

2017-06-22

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Recommended Citation

Futonge, K. (2017). Using Insider Action Research in the Study of Digital Entrepreneurial Processes: A Pragmatic Design Choice? In *ECRM2017-Proceedings of the 16th European Conference on Research Methodology: ECRM2017* (p. 451). Academic Conferences and Publishing Limited.

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Funder: DIT

Using Insider Action Research in the Study of Digital Entrepreneurial Processes:

A Pragmatic Design Choice?

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Abstract

This paper proposes that insider action research (IAR), with its iterative and emergent form of inquiry, presents a pragmatic design choice for understanding the nature of uncertainty surrounding the digital entrepreneurial process. Since entrepreneurship in the digital context is a highly dynamic and fluid process, IAR appears well-suited for use in researching it. Yet, the paucity of application in entrepreneurship research in general, and less so in the emerging digital space, is rather puzzling. Thus, using a 'live' case study in the e-learning domain, this paper contributes by shining light on how this design choice might be set up and applied in digital entrepreneurship experimentation.

Keywords: insider action research, researching entrepreneurship, digital entrepreneurship

1 INTRODUCTION

Entrepreneurship research appears to be coalescing around core themes, unified by the study of the *phenomenon* – i.e., the process of emergence of new economic activity (Wiklund et al., 2011). This process is often described in terms of uncertainty (Knight, 1921; McMullen & Shepherd, 2006), non-linearity and unpredictability (Sarasvathy, 2001, 2008). Thus, it requires 'continual adjustments by actors' (Garud & Giuliani, 2013), who learn and hone their capabilities through a range of situational influences (Kempster & Cope, 2010) and experimentation (Kerr et al., 2014).

In the digital context, Nambisan (2016) notes that the dynamic and fluid boundaries of innovation and entrepreneurial processes, dictate the use of methodological approaches that reflect the incremental and nonlinear paths that digital artifacts and platforms facilitate in entrepreneurial initiatives. Following this argument, this paper proposes that insider action research (IAR), with its emergent and iterative mode of inquiry (Shani & Pasmore, 1985; Reason & Bradbury, 2008) presents an intuitive design choice for producing knowledge within this context. Yet, despite its potential to illuminate our understanding of the entrepreneurial process, the paucity of use is rather puzzling.

Therefore, using a longitudinal 'live' case study of a digital start-up process in the e-learning industry, this paper hopes to elucidate how this form of inquiry might be applied in the continual experimentation and production of knowledge about the entrepreneurial process. And, in a dual role, the researcher, as entrepreneur, initiates a real digital start-up process that provides a vehicle for applying and testing a host of entrepreneurship and innovation management theories and principles. In a collaborative effort involving a Dutch gaming company, a web developer and actors sourced from digital talent platforms, the study recreates some of the realities of the digital entrepreneurial process, while exploiting opportunities for new knowledge production.

Being an ongoing study, results so far are only tentative. However, as the first and current IAR cycles demonstrate, managing uncertainty in the digital entrepreneurial process appears to lend itself to an eclectic mix of effectual logic (Sarasvathy, 2001) and a customer development innovation model (Blank, 2012), in conjunction with principles of the Lean Startup (Ries, 2011).

This paper is organised as follows. First, it draws on current debates in entrepreneurship research to underscore the rationale for adopting an IAR mode of inquiry. In so doing, it highlights the call for entrepreneurship research that adopts methodological sophistication, unique to researching the dynamic and non-linear entrepreneurial process. Next, it explores relevant literature on AR and the subcategory of IAR, while simultaneously establishing its suitability for experimenting with the digital start-up process. Finally, it illustrates how IAR is being applied in a real live case.

Overview

Entrepreneurship theories draw from diverse disciplines, with their corresponding epistemic traditions. While the multidisciplinary character of the field has contributed to a vibrant discipline (Audretsch, 2012); it has also resulted in fragmented and non-cumulative knowledge development (Fiet, 2001), with some incompatibility in the methods used to conduct research (Chandler & Lyon, 2001). This increased fragmentation has prompted different responses from the scholarly community about how knowledge should be produced in the field.

