**The Development of Entrepreneurial Identity within a HE environment; the COVID-19 context**

Keywords – Entrepreneurial identity, Enterprise and Entrepreneurship Education, COVID-19, pandemic

**Abstract**

**Topic**

The purpose of this research is to explore the process of identity formation of first year higher education students. This study was designed in the early stages of the COVID-19 pandemic and data was collected as COVID struck with full force during the academic year 2020-21 resulting in two national lockdowns. While exploring identity formation more generally was the original purpose of the study, an emergent area of enquiry soon became how the pandemic had influenced students’ entrepreneurial identity construction and how this in turn impacted upon their engagement with experiential based topics such as enterprise education.

**Applicability to the conference theme**

This paper is applicable to the conference theme of ‘Bridging Enterprise, Policy and Practice: Creating Social and Public Value’ through its examination of how our future graduates and potential entrepreneurs transition through the process of entrepreneurial identity (EI) development, particularly in an educational and work landscape changed dramatically by the events of the pandemic. This research examines these processes with a view to better understanding entrepreneurial behaviour and its antecedents.

**Aim**

EI is “the constellation of claims around the founders, organization, and market opportunity of an entrepreneurial entity that gives meaning to questions of ‘who we are’ and ‘what we do.” (Navis and Glynn, 2011, p. 479). It is how an individual defines their entrepreneurial role and is informed by their attitudes and beliefs including their thoughts and feelings about oneself in a future entrepreneurial role. This does not just concern the individual's current identity but also their ‘aspirational role identity’ as an individual's entrepreneurial behaviour may be a result of what they wish to become in the future (Watson, 2013; Alsos *et al*., 2016).

Taking an identity perspective on enterprise education research helps scholars to better understand entrepreneurial behaviour as it is regularly suggested individuals strive for congruence between their identity and behaviours (Stets and Burke, 2000; Cardon *et al*., 2009). As EI has been found to inform entrepreneurial motivations and behaviour (Farmer *et al*., 2011; Alsos *et al*., 2016), a deeper understanding of students’ identity formation processes can assist educators in their design and delivery of enterprise education (EE) for more effective entrepreneurial outcomes (Smith and Beasley, 2011; Pruett and Susen, 2017).

**Methodology**

The study sampled from first year undergraduate students across two UK based universities. Only first year students were targeted as there is limited research examining EI formation at this stage of the educational journey (Nabi *et al*. 2018), and it was felt that the transition from non-HE student to HE student represented a transition conducive to identity development. A pre (start of the academic year) and post (end of the academic year) survey was completed to measure student’s self-identification with pre-defined EI constructs based upon the work of Cardon *et al*. 2009’s founder/developer/inventor identity ‘types’, Murnieks *et al*.’s (2012) centrality measure and Morris *et al*.’s (2018) centrality measure.

Based on scores of entrepreneurial intent at timepoint 1, a purposive sample of participants was then invited to complete fortnightly reflective diaries through the course of academic year 2020/2021. In a form of methodological triangulation, the study also tracked EI development using quantitative measures in the diaries. In addition to the collection of this longitudinal data, focus groups were held with diary participants at the end of the academic year which further explored the concept of entrepreneurial identity formation with a specific focus on the impact of the pandemic.

**Contribution**

This paper contributes a timely exploration of EI formation for HE students, particularly with increasing calls for identifying the impact of enterprise education (Jones *et al*.,2020) and for exploring ‘new ways of working’ as necessitated and accelerated by the pandemic. Although gaining interest, EI remains an under researched area (Leitch and Harrison, 2016) particularly in the HE context (Nielson and Gartner, 2017) and thus far has not been researched in the context of a pandemic. There remains a limited understanding of how EI is formed, how this informs the entrepreneurial process (Coupland and Brown, 2012) and in turn impacts on entrepreneurial behaviour (Alsos *et al.*, 2016). Moreover, the value of longitudinal and diary-type forms of data collection have been recommended in entrepreneurship research generally, and in EI formation specifically, and so this study offers a still relatively underused put promising methodology.

The data gathered offer a rich picture of the intricacies and fluctuations in entrepreneurial identify development in the first year of HE. Participants’ narratives suggest a number of factors combine to shape EI. Lower levels of EI resulted from course deadlines and exams, lack of interaction as result of COVID related lockdowns; time spent away from campus and witnessing business failure during the pandemic.  The pandemic appeared to impact on respondents’ entrepreneurial identities both positively and negatively. For some, it gave them the time and space to work on self-development, whereas others saw the decreased opportunities to interact and learn from others, as well as the negative economic impact on businesses, as a hindrance to the development of their EI.

**Implications**

The results offer implications for educators in their design and delivery of EE activities. A better understanding of EI development will help tailor the advice and guidance provided to aspiring entrepreneurs particularly in relation to how external factors and stimuli may help or hinder the formation of the entrepreneurial identity. Educators can also use these findings to focus on assisting potential entrepreneurs in searching for their authentic entrepreneurial identity to ensure entrepreneurial behaviours are congruent with their values and motivations.

