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# Novice facilitators as creative catalysts in innovation support

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This article explores the value that students, acting as novice facilitators, bring in supporting professionals to innovate. This empirical research took a grounded theory and action research influenced approach to investigate a series of innovation support workshops with sole traders and SMEs delivered by Northumbria University. These workshops were part of a wider regional research project entitled Creative Fuse North East. The research found that there was trust and rapport between the expert facilitators, novice facilitators and enterprises participating which supported co-creation. In this safe environment, novice facilitators and enterprises worked together to learn and grow. It is argued that this enabled both parties to build their creative confidence. Thus, this approach offers a route to stimulating innovation in the region through supporting small scale enterprises and sole traders, and by developing strong creative graduates to participate in future workforces.

**Keywords:** *creative confidence, novice facilitators, innovation support, creative catalysts, innovation readiness.*

## 1 Introduction

This paper explores the role that students play in supporting professionals to innovate. The paper suggests that when students act as novice facilitators, they are able to have a significant impact on the creative confidence of the enterprises supported. Additionally, the students themselves benefit from cooperative learning and co-creation and their creative confidence is also enhanced. These findings have been reached through empirical research influenced by grounded theory and participatory action research. A series of data collection and analysis activities were embedded within a design-led context. The findings in this paper have a dual benefit by way of contributing to innovation in the region through business support and through nurturing creative graduates.

The North East is attractive to businesses due to the quality of life achievable, however they can find it difficult to attract talent (CFNE, 2017). Although the region has good educational establishments, innovation is low and, across the country, there are calls to support 'everyday entrepreneurs' and SMEs to enhance their leadership skills, possibly through collaborating with universities (HM Government and Transport for the North, 2015; Department for Business, Energy and Industrial Strategy, 2017). This challenge is

addressed here, to enable people to continue to build successful businesses in the area they want to live in through supporting the creative confidence of professionals and future graduates.

In this paper, we are using the term 'creative' to mean an 'expression of self', therefore open to all (Phelan and Young, 2003; Hegarty, 2014). 'Creative confidence' refers to people's belief in their ability to change the world around them through courageously trying out new ideas (Kelley and Kelley, 2012). This is closely related to the concept of self-efficacy, an individual's belief in their own capabilities "to mobilise the motivation, cognitive resources and course of action", required to reach their goals (Bandura and Jourdan, 1991: 952). Kelley and Kelley (2012:4) describe creative confidence as lying "at the heart of innovation" as it requires us to face challenges and take risks (Phelan and Young, 2003). We are referring here to a personal rather than organisational creative confidence.

The paper will first set out the research environment and methodology. It then describes the research findings that the students built trust and rapport with the enterprises so that they could co-create and learn together, thus potentially generating a stronger understanding of the innovation readiness of the enterprise. The paper closes by considering how this co-creative learning stimulated creative confidence.

## **2 Research environment**

The research was conducted during the design and delivery of 'Get Ready to Innovate' (GRTI), a series of workshops delivered as part of Creative Fuse North East (CFNE). CFNE is a European Regional Development Fund, Arts and Humanities Research Council and Arts Council England funded project involving 5 regionally linked universities. This project sought to explore the potential for the creative, digital and IT sectors to drive innovation and growth across the North East (CFNE, 2019)

Get Ready to Innovate (GRTI) was a program where enterprises were aided in assessing their innovation readiness. GRTI consisted of 12 hours of funded support for regional enterprises. Funding dictated the duration - but not the format - of support, which had 2 strands:

1. GRTI one-to-one: an enterprise attended sessions with expert facilitators (see Gribbin, Bailey & Spencer (2018)).
2. GRTI one-to-many: 2-4 enterprises all attended sessions, each facilitated by 2-3 students.
3. 3 sets of 'one-to-many' GRTI workshops were delivered with enterprises from sectors such as music and textiles. Enterprises were predominantly sole traders, with some micro SMEs (less than 10 employees) and one SME who had 38 employees.

Multidisciplinary Innovation (MDI) Masters students at Northumbria University acted as 'creative catalysts' in the planning and delivery of GRTI. MDI students are from any undergraduate discipline and professional horizon, and an Integrated Academic Practice model is employed by way of a pedagogical approach, where students engage in design-thinking projects with external partners (Bailey and Smith, 2016). To emphasise their 'professional-in-training' role, students will be referred to as 'novice facilitators' (NFs). A staff team of academics and researchers, 'expert facilitators' (EFs), also participated.

Each enterprise attended 3 workshops of 3 hours over several weeks, and a 3-hour review session following these broad themes:

1. Current business/future opportunities (Figure 1)
2. Modelling the opportunity (Figure 2)
3. Realising the opportunity (Figure 3)
4. Reviewing innovation readiness (review session with EFs only).

A series of design-led activities were developed and then personalised to each enterprise's needs.