Debating Entrepreneurship Research

Pittaway (2012) identifies and categorises two broad groups in the entrepreneurship research debate. The first group seeks to define the subject more narrowly, thereby consolidating (Shane & Venkantaraman, 2000) and/or excluding certain types of research (Low, 2001). This group also seeks expansive theories that integrate much thinking into a coherent whole. Meanwhile, the second group echoes both pragmatist and interpretivist perspectives. It considers the diversity in thinking to be a positive outcome of entrepreneurship studies (Gartner, 2007); thereby, leading to very different forms of acceptable knowing and knowledge construction (Grant & Perren, 2002; Pittaway, 2005).

Despite differing perspectives, there appears to be a consensus on several issues facing entrepreneurship research. For one, most scholars seem to agree that entrepreneurship is an evolving discipline and need not be researched purely as part of established sciences (Simon, 1996). For instance, Zahra and Dess (2001) argue that entrepreneurship cannot be too paradigm driven, as that would kill the energy that makes the field vibrant. There is also unanimity in Gartner's (1988) argument that entrepreneurship cannot lose sight of the phenomenon it seeks to study. As such, research needs to encompass the study of processes of emergence of new economic ventures (complete or incomplete) across various organisational contexts (Davidsson, 2016: 35).

The above views hark back to Bygrave's (1989) call for entrepreneurship research involving methodological sophistication germane to researching the phenomenon. Bygrave states that because entrepreneurship begins with a disjointed, discontinuous, and non-linear event, it cannot be studied with methods designed for smooth, continuous, and linear processes.

Rigour vs. Relevance

The debate about how entrepreneurship should be researched, can also be framed within the broader rigour versus relevance argument; which was partly engineered by Susman and Evered's (1978; 585) observation that findings in scholarly management journals only remotely related to the real world of practising managers. To bridge the gap between theory and practice, Gibbons et al. (1994) proposed Mode 2 knowledge production.

Unlike traditional Mode 1 research, which sets and solves problems in a context governed by academic interests of a specific community, Mode 2 research produces knowledge within a context of application (Starkey & Madan, 2001). It seeks to overcome the concerns of the practitioner community by producing knowledge which is based on academic rigour, yet holds relevance to practitioners (Starkey & Transfield, 1998: 14). As Starkey and Transfield argue, the 'ability to develop ideas and relate them to practice should be the distinguishing competence of the skilled management researcher.'

Mode 2 research, such as IAR, is therefore born out of some of the limitations of traditional research approaches, especially those that rely heavily on backcasting. As cognitive psychologists point out, human memory is constructive, with the result being selective recall and retrospective and hindsight biases (Anderson, 1990). As such, traditional approaches which mainly rely on methods such as in-depth interviews or surveys, risk producing knowledge that misidentifies causality in the entrepreneurial process, which only an immersive experience might uncover (Read et al., 2016).

At this juncture, however, it is important to underscore that the intent in identifying some of the limitations of Mode 1 research, is neither designed to deny its many merits; nor is it meant to suggest that one design choice

is superior to the other. In fact, it will often be the case that a researcher's design choice is predicated on subject matter and situational constraints (Easterby-Smith et al., 2015).

However, since entrepreneurship is often cast as pragmatic science (Drucker, 1985; Rasmussen & Sørheim, 2006), the need to produce actionable knowledge (Argyris, 1996), using concrete research, cannot be over-emphasised. Aldrich and Martinez (2001; 51) concur by stating that entrepreneurship research needs to move beyond conceptual integration and attempt to replicate concepts in concrete empirical research.

Landström et al. (2016: 10-11) summarise the foregoing practice-based arguments, by stating that like real world entrepreneurs, entrepreneurship research needs to adopt the same 'down to earth,' actionable and pluralistic view of entrepreneurship; by employing epistemological and methodological inspiration from pragmatic philosophy, and a wide range of traditions.

Digital entrepreneurship has only very recently garnered interest in entrepreneurship's top journal (ET&P), following Nambisan's (2016) agenda-setting publication. Given the current interest in this little-explored area of research, the time may be right for identifying methodological approaches that cater to the nature of entrepreneurship in the digital economy.