**Introduction**

This study contributes to the literature regarding the nature and antecedents of Entrepreneurial Identity (EI) for university students, specifically; individual antecedents (personal and protected characteristics of participants) and socio-cultural antecedents (education, experience, networks).

A better understanding of EI formation improves our understanding of why some individuals become entrepreneurs where others do not (Hoang and Gimeno, 2015). As individuals usually strive for congruence between their entrepreneurial identity and entrepreneurial behaviours (Stets and Burke, 2000; Cardon *et al*., 2009; Farmer *et al*., 2011; Agnete Alsos *et al.*, 2016), a deeper understanding of students’ identity formation processes can assist in improving EE design and delivery for more effective entrepreneurial outcomes (Smith and Beasley, 2011; Pruett and Susen, 2017).

The aim of the study was to explore the identity formation processes of first year higher education students over the course of one academic year. In seeking to address this aim we were guided by the following research questions:

1. How does entrepreneurial identity form over time in HE students?
2. How does enterprise and entrepreneurship education influence entrepreneurial identity formation?
3. How is entrepreneurial identity formation impacted by the COVID-19 pandemic?

The next section provides an overview of the literature regarding entrepreneurial identity, the research methodology, sampling and methods will be outlined thereafter and the data analysis and results provided in the ‘Findings and Analysis’ section. The ‘Discussion’ and ‘Conclusion’ sections will relate findings to the literature and research questions, outline implications as well as limitations and suggestions for future research.

**Literature Review**

*Entrepreneurial Identity*

Identity refers to the “internalised expectations that individuals have about the characteristics they hold as central, distinctive and enduring, and that are at least partially reflected in the roles they enact” (Cardon *et al*., 2013, p. 376). Identity theory sees the self as a collection of identities based on particular roles (Stets and Burke, 2000) but how one forms and perceives their identity is not in isolation from their social context. Social identity theory which originates in social psychology literature explores how the self is conceptualized in social contexts (Tajfel *et al*.1971) and how social identity is “the individual's knowledge that they belong to certain social groups together with some emotional and value significance to them of this group membership” (Sieger *et al.*, 2016, p. 292). How a person understands their role originates in their observations of others performing that role and also the expectations of the role (Stryker and Burke, 2000).

It is understood that assuming an EI may support the entrepreneur in their start-up efforts. It can help establish themselves as entrepreneurial individuals, fostering a sense of belonging, giving legitimacy to their behaviours (Baert *et al*., 2016), and ultimately guiding decisions and actions (Murnieks *et al*., 2019; Alsos *et al*., 2016; Cardon *et al*., 2009). It is recognised that EI research draws upon a range of disciplinary perspectives including sociological, psychological and philosophical (Radu-Lefebvre *et al*., 2021) which has meant an eclectic mix of theoretical foundations underpinning EI theory thus far (Leitch and Harrison, 2016). Recent literature reviews by Mmbaga *et al*., 2020; Wagenschwanz (2020) and Radu-Lefebvre *et al.* (2021) examine the fragmented nature of the EI literature to outline the complexity of antecedents and outcomes related to the phenomena. Radu-Lefebvre *et al. (*2021) cut through the complexity to present two primary conceptualisations of EI as either ‘property’ or ‘process’. The former, rooted in positivism presents EI as relatively stable over time, able to be acquired and as an influencing factor upon individual and venture level outcomes. Whereas the latter, rooted in social constructivism, presents EI as dynamic and socially negotiated and in turn influenced by individual and socio-cultural antecedents.

EI is often explored in terms of two key dimensions of role identity; identity centrality and identity complexity. Identity centrality is the individual's strength of attachment to the founder role, for example how high is it in the hierarchy of multiple social identities (i.e. parent, student, neighbour). The higher the centrality then the greater motivation the individual has to focus on the goals associated with that identity. Murnieks *et al.* (2012) found that the centrality of the entrepreneurial role identity impacts upon the levels of entrepreneurial passion experienced and then the subsequent extent of entrepreneurial behaviour. Identity complexity is how individuals differ in the “behaviours, traits, attitudes and values that are viewed as appropriate to the entrepreneurial role” (Hoang and Gimeno, 2015, p.3). Those with more complex constructions of themselves as entrepreneurs will be less affected by setbacks as they are better able to identify new behaviours needed to enact their entrepreneurial role.

EI studies rooted in a social identity, rather than role identity, perspective (Fauchart and Gruber, 2011; Gruber and Macmillan, 2017) explore the formation of entrepreneurial identities in terms of how individuals define themselves as a member of a group. It is often the case that individuals have multiple social identities or ‘micro’ identities (Donnellon *et al*., 2014) and social identity theory is used to understand the relationship of the founder not just with themselves but with the social world.

