Entrepreneurial decision making in a microcosm
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**Abstract:** This study investigates when, how and why students use causation, effectuation and bricolage behaviours within a fundraising project that acted as a microcosm of the entrepreneur’s world. Such a pedagogical device reveals students use of different OM behaviours over the different stages of entrepreneurship. Although research has confirmed the use of these behaviours by entrepreneurs, how student entrepreneurs learn, and practice, them, remains underexplored. Causation is the predominant focus for university teaching, yet our data reveal that students adopted all three behaviours at different stages of the fundraising project as they responded to different contextual forces. Our findings suggest that opportunity management theories should take a more prominent role in the higher education entrepreneurship curriculum. Educators also need to provide a better means of facilitating students to learn about, and practice, a greater repertoire of opportunity management behaviours than is currently the case.

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Entrepreneurial decision-making within a microcosm

Abstract

This study investigates when, how and why students use opportunity management (OM) behaviours (causation, effectuation and bricolage) within a fundraising project that acted as a microcosm of the entrepreneur’s world. Such a pedagogical device reveals students use of different OM behaviours over the different stages of entrepreneurship (Chang et al 2014; Gibb 2002; Rasmussen 2011). Although research has confirmed the use of these behaviours by entrepreneurs, how student entrepreneurs learn, and practice, them, remains underexplored. Causation is the predominant focus for university teaching, yet our data reveal that students adopted all three behaviours at different stages of the fundraising project as they responded to different contextual forces. Our findings suggest that opportunity management theories should take a more prominent role in the higher education entrepreneurship curriculum. Educators also need to provide a better means of facilitating students to learn about, and practice, a greater repertoire of opportunity management behaviours than is currently the case.

Key words: opportunity management, entrepreneurial cognitive logics; causation, effectuation, bricolage; entrepreneurial learning, microcosms,

Introduction

This paper explores when, how and why, undergraduate entrepreneurship students on a business-management degree use different opportunity management (OM) behaviours (causation, effectuation, bricolage) in a fundraising project that acts as a microcosm of the challenges faced by entrepreneurs over time (Gibb, 2002). In this paper we use the term
opportunity management rather than opportunity recognition, discovery, or creation (Miller 2007; Alvarez and Barney, 2007) as it encompasses both the identification and conversion of a potential opportunity into something valuable. We are aware that other authors have used the terms decision-making or cognitive logics (Reymen et al., 2016; Dutta and Thornhill, 2014) to describe a combination of entrepreneurial intentions and behavioural outcomes. It is beyond the scope of this paper to disentangle these differences; instead we simply use the term opportunity management to encompass both the cognitive underpinnings and actual behaviours.

The best way of preparing university students for entrepreneurial careers has been the subject of energetic, and increasing, debate in a number of literatures (Fayolle, 2013; Gielnik et al., 2015). What they should be taught, or should learn to do, ideally ought to prepare them for becoming entrepreneurs. Historically causation has been presumed to be the default behavioural logic that entrepreneurs use (Matlay, 2008). Causation refers to where an entrepreneur decides on a predetermined goal and then selects between means to achieve that goal, a process that involves formal planning based on competitor and market analyses (Sarasvathy, 2001; 2003; Fisher, 2012). However, it was increasingly recognised that actual entrepreneurs often do not do this, and certainly not to the extent that some had presumed. Hence subsequent theorising on entrepreneurial decision-making identified effectuation, in which decisions are based on the identification of means which are subsequently applied to suitable entrepreneurial opportunities, and bricolage, in which neither existing means nor predetermined goals set the entrepreneur’s path, rather it is a process of ‘making do’ with whatever is at hand (Fisher, 2012).

These are therefore the behaviours and skills that students leaving higher education should have learnt. However, there is evidence that this is not what is happening. In parallel with increasing
knowledge about what entrepreneurs actually do, there is increasing awareness of the limitations of entrepreneurship education which has tended to focus on the teaching of causation and not effectuation and bricolage. In this paper we reveal when and why students use effectuation, causation or bricolage when they are immersed into a microcosm of a ‘real-life’ entrepreneurial task, fundraising for a social enterprise in a resource-constrained environment. This is in order to identify the contextual imperatives that shape the adoption of the different OM behaviours and thereby provide a more nuanced understanding of the learning needs of entrepreneurship students. Our longitudinal qualitative data captured the students’ journey over time as they described and critically reflected on what they had done and why they had done it (Welter et al., 2016).

Our aim is to expose the contextual influences on students’ behaviour, and changes in their behaviour, in order to help educators facilitate students’ learning about the appropriate use of the different behaviours (Arend et al., 2015; Brettel et al., 2012; Chandler et al., 2011; Fisher 2012; Perry et al., 2012; Senyard, et al., 2015). We are able to provide insights as to why effectuation and bricolage, as well as causation, should form a stronger part of entrepreneurship education. For example, when entrepreneurs are working in a time-unconstrained, and predictable situation, causation is an appropriate behavioural choice (Sarasvathy, 2001). In a time-pressured, stressed and risky context, effectuation and bricolage are useful (Fisher, 2012; Perry et al., 2012; Welter et al., 2016). Educators need to understand this in order to guide students appropriately, and to provide them with the means to acquire the skills and knowledge that will allow them to make good behavioural choices.

The structure of this paper is as follows. First, we review the literature on OM behaviours and the use of live projects as a microcosm in entrepreneurship education. This is followed by a
discussion of the methods used to collect and analyse our data. We then unfold the students’ use of different OM approaches within the fundraising projects. The conclusion summarizes the contributions of this article to entrepreneurial learning and the role of microcosms in entrepreneurship education, and suggests areas for future research and practice.

Entrepreneurial decision-making

The management of opportunities is a core problem for entrepreneurs (Mair and Marti, 2006). The original construct, causation or ‘rational’ theory, is an economics-based approach in which entrepreneurs discern an opportunity and then follow a normative decision-making process to exploit it (Hindle, 2004). By collating essential information, they systematically evaluate choices (Alvarez and Barney, 2007; Miller, 2007) and assemble any necessary resources (Lanivich, 2015). A subsequent development of the theory was the defining of ‘effectuation’ (Sarasvathy (2001, p245) as a decision-making process that does not begin with a specific goal ... "instead, it begins with a given set of means and allows goals to emerge contingently over time from the varied imagination and diverse aspirations of the founders and the people they interact with, bringing in his or her skills, resources, people, and networks". Effectuation is means-driven, as opposed to the goal-driven causation. Effectuation original five principal components: ‘bird-in-hand’, “affordable loss”, “lemonade”, “crazy-quilt” and ‘piloting the plane’ (Sarasvathy, 2003) were subsequently operationalized by Chandler et al. (2011) and Fisher (2012) into seven categories that we used as the basis for our analysis.