3 ACTION RESEARCH (AR) – AN OVERVIEW

AR is used as an umbrella term for a family of methods, united by the original Lewinian (Lewin, 1946) root, with each modality having its own distinctive emphasis (Raelin, 2009; Coghlan, 2010a, 2011; Bradbury, 2015). Given its interdisciplinary application, definitions tend to be varied and discipline specific. Within management sciences, AR is commonly defined as follows:

... an emergent and iterative process of inquiry that is designed to develop solutions to real organisational problems through a participative and collaborative approach, which uses different forms of knowledge, and which will have implications for participants and the organisation beyond the research (Shani & Pasmore, 1985; Reason & Bradbury, 2008).

This definition brings to the fore, the themes of purpose, process, participation, knowledge and implications. With relation to purpose, AR, as Shani and Pasmore observe, seeks to promote learning and solve real organisational problems.

Philosophical Underpinnings of AR

Herr and Anderson (2005) note that AR, is informed by a continuum of epistemic traditions, of which the philosophies of critical realism (CR) and pragmatism are frequently identified as underpinning knowing in action (Johansson & Lindhult, 2008; Coghlan & Brannick, 2014: 45).

Critical realism: As Burgoyne (2011) explains, critical realism (CR) presents a middle ground philosophy between the extremes of positivism and interpretivism. It develops a qualitative theory of causality by avoiding some of the pitfalls of empiricist theories, as embodied by direct realism and positivism (Roberts, 2014). For this reason, critical realists like Bhaskar (1975) maintain that reality is stratified into the empirical, the actual and the real. The empirical represents events that are observed or experienced; the actual, constitutes events and non-events which come about as a result of the real, while the real represents causal or generative structures and mechanisms with lasting properties.

Therefore, owing to the stratified nature of reality, the researcher must deep-dive in critical reflection, to probe and understand the underlying structures and mechanisms that give rise to observed phenomena (Bhaskar, 1989). Since CR raises questions about the preconditions for social phenomena, Blundel (2007) posits that it is well placed to frame and investigate into contextual and process issues in entrepreneurship.

Critical realist knowing involves a three-step process of experiencing, understanding and judgment (Lonergan, 1992; Flanagan, 1997); whereby, we start by experiencing; then, using retroductive analysis, we reason backwards to question our experience (Danermark et al., 1979; Sayer, 1992:107; Danermark, 2002; Reed, 2005). In so doing, we discover or gain understanding. Upon our understanding, we make judgement. Through this

process, we discern the underlying causal mechanisms and structures that give rise to qualitatively observed phenomena. Finally, based on our knowledge, we might take action.

As Johansson and Lindhult note, the critical realist orientation of AR ‘focuses on reflective activity, in order to articulate, develop and validate knowledge, and support emancipation of minds.’ This orientation of AR allows researchers to be part of the research, yet maintain distance from it.

Pragmatism: Kelemen and Rumens (2008) explain that the philosophy of pragmatism, as espoused by John Dewey, is premised on the notion that concepts are only relevant where they support action. Thus, with pragmatic philosophy, theories, concepts, hypothesis and research findings are not abstract ideas, but form the bases for thought and action; and it considers reality to be the practical consequences of ideas, which derive from a flux of processes and experiences (Saunders et al., 2016: 142-143). With pragmatism, thought is intertwined with action, and understanding arises from the very act of applying (Schon, 1995).

Finally, while CR highlights the process of knowing in AR, a pragmatic orientation is needed in contexts where immediate action is needed. Thus, pragmatism in AR helps to combine theory and practice, by employing experimentation in practice and conceptualisation as a desirable approach to developing new knowledge and improving practice.

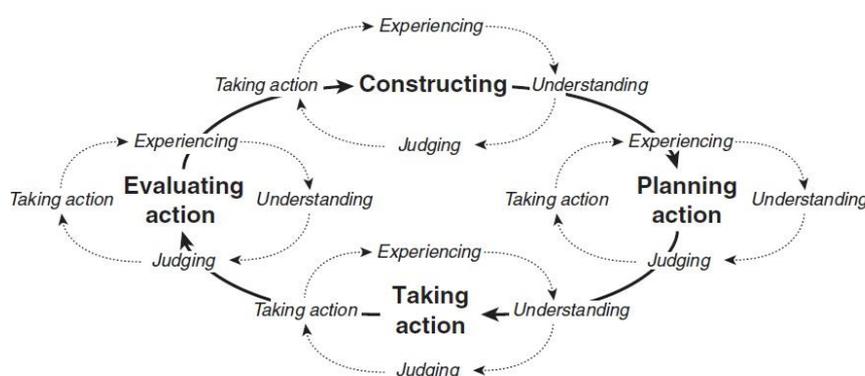
Why Action Research the Entrepreneurial Process