Therefore, the development of one’s EI is a complex and often ongoing process. The ongoing nature of identity development is discussed in the work of Sveningsson and Alvesson in terms of ‘identity work’ which refers to “people being engaged in forming, repairing, maintaining, strengthening or revising the constructions that are productive of a sense of coherence and distinctiveness” (Sveningsson and Alvesson, 2003, p. 1165). It is also not just the individual's current identity that is important but also their ‘aspirational role identity’ as an entrepreneur. An individual's entrepreneurial behaviour may be a result of what they wish to become in the future (Watson, 2013; Alsos *et al.*, 2016). Here motivations are an important aspect of identity formation; an individual's identity as an entrepreneur is linked to their motivation to engage in acts of entrepreneurship (Baert *et al*., 2016; Jaskiewicz *et al.*, 2016) with behaviours seen to be *“*the expression of one’s identity.” (Gruber and MacMillan, 2017, p. 274). In this sense, EI is an evolving entity for many individuals making the understanding of formation processes all the harder to establish.

It is important to note that EI studies can be further split into those regarding established entrepreneurs and those of nascent or latent/aspiring entrepreneurs, the latter remains an under researched area (Leitch and Harrison, 2016) particularly in the HE context (Nielson and Gartner, 2017). From the limited literature on identity formation in HE students and/or latent and nascent entrepreneurs, the following themes have been explored; entrepreneurial identity resulting from interactions with peer groups and collectives (Falck *et al*., 2010), the use of narrative and storytelling to articulate one’s identity (Haynie and Shepherd2011; Donnellon *et al*., 2014) and the importance of mentor networks (Rigg and O’Dwyer, 2012; Donnellon *et al.,* 2014). The existing work particularly emphasises the importance of identity formation in conjunction with others, whether that is to initiate, support, or take an active part such as forming a group or partnership (Donnellon *et al.*, 2014). What is particularly interesting in relation to this study is how identity formation processes fare when the ability of individuals to form these groups, network, and socialise with others in traditional ways has been hampered by the COVID-19 lockdowns.

*COVID-19 context*

The COVID-19 pandemic represents a unique event impacting on nearly all areas of individual’s professional and personal lives across the globe. Given the recency and ongoing nature of the event, studies that explore the impact on EI have yet to be published., However, there are a growing collection of studies examining the impact of COVID-19 on entrepreneurs more generally, and historic studies that have explored entrepreneurial intentions and behaviours during circumstances of great peril and uncertainty, which provide interesting parallels and insights.

Munoz *et al*. (2019) explore how entrepreneurs continue to operate, and engage in new entrepreneurial activities, during times of continuous threat (in this case, repeated volcanic eruptions), emphasising the importance of resilience. Resilient individuals are seen to retain higher entrepreneurial intentions through times of crisis facilitated by engagement in entrepreneurial actions such as business training, networking and reflective practice. Reflection was found to be a crucial element in entrepreneurs processing and bouncing back from a crisis as crises can prompt a “critical junction” (Munoz *et al.*, 2019) which forces individuals to reflect and consider new possibilities. Cazeri *et al*.’s (2021) reflections on the pandemic’s impacts on the entrepreneurial potential of Brazilian students emphasises the learning opportunities resulting from the crisis, particularly in understanding the pitfalls to avoid when setting up and developing a business. They discuss the importance of EE in helping university students process learning points from the pandemic and become more knowledgeable entrepreneurs as a result. The importance of reflecting to bounce back in times of peril and uncertainty is also reiterated by Williams *et al. (*2017) who outline times of crisis as ultimately times of learning stating there is a need to better understand what learning happens so it can be supported and accelerated in future crises.

Vinogradov *et al*.’s (2013) Ukrainian study found nascent entrepreneurs place greater importance on the role that family and friends can play in providing support and giving direction to inform their actions. This work on entrepreneurial intention and its antecedents during an economic recession highlights the importance of a support network for entrepreneurial individuals. How the intention to start, or ability to continue to run, a business is influenced by the level of support offered by friends and family is also explored in Schlaegel and Koenig’s (2012) and Pollack *et al*.’s (2012) studies both highlighting the importance of social ties in providing emotional support to entrepreneurs after the 2008 financial crisis.

In summary, the role identity can play in helping shape entrepreneurial behaviour has been widely recognised. The concept itself though, and how it is developed is still something researchers are grappling with. The different facets of identity (e.g., its centrality and complexity) as well as its proximity to other attributes is the subject of continued interest. This is where this study attempts via a promising yet still rarely applied longitudinal diary method, to explore and understand how EI develops in the first year of HE. The backdrop of the study is the Covid-pandemic which adds further novelty.

**Methodology**

This study adopts a social constructivist approach to EI, recognising identity as a subjective and dynamic socio-cognitive factor which is often not stable over time (Leitch and Harrison, 2016). Consequently, a mixed method approach was taken including an e-survey, reflective diaries and focus groups to gather data from a variety of perspectives and to triangulate and validate findings. Participants were drawn from two UK universities; all were in their first year at university and studying at least one enterprise module.