The most recent aspect of opportunity management to be conceptualised is ‘bricolage’ (Lévi-Strauss, 1967), the application of new combinations of whatever resources are at hand to address an opportunity that has been identified (Di Domenico et al., 2010). Baker and Nelson (2005) characterize three aspects of bricolage: “resources at hand”, “recombination of resources
for new purposes” and “making do”. Bricolage has the additional connotations of refusing to recognize, or be constrained by, existing definitions of a problem (Mair and Marti, 2006).

Causation tends to be used in a flourishing or stable and predictable environment. Here opportunity creation is incremental, such as the differentiation of a product where its market and competitive environment are already known (Sarasvathy, 2001). Causation involves identifying a gap and developing a plan to address it (Alvarez and Barney, 2007; Sarasvathy, 2003). Effectuation is more common in situations where the future is unknowable and unmeasurable. Effectuation’s principles (Sarasvathy, 2001) are to find the means to adapt resources and create new opportunities (Welter et al., 2016) as well as reducing complexity in an environment that is lonely, uncertain, and full of risk (Gibb et al, 2013). Bricolage, which has been less researched than the other two categories, tends to be found in conditions where resources are especially scarce and penurious, and uncertainty-based risk is higher (Senyard et al., 2015; Welter et al., 2016). These conditions are particularly common in the case of business start-ups in a new field (Beckett et al, 2015; Fisher, 2012). There is a growing literature on how entrepreneurs respond to resource adversity through the use of bricolage but little work to date has been done on the competences or skills necessary to use bricolage effectively (Baker et al., 2003).

As theoretical constructs, causation, effectuation and bricolage have some critics (Arend et al., 2015) who suggest that each element remains to be fully developed conceptually. A number of scholars have criticised the OM categories as being rather repetitive and overlapping (Welter et al., 2016), and recommend further refinement of the categories. Bricolage appears especially problematic (Baker and Nelson 2005; 2012; Welter et al., 2016). Given this lack of clarity it can be difficult to understand what aspects of the different concepts are used, and whether they can
be used sequentially, or even simultaneously, to address specific aspects of the entrepreneurial
decision-making process (Laine and Galkina, 2017).

However, increasing numbers of scholars are examining their use (Welter et al., 2016; Fisher 2012; Mäkimurto-Koivumaa and Puhakka, 2013) and finding that entrepreneurs use a range of
different decision-making logics to deal with the creation of a new venture under conditions of
uncertainty (Baker and Nelson, 2005; Dew et al., 2015; Fisher, 2012; Read et al., 2009
Sarasvathy, 2001). One of the important inputs into decision making generally, and this holds
true for entrepreneurs as well, is the role of experience (Sarasvathy, 2001; Wiltbank et al.,
2006; Dew et al., 2009). Experience leads to the development of decision-making heuristics,
which shape behaviour (Fodor and Pintea, 2017. Fodor, et al., 2016). Foo et al., 2015; Delgado
Garcia, et al, 2015). Bad experiences can leave psychological 'scars' which steer the individual
away from using the same decision-making logics, even if it would be an appropriate strategy in
different circumstances; in contrast, positive experiences can lead to the same behaviour being
repeated, even if it would be ineffective in the new circumstances. However, few studies have
examined how entrepreneurs decide which logic to use (Salusse and Andreassi, 2016; Williams
et al., 2014) or how entrepreneurship students are taught which are the most appropriate. An
awareness of these gaps underpinned our study.

Entrepreneurship education

Research suggests that university entrepreneurship programmes have had mixed success in
developing students for an entrepreneurial career (Fayolle, 2013; Nabi et al, 2016; Souitaris et
al., 2007). We know that enterprise education has expanded in terms of what is being taught,
from a narrow focus on what entrepreneurship is, often centred around traditional business
school teaching, to include training for entrepreneurship and finally to encompass experiential
and existential aspects of enterprise education in learning *through* entrepreneurship. However, this has “not been adequately articulated either in course descriptions or in the academic literature” (Blenker et al., 2015, p 134). Most have focused on identifying entrepreneurial attitudes and the intention to start a business (Pittaway and Cope, 2007; Souitaris et al., 2007) and not on learning ‘entrepreneurialness’.

Despite the increasing awareness of the entrepreneur’s actual behaviours most entrepreneurship degree programmes appear to offer little in the way of teaching students about the appropriate use of these behaviours (Fayolle et al, 2016; Nabi et al., 2016) and is still heavily focused on causation (Kickul et al., 2010; Matlay, 2008). In parallel there is increasing criticism of the didactic classroom-based approach to teaching entrepreneurship and increasing recognition of the benefits of live projects or microcosms (authors, 2013; Fayolle 2013; Neck et al., 2014; Welter et al., 2016). Especially relevant for our study, Corbett (2005) found that action learning is a useful means for students' to discern and act on opportunities and reflect on critical incidents, resulting in higher levels of entrepreneurial awareness (Lindh and Thorgren, 2016).