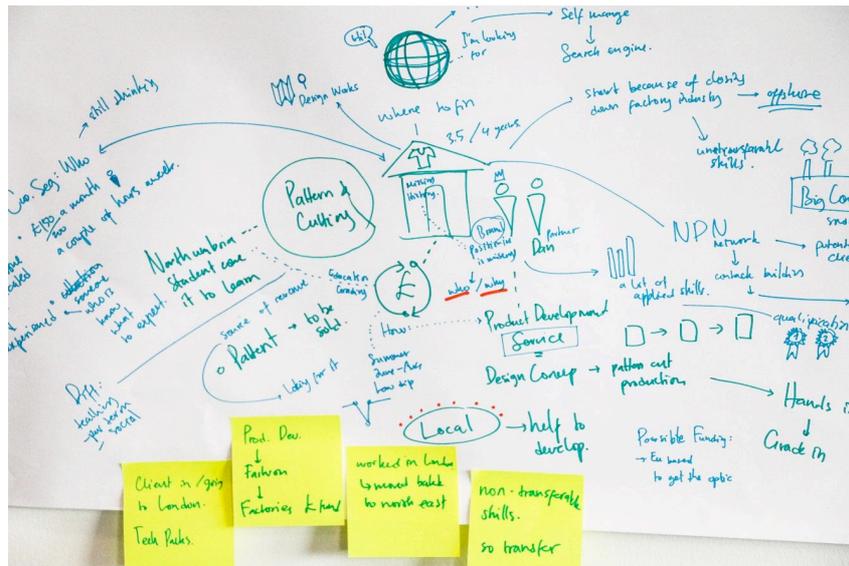


Figure 1: Mapping the enterprise

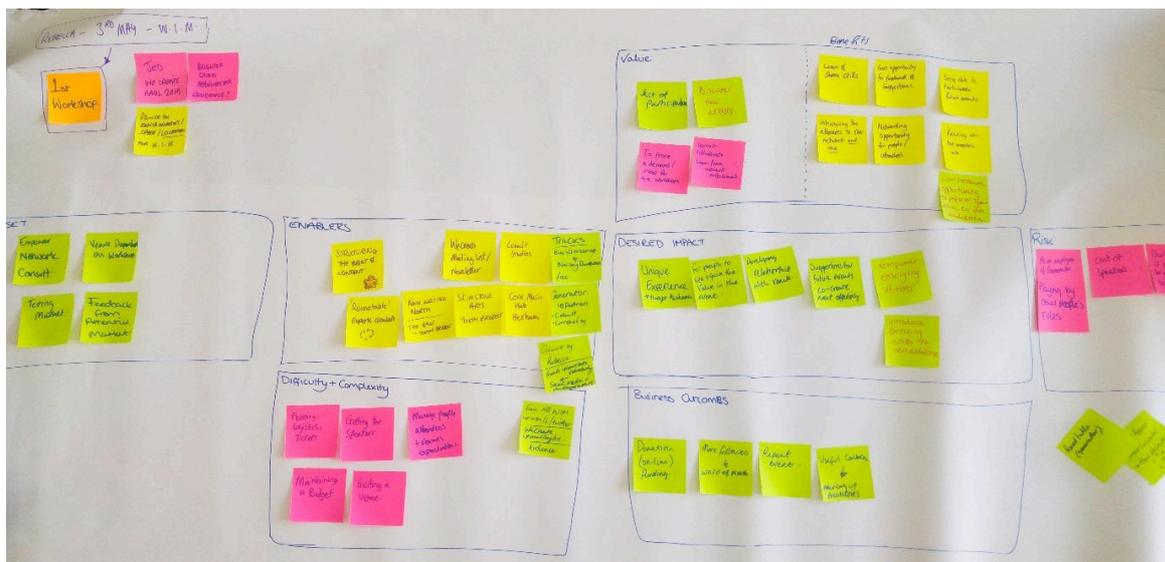


Figure 2: Modelling the opportunity space

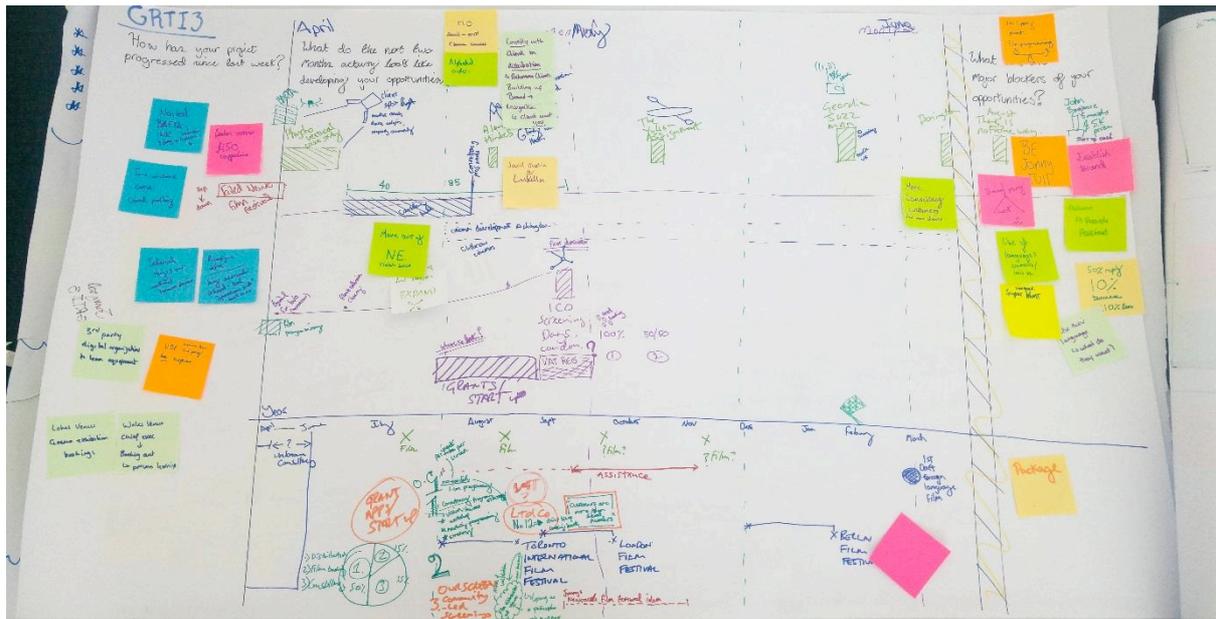


Figure 3: Strategising around the opportunity

Facilitation is taken to mean supporting others to reach a shared aim (Kofschoten et al., 2007). In GRTI, the facilitator is integral to the group work, and activities are co-creative and design-led. A design-led approach to solving complex and ill-defined problems involves using the tools and mindset of a designer and requires the creative confidence to act decisively and take risks (Rauth, Koppen, Jobst & Meinel, 2010; Kelley and Kelley, 2012; Ulibarri, Cravens, Cornelius, Royalty & Nabergoj, 2014). The design-led facilitator does not act as consultant but works in multidisciplinary teams with diverse people as the route to solving complex problems (Baer, Greg, Costa Jacobson & Holingshead, 2008: 255). This paper focuses on the role that the students played as novice facilitators. We can speculate that, were the business to be supported only by EFs, we might have observed different techniques and results, as will be explored in future research.

### 3 Methodology: Design-led, participatory and grounded in data

The research design was influenced by grounded theory and participatory approaches undertaken within a design-led context, aimed at trustworthiness and authenticity. The largely early-career research team were conscious that they were working within an experienced team and saw an opportunity to take a fresh approach to an under-researched aspect of the departmental practice, that of student involvement in innovation support. This research design offered a way to make use of existing knowledge to sensitise the team to what was going on but also to navigate the body of expertise.

A grounded theory approach was taken which aimed to generate findings that were 'grounded' in the data, and therefore there were no pre-existing hypothesis. The effect of the researcher's prior or emerging assumptions was minimised using an iterative refinement of data collection methods in response to emerging themes and a systematic and transparent coding process (Charmaz, 2006). An analytical leap from data straight to theory was avoided

using a progressive content analysis procedure involving first descriptive then analytical themes (Saldana, 2009). Facilitation and visualisation techniques from a design-led approach were used to aid reflection and communication between research participants and researchers (Ward, Runcie and Morris, 2009).

Key research stages (each data collection stage was followed by coding in QSR\*NVivo):

1. Scoping literature and departmental practice to develop initial 'sensitising concepts'. A broad initial question 'what is going on here?' guided scoping so that themes could emerge in response to what was observed (Charmaz, 2006).