The AR *process* is both emergent and iterative. It begins within a context and works through several cycles, with the possibility for a change in focus as the research unfolds. Each cycle starts with diagnosing of issues, followed by planning, taking and evaluating action. A decision on actions for the next cycle is usually informed by knowledge gained from evaluating the previous one. Subsequent stages follow a similar pattern.

Almost instantly, one notices that the iterative AR process (see figure below) is akin to innovation and entrepreneurial processes such as the Lean Start-up (Ries, 2011), design thinking (Brown & Katz, 2011) and effectuation (Sarasvathy, 2001, 2008). Thus, AR appears to be one of few methodologies that allows entrepreneurship researchers to live and document the entrepreneurship experience as research.

With regards to participation, AR is a social process wherein the researcher is embedded (Bradbury & Reason, 2003), and collaborates with members of an organisation as a facilitator, to better their situation (Greenwood & Levin, 2007). As Heron and Reason (2006) put it, AR is research ‘with’ rather than ‘on’ people. Since most successful entrepreneurial ventures are the result of team collaboration (Cooney, 2005), it points to yet another similarity between entrepreneurial and AR processes.

Figure – AR Empirical Method



Source: Coghlan and Brannick (2014: 30)

AR also encourages the use of different forms of *knowledge*, which may include abstract theoretical knowledge, experiential knowledge, and knowing-in-action (Reason, 2001). This approach to knowledge production is incorporated into each stage and cycle in the AR process. It echoes the same pragmatic approach to new venture creation by practising entrepreneurs, who constantly learn and sharpen their capabilities through a range of contextual influences and experimentation.

While the use of AR in entrepreneurship studies appears intuitive, only a handful of entrepreneurship scholars have taken up this mode of inquiry (Rasmussen & Sørheim, 2006; Leitch, 2007); even rarer is the application of AR in experimenting with the start-up process, which might partly be explained by the potentially taxing nature of the process.

4 INSIDER ACTION RESEARCH & THE DIGITAL ENTREPRENEURIAL PROCESS

Overview

IAR is a unique form of AR, which emerges from a mixture of organisational AR modalities, and gains integrity from integrating first, second and third person inquiry (Coghlan, 2007; Coghlan & Brannick, 2014). It involves conducting research in the organisation or community in which one is employed or a member, such as a start-up organisation. As such, the process involves high vulnerability.

A complete theory of the IAR process, as Shani and Pasmore (1985) envisage, consists of four main factors - *context*, *quality of relationships*, *quality of the AR process* and *outcomes*. Factors surrounding context, affect the readiness and capability for participating in AR. Environmental factors in the global and local economies provide the larger context in which AR takes place.

The quality of relation between researcher and members is considered paramount; and, therefore, it needs to be managed through trust, concern for others and equality of influence. The IAR process itself needs to be rooted in a dual focus on both the inquiry process and the entrepreneurial process. Finally, outcomes of AR need to have a dual function of developing self-help competencies out of the action, and the creation of new knowledge (Coghlan & Shani, 2014; Coghlan & Brannick, 2014: 5-6).

Björkman and Sundgren (2005) describe IAR as a form of political entrepreneurship where researchers exploit learning opportunities within their organisations. Political entrepreneurs, as Buchanan and Badham (1999) note, operate within an organisation, combining a flexible number of skills while enabling activities such as intervention in political processes, coping with resistance, and promoting credibility in order to reach objectives.

One reason IAR presents a feasible option in experimenting with digital entrepreneurship, stems from the low barriers to entry (Porter, 2001), made possible by several enabling digital technologies; thus, it allows researchers to set up real start-up organisations, against which they may affordably experiment with the entrepreneurial process, while potentially creating new business ventures as an outcome.