We acknowledge that there are many differences between a microcosm and real entrepreneurship: raising funds is only one of the many activities that entrepreneurs have to undertake, such as management of employees, business growth, product development etc. It is also much more risky and complex in terms of financial investment, personal reputational loss, and the opportunity costs that have to be balanced. However, given the constraints of the higher education context, the microcosm provided a simulacrum that was as close as possible to real life and which allowed us access participants’ learning and development as it happened in real time (Kassean et al., 2015; Rasmussen et al., 2006) and explore how, when and why the different OM behaviours were used (Baker and Nelson, 2005; Fisher, 2012).
The microcosm as a pedagogical device for entrepreneurial learning

The live project that we used to assess students use of the different OM behaviours, fundraising for a social enterprise, provided a microcosm, or scaled-down version, of entrepreneurial activities (Kapranos, 2016). Scholars such as Souitaris et al. (2007) suggest that the challenge for entrepreneurship educators is to develop a pedagogic device that encourages the development of entrepreneurial behaviour through immersion in real rather than simulated activities (Tosey et al., 2015; Gibb et al, 2013). A microcosm has been used successfully as a tool for entrepreneurship development in order to illustrate the activities of an entrepreneurial actor in rural Bangladesh (Mair and Marti, 2006). We argue it is also suitable for entrepreneurship education, although it does not contain the five stages of entrepreneurial development (Gibbs, 2002) typically taught on entrepreneurship programmes. It has some overlap with live projects, which are well established methods of learning entrepreneurship (authors, 2014; Fayolle 2013; Neck et al., 2014) being inherently immersive (Gibb et al, 2013). However a microcosm contains specific additional features that mimic the entrepreneur’s world. Souitaris et al. (2007) say it allows a change in entrepreneurial attitude or behaviour, facilitates learning of entrepreneurship, is a means of inspiring and motivating entrepreneurship, and provides incubation resources.

The question is, does a fundraising project represent a suitable microcosm of the entrepreneur’s world? We believe that it does. Fundraising for a social enterprise, without prior financial resources, is an entrepreneurial process in which opportunities are transformed into value (Fisher, 2012; Welter et al 2016). There are stressors and time pressure; it provides the means for developing awareness of the effects of resource scarcity and the need to use resources as a means to control uncertainty. It encourages students to search and select, and develop unformed
thoughts into valid ideas. It allows for students to develop financial plans, negotiate with
different stakeholders, promote their activities, and develop their ideas into larger-scale
operations, which they then have to implement. Such immersion involves elements of risk
reduction, strategic thinking, and learning under pressure.

However, we know that there are differences between students working in a microcosm and
actual entrepreneurs that need to be factored into our theorising. For example, even though they
could choose their own team members, students had a relatively narrow group of people to
work with. Entrepreneurs, in contrast, have an existing network of established relationships
(Rauch et al., 2016), who provide a more stable and predictable environment. Entrepreneurs are
also able to choose colleagues that are culturally similar (Hardy and Tolhurst, 2014). In our
case conflict and relational difficulties were possible because of the internationally diverse
nature of the student body (Apfelbaum et al., 2014; Moreland et al., 2013). This may lead to a
preference for those OM behaviours that are less psychologically expensive (Grupe and
Nitschke, 2013). There are also quite profound differences between real entrepreneurial
ventures and the microcosm in the time set for the project (ten weeks vs unlimited time) and in
the different objectives between students and entrepreneurs (passing the course / creating a
successful venture). These mean that any research has to be careful in extrapolating results and
generalising from a microcosm to the real world of the entrepreneur. However, given these
limitations we nevertheless believe that the microcosm offers the best available proxy for real
life given the constraints of university education and its learning environment.

To summarise, in this paper we are interested in a poorly-researched area, that of understanding
students’ use of causation, effectuation and bricolage within a microcosm of the entrepreneur’s
world. We now describe the methodology that we chose.
Methodology and data analysis

Our intention was to understand the use of OM behaviours by entrepreneurship students in a live project that mimicked, as far as was possible within the higher education context, the entrepreneur’s world (Dew et al., 2015; Lehner and Kansikas, 2012). Understanding the contextual influences on these processes, and how they change over time, requires longitudinal qualitative data and an interpretive epistemology (Gray, 2007; Jones et al., 2011).

Students were tasked with raising money for a social enterprise without any prior budget. This took place within an elective entrepreneurship module on an undergraduate business degree in a UK business school during the second year of a three-year degree programme. It lasted ten weeks. Students were not required to have any prior knowledge of entrepreneurship concepts or theory in order to join the module, although all had previously taken core business and management modules (e.g. marketing, accounting, economics). Our objectives were to enable students to be immersed in a real project, a form of “learning by doing” (Pittaway and Cope, 2007). The microcosm, as described above, would allow students to learn the skills that entrepreneurs need and also develop some empathy for the entrepreneur’s world. Mentoring was provided by academic staff who met weekly with the students in order to provide feedback and discuss options. The amount of money raised was not to form part of the assessment: instead students were graded according to the quality of evidence of their activities and their reflection on their learning.

124 students participated in the module, divided into 25 teams. Each team was tasked with raising funds for one of six social enterprises that staff had pre-selected and that had agreed to make themselves available to the students (Table 1).
Insert Table 1 here:

Fundraising activities included social events, food fairs, salsa evenings, charity auctions, sales of T-shirts, computer games competitions, radio advertisements and a photo gallery competition. Each team was required to report on their progress weekly, reflecting on what they had done, and why, and what had worked and what hadn’t (Lindh and Thorgren, 2016). These reflective logs comprise our primary data, onto which we subsequently mapped the CEB constructs and the contextual influences on them (Pittaway et al., 2011; Pittaway and Cope, 2007). The logs averaged between 9,000 and 10,000 words per group, about 250,000 words in total. All groups gave permission for their data to be used for research purposes. The data from the student accounts were supplemented by information from tutorials, observation of student interactions, discussions with students, social enterprises and tutors, all of which were recorded and discussed between the teaching and research team. These helped to inform the analysis and judgement of why and how students behaved as they did.

We used Fisher's (2012) scale to identify inductively indications of the use of the different OM behaviours within the logs. These emerged through a process of theme identification and interpretative synthesis (Howard et al, 2013; MacKay and Chia, 2013) rather than the positivistic application of a predetermined framework (Åsvoll, 2014; Gray, 2007). Students were not asked to categorise their behaviours; instead the authors went through the transcripts and categorise any behaviours that could be identified. They agreed on the themes and the OM behaviours identified. Where there were differences of interpretation, these were discussed and a common conclusion reached. There was no attempt to measure the degree of disagreement or inter-coder reliability ratings; all classifications were discussed and an agreed decision reached.
Each behaviour was allocated exclusively to one of the CEB categories as described in the findings section below. Almost all of our data could be fitted into one of the CEB categories. Behaviours which appeared to fit into two or more categories were also noted, and allocated to what appeared to be the most appropriate. This process allowed us to believe (as we discuss later) that the cognitive logics’ categories need some refinement in order to remove duplication and overlap.

