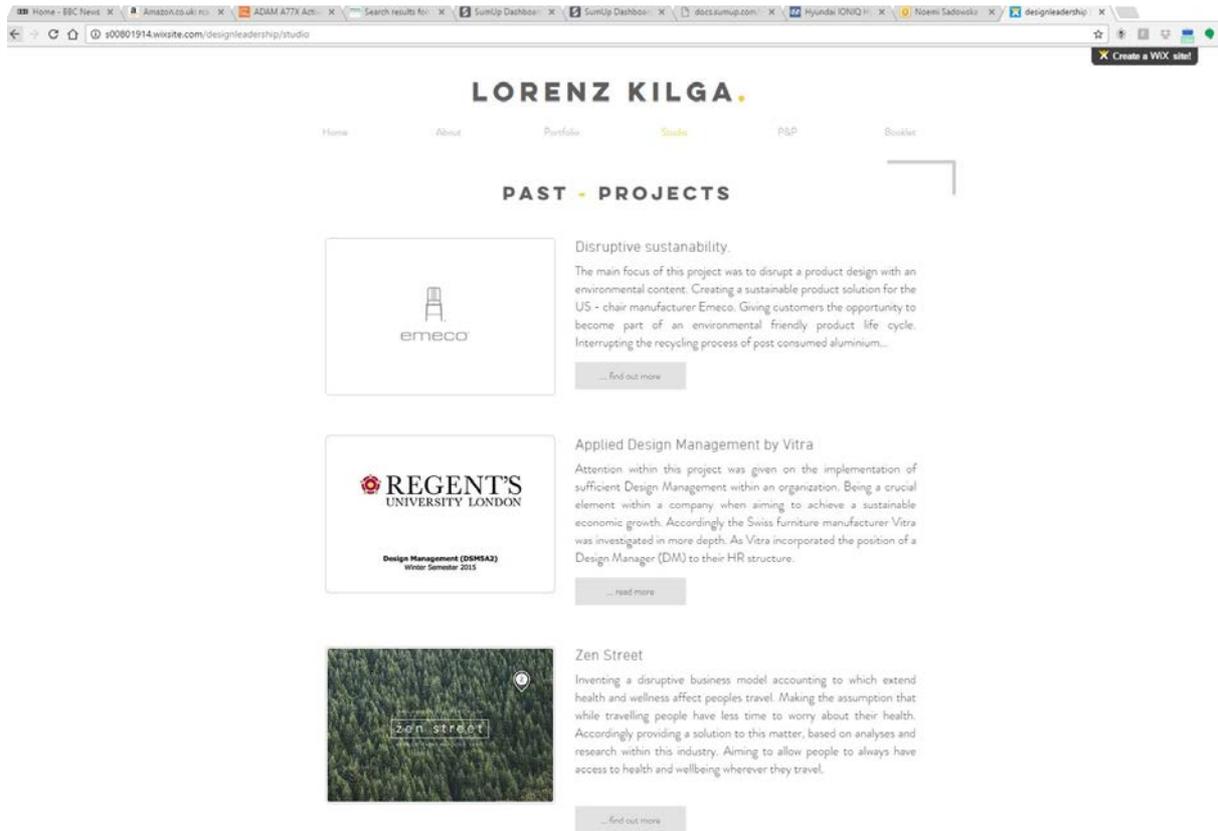
Figure 4. Studio page from Lorenz Kilga's e-portfolio displaying his involvement in projects external to his studies. (December, 2016)

These learners are not taking an art or design degree, so it is of note that this plethora of creative outcomes is a real testament to the learners gained new understanding of the links between what they find interesting focusing on outside of their university experiences and how the education they are gaining aligns with these experiences and leads to the new learning. In conversations during the event, learners often are keen to tell the stories around the exhibited works but also are skilful in then drawing the links between their portfolio and what is being exhibited. Although such behaviour might be perceived as typical for a design or an art student, for learners on a management degree programme, the creative outputs are not a norm and require a different kind of thinking and learning. As one of the most recent learners comments how she never worked so hard on any of her other management projects, but how much fun it has been and how it all felt like playing. Here we argue that learners see their external lives as a more valuable resource when they link it more closely to their studies. This process helps the learners to assimilate and synchronise their internal and external knowledges combating some of the fragmentation of contexts influencing learning, observed by Illeris (2007)