A total of 152 participants completed an e-survey at the start of the academic year (145 were valid responses that could be processed for analysis) prior to engaging in any EE modules and 31 of these individuals responded to a request to complete the follow-up survey at the end of the academic year once their enterprise modules(s) had finished. We termed these ‘pre’ and ‘post’ surveys. 30 pre-survey participants (approx. 20%) were then approached to participate in completing reflective diaries over the course of the academic year. 19 participants accepted this invitation with one dropping out resulting in 18 diary completions for analysis by the end of the academic year.

At University A (survey n=70, diaries n=7, focus group n=3), students were studying a 10 credit enterprise module to complement and support their professional development and career plans. These modules are practical and experiential in their focus on developing students’ skills and competences and include the following topics; *Introduction to Entrepreneurship, Creative Thinking for Business, Making a Difference Through Social Enterprise and* *Developing your Personal Entrepreneurial Skills.*

At University B (survey n=75, diaries n=11, focus group n=5), students were studying entrepreneurship as a major component (50%) of a core first year undergraduate module on a business management or international business degree, or as part of a joint honours degree with business.

*E-survey*

Embedded in the survey questions were three measures of EI taken from the literature. The first was Murnieks *et al*.’s (2012) centrality measure which aims to measure the centrality of entrepreneurship to the individuals’ overall identity. This is a four item scale where respondents are asked to indicate to what extent they agree with statements regarding their EI, I.e., “Being an entrepreneur is an important part of who I am”. The total scores from this measure were analysed by appropriate statistical tests (e.g. t-tests or ANOVA) using IBM SPSS Version 26.

The second centrality measure was taken from Morris *et al*. (2018), adapted from Stryker and Serp (1994), which measures the readiness an individual has to enact an identity. Participants were asked to write how they would introduce themselves to a stranger at both a professional and social event. Open text boxes provided flexibility to how much detail participants wished to provide. Responses were analysed through thematic analysis to identify and group common responses.

The final measure of EI was taken from Cardon *et al.*,’s (2009) work on role identity theory whereby a distinction is made between ‘inventor’, ‘founder’ and ‘developer’ role identities. The ‘Inventor’ identity involves an individual engaging in activities related to seeking new ideas, new product development and scanning for opportunities. The ‘Founder’ identity involves combining resources needed to create and then found a firm. The ‘Developer’ identity is related to firm and market development such as finding new customers or growing the business. Participants were presented with a series of statements related to these three ‘types’ and asked the extent to which they agreed. Scores from this measure were analysed using SPSS.

*Reflective diaries*

It has been recognised that reflection provides individuals with the opportunity to make sense of the EI development process (Donnelon *et al.*, 2014) and its complexity and dynamism (Leitch and Harrison, 2016). E-survey participants who had scored particularly low or high on Thompson’s (2009) entrepreneurial intention measure were given the opportunity to complete diary entries every fortnight after completing the pre-survey and up until completion of the post-survey. Of the 18 who completed the diaries, 12 were low entrepreneurial intent scorers compared to 6 high scorers meaning our sample was skewed towards participants who had no, or limited, intentions to start a business. The demographic information for the diary participants is provided in Table 1.

|  |  |
| --- | --- |
| **Demographic Information** | **Number of participants** |
| University | University A – 7  University B - 11 |
| Gender | Female – 12  Male - 6 |
| Age Range | All participants were aged 18-21 |
| Student Status | FT UK students – 14  FT EU students – 2  FT International - 2 |
| Employment Status | Employed PT – 3  Unemployed and not looking for work – 8  Unemployed and looking for work – 5  Prefer not to say - 2 |
| Subject of Study | Business Management – 12  International Business – 3  Engineering - 2  Marketing and Advertising - 1 |

**Table 1. Demographic information for diary participants (n=18)**

Donnelon *et al*. (2014) outline how visual symbols and storytelling can be important in reflecting upon EI. Therefore, included in each diary template was a section where participants could draw their identity with several options available such as; adding to a stickperson, taking a photograph, using a pre-existing photograph or drawing freehand.

In recognition of the amount of effort it takes to complete diary entries every fortnight for an academic year, online support sessions were held every six weeks with participants as an opportunity to ask questions and iron out any issues. Feedback on these meetings was positive with participants stating the personal benefits they reaped from completing the diaries.

Diary entries were uploaded to NVIVO and coded to identify themes. Throughout the process of coding, the research team gathered several times to discuss disparities in individual coding results and reach consensus on codes (Gioia *et al.*, 2010). Coding continued until saturation was reached and no further substantive codes were identified.

*Focus Groups*

Two focus groups were held at the end of the academic year once initial analysis had been undertaken on the pre and post survey and diary entries. Topic guides were informed by the emergent themes from the other two research tools and in particular focused on discussing the COVID-19 pandemic. The survey and diaries were designed at the start of the pandemic when the messaging from government and the media had been “over by Christmas”. When it became apparent during the academic year that the pandemic would not indeed be “over by Christmas” the focus groups were scheduled to gather data on this important contextual factor.

