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The Potential of Online Coaching to Develop Female Entrepreneurial Self-Efficacy

The World Economic Forum has identified female entrepreneurs as ‘the way forward’ for global development in the 21st century (Dennis, 2012), yet they largely remain an ‘untapped source’ of economic growth and development (Vasudevan and Wasilkowska, 2018). For many female entrepreneurs, starting a business in the current, unstable economic climate can be daunting; with subsequent business survival and growth during a time of austerity may well pose a significant barrier to female entrepreneurship (Berger and Kuckertz, 2016; Fielden, Dawe and Woolnough, 2006). Although, entrepreneurial activity can foster growth and economic development, it is the support of positive risk-taking attitudes that can stimulate and sustain an entrepreneurial society (Kuckertz, Berger and Allmendinger, 2015). Yet, the role of female entrepreneurship involves more than just increasing production and income per capita, it provides social goods that benefit their relevant regional community (Martins, Galvão and Pinheiro, 2017),

Although gender differences in business development and entrepreneurial activity is well documented in the literature (Saadaoui and Affess, 2015), the barriers to female entrepreneurship are still wide ranging, covering the whole spectrum of business development from pre start-up to maturity (Dobrea and Maiorescu, 2015). These barriers are widely documented in the literature, such as access to funding and finance, domestic responsibilities, the maintenance of work/life balance, a lack of human capital (i.e., previous work experience and education), and a lack of social capital (i.e., networks) (Brush, Kelley and Greene, 2017; de Mel, McKenzie and Woodruff, 2012; Fielden, Dawe and Woolnough, 2006; Hunt and Fielden, 2016; McGowan et al., 2015; Poggesi, Mari and de Vita, 2016; Vasudevan and Wasilkowska, 2018). This raises the question as to how ‘supportive’ support for female entrepreneurs can be provided throughout their entrepreneurial journey in order to overcome such barriers, while having a positive impact on entrepreneurial self-efficacy

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2
3 (Saadaoui and Affess, 2015). Entrepreneurial self-efficacy in a given domain that reflects an
4 individual's innermost thoughts on whether they have the skills/abilities perceived as important
5 for task performance, as well as the belief that they will be able to effectively convert those
6 skills/abilities into a chosen outcome (Bandura, 2001). High levels of self-efficacy are
7 important throughout the whole cycle of entrepreneurship and, because levels of self-efficacy
8 can fluctuate throughout an individual's entrepreneurial career, it is crucial that 'supportive'
9 support is available to them when required (Mauer, Neergaard and Linstad, 2009; Wilson,
10 Kickul and Marlino, 2007).

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Formal business support provision is available in the UK to help and guide all entrepreneurs; however the number of women taking up such support remains low (Fielden, Dawe and Woolnough, 2006; Williams and Cowling, 2009). Research has suggested that the reason women are not accessing this form of support is because a lack of self-efficacy, poor physical access, and a lack of understanding about the relevance of the services to their situation (Fielden et al., 2003; Mariani et al., 2019). As many women perceive entrepreneurship as a male construct, which focuses on masculine values and attributes, they frequently question the ability to be successful in such a male dominated arena in business ownership (Simpson and Lewis, 2007; Swan, Stead and Elliott, 2009). Consequently, female entrepreneurs report needing a different form of support that reflects their personal qualities, the type of businesses they engage in and their specific business needs, delivered in a one-to-one format (Hunt and Fielden, 2016). Although there has been an increasing focus on the positive impact high self-efficacy can have on the success of female entrepreneurs, the investigation of specific methods of support in rising and maintaining female entrepreneur's self-efficacy is low. This gap in the literature means that empirical research using a one-to-one delivery method, examining female entrepreneurs and self-efficacy at transformational stages of business, is necessary in order to develop a method of support that is actually 'supportive' for

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2
3 female entrepreneurs. In answer to this, coaching has been identified by female entrepreneurs
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5 as mechanism by which they could receive suitable support (Hunt and Fielden, 2011), and
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7 coaching is gaining increasing validity across the literature as a development tool for female
8
9 entrepreneurs (Brinkley and le Roux, 2018; Dobrea and Maioreescu, 2015; Kariv, 2013;
10
11 Laukhuf and Malone, 2015; Saadaoui and Affess, 2015). As a consequence, the aim of this
12
13 longitudinal study was to examine the potential impact of an online coaching programme on
14
15 the development of entrepreneurial self-efficacy of female entrepreneurs at various levels of
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17 business start-up and development, compared to a control group.
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21 **Female entrepreneurial self-efficacy**