4.4 Emergence of confidence in applying creative processes

As part of the portfolio content learners are also asked to generate creative responses to business problems. These are projects set during the module delivery where all learners need to follow a particular brief. In conversations during the event, this particular set of tasks although referred to by the learners, is not as often highlighted as the other elements of the portfolio. Learners tend to refer to it only in passing more to demonstrate that they have met the modules' learning objectives. However, despite this passing attention, when asked about the projects they are very adept at exploring the creative approaches and in particular what they have invested in the solution. That

process of acknowledging of what they bring to the solution and naming it as part of creative process demonstrates how the module enables learners to see creativity as part of their identity. However, it is through the conversations at the opening event in particular that these learners begin to connect their ability to address business problems with their own creative outputs. Thus, the process of externalising and thinking through the links that is triggered by the conversations at the event capture learners newly developing creative confidence (Kelley, 2010).

4.5 New skills to navigate socially dynamic public environments

The final category emerging from the observed impact of the opening event is how the learners navigate the event and the social dynamics it creates. All six iterations of the event have been well attended by the learners and their invited friends and family, rather than representatives from industry. Thus, the event becomes a time and space that offers quite an intimate experience of sharing personal achievements where learners use this opportunity to introduce their family members to academic staff who attend or show their family members what they have been up to on the module. In the observed interactions, learners provide descriptions of what has been created with a lot of confidence and belief. In particular, what they often refer to is their creative outcomes and share with others their creative achievements. The observed dynamics at the event capture learners' confidence in their creative outputs in light of possible family and peers' scrutiny. With very personal displays, they are able to navigate both the praise and critique from their audience, as well as demonstrate camaraderie with their fellow module participants.

The intimacy the event creates offers a further learning opportunity for learners to reflect on their own creative confidence and how it can become a way to foster resilience and adaptability in response to socially dynamic public environment where in particular scrutiny plays an important role. In this case exhibiting portfolios and other art works can be perceived as exposing for the management learners to external critique. However, we observe that by the time the event comes around, the learners have become resilient to putting aspects of themselves out there because they do it every week in the seminars. These in-class encounters enable learners to start practicing their skills in navigating the social dynamics that emerge from presenting their work publicly. Thus, at the event they demonstrate greater adaptability to the exposure in the public space.

Upon reflection, the act of learners' participation in the opening event where they launch their portfolio and exhibit their artworks becomes what we would like to call a leap of faith in their development as leaders. The nature of the event that effectively elevates the regular university module assessment submission to a public event prompts the learners to see themselves in a new light (see Figure 5).
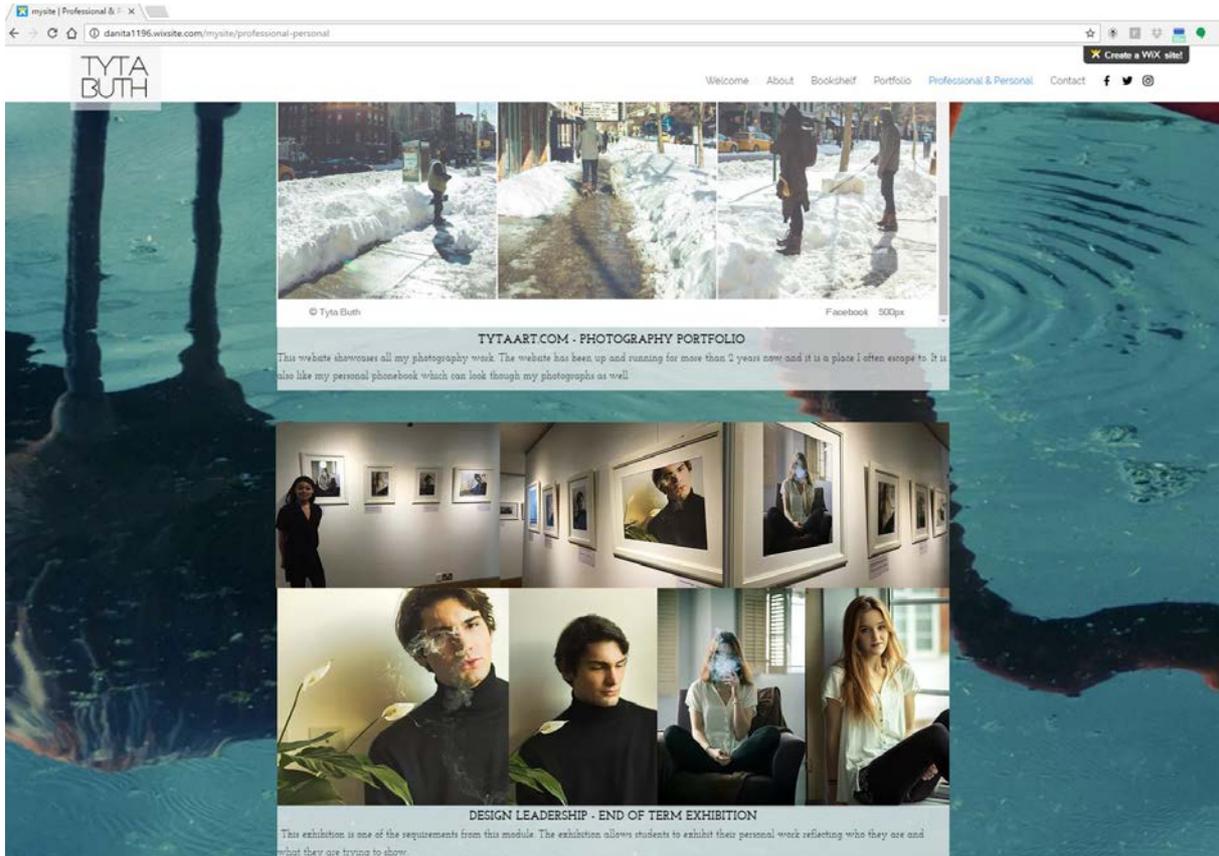
Figure 5. Keoinmorokot Buth's e-portfolio page presenting her display at the Design Leadership Exhibition to highlight its value in the learning process of becoming a design leader. (December 2016)