**Findings and Analysis**

*Changes in Entrepreneurial Identity and Congruence between Identity and Behaviour*

For the e-survey results, identity scores on Murnieks *et al*.’s (2012) scale did not significantly change over time (pre- to post), and there were no significant differences pre and post for Cardon *et al*.’s (2009) three identity types. However, there was an effect of gender, shown by a two-factor mixed samples ANOVA (gender and pre/post), with females (pre=12.52, post=14.38) more likely than males (pre=17.90, post=17.60) to show increased scores on Founder identity items [F(1, 29)=6.683, p<0.01]. The interaction between gender and pre-post was not significant, however, and similar analyses showed no significant effects for Developer and Inventor identity scores.

Identity scores increased across the year for 50% of the diary participants while 19% indicated no change in the last entry compared to the first. The average point change for increase and decrease was the same (3 points) meaning overall the majority of participants felt more, or as, entrepreneurial in the last diary entry as they did in the first. However, this strength of perceived entrepreneurial identity did not always translate into entrepreneurial behaviours. We know that longevity of businesses is made more likely when businesses are congruent with the values and motivations of their owners as entrepreneurs who increase commitment toward business goals based upon intrinsic motivations like passion are more likely to realize higher venture growth (Drnovsek *et al.,* 2016). Participants identified key barriers to engaging in entrepreneurial activities, one dominant theme was balancing their academic studies and commitments with pursuing entrepreneurial endeavours.

Participants discussed feeling more entrepreneurial at certain points (usually mid-way through modules and at points of high interactivity with their peers) and feeling less entrepreneurial at other points (around assessment and over the holidays when isolated from university life). While participants recognised that assessments were an inevitable part of studying a degree, for many this did not make easier the management of conflicting priorities.

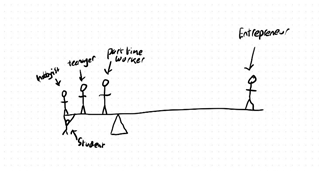
*“Having deadlines and getting closer to the deadlines generally means I spend a lot less time being entrepreneurial.*” (Diary Participant 8)

A narrative formed of being entrepreneurial versus being a high achieving student and several participants felt they could not do both. In the drawings a recurrent theme was tension between conflicting priorities often represented by a drawing or image of scales (Figure 1). The ball on the right represents their business and on the left is ‘life’. Their business is smaller but nonetheless heavier, a visual paradox which helps compound a sense of conflicting priorities.



**Figure 1. Diary Participant chosen image to represent their entrepreneurial identity.**

A more elaborate narrative around this balancing and conflicting is represented in Figure 2 where multiple commitments and identities on the left are opposed to the entrepreneur on the right. The student identity is represented as barely hanging on and is drawn as smaller than the other identities. This student began their year with very high entrepreneurial intentions and identity which declined near the end of the academic year when this image was produced.



**Figure 2. Diary participant original drawing to represent their entrepreneurial identity.**

Alongside assessment pressures, the cycle of the academic year which meant students around Christmas, Easter and Summer were away from university life also impacted upon EI formation processes. Participants felt being away from campus they were not around like-minded people or for those doing paid work they fell into an ‘employee’ mentality removed from the entrepreneurial process. This was then further exacerbated for individuals by the lockdowns. There was a sense of participants’ lives being on pause while they undertook their studies, the phrase ‘once I graduate …..’ recurred throughout the datasets and this feeling of being ‘on pause’ was further exacerbated by the pandemic context where the future was uncertain. This indicates an intentional deferment of entrepreneurial behaviour which resulted in a quasi deferred entrepreneurial identity. It is not as though the development of an entrepreneurial identity was rejected, but instead postponed. In some ways this also reflected a risk-reduction strategy where full engagement with entrepreneurship was put on hold while trying to gauge first what a post-pandemic economy may look like, and in the meantime find some degree of security in focussing on their studies.

*Gender*

There were statistically significant differences for identity scores according to gender in the e-survey analysis. Females were less likely than males to hold an EI using Murnieks *et al*.’s (2012) scale [independent-samples t(141)=1.966, p<0.05; Mean scores of females = 16.00, males = 17.78]. Generally female participants had lower identity scores than males across each of Cardon *et al*.’s (2009) types (see Table 2). In particular, women in this sample were less likely to identify themselves as ‘Founders’ than men.