Challenges & Countermeasures

The reflexive, collaborative and interventionist nature of IAR (Riordan, 1995; Cooke & Wolfram Cox, 2005) presents challenges, which mainly arise from being close to the problem under study. For this reason, Coghlan (2007) identifies preunderstanding, role duality and organisational politics as being the main issues researchers face when undertaking IAR.

Preunderstanding as Gummesson (2007: 57) notes, refers to a person's knowledge, insights and experiences before they engage in a programme. It includes both explicit and tacit knowledge; which for the insider action researcher, can be beneficial, as well as detrimental to the study (Coghlan & Brannick, 2014: 133-134). Insider action researchers must guard against assuming too much, which tends to prevent critical examination. Ferguson and Ferguson (2001) warn against the danger of believing they fully know their own contexts when in fact their perspectives might only be partial and path dependent. Thus, the researcher is called upon to question their own assumptions and self-awareness using reflective journaling, thought experiments and counterfactual thinking.

Role duality, which Willliader and Styhre (2006) describe as being between academia and practice, can complicate the IAR process. This dual role can become overwhelming and confusing as the researcher is bound to experience 'competing commitments' (Kegan & Lahey, 2001); whereby, there is a higher degree of commitment to the core project, but as an academic, a detached and neutral position is demanded. This conflict may lead to role detachment as the researcher begins to feel like an outsider in both roles (Adler & Adler, 1987).

Organisational politics presents another challenge, as it can undermine research and obstruct planned change. Coghlan (2007) notes that gaining access, using data, disseminating and publishing findings of IAR can be intensely political acts, which may also raise ethical issues. As such, researchers need to be reasonable, intelligent, self-critical and responsible.

5 ENACTING THE IAR & DIGITAL ENTREPRENEURIAL PROCESSES

Pre-step: context & purpose

The IAR process usually begins with a pre-step that defines the context and purpose of the core project and the research project. Context in this study is multi-layered, and includes the digital entrepreneurial context, the Irish national and the academic contexts. These contexts, which often overlap, present opportunities and constraints for undertaking the project.

Digital entrepreneurial context: This study unfolds within the broader context of the global digital economy and the e-learning industry. Within this context, a technological disruption presents the external enabler (Davidsson, 2015, 2016) for coming up with the new venture idea. The entrepreneur has been embedded within the e-learning industry for over ten years as portfolio digital entrepreneur; and draws from his context-derived cognitive abilities, and related experiences, to identify, evaluate and develop the new venture idea.

This digitalised context presents challenges for conducting IAR. In AR and management literatures, the assumption appears to be that organisations are established entities operating within stable boundaries and industries, using traditional value chain processes. As such, there is little reference to digital start-up organisations, which adopt lean and nimble strategies, involving ‘less bounded entrepreneurial processes’; and which use digital technologies to collaborate with a diverse, distributed and independent cast of agents (Nambisan, 2016) across virtual value networks (Rayport & Sviokla, 1995; Peppard & Rylander, 2006).

Within this context, emerging organisational forms, such as digital lean global start-ups (Rasmussen & Tanev, 2015) and internet born-globals (Bell & Loane, 2010), which use digital technologies to collaborate and gain a global competitive advantage from their very inception, are increasingly common. As such, applying and adapting IAR under such conditions for entrepreneurial experimentation, presents a novel and worthwhile undertaking.

As Dymek (2008) notes, digital technologies are shaping the development of AR processes as they provide opportunities for collaboration, yet pose great challenge with relation to quality of participation. As Schein (2003) observes, the lack of body language and ‘functional familiarity’ poses threats to the quality of participation when undertaking AR with virtual agents. This study found that computer-mediated communication has the potential to increase the level of misunderstandings and uncertainty in the digital entrepreneurial process. To circumvent these challenges, communication technologies are used interchangeably and concurrently to minimise misunderstandings in a two-tier layer of live symmetric communication and follow-up asymmetric confirmation.

Academic context: The academic context of this study presents knowledge-based opportunities. The current venture under study is initiated by the researcher, who doubles as a portfolio digital entrepreneur in the e-learning industry. After a fourteen-year hiatus from higher education, the entrepreneur returned to undertake a master’s in entrepreneurship in his current institution. Upon completion of the programme, he came away with an improved understanding of how his fortuitous digital entrepreneurial journeys had unfolded; and possible shortcuts he might have taken, had he been exposed to theoretical knowledge prior. He then became intrigued by the idea of fusing academic research with real-world practice at the doctorate level.