From our observations, we have gained insights on how much learners recognise this event as process of revealing something about themselves to gain confidence in their own decisions and outcomes (see Figure 6).
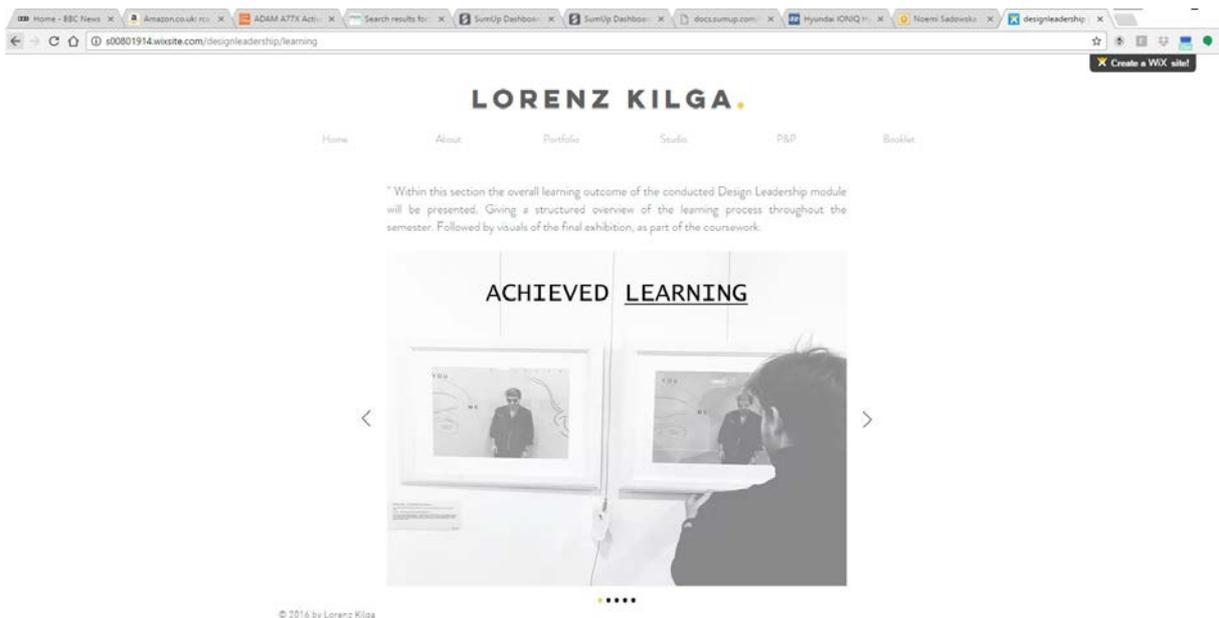

Figure 6. Lorenz Kilga's e-portfolio page demonstrating his learning. Of interest is the central image capturing the interplay between Lorenz as observer of his own exhibition display. (December, 2016)

At the event, they stop being simply undergraduate students and see themselves as professionals, which is where we believe lies the leap of faith allowing them to see the relevance of their module learning beyond simple acquisition of knowledge.