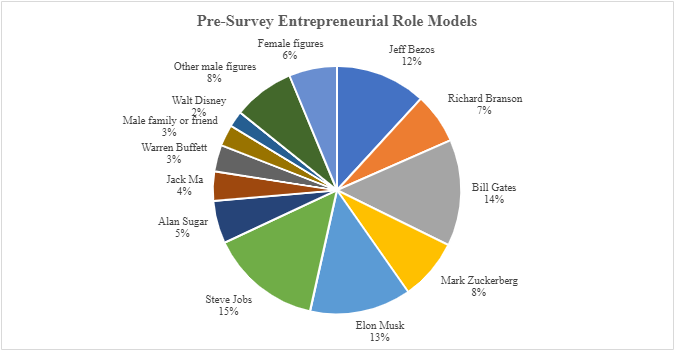
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| --- | --- | --- | --- | --- |
| Identity type | Gender | Mean | Related Measures t(141) | p |
| Developer | F | 16.82 | 1.024 | ns |
|  | M | 17.66 |  |  |
| Founder | F | 14.28 | 2.243 | <0.05 |
|  | M | 16.22 |  |  |
| Inventor | F | 15.77 | 1.772 | ns |
|  | M | 17.06 |  |  |
| Total | F | 46.87 | 1.881 | ns |
|  | M | 50.94 |  |  |

**Table 2: Analysis of Cardon *et al.*’s (2009) identity types by gender**

The literature highlights that identity construction may be affected by the opportunity structures that are available to women (Essers and Benschop 2007, Madsen *et al.*, 2008) and constructed and negotiated through use of the gendered scripts that are readily available (Ozasir and Essers, 2019). This can prevent true congruence between identity and behaviours as women are encouraged to switch between different identities in different contexts (Hytti *et al.*, 2017). This was seen in the diary data with some female participants struggling to establish their identity as an entrepreneur, particularly when compared against the ‘masculinised’ entrepreneurial identity they perceived in common discourse. This is exemplified in the below quotation outlining how the participant felt disadvantaged as a woman with entrepreneurial ambitions.

*“I decided to look into women in the industry using LinkedIn. I have seen great appreciation for women in this industry and many acknowledgements of their work. I then wanted to look further into this as looked for women in not only managerial roles but in executive and director roles. The higher up the hierarchy I searched; the less women were involved. In some companies, they were not existent past area manager roles.”* (Diary Participant 1)

The dominance of the ‘masculine’ identity was evident in e-survey data when participants were asked to list three entrepreneurial role models. 130 participants responded to this question and of the total possible 390 role models who could be listed (respondents were able to list up to three role models), examples given were overwhelmingly male (see Figure 3) which was surprising considering the sample had a female majority.

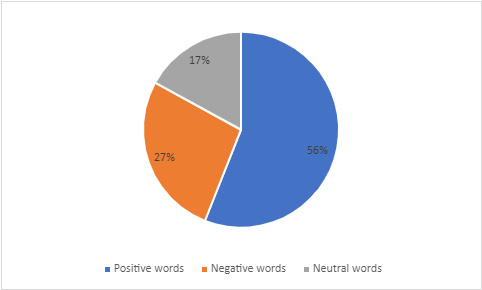


**Figure 3. Pre- Survey responses for entrepreneurial role models by most popular responses (n = 130)**

While many of the same entrepreneurs listed in the pre survey were listed again as the most popular choices in the post survey, there were more female and ethnically diverse entrepreneurial role models listed in the post-survey, such as; Susan Ma, Huda Kattan, Carlos Ghosn, Patricia Bright and Ingvar Kamprad. This could indicate participants expanding their knowledge of female and more ethnically diverse entrepreneurs as a result of studying enterprise modules.

*Maturing perspectives of entrepreneurship*

Across the sample there were mixed attitudes towards entrepreneurship in part explained by different conceptualisations of what entrepreneurship or being an entrepreneur entailed. Several participants had negative perceptions about entrepreneurs and small business management while others saw entrepreneurship as a force for good in society. For each diary entry, respondents were asked to provide three words that they currently associated with their EI. A total of 563 words were written by diary participants and these were categorised into ‘positive’ ‘neutral’ and ‘negative’, the % balance between these is shown in Figure 4. Commonly chosen ‘positive’ words were associated with motivation and energy, such as ‘motivated’, ‘excited’ and ‘passionate’. Commonly chosen ‘negative’ words were linked to feelings of inertia or being stuck, such as ‘hard work’, ‘confused’ and ‘no ideas’.



**Figure 4. Words used to describe entrepreneurial identity (n = 563)**

Interestingly, the words and phrases participants chose became more nuanced over the course of the year beginning with quite simplistic words such as ‘ambition’ ‘creativity’ and ‘confidence’ and evolving into terms such as ‘contemplative’ ‘risk managing’ and ‘self motivated’. This increased sophistication in moving away from quite general to more entrepreneurship-specific terminology was also seen in later diary entries where participants began to evaluate the benefits and disadvantages entrepreneurs bring to society and the economy.

The maturity in how some participants conceptualised EI was also mirrored in the fortnightly diary drawings. Figure 5 features a common trope which involves deforming the stickman figure to suggest some sort of lack, or limitation. The student then progresses from lying down, to be metaphorically headless, followed by multiple arms as there are too many competing tasks to complete, through to finally punching the air in triumph.

A picture containing text, whiteboard

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**Figure 5. Diary participant original drawings representing the progression of their entrepreneurial identity over the academic year.**

Figure 6 shows the student initially as a question mark before identifying the key components they perceived made up an effective entrepreneur.