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23 Self-efficacy is an individual's perceptions about their skills/ability to function effectively in
24
25 specific domains and their belief that they can use these skills/abilities to perform
26
27 successfully (Bandura, 1986; Kirkwood, 2009). According to Bandura (1986, 1997) self-
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29 efficacy is an assessment of the extent to which an individual believes they have the
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31 motivation, cognitive resources and causes of action required to overcome adverse conditions
32
33 and barriers. A strong relationship has been found between measure of perceived self-
34
35 efficacy and performance and a clear link has been found between self-efficacy and
36
37 entrepreneurial intentions (Segal, Borgia and Schoenfeld, 2002; Wang, Wong and Lu, 2002).
38
39 Entrepreneurial self-efficacy is a domain specific belief that, not only views entrepreneurship
40
41 as a feasible career option, but concerns the self-perception that the individual will be capable
42
43 of converting their current skill set meet the challenge of entrepreneurship (Forbes, 2005).
44
45 Research has shown that individuals who have higher entrepreneurial self-efficacy are more
46
47 likely to pursue and persist in entrepreneurship, report higher levels of entrepreneurial
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49 intentions and believe that they have a viable business idea (Bandura, 1997; Wilson, Kickul and
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51 Marlino, 2007). However, women tend to have lower self-efficacy with regard to success in a
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53 wide range of occupations, especially those that have typically been perceived as 'non-
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3 traditional' for women, including entrepreneurship (Chowdhury and Endres, 2005; Zhao,
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5 Seibert and Hills, 2005) Some entrepreneurial research has suggested that stereotypes
6
7 associated entrepreneurs with traditionally masculine characteristics, e.g. entrepreneurship, may
8
9 be responsible for the low entrepreneurial intentions reported among women (Gupta and
10
11 Bhawe, 2007). This means that women often dismiss engaging in entrepreneurial endeavours
12
13 because they believe they do not have the entrepreneurial self-efficacy to achieve their goals
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15 (Levie and Hart, 2009; Wilson, Kickul and Marlino, 2007). Even when women do believe that
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17 they have the skills/abilities needed to be an entrepreneur, they tend to choose another career
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19 path if they believe they possess stronger skills in that area (Wilson, Kickul and Marlino,
20
21 2007). Actual skill levels appear to matter less than the self-perceptions of those skills,
22
23 particularly when those perceptions are shaped by gender stereotypes (Bandura and Locke,
24
25 2003).

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30 Although, compared to men, women may be more strongly influenced by perceived
31
32 skill deficiencies regarding entrepreneurship, it is actually a lack of self-efficacy regarding
33
34 entrepreneurial success that appears to be the most influential barrier to their entrepreneurial
35
36 intention (Levie and Hart, 2009). Research suggests that these aspirational differences occur
37
38 before adulthood; consequently females of all ages may be self-limiting in gathering career
39
40 information and life experiences that may impact on entrepreneurial intent (Kickul, Gundry and
41
42 Sampson, 2007). Further, where a behaviour is perceived as risky women are less likely than
43
44 men to engage in that activity, consequently in times of austerity, uncertainty or unstable
45
46 economic climates female entrepreneurship will stagnate, just when start-up and business
47
48 development are most needed to stabilise the economy. However, the results of
49
50 entrepreneurship training programmes that are created with the needs of women in mind can
51
52 be very positive (Godwyn, 2009). Despite this, there are few longitudinal studies examining
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54 programmes that can help to improve women's entrepreneurial self-efficacy and intention
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(Hunt and Fielden, 2011). The majority of the literature appears to centre on highlighting the barriers faced by female entrepreneurs and their potential weaknesses, although there is some research examining how this can be challenged and how programmes can be designed to build the entrepreneurial self-efficacy and intention of women (Fielden and Davidson, 2010).