For each instance of a particular behaviour we looked for explanations for why they had been chosen, for example the characteristics of the project environment (e.g. stable, pressured, complex), team characteristics (e.g. diverse, experienced) and group dynamics (e.g. conflicted, demotivated). In doing this we were looking for causal and moderating factors that underpinned the choice of behaviours as the fundraising project developed over time.

**Findings**

In this section we describe the ways in which students used the different categories of OM behaviours, when they used them, and what stimulated their use. We especially identify changes in behaviours as the fundraising project progressed, and differences in the behaviours in different groups. In total, nearly half of the behaviours that we discerned could be categorised as causation, a quarter could be defined as effectuation, and another quarter as bricolage, but the preference for one over the others changed over the lifespan of the project (Figure 1).

**Figure 1 about here**

We discuss in depth the reasons for these choices and the influences on any change below.
now we simply note that causation was prevalent between weeks 2 and 5 when students used their learning from previous courses such as accounting, finance and marketing. Week 2 was when most groups visited their social enterprise and became aware of its ethos and need for regulatory compliance. Bricolage became particularly apparent at key dates later in the project, as the project path turned out to be not quite as the students had predicted. Both effectuation and bricolage increased over time as the students learned what worked rather than what they had learned in the classroom.

In the following sections we discuss in more detail the OM behaviours used, and provide explanations for these choices.

**Causation**

In looking for indicators of causation, we based our analysis on Fisher's (2012) definitions. Figure 2 shows the pattern of causation behaviours over the 10 week period. Examples of students’ causation behaviours are shown in Table 2.

**Insert Figure 2 about here:**

**Insert Table 2 about here**

**Effectuation**

In identifying effectuation we again looked to Fisher (2012, p. 1030) and Chandler et al.’s (2011) seven categories of effectuation behaviours (Figure 3). Examples of students’ effectuation behaviours are shown in Table 3.

**Figure 3 about here:**

**Insert Table 3 about here**
Bricolage

In looking for bricolage we looked to Fisher (2012), Chandler et al. (2011) and Senyard et al. (2009) to identify eight categories of bricolage (Figure 4). Table 4 gives some examples of students’ bricolage behaviours.

Insert Figure 4 about here

Insert Table 4 about here

The influence of time on the use of the different behaviours

All categories of causation behaviours were used by at least some of the student groups each week. This reflects what might be considered the traditional teaching of entrepreneurship (Matlay, 2008) and the conventional business practices that our students had been taught, so it is no surprise that we see evidence of these behaviours. Both experienced and non-experienced groups came out with at least two ideas that had to be tested in order to assess the viability of the opportunities identified. They organized and implemented control processes to ensure that the ideas were implementable, and then the majority of the groups developed plans that detailed their ideas for revenue generation, as agreed with their social enterprise.

Causation frameworks that were derived from previous teaching (for example how to analyse financial performance or undertake competitor analyses) were used extensively. Some were linked to the timing of the task: visioning and opportunity identification were used at the beginning, but less so subsequently. Calculated returns was dominant when the students had to submit their plans, with performance predictions, to the social enterprise in week 4. Market reviews, competitor analysis and financial plans were all undertaken at the appropriate time. Control processes and project planning were used steadily throughout, suggesting that the
groups believed that the environment was stable and predictable. We thought that the groups appeared to be rather on an autopilot causation course, steered by the systematic and linear approach of the entrepreneurship syllabus along with the groups’ (especially the inexperienced ones’) assumption that OM is linear.

In terms of temporality, there were also relatively few surprises in effectuation. Adaptation behaviours, for example, were only seen after the first concepts had been developed, and agreement behaviours were seen especially after week 7 as students realised that they needed to begin to implement their ideas and that they needed to comply with the requirements of the SE and the university. Commitment of limited resources was the most prevalent effectuation category overall. Students knew they would not have a starting budget and had to depend on their own resourcefulness in order to succeed. Thus the early stages saw attempts to identify and muster resources, including knowledge and relational capital. In most of the weekly reflective logs, the ‘no starting funds’ requirement was perceived to be a challenge. However, it compelled students to assess the intrinsic resources available to the group and use creative means of achieving their goals, or what Sarasvathy (2001) termed ‘bird in-hand’ principles. The ideas for generating income were drawn from the experience and competence of team members, networks from present and previous work places, as well as family and ‘friends of friends’. The behaviour of ‘affordable loss’ was also discernible, as the students thought up novel ways to limit the amount of money they needed to spend. The effectuation behaviours that prevailed between weeks 3-7 were to do with adaptation, efficiency and agreement with different stakeholders.

Bricolage was not really used until the students were faced for the first time with the real world of the social enterprise during week 2. Visits to the social enterprise allowed them to access
under-used resources within the organisation. In almost all cases these provided a strong
stimulus for change in the groups’ behaviours. Bricolage was particularly prevalent near to the
fundraising event between weeks 8 and 10, suggesting that they were a response to what was
perceived as a crisis as the students needed to “improvise” to get things done.

Most of the teams sought resources outside the social enterprises and were reliant on business
sponsors and university facilities to combine resources in order to generate income. There was
little evidence of the bricolage category of reuse of resources, however, or experimentation,
changing the product or service, and responding to unplanned opportunities.

Instead, personal resources such as labour and skill inputs predominated; although these are
poorly conceptualised in the OM literatures they were more relevant to our students. As we
discuss below, there were some differences in the use of this category due to the presence of an
experienced student in a group.

Revenue targets moderated over time, influenced by students’ desire to generate more income
for their social enterprise. An empathetic ability to relate to the cause of the organization
increased over time, which stimulated an awareness that they needed to do more, and could not
simply coast. Once again as we discuss below, experience provided the groups with a better
understanding of what was possible, meaning that some groups used bricolage to catch up when
causation did not produce the hoped-for result.

The involvement of the social enterprise also provides an explanation for what at first sight may
seem an unexpected finding - the complete absence of data suggesting that they worked around
the limitations of the institutional environment. An awareness of the social enterprise’s
constraints, along with the requirements of the university’s regulatory and assessment
environment, provided a strong impetus for compliant behaviour.

**The influence of experience on the choice of behaviours**

We were able to identify differences in behaviours between groups with an experienced member and those without. All of the groups approached the business communities around their social enterprises to seek agreements for funding, although the experienced groups did better at this - they knew earlier on who to approach, and to what intent. Most created Facebook accounts to raise awareness of their projects among their classmates, student unions, and business communities. Comments were sought from customers of the projects through social media, both on the projects themselves and on how to get more resources, leading to a virtuous cycle of resource acquisition.