Diagram

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**Figure 6. Diary participant original drawings representing the progression of their entrepreneurial identity from the start to end of the academic year.**

*Impact of the pandemic*

The focus groups provided several insights into the effect of the pandemic. In particular the interesting mix between positive and negative impacts upon the formation of EI :

*“At the beginning I was just willing to do my work as was told but now I’ve grown more confident and think for myself and develop myself and I feel that is important for an entrepreneurial identity” (Focus Group Participant)*

*In a weird way the pandemic helped with my entrepreneurial identity as it gave me a chance to work on myself rather than working on other things and it gave me the chance day to day to see how my life might be different if I took more interest in my entrepreneurial identity (Focus Group Participant)*

Both these participants had consistently high EI scores and found the pandemic to offer opportunities such as; business growth and personal development. Although both participants refer to a period of confusion and loss of control, this is represented as an opportunity rather than a challenge. Their EI, and in particular an emphasis upon self-sufficiency, was able to sustain them through the pandemic, keeping them positive about the future and their entrepreneurial prospects. This feeling of positive change was seen elsewhere in the diaries with participants outlining a period of dedication to their own personal development:

“*When it comes to my personal development, I do believe that 2021 has been the year where I have grown and expanded as a person the most. I have invested a lot of time into reading around personal development, taking free courses (such as spirituality courses, money mindset courses, recruitment courses and other personal development courses), listening to educational podcasts and updating my lifestyle to make sure I am making the most out of everyda*y.” (Diary Participant 15)

Another positive aspect of the pandemic for several participants was the increased closeness with family members particularly in relation to sharing in their EI development. Participants were becoming more involved with family businesses necessitated by the fact staff were furloughed and family bubbles therefore needed to take on others work. One diary participant detailed a journey of significant personal growth and strengthening of familial bonds due to working for their family business

“... *never forget or ignore any member of your family as they will be one of the only people you can surely trust and they will also be one of the only ones who will stay with you in your bad and good times*.” (Diary Participant 6).

This participant had started with quite low confidence in their own entrepreneurial abilities but by working with their father on the family business their confidence grew “*Now I understand how transportation and logistics of goods works thus making me feel more confident of having a start-up idea. I do feel way more confident and more entrepreneurial than I used to*”

Although family connections grew in importance to supporting EI formation, lockdowns severely restricted the ability of individuals to network and socialise with their peers in traditional ways. For some, this weakened their identity formation processes as they were cut off from a community of like minded others.

*“I found it [the pandemic] limited my entrepreneurial identity because it restricted time spent with other students so you’d be able to bounce ideas of, so in a sense it limited my creativity” (Focus Group Participant)*

*“I think it hindered me, because when I’m around people I feel more confident and able to do more stuff and be more outgoing, online there is no opportunity to meet people, like, you know, try to figure yourself out and try to do things” (Focus Group Participant)*

Risk aversion became a dominant theme as the diary entries progressed. According to Vinogradov *et al.* (2013) young people are more likely to overestimate the odds, and underestimate the risks, of entrepreneurial success. However, this is not what was apparent in this study’s data. With the news coverage being dominated by stories of redundancies, job losses and business closures, some participants who had been previously entertaining the prospect of becoming an entrepreneur began to question whether this would be the right path for them anymore:

*“I have less intentions of being an entrepreneur, I think this is due to the pandemic and me losing a lot of motivation over this past year .” (Post survey participant qualitative response)*

“*since lockdown and the end of my studies my motivation towards developing my entrepreneurial identity has decreased.”* (Diary Participant 11)

*Engagement with enterprise education*

Participants discussed having a fuller understanding of what is meant by the concepts of enterprise and entrepreneurship as a result of studying enterprise modules. Their modules encouraged them to question what is meant by these concepts and how that translates in their personal contexts.

“*since learning more about entrepreneurship and participating in this study I feel more equipped and therefore more likely to set up a business. When participating in my studies I feel more productive, and this carries over into my spare time and encourages me to develop my business ideas.*” (Diary Participant 11)

This raised understanding translated for some participants into increased intent to start a business:

*“Uni [sic] studies encourage me as when I learn about the industry  it makes me motivated to be entrepreneurial.”* (Diary Participant 5)

*“I do feel much more educated and prepared to run business. I’m pushed to think about topics which I had not considered beforehand and I feel more prepared to face challenges in the future.”*  (Diary Participant 13)

Individuals usually hold multiple role identities (Donnellon *et al*., 2014), for our participants this could include entrepreneur but also student, daughter/son, parent, friend and so on. Perhaps to be unexpected, we saw the role of ‘student’ as prominent across the sample when analysing the centrality measure data. However, we also saw increased mentions of being an entrepreneur/entrepreneurial/aspiring to be an entrepreneur in the post survey when compared to the pre survey responses, suggesting that engagement in enterprise modules was encouraging participants to intend to engage in entrepreneurial activities.