Borrowing from effectuation (Sarasvathy, 2001) and other entrepreneurship concepts, the researcher funds the creation of a new venture idea (Davidsson, 2015). The new venture idea is an e-learning start-up, designed to support learning in K-12 (basically pre-university education) markets using cross-platform compatible fun games.

Irish national context: The academic context is embedded within the broader Irish national context. Within this context, the researcher is a non-EU citizen on a student residential visa. The researcher’s status provides limitations at the level of setting up the venture as a limited liability company, since non-EU nationals are not allowed to register such businesses in Ireland unless they commit to a huge upfront investment. With this

limitation, the researcher is forced to register the venture as a Hong Kong company, while leaving open the possibility for scaling later within Ireland, if successful. Scaling within Ireland is desired because of its enabling digital environment.

Main Steps – Enacting the First IAR Cycle

As stated above, AR involves a dialogic process of constructing, planning action, acting and evaluating action, while chronicling events in real-time, using reflective journaling.

Constructing: Using the business model canvas (Osterwalder & Pigneur, 2010) as a planning tool, the entrepreneur started by articulating his vision for the new venture. He then proceeded to search and shortlist a cast of possible virtual agents as team members. Starting from his own network, he enlisted the services of an Indian web programmer who develops the online platform.

Through LinkedIn, he found a Dutch gaming company that had experience building cross-platform compatible games. A Skype video conference was arranged with the founder to discuss details of the project. Prior to the meeting, a document detailing the technical specifications of the minimum viable product (Ries, 2011) was scripted and emailed. At the meeting, the vision and questions about the requirements were discussed and clarified. The goal was to develop four customisable game templates which the entrepreneur would use to create learning activities for online learners. With this understanding, the gaming firm returned with a quotation for the project which was unaffordable. However, by communicating the level of financial constraints, the Dutch company was able to devise a more affordable solution by reducing the templates to two and removing unnecessary programming requirements.

Planning action: With a contract signed, the project manager designated by the Dutch team was introduced to the entrepreneur. Through Skype, the Dutch team, the Indian developer and the entrepreneur discussed what was needed for key steps of the game development process.

Taking action: With details discussed, the process unfolded, as the researcher functioned as entrepreneur, while capturing every interaction in his reflective journal. Through several Skype meetings and emails, all stakeholders were kept abreast with on-going developments. The game development process mostly ran smoothly, until a miscommunication led to the wrong technology implementation. The entrepreneur took responsibility and the process carried on, forcing a 'pivot' in the revenue model.

As the agreed project was drawing to a close, the entrepreneur was impressed by the efficiency with which the Dutch team worked on the project. He saw it as an opportunity to add two new templates for half the price and took it. He reached an understanding with the founder of the Dutch firm to add two additional game templates for a fifty per cent discount. With the same efficiency, the Dutch team completed the game development process and delivered the four game files.

Evaluating action: Upon completion, the entrepreneur scheduled a Skype meeting with the founder of the Dutch company. The meeting was an in-depth interview designed to understand how the process unfolded behind the scenes with their own independent team members. This provided a major learning opportunity for the entrepreneur. The meeting concluded with suggestions on how future product development processes and outcomes might be improved.

Analysis: By going back to the journal and reflecting on the entirety of the process, against the backdrop of entrepreneurship theories, several insights and new concepts began to emerge that may provide an explanatory framework for entrepreneurship theories. While it is early stages, digital entrepreneurial processes may arguably exhibit a bias for effectual logic, and an eclectic and situational mix of innovation management models. This process also revealed new ways of conceptualising effectuation theory. However, given that the study is longitudinal and ongoing, conclusions at this stage are tentative.

By elucidating how IAR can be utilised in an immersive study of the digital entrepreneurial process, this paper contributes to the growing debate on how entrepreneurship at the intersection of digital technologies might best be researched. Through an ongoing live case in the e-learning industry, the paper demonstrates compatibilities between methods of IAR and the digital entrepreneurial process. In so doing, it sheds light on how this little-used design choice can be set up to gain valuable insights about the nature of uncertainty surrounding the digital start-up process.

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