2. Observation of five GRTI workshops, initially observing all enterprises before focusing on one enterprise to gain a deeper understanding. This enterprise was selected to generate rich, rather than representative, data as they were working with strong NFs (Charmaz, 2006). The paper here refers to insights drawn from all workshops, totalling 12 enterprises.
3. Sense-checking interview to explore emerging themes with an EF.
4. Data collection workshop with 3 NFs and 2 researchers.
5. Descriptive and analytical (re)coding of all data collected (Saldana, 2009).
6. Analysis workshop with 4 researchers to generate analytical framework.
7. Identification of relevant theoretical frameworks helped make sense of the analytical conclusions thereby ensuring, as much as possible, literature did not shape the conclusions, but aided interpretation of themes that had already emerged.

A core researcher was joined by co-researchers embedded in the planning and delivery of GRTI as EFs, thus enabling a participatory action research approach and allowing multiple-perspective validation. The research was situated within the departmental community of practice (Kemmis, McTaggart & Nixon, 2014) and benefitted from the enhanced trustworthiness and transparency of a grounded theory approach to research design and analysis (Charmaz, 2006). The research team had 5 members with varying roles, as can be seen in Table 1.

Table 1: Changing team roles during GRTI planning, delivery and research activity

	GRTI Planning	GRTI Delivery	Post-delivery research activity
RA 1	Researcher		
RA 2	EF	Participant	Researcher
liR 1	EF		Researcher
liR 2	EF		Researcher
Senior staff member	EF		Researcher

#### 4 Findings and analysis: Creating a space for growth

Analysis identified three core interrelated themes. Firstly, trust was built and nurtured between all activists. Secondly, supported by the EFs, NFs worked to gather and make sense of information about the enterprise and context. Thirdly, and perhaps acting on a higher analytical level than the previous themes, a ‘safe’ environment was created that supported both NFs and the enterprises to grow together through exploration, reflection and learnings.

##### 4.1 Building trust

GRTI required “trust across hierarchy”, as the EFs and NFs worked together on workshop planning and delivery, “you established a level of trust with myself” (EF). NFs were encouraged to try different approaches and to operate without constant supervision. Trust was recognised by one NF who described a family-like structure,

it’s a bit like parents giving trust to their children ... you’re like ‘OK someone gave me a huge chunk of trust to do this on my own so let’s not screw up’.