Entrepreneurial Coaching

Coaching is a multi-dimensional concept that can provide many support functions, including psychological, cognitive, emotional and professional (Wilson et al., 2013), which can ultimately provide a complete form of entrepreneurial support (Salem and Lakhali, 2016; Ye et al., 2016). It has the potential to provide a form of continuous learning and support for female entrepreneurs; however, if it is to be used effectively it is important to examine the preferences of the individual learner. Furthermore, the degree to which this form of development has the potential to develop female entrepreneurial self-efficacy and its application may be significant (McGee et al., 2009). Although there are many definitions of coaching, the one utilised in this study seeks to address two key areas specifically aimed at increasing entrepreneurial self-efficacy: by firstly, improving performance at a skill level, and secondly, establishing relations that allow a coach to develop the coachee's psychological development (Hunt and Fielden, 2016; Woolnough and Fielden, 2017). Studies examining coaching in entrepreneurial settings conclude that it can offer many advantages for the development for female entrepreneurs, yet there is limited understanding of the role of entrepreneurial self-efficacy on business performance following start-up (Audet and Couerret, 2012; McGee et al., 2009; Orser, Riding and Stanley, 2012; Tillmar, 2007).

As coaching can be tailored to female entrepreneurs' specific needs and it is ideal as an individual form of development, which is task specific and focused on the self-efficacy of that individual (O'Connor and Lages, 2004; Peel). Bandura's (1986) self-efficacy processes is ideally suited as a theoretical basis employed by the coach to overcome barriers

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3 to entrepreneurial intention, activity and success. It unquestionably has a role to play in the
4 start-up and growth of new enterprises (St-Jean and Audet, 2012), and nascent and
5 established business owners frequently lack the support (e.g. advice, networks) they needed
6 to build and develop a successful business (Shinnar et al., 2018). They require help to ask
7 the 'right' questions, i.e. they do not know what they need to ask, as they do not know what
8 support is available to them (Hunt and Fielden, 2011; Koffi et al., 2014). One important
9 problem for nascent and new entrepreneurs is that they have very little time to spend
10 looking for outside help, and only rarely have the knowledge or the networks required to
11 find the right person (or any person) to provide them with the right kind of support (Alstrup,
12 2000). Coaching has the potential to achieve this through the utilisation of Bandura's (1986)
13 theoretical framework, which operates with four sources of self-efficacy as follows:
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28 *Enactive mastery*

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30 This relates to positive experiences that individuals can develop in order to enhance their
31 self-efficacy, i.e. through completing a task successfully. The experience has to be
32 sufficiently difficult that it contains has the potential for failure, as a relatively easy task
33 would not result in a change to an individual's perception of self-efficacy;
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40 *Vicarious experiences or modelling*

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42 Learning through the vicarious experiences of another enables the individual to observe
43 people succeeding through perseverance and effort, without any of the associated risk. This
44 is further intensified with the degree to which an individual can relate their circumstances to
45 the individual they are observing;
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51 *Social/Verbal persuasion*

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53 This is the degree to which self-efficacy is influenced by the pressure of others, such as
54 stereotypes, culture, or personal relationships, dictating what behaviour is acceptable;
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58 *Psychological or autonomic arousal*

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3 Finally, it is important that individuals are conscious of their own physical and emotional
4 reactions in different situations, in order that they can recognise reactions and interpret how
5 they impact on self-efficacy.
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10 In order to facilitate entrepreneurial intent and behaviour, coaching may be used to assist
11 individuals in thinking reflectively about their own behaviour and how that impacts on their
12 self-efficacy and entrepreneurial success (Mauer, Neerguard and Linstad, 2009).
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16 *On-line Coaching*