Experienced groups were especially conscious of the implications of the lack of resources from week 1: they knew they would need to start early to accrue the resources they needed. Only the experienced groups appeared able to combine resources and reuse resources for new purposes (Groups 6 and 11). They were able to develop opportunities from the resources they observed from their frequent visits to the SE, which tended to be more frequent than the inexperienced groups.

Groups with experienced members (e.g. Groups 5, 6 and 11) also embarked on experimenting with different business models much sooner than the inexperienced groups. Group 6 went to visit the SE immediately and experimented with the idea of advertising local business on the radio station previously used by the SE for training its youth workers. Group 6 experimented with different sales channels for its raffle - via a Just Giving page or physical distribution of tickets, and Group 11 experimented with baking cookies themselves versus obtaining cookies.
from bakeries.

Experienced groups also appeared to be able to use both causation and effectuation simultaneously, such as implementing control processes for their experiments, meaning that they were less conflict-ridden and more able to control their environments. They were also able to employ resources such as social media much sooner, and were therefore able to reduce the likelihood of an unsuccessful event. The experienced groups were able to target resource acquisition at an earlier stage, typically between weeks 1-3, and more efficiently - with less time spent on wasted initiatives. The less experienced groups typically started later - at week 5 - and by week 10 were in something of a panic about their performance. We also observed that entering into agreements to obtaining the resources they needed was a popular choice for the experienced groups; the non-experienced groups were more tempted to use their own money, even though this was not officially sanctioned.

The effects of diversity

Diversity within the group was usually the most important factor leading to emotionally-driven absenteeism, conflict, and the panicked use of bricolage at later stage of the project. Confounding effects could be discerned when inexperienced and diverse groups were unable to resolve the conflict that stemmed from diversity. For example, in the four inexperienced groups (1, 15, 24, 25) where the negotiated tasks (i.e. process control) had not been completed by weeks 4-8, conflict developed, leading to lack of engagement and low attendance. Group 1 had unrealistic expectations. In group 15 one international student attempted to dominate leading to resistance and withdrawal from the other members. A consequence was the inability to fully use the internal resources that could be used as the means of achieving their goals. Eventually Group 1 learned to reduce their goals and work with what they had (i.e. effectuation), and
Group 15 also learnt to work with what they had (a dysfunctional dominant member) by assigning different tasks to other members.

In contrast diverse but experienced groups (9, 11) were able to manage the limited conflict that developed through better allocation of roles as well as through the less experienced members of the group being taught what they could expect. As a result, their control processes worked effectively and they had less need to rely on bricolage.

**Discussion**

Our study investigated students’ use of causation, effectuation and bricolage within a fundraising project that provided a microcosm of the entrepreneur’s world. We were interested in when, and why, students used the various OM behaviours over time (Figure 5). Drawing on previous process-based research, we found that the three OM behaviours adopted by students during the 10 weeks were triggered by different kinds of stimulus, teleological, dialectical and evolutionary (Van De Ven and Poole, 1995; Reymen et al., 2016; Rasmussen, 2011).

Insert Figure 5 about here

Each of these stimuli focuses on different aspects of the new venture process. Similar to Rasmussen (2011), the contours of a stage or life-cycle process (causative goal formulation, implementation, evaluation and modification of goals), which assumes that change processes proceed through defined steps or stages of development, were visible in all of the teams, but progression through the life-cycle stages were by no means linear or uniform across the groups. Progression was affected by dialectics (academic and SE input; conflict) leading to changes in the balance of power between opposing entities. Teleological processes (all groups had the final event in mind) guided the groups’ path towards the goal, although this path was shaped by
experience, group diversity and stress; and evolutionary theory, which assumes that change processes move through a continuous cycle of variation, selection and retention was influenced by unpredictable events, environmental changes, and history.

Our results also concur with Dew et al. (2009) who found that MBA students made decisions regarding possible opportunities using a ‘predictive frame’. Established entrepreneurs use causation sparely (Dew et al., 2015, yet causation tends to dominate business school teaching, including our students’ (Kickul et al., 2010; Matlay, 2008). We suggest that this conditioned them to behave in ways (Calvard, 2015; Minniti, 2008) that may have been ineffective given the nature of the task, its time frame, and the resources that they had available (Duxbury, 2014). We also speculate that causation, being less risky and psychologically expensive (Grupe and Nitschke, 2013; Pittaway and Cope, 2007), prevailed over experimentation because of the students’ need to address two goals simultaneously - to engage in entrepreneurial value creation and to pass the module.

Groups with an experienced member, who acted as coach and conflict-mediator, used more effectuation and also exhibited more of all three types of OM behaviours than the inexperienced groups. Although competitive performance was not part of the students’ brief or assessment, five of the groups that surpassed their fundraising targets used more OM behaviours, specifically more effectuation, than the less successful groups. Those that encountered conflict, typically because of the international diversity of the group, tended to perform worse. Intriguingly diverse groups which also had a member with entrepreneurial experience achieved more than their intended goals more than low diversity groups with an experienced member. We suppose that experienced students could exercise their knowledge of the range of OM behaviours, capitalizing on the resources within the group, and choosing which behaviours to
use to their greatest effect. This suggests that groups with entrepreneurial experience are able to
capitalise on diversity, whereas those without cannot.

Tight deadlines and perceived task-difficulty act as stressors (de Clerq et al., 2014), putting
pressure on team functioning (Costa et al., 2015; LePine et al., 2005). Students became
increasingly aware of the multiple expectations that they were faced with, having to pass the
module at the same time as raise money for a deserving cause. These may reduce the propensity
to take brave decisions or risks (Bradley et al., 2012; Dutta and Thornhill, 2014), something
which experience appeared able to counter. Inexperienced students tended to rely on what they
had been taught, whereas experienced students had a greater repertoire of knowledge to draw
upon. The groups only needed one person of this kind to influence choices of OM behaviours
(Brettel et al., 2012); for some reason more than one experienced member made little
difference. Nevertheless, it suggests that educators may need to intervene in the membership of
groups so that entrepreneurial experience is part of the mix. Inexperienced students were
dependent on rationalisation and analysis rather than intuition or other heuristic-based decision-
making processes that more experienced students could draw upon (Kickul and Gundry, 2011).
Experience may give confidence in decision-making processes, and is also likely to increase
awareness of the types of resources needed (Berends, et al., 2014), the means of obtaining them,
and the consequences of failure (Brinckmann et al., 2010; Gielnik et al., 2015; Rasmussen et
al., 2006).