The NFs did take on this responsibility, contributing their own time to preparation between sessions.

It was also evident that the NFs trusted EFs to support them if necessary. They asked for advice and sought feedback between workshops. One EF reflected on his position relative to NFs, “I am credible amongst them...they know I’m rigorous”. There was also the need for the NFs to trust each other to prepare for and participate in sessions.

Enterprises needed to trust the students in order to expose their fears and dreams to scrutiny by people they had only recently met, as one NF reflected,

it's like someone telling a story about themselves and we were surrounding ourselves with information about her and she felt safe and that these people want to know me.

This may be helped by a 'fit' between enterprise and facilitators, "we got really good people to work with who were from a similar background to us ... I suppose otherwise we would have maybe taken a little longer to get to that honesty" (NF).

## 4.2 Developing rapport

Closely related to trust, to create a non-confrontational climate for questioning and collect authentic information, rapport between facilitator and facilitated was vital. The NFs seemed to achieve this through emphasising that they had a shared goal. Observational notes provide an example of this, "[the EF] comes over to the table, the business is talking to one of the students, but one student shows him the business' new business card design, really chuffed and positive, like she is siding with the business". The EF described here later commended how the NFs put their enterprise at ease,

[the NF] was brilliant at establishing and re-establishing that relationship ... every single time he came in [to the workshop] he was great at 'how've you been', 'what's it been like' ... establishing the comfort level so the business knows 'ah it's [student's name], we're familiar with him, he's good.

NFs also developed a rapport by employing empathy, attempting to look at the world through the enterprise's eyes, "you're able to relate to and understand who is sat in front of you" (EF). We will go on to speculate that because the NFs were in a position of having to learn and take risks as well as the enterprises, the enterprises were perhaps better able to open their business up to scrutiny than they might have been where they faced only with an EF or with an industry expert, although personality of the NF may have an impact.

The length of GRTI, with the NFs and enterprises having 9 hours of intensive interaction, provided the time for NFs to have both light-hearted and focused conversation, "getting to know them as a person rather than as a whole business" (NF). The NFs recognised that to do this required establishing a shared goal and a shared language, "it's a bit like knowing what's your enterprise's language" (NF). Rapport was perhaps especially important as the NFs were predominantly working with sole-traders whose working and personal selves were often indistinguishable and therefore conversation inevitably strayed into private lives and heartfelt dreams. One NF described being aware of this,

when you're working with people with things that are close to them ... and then all of a sudden, they have met you for the first time and this is what we're doing, so you have to be personable, you have to be a good actor.

The ability of the NF to do this and their personality type may affect the degree to which this can be achieved.

## 4.3 Approaching the topic

To gather comprehensive information and to explore the business in new ways, the facilitators approached topics from different angles, probing to understand factual and

emotional sides of the business. They also had to navigate conversational 'dead-ends'. One NF reflected on his developing understanding of the need to avoid meeting resistance with resistance, "I learned... don't be as resistant as them...you won't get anything back and we'll just sit there in awkward silence". GRTI was not intended to be an easy process for the enterprises, and several reflected that it was gruelling, and forced them to think about things they might rather not, requiring great skill and persistence on the part of the facilitators.

The NFs strove to use questions which kept the space open for conversation, for example they encouraged deeper discussion by 'playing back' what the enterprise was saying, echoing Wegerif's (2005) creative space for conversation. NFs engaged in 'active listening' (Rogers and Farson, 2015); taking in both the content of what enterprises were saying and the underlying feelings or attitudes that were shaping their communication. In this way they were prepared to see the world from the enterprise's perspective. Co-creating a deep understanding

The NFs came from diverse backgrounds and therefore provided a fresh perspective, as suggested by one enterprise,

this is how people see my business, people who don't know me, not my family, not my friends, but they are willing to help me ... I am rather stuck in a vacuum so it's nice to see things from another person's perspective".

There seemed to be a generative effect when NFs and the enterprise contributed different ideas to co-creation, a kind of "social or collective creativity" (Reilly, 2008). In the context of ill-defined problem spaces, it follows that a multidisciplinary approach might be beneficial. Reilly (2008: 72) describes observing similar co-creation amongst novice facilitators outside of a design-led context, where participants worked with each other's ideas to clarify a patchwork of perspectives, novices "simultaneously hold and use a multidimensional perspective lens ... generating creative open solutions".

However, a lack of experience or conflicting personalities may have prevented the co-creation of understanding at times, for example one NF commented that "the people that you work with sometimes encouraged the work output or ... restricted the work output" (NF).

We could speculate that this was a consequence of the NFs and EFs misjudging the support this enterprise required by framing the problem as idea generation, rather than how to prioritise.

#### **4.4 Sense-making & sense-checking**

The NFs recognised the importance of working with the enterprise to develop an understanding of what was really going on. For example, re-framing for one enterprise, a desire to buy new software as a need to maximise profitability. One NF described this situation; "sometimes they [the enterprise] would say this, and they actually meant something different, it needed translating".

NFs achieved varying degrees of sophistication with regards to 'translating' what they heard. For example, one enterprise revealed she did not chase customers for payment which was interpreted by the NFs as a time management issue. However, with EF intervention it became evident that a more insightful interpretation was to read her comments as a lack of confidence. There was other evidence of NFs lacking in 'active listening' skills (Rogers and Farson, 2015), for example after the first GRTI workshop session an EF commented "I think

they had lost sight of why they were there and they had begun to project their own points of view". The NFs had shaped a strategy around sales growth through craft-fair attendance, when the enterprise, as a full-time worker and mother, saw growth as achieving enough online sales to fund her evening creative occupation.