**Discussion**

From the data we see that fluctuations in identity scores across the year were impacted by the following key factors; the cycle of the academic year including assessment and periods away from campus, the changes in social and professional life brought about by the COVID-19 pandemic and gender differences with females less likely to identify as entrepreneurial and with EI more likely to be associated with male role models.

Some may view assessment deadlines and breaks in the academic year as quite minor events to have had an impact on a complex construct such as EI but the fragility the participants displayed may in fact be a consequence of participants alignment with an entrepreneurial identity. Patel and Rietveld’s (2020) American study into psychological distress in the self-employed population found that relative to wage workers, the self-employed experience greater psychological distress caused by perceptions of, and actual, financial insecurity. The economic uncertainties of the pandemic have impacted entrepreneurs harshly and participants were well aware of this fact often referencing news stories and their perceptions of enhanced financial risks of being an entrepreneur.

The pandemic impacted on respondents’ EI in mixed ways. For some, periods of lockdown provided an opportunity to look inwards and work on themselves whereas others felt disadvantaged by the decreased opportunities to interact and learn from others. Vinogradov *et al.* (2013) found that when jobs are scarce, individuals are more likely to rely on their relatives and friends for support and take direction from this network to inform their actions. For the students in this sample, who were studying predominantly online and living off campus, this heightened influence of family upon their entrepreneurial intentions and identity formation processes was apparent, particularly during lockdowns when regulations prevented mixing of households.

However, while familial bonds strengthened, strain had been placed upon participants relationships with their peers and wider social ties. This was problematic for many participants for developing a sense of their EI as they were limited in how they could rely on, and support, like minded others. Giones *et al.*’s (2020) study of entrepreneurs’ response to the pandemic recognises the challenges of accessing social and, in particular emotional, support during a pandemic when individuals are encouraged to socially distance, rely on self-sufficiency and are hesitant to place additional emotional burdens on others. Their work echoes that of Pollack *et al*., (2012) who examined whether contact with social ties would buffer entrepreneurs from the negative impacts of economic crises. They found that those entrepreneurs with strong social ties with similar others has access to valuable information, empathic support and ultimately lower intentions to withdraw from entrepreneurial activity than those with weaker ties. These findings were seen in the student population of our study where limitations on accessing social networks had a detrimental impact on aspects of EI formation processes.

Lastly, there were statistically significant differences in the survey data in regards to female participants scoring lower identity scores for aspects of Cardon et al.’s 2009 Founder identity. Across the datasets, a recurrent theme was of dominant ‘masculine’ discourse in relation to entrepreneurial role models in particular and some female participants were explicit in stating they felt disadvantaged in pursuing their entrepreneurial ambitions by the very fact they were female. However, the longitudinal dimension of this study enabled a maturing in perspectives of entrepreneurship to be seen across all data sets, such as; more diversity in the choice of role models from pre to post survey, more complex descriptions and drawings of entrepreneurial identity in the diaries and increasing evidence of participants evaluating the costs and benefits of engaging in entrepreneurial activities. The gradual maturity in perspective indicates that as participants engaged in their enterprise modules they started to apply the theory and skill they were learning to their own individual contexts thereby EE being an influencing factor on their EI processes.

**Conclusions**

This research offers a novel contribution of examining the formation of EI in the context of a pandemic. It offers rich insights into how isolation and lack of face-to-face social connection may hinder aspects of identity formation but can bolster some elements of personal development. There is limited research that examines how multiple roles are managed by entrepreneurs and there have been calls for better understanding of role identity dynamics (Shepherd *et al*., 2020). Our study offers insight into how students articulate their multiple roles to others and therefore how important they perceive them to be in relation to one another.

The results offer implications for educators in their design and delivery of EE activities. If the aim of EE is to encourage the start-up of more high quality firms then a better understanding of EI development should help tailor the types of advice and guidance provided to those aspiring entrepreneurs. Enterprise educators can use these findings to focus on assisting potential entrepreneurs in searching for their authentic EI thereby encouraging start-ups that are not only in alignment with individuals’ values and motivations (Agnete Alsos *et al.*, 2016) but have an increased likelihood of longevity. The impact being away from campus on identity formation processes was an interesting finding and has implications for enterprise educators in reviewing how the educational experience can continue supporting students through these breaks in the year as they appear to be fruitful times for learning.

*Limitations*

Identity formation is a complex process, dynamic and socially negotiated (Leitch and Harrison, 2016), it is recognised in this study and others (Alsos *et al*., 2016) that individuals may fall into ‘hybrid’ identities and entrepreneurial behaviours can then be influenced by multiple types which can make behaviour more difficult to predict as a result (Fauchart and Gruber, 2011). This study was limited to examining the EI formation processes of students at two UK universities and therefore care must be taken in generalising our findings to the wider student population. However, rich and novel insights have been gathered into how EI formation progresses over the course of a unique academic year, one that was impacted in almost every way by the COVID-19 pandemic. Future research could examine EI processes in relation to the key influencing variables found in this study in a variety of other settings such as; non-western educational institutions, extracurricular enterprise activities and educational settings in the post-pandemic landscape.

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