Conclusion and recommendations for further research and practice

Our findings contribute to theoretical debates in a number of areas of entrepreneurial learning.
Firstly, there is little empirical research on the use of OM behaviours, less on the underlying
reasons for the choice of these behaviours, and even less on the use and causes of these
behaviours by students (Dew et al., 2009; Perry et al., 2012; Welter et al., 2016). Our research
also introduces the microcosm as a learning environment that allows students to enact OM
behaviours, thereby mixing practice-oriented and theoretical knowledge in OM education
(Fayolle, 2013). Currently its teaching is largely disconnected from the exigencies of
entrepreneurial practice (Edelman et al., 2008; Vanevenhoven, 2013). The approach that we
describe in this paper helps to bridge this gap in showing how students develop their ideas into
outcomes in a specialized-task setting which in our case focused on fundraising for a social
enterprise.

The use of a fundraising project as a substitute for learning in an actual entrepreneurship
context focuses attention on the role of microcosms as pedagogical devices (Kapranos, 2016;
Mair and Marti, 2009; Welter et al., 2016). Kyrö’s (2015) view is that microcosms offer
radically new vision of learning because of their creative, responsibility-inducing and risk-
exposed dimensions. Although they have some differences, they have some similarities to the
entrepreneur's world, and mimic to some extent the pressures that entrepreneurs actually face.
They encourage, and even force, students to engage in a range of resource-creation activities.
However, what a microcosm should look like is more uncertain. We believe that the fundraising
project that we used in this study provided a useful pedagogical device for engaging students in
the entrepreneurial process and creating empathy among novices about the entrepreneurial life
(authors, 2013; Gibb, 2010; Kapranos, 2016). There are few empirical studies on what makes
for effective learning environments of this nature (Fayolle et al., 2016). For example, how
difficult and time-pressured should the task be? Complexity, risk, uncertainty and working with
different stakeholders are all contextual factors known to shape behavioural choices in the ‘real’
world. Should a microcosm attempt to imitate this? If so, how? Students have different levels of
skill and different experiential backgrounds to entrepreneurs, and the nature of the task needs to
reflect this if students are not to be frightened off from entrepreneurial careers.

Responding to a resource-constrained task forced our students to use a range of skills (e.g.
creativity, negotiation, working with stakeholders). And from their logs we could see a
developing awareness of their need to change behaviours, and arguably become more
resourceful, over time. This was despite not having been formally taught these skills. However,
we caution that coaching was used to support the students, which may have shaped the
students’ behaviours as some of the academic coaching team were experienced entrepreneurs.

As Fayolle (2013) suggests, coaching is inherently effectual as it provides a feedback loop that
encourages students to reflect on what they have done, what has worked, and what now needs
to be done differently. Arguably this is why we saw the use of effectuation only at a later stage
of the project (Sarasvathy, 2001). We would recommend that the principles of effectual or
bricolage logic should be taught, if only to make students aware of their possibilities and perils.

Further research could attempt to understand the differences between students who have been
taught about the OM behaviours in a conventional classroom and those that learn about them
through discussions with experienced entrepreneurs or through learning-by-doing. We also did
not examine the learning process and further research could usefully identify which platform
provides for the most insightful personal development.

We did not specifically explore the issues around diversity and numbers of relevant groups
were small. This is something that we believe would warrant further investigation. Our data
revealed that the national backgrounds of group members was an important influence on
behaviours. Diversity is a known contributor to group conflict, as its opposite, homogeneity, is
a known factor in group agreement or groupthink (Moreland et al., 2013; Apfelbaum et al., 2014). The cultural background of students and the socio-psychologically derived attitudes that are the result of innate factors in combination with socialisation processes (Autio et al. 2013) are likely to have influenced decision choices through enhancing the potential for conflict within groups, given that they were under considerable pressure (de Wit et al., 2012; Nouri et al., 2013). How, specifically, diversity influenced behaviours remains to be answered. However, we hypothesize that a student’s previous entrepreneurial experience likely to make a diverse group more able to resolve any conflict that does develop, as skills in the resolution of disagreements and handling of stressors are brought to the discussions on task behaviours (Yeung et al., 2015).

Similarly, we did not evaluate the effect of the students' intended future careers on behaviour, for example if, whether they had already decided to create their own ventures when they left university they were more motivated to experiment with different behaviours.

A question that remains to be answered is whether the fund-rising performance would have improved if students had been more familiar with the different types of OM behaviours through being introduced to them in the classroom. Although this was not part of our study, it appears that there were links between the use of a wider repertoire of OM behaviours and financial performance. We speculate that learning about OM concepts would help students to use them more effectively, improving their performance accordingly. This is something that would benefit from further research. Whether students would use the same types of behaviours given a different microcosm has also not been studied. A better understanding the links between context and behaviours would help both educators and practitioners alike to understand when certain categories of behaviours are more useful. Our study did not attempt to measure the
effectiveness of the different behaviours, or link them with the types of fundraising activities that the students chose. Future studies could also include the backgrounds of students, for example whether those from specific academic disciplines or different cultures, influences which OM behaviours they prefer, and why.

Other types of entrepreneurial behaviours were not considered in our study. An example of this is the role of ‘improvisation’ by entrepreneurs as a possible additional approach to the categorisation of entrepreneurial activity (Duxbury, 2014). Baker and Nelson (2005) suggest that organisational improvisation can be an important precursor to bricolage, yet this is not considered in Fisher's model and we did not investigate it. Students working under time and physical resource constraints faced unpredictable and unanticipated consequences (Fayolle, 2013; Duxbury, 2014), making improvisation appropriate. As a side issue, we would concur with those that have criticised the OM model as being rather repetitive and overlapping (Welter et al., 2016), and would recommend further refinement of the categories. Bricolage is where our data encountered unclear boundaries between the different categories (Baker and Nelson 2005; 2012); we sometimes found it challenging to decide in which classification data should be placed. For example ‘using resources at hand’ (effectuation) and ‘making-do with what we have’ (bricolage) seemed to overlap (Welter et al., 2016).