If we frame attributes, such as empathy, as acquired rather than inherent, these moments of not actively listening present learning opportunities for the NFs. An EF discussed the different approach she took to the NFs when working with an enterprise who had big dreams but no strategies to reach them. She said she had to actively encourage the NFs to introduce criticality by encouraging the enterprise to prioritise his ideas. In this example, it again seems the EF was encouraging the NFs to engage in active listening by considering not only the content of what was said, but the underlying emotions and values behind what the enterprise was saying and encourage the enterprise to do the same (Rogers and Farson, 2015).

By developing a rapport with the enterprises, the NFs created a climate of confidence where trust and honesty were the norm. This later enabled them to co-create a deep understanding of the enterprise's situation,

[w]e had 3 students all with their own unique strengths who worked well as a team to come up with excellent ideas and solutions - they were the value (enterprise).

Gathering information throughout the GRTI programme allowed both NFs and enterprises to discover each other's values and skills on a personal and professional level.

## **4.5 Growing Together**

The GRTI co-creative experience shook up the enterprises' and MDI students' working habits which forced them to step out of their comfort zones. The trust the EFs placed in the NFs and the rapport established between them and the enterprises gave each group a common purpose and drive to take up the challenge and exceed expectations, engaging in exploration, reflection and learning.

### **4.5.1 Exploration**

The NFs are familiar with working on 'live' projects with external clients, however this usually involves receiving a brief from the client, working as a group without clients being present, and then presenting back to them. In GRTI the students and the enterprise were able to spend a much longer period of time working closely together. This activity could be framed as a space for exploration and upstream research before the development of a brief.

### **4.5.2 Reflection**

Enterprises and NFs learnt through reflection 'in-action' during sessions and 'on-action' afterwards (Schon, 1984). For example, EFs prompted intermittent re-caps upon re-entering the group, and the visual nature of the activities allowed the group to engage in reflective practice by moving post-its between categories, moving around the table to explore diagrams from different perspectives and easily identifying knowledge gaps, "to make it real and to make it tangible and to do some of the processing" (EF). Space for reflection on-

action was also created through 'homework' activities or questions to think further on between sessions,

they have time to actually think about that question that we've asked them about, so they can rethink if that's [the answer they have given during the session] actually what it is (NF).

#### 4.5.3 Learning

NFs were not marked on their involvement and they were encouraged to see failure as a learning opportunity without implications for course credit. The department removes the risk from experimentation as much as possible by encouraging failure with reflection in order to facilitate learning, consistent with a design-led approach (Author and Smith, 2010). Student learning during the iterations of GRTI is evidenced by their taking and being given, further input and control over the content of sessions. An EF described how, during early iterations, the students were more closely supervised than later ones,

when we delivered to the first set of businesses we were very explicit in terms of what we wanted the students to do... we prepopulated the templates, we controlled everything.

Control was then handed over to "enable the student to be confident enough to come up with their own ways of working" (EF).

The workshops were also a learning space for the enterprises as they aimed to provide strategies that enterprises could use again in the future. The NFs acted as creative catalysts and a sense of adventure was encouraged, for example by using coloured pens and post its on big bits of paper (Figure 4). A sense of growth is suggested in this comment from an enterprise,

I found the process to be exciting and energising... I was thrilled to be able to work with such enterprising and engaged young people and staff.

Their learning may have been enhanced through the face-to-face delivery of the support, allowing for the personal connections discussed above, and for NFs to make the most of their social skills such as leadership and trust-building, both factors that are necessary for a cooperative learning environment (Johnson and Johnson, 1999).