The event becomes a turning point where new emotional relationships emerge from their learning enabling them to improve academic achievement, transfer of knowledge between learning spaces, whilst mimicking work experience to improve employability, building for the next.

5. Discussion and conclusions

The e-portfolio is a step beyond familiar forms of social media and requires design form and function decisions to be made. Where learners have started early with portfolio development it is not unusual for the limitations of the templates to be identified and completely new rebuilds are undertaken several times before hand-in. This is one of the examples of the lean process allowing learning through iterative prototypes, which encourages further exploration through self-generated questioning and problem solving. The portfolio and the opening event become a tool for discussion between the learners, learning is quickly transferred, and design decisions tested with peer critique as a way of behaving. Here the immediacy of the publishing processes enables learners to see the product and to measure its success and learn from it to build the next iteration. As one of the learners acknowledged at the most recent opening event, he has rebuilt his portfolio ten times where the last building iteration took place the night before the event. However, our analysis highlights that the process of living learning only truly emerges at the point of participation in the opening event.

We argue, that learning for the next or as we term it 'living our learning' requires a new self-awareness and ability to self-reflect to ask questions of sources to better anticipate and understand the challenges to come. A learner will achieve a deeper level of learning, and improve academic success where 'real, demanding and exciting work' is offered combined with emotional engagement between staff and learners and the opportunity for all to reflect on those experiences. This process will encourage personal development and will help to overcome difficulties of transfer through fragmentary lives and the limitations of learners' expectations of the learning available. On the other hand, lean start-up principals ensure that organisations are adaptable (i.e. able to adjust their processes and performance to current conditions) and as fast as the challenges they are facing. Harnessing the power of the learners who bring new knowledge and needs from their generational experiences and circumstances would mean that the student body is treated more as a customer with fast changing needs, whom the university needs to continually understand and work with to facilitate the learning that is required.

To understand more of these new emerging needs there are three areas for further research:

- Understanding more of the ongoing external contexts of the learners as they become increasingly diverse, with complex and fragmented lives outside their studies including sophisticated technology use, entrepreneurial activities and bases in more than one country
- Understand more of the longer-term impact of 'living learning' by encouraging alumni communities and further tracking of success and career choices
- Benchmark the module with other courses from outside our university to understand how others are encouraging deeper level learning and how this is received by employers of their alumni.

Higher management education needs to be more about designing the initial content and assessments that enable the students to find problems, test solutions and pull information as they need rather than have content pushed at them through more traditional means. In response to our study, we argue that modules that formulate learning and teaching as 'platform for experimentation' and use the principle of Five Whys (a simple but powerful process of asking Why five times to get to the real heart of the problem) (Ries, 2011, p. 229) would provide a platform for staff and learners to innovate in real time the learning they need. The feedback from such learning experiences would provide data generated by the learners and staff on accountable matrix such as pedagogic success, knowledge transfer, new levels of understanding, cross and transdisciplinary working and innovative solutions. Failed experimentation would be just as valid as all activity would be measured as actionable, accessible and auditable (Ries, 2011, p. 143). This might lead to real-time problems being addressed and giving learners more of a managed apprenticeship in working practice experiences, validating their need to be adaptable. In turn this may lead to further start-ups and new mechanisms for knowledge transfer and innovative solutions that may also demonstrate levels of acquiring knowledge and skills that would still allow a standard such as a BA to be achieved but also contribute to change in the wider communities of business and society.

In conclusion, we recognise that current undergraduate management learners in our classes tend to perceive learning as external and only remembered when required. However, we argue that it is not enough for learning to be owned and acknowledged, yet used when needed. Mindful of current and future needs, we maintain that the role of learning is to be owned, internalised, where learners feel responsible for its impact and outcomes, allowing the experience and know-how to become 'living learning'. Such an approach to learning instils in management learners' resilience, adaptability, and flexibility, highlighted by Harford (2011) as key in shaping the workforce for the next.

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