Finally, although not discussed in detail in this paper, we saw evidence of students identifying themselves as ‘entrepreneurs-in-the-making’. We argue that this is the effect of the microcosm, which imitated as far as possible the real world and the real pressures, experienced by entrepreneurs. We suggest that the students’ obvious engagement and immersion with the entrepreneurial decision-making process reflects the powerful effect of ‘real-life’ action learning (Gielnik et al., 2015). Thus, another avenue for further research is to understand how
the construction of an entrepreneurial identity can be encouraged through engagement with actual entrepreneurs engaged on genuine entrepreneurial tasks.

References


Authors (2013)

Authors (2014)


Beckett et al, 2015


Chandler GN, DeTienne DR, McKelvie A and Mumford TV (2011) Causation and effectuation


Figure 1
Figure 2: The pattern of causation behaviours over the 10 week period.
Figure 3: Effectuation behaviours over 10 weeks

![Effectuation behaviours over 10 weeks diagram](image_url)
Figure 4: Bricolage behaviours over 10 weeks
Figure 5: The Use of Opportunity Management Behaviours Over Time

Adapted from Rasmussen (2011)

Life-cycle stages

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4</th>
<th>Stage 5</th>
<th>Stage 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction</td>
<td>Developing valid ideas</td>
<td>Developing operational plans and resource identification</td>
<td>Negotiation for opportunity</td>
<td>Implementation</td>
<td>Survival</td>
</tr>
</tbody>
</table>

- Ideas for revenue generation almost non-existent
- Purposeful actions by key individuals in groups (teleological)
- Fund raising event setting
- Transition (dialectical)
- Academic didactic setting
- Unpredictable events, environmental changes (Evolutionary)
- Revenue generation for social enterprise implemented
### Table 1 Demographics of the student groups and commentary on group functioning

<table>
<thead>
<tr>
<th>Group</th>
<th>Male</th>
<th>Female</th>
<th>International experience</th>
<th>Performance against target</th>
<th>Comments on group processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 International aid charity</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>40%</td>
<td>WA 1-2 100% attendance, with all tasks completed. Week 4 - 5 attendance at meetings went down to 60%. Conflict led to reduction in ambitions for the project. By weeks 7-8 attendance returned to 100%, aided by tutor’s intervention. Tended to improve during the event in week 8 as they reflected on their performance.</td>
</tr>
<tr>
<td>2 Hospice</td>
<td>2</td>
<td>3</td>
<td>20</td>
<td>0</td>
<td>62%</td>
</tr>
<tr>
<td>3 Hospice</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>87%</td>
</tr>
<tr>
<td>4 Hospice</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>25%</td>
</tr>
<tr>
<td>5 Hospice</td>
<td>1</td>
<td>4</td>
<td>20</td>
<td>60</td>
<td>134%</td>
</tr>
<tr>
<td>6 Teenagers’ charity</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>20</td>
<td>117%</td>
</tr>
<tr>
<td>7 S. African women’s charity</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>60</td>
<td>123%</td>
</tr>
<tr>
<td>8 Head Injuries charity</td>
<td>4</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>42%</td>
</tr>
<tr>
<td>9 Head Injuries charity</td>
<td>3</td>
<td>2</td>
<td>60</td>
<td>0</td>
<td>107%</td>
</tr>
<tr>
<td>10 Children’s charity</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>8%</td>
</tr>
<tr>
<td>11 Children’s charity</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>20</td>
<td>160%</td>
</tr>
<tr>
<td>12 Children’s charity</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>93%</td>
</tr>
<tr>
<td>13 Children’s charity</td>
<td>3</td>
<td>2</td>
<td>20</td>
<td>0</td>
<td>33%</td>
</tr>
<tr>
<td>14 Children’s charity</td>
<td>2</td>
<td>3</td>
<td>20</td>
<td>0</td>
<td>131%</td>
</tr>
<tr>
<td>15 Children’s charity</td>
<td>5</td>
<td>0</td>
<td>20</td>
<td>0</td>
<td>22%</td>
</tr>
<tr>
<td>16 Hospice</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>83%</td>
<td>83%</td>
</tr>
<tr>
<td>17 Children’s charity</td>
<td>5</td>
<td>0</td>
<td>40</td>
<td>0</td>
<td>67%</td>
</tr>
<tr>
<td>18 Hospice</td>
<td>3</td>
<td>3</td>
<td>17</td>
<td>0</td>
<td>105%</td>
</tr>
<tr>
<td>19 Children’s charity</td>
<td>3</td>
<td>2</td>
<td>80</td>
<td>0</td>
<td>85%</td>
</tr>
<tr>
<td>20 Head Injuries charity</td>
<td>5</td>
<td>0</td>
<td>20</td>
<td>0</td>
<td>54%</td>
</tr>
<tr>
<td>21 Head Injuries charity</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>83%</td>
<td>83%</td>
</tr>
<tr>
<td>22 Head Injuries charity</td>
<td>1</td>
<td>4</td>
<td>20</td>
<td>0</td>
<td>68%</td>
</tr>
<tr>
<td>23 Hospice</td>
<td>2</td>
<td>2</td>
<td>25</td>
<td>0</td>
<td>52%</td>
</tr>
<tr>
<td>24 Teenagers’ charity</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>83%</td>
<td>133%</td>
</tr>
<tr>
<td>25 Teenagers’ charity</td>
<td>3</td>
<td>2</td>
<td>20</td>
<td>0</td>
<td>42%</td>
</tr>
</tbody>
</table>
Table 2: Examples of students’ causation behaviours