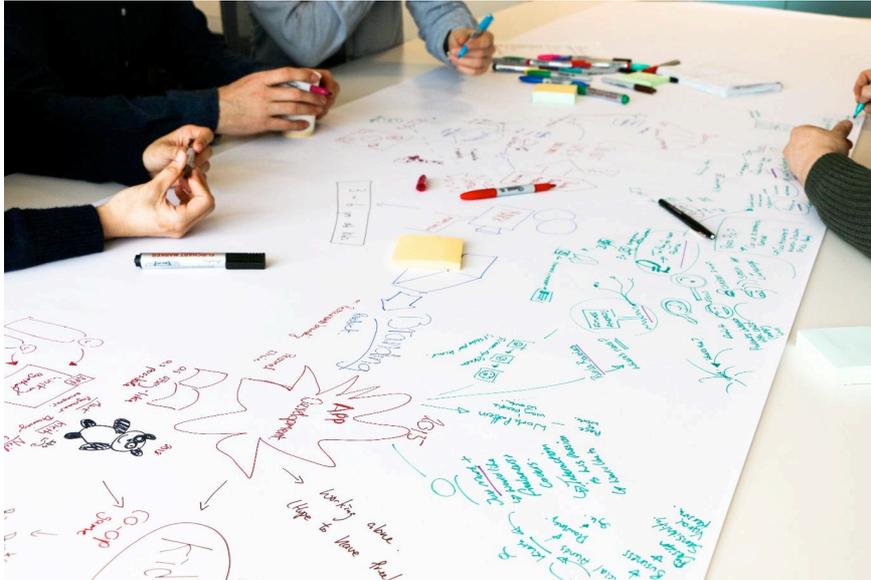


Figure 4: An enterprise and facilitators map ideas

#### 4.5.4 Support

NFs are familiar with working alongside and being supported by staff in the presence of external partners during their MDI course. EF involvement during the GRTI workshops varied depending on the NF's and enterprise's needs. EFs often emphasised to enterprises that they were present to support NFs rather than lead the session as suggested in the statements they made such as, "I will hand the reins over" and "the students have come up with these ideas not me" (EF). At times the EFs subtly intervened to nudge conversation back on course, for example observational notes record that the EF "re-joins the group and directs them to bring conversation back to a higher-level strategy as they were getting bogged down in the details". There was a 'fluidity' as EFs moved in and out of groups, judging when interventions were necessary. This required an expertise on the part of the EF, to judge when to intervene, "I'm constantly reflecting on how I would approach it when I'm watching the table", and when not to, "I'd completely derail the session if I went [NF name] you should do this" (EF).

NF comments indicate that they felt supported where necessary to lend credibility to their work,

we were getting a bit of onboarding from an academic perspective because sometimes we felt like the enterprise needed the reassurance from the academic.

EFs also provided some 'side talk', such as overall aims and timescales, and the 'theory' behind the activities, "my main role with that group was to help [the enterprise] understand what we were doing and why we were doing it" (EF). In contrast to GRTI one-to-one (Gribbin, Bailey and Spencer, 2018), enterprises may have felt supported by being able to see that other enterprises were having similar experiences and waves of conversation and quiet reflection.

The structure of the GRTI sessions and the reflective time between each of them allowed the enterprises and the NFs to grow as individuals and professionals and to develop a certain set of skills as well as building a relationship based on trust and understanding within a safe space (Bailey and Smith, 2010).

## **5 Discussion: Learning Creative Confidence**

This research aimed to investigate the impact of student facilitated design-led innovation support workshops. It was found that the students, framed here as NFs, worked to build trust, gather information, and collaborate with the enterprises to make sense of what they learned. Despite at first surprising some of the enterprises, working with NFs was evaluated highly and no enterprises failed to attend the full (demanding) programme of support. Having NFs lead the delivery of this innovation support seemed to be significant. For example, when asked if there were any disadvantages of student involvement, one enterprise answered, “none, they were essential to the project”. This section argues that student involvement in GRTI created a circumstance where facilitator and facilitated were learners together and authentic co-creation could take place. Further, it is suggested that this develops the creative confidence of those individuals involved.

The first key assertion this paper makes is that an environment was created that allowed the NFs and the enterprise to learn and grow. Acting as creative catalysts, the NFs created a rapport with the enterprise and took ownership of the growth ‘work’ that took place during the workshops. We can speculate that a sense of ‘we’ rather than ‘us and them’ was partly created by both parties being there to learn, take risks, perhaps fail, but ultimately both growing together. One NF had clearly learnt about the practice of facilitation in a way he felt would benefit his core course work, “some of the theory we were using in GRTI, it went over to MDI and vice versa, so we were kind of working through methods and kinds of theories then intertwining them”. We could frame the student facilitators as ‘expert novices’ (Glaser, 1987), aware that they do not know everything, but confident that they can acquire the new knowledge they need. That NFs are able to take on the role of expert novices is arguably facilitated by the safe space and supportive network of relationships with EFs, some of which are previous MDI students themselves and therefore act as role models. The NFs seem to have been able to adopt the role of an expert novice with high self-efficacy - believing in their ability to acquire new knowledge. A cooperative learning environment may have been enhanced by the premise that facilitators and facilitated were both attending to learn and grow as it encouraged a sense of ‘positive interdependence’; both parties were invested in each other’s success as intertwined with their own (Johnson and Johnson, 1999). This has been noted in other models for enhancing creativity such as the ‘micro-cultures’ fostered in the ‘Team Academy’ model (Tosey, Dhaliwal and Hassinen, 2014).

It may seem a straightforward conclusion that delivering an intensive business support workshop would challenge NFs to develop their skills, however it is nonetheless a valuable learning point. The opportunity to learn from their peers and from working alongside the EFs offers a chance to raise an awareness of what can be achieved for the NFs. Information is now readily accessible at the touch of a button meaning that we arguably no longer require as many graduates to be information experts as previously. Instead, we need people who can solve complex challenges in multidisciplinary environments. McFall, Beacham, Burton & Dulaney (2013:125) argue that to adjust to this new working environment universities need to “help students ... bridge academic life and professional expectation” by exposing them to professionals and faculty to work together to “address a real-world problem”. While these authors present vertical studios as one way to do this, this paper has explored innovation

support delivered within a safe environment, and through an Integrated Academic Practice approach, as another.

The second key assertion this paper makes is that, by co-creating and growing together, students and enterprises developed their creative confidence. This was identified by one of the NFs in relation to the enterprise, and we could perhaps speculate that the developing awareness in this student of the enterprise's development demonstrates their increasing emotional intelligence, "the workshop doesn't just profit their business it actually builds their own creative confidence while they're doing it".

Creative confidence might have been developed through the opportunity to repeatedly try out activities, "like a muscle - it can be strengthened and nurtured through effort and experience" (Kelley and Kelley, 2012: 4). It has been argued that self-efficacy is developed through repeated opportunities to achieve one's targets or by learning when targets aren't achieved (Bandura and Jourden, 1991). Similarly, Rauth et al. (2010: 6) found that through repeatedly engaging in design thinking a particular mindset was developed that built creative confidence,

[C]reative mindsets are fostered by repetitively experiencing and applying the process as well as tools according to given problems or developing behavioural patterns in certain situations. These mindsets can be seen as the establishment of a bias towards creative behaviour in situations where students are facing situations in which they are uncertain or problems where there is no solution at hand.

Attempting new things requires a tolerance to risk, failure and uncertainty, and a confidence in one's capability that these challenges can be overcome (Hsu, Hou & Fan, 2011). As people engage in design thinking they are more able to trust their abilities to cope when faced with the next challenge (Rauth et al., 2010). This increasing competence was recognised within the students in this research as they were awarded more control over their interactions with enterprises.

Kelley and Kelley (2012) suggest that creative confidence is progressive, adding to and enhancing what we do rather than meaning we must abandon existing work practices. Further, lack of creative confidence can hold people back from achieving their potential. This is exemplified in the example of a pattern cutting and sewing enterprise that participated in GRTI. They began GRTI with identifying that their biggest challenge was being able to afford new software they thought would lead to increased revenue. Through working with their NFs that uncovered the tangible problem spaces behind this goal, and adapted (rather than abandoned) their current working practices to address them. The NFs quickly saw that their lack of confidence in their own ability was holding them back when pricing work and choosing what work to accept, as noted by an EF "you picked up on that very quickly, on how to boost her confidence and when I came back her confidence was 20, 30% higher". This was even dealt with directly by the NFs during the session, with one commenting to the enterprise that "you've already started building your creative confidence". The enterprise quoted here gained the confidence to change aspects of their work that were less profitable and use their new confidence to get a great deal on the new software they wanted, thus they have the creative confidence to "pursue a line of action" (Lucas, Cooper, Ward & Cave, 2009: 740). This was summarised by the enterprise,

recognising that the skills we have are valuable and giving us the confidence to go after bigger jobs and gain a deal ... for software essential to our growth ... They have taught us better ways to evaluate the business and have improved our self-confidence which has resulted in larger fees from enterprises and us being more selective about who we work with.

Trust must exist for group members to venture new ideas and feel they can co-create, creating a kind of 'contract' between members who see each other as having the potential to have a positive impact on their environment (Carmeli and Spreitzer, 2009). Trust between NF and enterprise seemed to be built through social skills such as being personable and understanding, echoing Ulibarri et al.'s (2010: 263) finding that treating people as "human beings" (with fears, values and emotions) was vital if seeking to build their creative confidence, congruent with a design-led approach (Ghassan and Bohemia, 2013:526). We could speculate that within co-creative environments where a 'contract' of trust and honesty is created, a creative confidence in each other as well as oneself is fostered. Baer et al. (2008) refer to 'team creative confidence' and 'collective efficacy' when this confidence is directed towards a shared goal. It is suggested that because NFs may have seemed more approachable than experienced staff or industry experts, and because they were also learners and risk-takers, they may have been able to more readily establish rapport and collective creative confidence.

GRTI aimed to enhance the innovation readiness of sole-traders and SMEs in the region. We have argued here that students proved invaluable in achieving this aim through building the creative confidence of the enterprises who participated. An environment was created where these students could act as (expert) novice facilitators in that they acted with support from expert facilitators, were presented to enterprises as activity leaders with ownership over the activities, and built the cooperative learning skills necessary to acquire the information they required. Enhancing creative confidence is highly valuable if we consider that those with higher levels of belief in their own ability to change their environment, to grow, and to recover from failure in a positive way, are more able to reach for, and achieve, higher goals. The more we achieve these goals, the more our creative confidence flourishes. Therefore, this approach offers a way to stimulate innovation in the region through equipping enterprises and graduates with the seeds of creative confidence and some tools to build this mind-set further. Further research will reflect upon the strengths and limitations of taking this dual focus, and will seek to assess the innovation readiness of the SMEs involved.

## 6 References

- Bailey and Smith, N. (2010) Safe environments for innovation: developing a new multidisciplinary masters programme. In: C. Boks, C. McMahon, W. Ion & B. Parkinson (Eds.), *When Design Education and Design Research Meet: proceedings of the 12th International Conference on Engineering and Product Design Education E&PDE10* (pp. 60-65). The Design Society.
- Bailey & Smith, N. (2016). Making it Work; Integrated Academic Practice. In: *20th DMI: Academic Design Management Conference Inflection Point: Design Research Meets Design Practice* (pp. 2346-2363). Boston: DMI.
- Baer, M., Greg, O., Costa Jacobson, G. & Hollingshead, A. (2008). The personality composition of teams and creativity: The moderating role of team creative confidence. *The Journal of Creative Behaviour*, 42(4), pp. 255-282.