<table>
<thead>
<tr>
<th>Causation category</th>
<th>Example</th>
<th>Week</th>
<th>Stimulus</th>
<th>Consequences (intended and unintended)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develops a project plan to develop the product and/or services</td>
<td>Gp. 17: We need to arrange the next group meeting. Next Wednesday before classes - NB: ‘**’ cannot join, however he will contribute on Facebook or in mail. Learn by reading how this idea could be marketed</td>
<td>1</td>
<td>Awareness of the need to conform to academic requirements and achieve the targeted fundraising objectives</td>
<td>Helped to identify options, and allocate tasks and roles within the group. Identified expertise and inexperience. In some groups led to individual attempting to dominate in order to try to achieve the intended outcomes.</td>
</tr>
<tr>
<td>Organizes and implements control processes</td>
<td>Gp 12: This week we focused on the Risk Assessment, pinpointing the types of uncertainties that could affect the progress of the event. The risk could arise from two main variables the venue and stakeholders</td>
<td>5</td>
<td>Increasing awareness of the potential for university regulatory non-compliance</td>
<td>Made the internal environment more predictable. Taught structure to decision-making, and confidence that the process was on course. For dysfunctional groups provided a source of stress and increased dysfunctional, leading to demotivation and absenteeism, and eventually to greater use of bricolage later in the project.</td>
</tr>
<tr>
<td>Calculates the returns of various opportunities</td>
<td>Gp 12: 84% of the students interviewed showed interest in a theme party, and told they would come. This confirms our belief that we will fulfill unmet needs within our target. Then, the 4 options submitted got close results, so we need to choose a theme which satisfies everybody.</td>
<td>4</td>
<td>Initial research brings about an awareness of the need to identify potential customers and the most profitable returns</td>
<td>Applied learning from previous classes. In some cases spurious confidence in the planning and financial calculation process led to errors that might have been prevented if the group had taken a more experimental route.</td>
</tr>
<tr>
<td>Gathers information about competitors and compared offerings</td>
<td>Gp 19: Our main competitors would be the other students who are doing this same module and have the same assignment. All the information about the ideas for fundraising have been kept confidential. However, we were able to gather some information about the events through word-of-mouth. … Since this event is completely different from the one we are hosting, we don’t think it would be a potential competitor or a threat. Another competition might be the Messy Mondays event which takes place every Monday. However, we plan to collaborate our event with Messy Mondays’ in order to attract more people</td>
<td>5</td>
<td>Increasing awareness of the performance of the competitors and potential for other options</td>
<td>Increasing awareness of competitors and potential for other options. Increasing awareness of the need to exploit additional resources and break out from conventional ‘zero-sum game’ thinking.</td>
</tr>
</tbody>
</table>
Table 3: Examples of students’ effectuation behaviours

<table>
<thead>
<tr>
<th>Effectuation category</th>
<th>Example</th>
<th>Week</th>
<th>Stimulus</th>
<th>Consequences (intended and unintended)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced with different Gp 5: ways to sell and/or deliver the Create Just Giving Sample page and write down IN IT a step-by-step on how to do it in order to help contestants create their own</td>
<td>5</td>
<td>Experienced group was aware that different offerings would produce different results. Also experienced with digital media and research</td>
<td>Ability to compare possible outcomes Excitement as the opportunities became apparent</td>
<td></td>
</tr>
<tr>
<td>Changed the product or service substantially as the venture developed</td>
<td>6</td>
<td>Commitment to achieve the goal; motivated to achieve the target, and awareness of the lack of success of the original idea</td>
<td>Stress of failure stimulated awareness of the need to change course</td>
<td></td>
</tr>
<tr>
<td>Committed only limited amounts of resources to the venture at a time</td>
<td>8</td>
<td>Awareness of internal resource limitations</td>
<td>Desire to not lose their own money</td>
<td></td>
</tr>
<tr>
<td>Adapted what they were doing to the resources at hand</td>
<td>18</td>
<td>Recognition of the need to be realistic and creative in terms of maximising resource utility</td>
<td>Group with experienced members knew earlier, and better, what they could do</td>
<td></td>
</tr>
<tr>
<td>Entered into agreements with Gp 11: customers, suppliers, other organisations and we will also physically meet or contact the student union on our campus offices on Monday inquiring on how and where to get permission to use the Uni yard for our cake stall. Meeting with coffee machine sponsors on Monday to see what their decision is in securing as a machine for the event(s);</td>
<td>19</td>
<td>Recognition of need to obtain the external learning about the potential expansion of resources provided by customers, suppliers, etc in order to ensure success of the project</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4: Examples of students’ bricolage behaviours

<table>
<thead>
<tr>
<th>Bricolage category</th>
<th>Example</th>
<th>Week</th>
<th>Stimulus</th>
<th>Consequences (intended and unintended)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combination of resources for new purposes. Combined existing resources in creating solutions</td>
<td>Gp11: I can … promote my shoe business and at the same time tell the world about how my business is helping the SE</td>
<td>3</td>
<td>Increased understanding of the potential for synergies</td>
<td>Improved resource allocation, increased awareness of the part of inexperience groups especially that they could achieve more by being creative in the way that they brought together resources</td>
</tr>
<tr>
<td>Reused resources for purposes other than those for which they were originally designed</td>
<td>Gp17: Fortunately, the Student Union has a licence to screen a movie for student entertainment and they allowed us to use this license to generate income for the SE</td>
<td>8</td>
<td>Awareness of the limitations of the group’s own resources, therefore had to cast around for others’</td>
<td>Experienced groups lacked ideas and at the last minute needed to depend on staff suggestions e.g. Gp17, inexperienced groups had the ability to assess the potential of what was available, leading to earlier and better use of resources</td>
</tr>
<tr>
<td>Physical inputs. Used forgotten, discarded, worn, or presumed ‘single-application’ materials to create new solutions</td>
<td>Gp18: The sunflower was an iconic symbol used by the SE in fundraising campaigns; Decided to come out with the Sunflower Event as SE had a lot of Sunflower badges left from a previous event; the sunflower was to make awareness of the SE. It can be bundled as a package [with other donated goods] for sale</td>
<td>7</td>
<td>Opportunistic recognition of spare resources</td>
<td>Learning of the potential synergies between SE’s ethos and underexploited resources, awareness of the potential to increase revenue without spending anything on inputs</td>
</tr>
<tr>
<td>Skills inputs. Encouraged the use of amateur and self-taught skills that would otherwise go unapplied</td>
<td>Gp1: This week, as we have changed idea drastically we need to get a big move on and the new idea is based on selling products … Therefore this week each member must contact at least one company and ask them, in detail, what can be done to help us. In short, it is a mini phone pitch to them for sponsorship</td>
<td>5</td>
<td>Awareness of the pressing need to avoid the event failing</td>
<td>Fear of failure, stimulating the last-minute use of amateur skills</td>
</tr>
</tbody>
</table>