- Bandura, A. & Jourden, F. (1991). Self-regulatory mechanisms for governing the impact of social comparison on complex decision making. *Journal of Personality and Social Psychology*, 60(6), pp. 941-951.
- Carmeli, A. & Spreitzer, G. (2009). Trust, connectivity and thriving: Implications for innovative behaviours at work. *The Journal of Creative Behaviour*, 43(3), pp. 169-191.
- CFNE (2017). *Initial report*. Retrieved from <http://www.creativefusene.org.uk/wp-content/uploads/2017/06/Creative-Fuse-North-East-Initial-Report-22062017.pdf>.
- CFNE (2019). *Project report*. Retrieved from <http://www.creativefusene.org.uk>.
- Charmaz, K. (2006). *Constructing grounded theory*. London: Sage.
- Department for Business, Energy and Industrial Strategy, (2017). *Building our industrial strategy*. Retrieved from [https://beis.gov.uk/citizenspace.com/strategy/industrial-strategy/supporting\\_documents/buildingourindustrialstrategygreenpaper.pdf](https://beis.gov.uk/citizenspace.com/strategy/industrial-strategy/supporting_documents/buildingourindustrialstrategygreenpaper.pdf).
- Ghassan, A., & Bohemia, E. (2013). From Tutor-led to Student-led design education: the Global Studio. In J. Beate Reitan, P. Lloyd, E. Bohemia, L. Merete Nielsen, I. Digranes, & E. Lutnæs (Eds.), *Proceedings of the 2nd International Conference for Design Education Researchers: Design Learning for Tomorrow – Design Education from Kindergarten to PhD* (Vol. 1, pp. 524–536). Oslo, Norway: ABmedia.
- Gribbin, J., Author, Spencer, N. (2018). A rapid design-led approach to innovation readiness: advantages and disadvantages. In *21st DMI: Academic Design Management*. 1-2 August 2018, London, UK.
- Glaser, R. (1987). Teaching expert novices. *Educational Researcher*, 16(9), p5.
- Hegarty, J. (2014). *Hegarty on creativity there are no rules*. London: Thames & Hudson.
- HM Government and Transport for the North. (2015). *The Northern Powerhouse: One agenda, one economy, one north*. London: HMSO.
- Hsu, M., Hou, S. & Fan, H. (2011). Creative self-efficacy and innovative behaviour in a service setting: optimism as a moderator. *Journal of Creative Behaviour*, 45(4), pp. 258-272.
- Johnson, D. & Johnson, R. (1999). Making cooperative learning work. *Theory into Practice*, 38(2), pp. 67-73.
- Kelley, T. & Kelley, D. (2012). *Reclaim your creative confidence*. Harvard Business Review, 90( 12), pp. 115-118.
- Kemmis, S., McTaggart, R. & Nixon, R. (2014). *The action research planner: Doing critical participatory action research*. New York: Springer.
- Kolfschoten, G., Hengst-Burggeling, M. & Vreede, G. (2007). Issues in the design of facilitated collaboration processes. *Group decision making and negotiation*, 16, pp 347-36.
- Lucas, W., Cooper, S., Ward, T. & Cave, F. (2009). *Industry placement, authentic experience and the development of venturing and technology self-efficacy*. Technovation, 29(11), pp. 738-752.
- McFall, B., Beacham, C., Burton, K., Dulaney JR, R. (2013). How can we make it better? Translating an innovative medical model into cutting edge design curriculum. In J. Beate Reitan, P. Lloyd, E. Bohemia, L. Merete Nielsen, I. Digranes, & E. Lutnæs (Eds.), *Proceedings of the 2nd International Conference for Design Education Researchers: Design Learning for Tomorrow – Design Education from Kindergarten to PhD* (Vol. 1, pp. 524–536). Oslo, Norway: ABmedia.
- Phelan, S. & Young, A. (2003). Understanding creativity in the workplace: An examination of individual styles and training in relation to creative confidence and creative self-leadership. *The Journal of Creative Behaviour*, 37(4), pp. 266-281.
- Rauth, I., Koppen, E., Jobst, B. & Meinel, C. (2010). Design thinking: an educational model towards creative confidence. *First International Conference on Design Creativity, ICDC*, 29th November - 1st December, Kobe, Japan.
- Reilly, R. (2008). Is expertise a necessary precondition for creativity? A case of four novice learning group facilitators. *Thinking skills and creativity*, 3, pp.59-76.
- Rogers, C. & Farson, R. (2015). *Active Listening*. USA: Martino Publishing.
- Saldana, J. (2009). *The coding manual for qualitative researchers*. London: Sage.
- Schon, D. (1984). *Reflective Practitioner*. Basic Books: USA.
- Tosey, P., Dhaliwal, S. and Hassinen, J. (2014). *The Finnish Team Academy model: implications for management education*. *Management Learning*. 46 (2), pp. 175-194
- Ulibarri, N., Cravens, A., Cornelius, M., Royalty, A. & Nabergoj, A. (2014). Research as design: Developing creative confidence in doctoral students through design thinking. *International Journal of Doctoral Studies*, 9, pp. 249-270.
- Ward, A., Runcie, E. & Morris, L. (2009). Embedded innovation: design thinking for small enterprises. *Journal of Business Strategy*, 30(2/3), pp. 78-84.

Wegerif, R. (2005). Reason and creativity in classroom dialogues. *Language and Education*, 19, pp. 223–237.

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