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18 The potential of coaching to develop entrepreneurial self-efficacy can be further enhanced
19 by the use of information technology, which can provide an effective alternative to
20 traditional forms of business support. Information technology, i.e. email and instant
21 messaging services, can help to overcome “all sorts of barriers such as time, work
22 responsibilities, geographical distance and lack of trust”, which often reduce if not halt
23 interaction (Bierema and Merriam, 2002). There are numerous advantages to on-line
24 coaching as means of increasing entrepreneurial self-efficacy for female entrepreneurs, such
25 as cost and time savings, removal of geographical boundaries, increased flexibility with regard
26 to choosing time for learning, sharing and questioning between groups of individuals, and
27 interaction and debate can be organised through email, discussion groups, chat rooms, and
28 visual tutorials. E-coaching can also prove to be extremely collaborative as professionals
29 from across the globe can work together to pool their expertise through the use of discussion
30 threads (Tsai, 2017). Although there can be challenges with employing digital technologies
31 in delivering a coaching programme, on-line coaching makes it easier for female
32 entrepreneurs to manage work and family commitments (Rajahonka and Villman, 2019).
33
34 On-line, or e-coaching, moves the process of this development intervention online and
35 through this expands the possibilities (Rossett and Marino, 2005). Social interaction can also
36 be maintained by individuals sharing ideas, solving problems and sharing information
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(Caplan, 2003; Rossett and Marino, 2005). Yet despite this, there is an absence of literature and empirical studies focusing on coaching in an entrepreneurial setting that is specifically designed to provide 'supportive' support as a means of increase and maintain entrepreneurial self-efficacy (Hunt and Fielden, 2016). Consequently, this study take a longitudinal, multi-methods approach as a means of investigating the impact of coaching, which utilises Badura's (1986) framework of self-efficacy, to achieve the following objectives:

Research objective One: To investigate the development of the four sources of female entrepreneurial self-efficacy on female entrepreneurs (coachees) over the course of an online coaching programme;

Research objective Two: To compare the development of the four sources of entrepreneurial between female entrepreneurs (coachees) with a control group.

Methods

This study used a longitudinal, multi method approach to data collection across two time points, (T1) pre programme implementation, and (T2) post programme implementation, with quantitative data collected at T1 and T2 and qualitative data collected at T2. The study was designed to facilitate the examination of trends and changes in and between the coachee and control groups, whilst also providing rich, complex and detailed meanings, contexts and processes (Mulder and Kort, 2010). This approach, which gives data across both the qualitative and quantitative spectrum, has been described as a crucial component of research.

Data Collection

Quantitative data was collected using a questionnaire, which had been developed from a previous study (Hunt and Fielden, 2011) in conjunction with Chen, Greene and Crick's questionnaire (1998). It utilised in-depth interview data from nascent and established female entrepreneurs to establish the main elements to be included, in conjunction with Bandrura's

(1986) self-efficacy framework. It was designed to measure entrepreneurial self-efficacy within the four sources of self-efficacy, these were as follows:

- Enactive Mastery – this was measured by 26 items, e.g. *I am able to define my long term goals;*
- Vicarious experience– this was measured by 26 items, e.g. *I expect my coach to develop my ability to take calculated risks;*
- Social persuasion– this was measured by 26 items, e.g. *My friends help me develop new business ideas;*
- Psychological arousal– this was measured by 17 items, e.g. *I am ambitious for more success.*

Participants and control group members were asked to rate their responses on a 5-point Likert-type scale from 1 (strongly agree) to 5 (strongly disagree), enabling changes over time to be measured (Ebert-May et al, 2011).

The interview format was also developed from a previous study investigating coaching and female entrepreneurship (Hunt and Fielden, 2011), based around Bandura's (1986) self-efficacy framework, which utilised open-ended questions used to elicit in-depth responses. As there is an absence of research relating to e-coaching schemes, despite the fact that there has been a recent increase in such innovative methods of delivery in the mentoring field, it was important to explore the potential of online methods specifically using a coaching framework (Kyrgidou and Petridou, 2013).

Sample

The primary sampling technique used was that of snowballing, whereby participants, including coaches, coachees and control group, were self-selecting. Participants were invited to take part in programme by means of a variety of adverts in a number of local newspapers, journals, newsletters, websites and informal and formal contacts. The

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2
3 intervention group comprised of twenty four female coaches and twenty four female
4
5 coaches and the control group comprised of sixteen female entrepreneurs. All coaches and
6
7 the control group were either at the start-up (n= 10; n=1 respectively), or development
8
9 stages of enterprise creation (n=14; n=15 respectively). Coaches comprised of established
10
11 and experienced female entrepreneurs, with a minimum of two years business experiences
12
13 and either had entrepreneurial coaching experience or were a trained coach. The
14
15 demographics of coaches and the control group are shown in table one and analysis of the
16
17 personal and business demographics of the coachees and the control group did not show any
18
19 statistically significant difference in terms of the variables listed.
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24 Insert Table 1 about here
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27

28 *Data Analysis*

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30 The distribution of the quantitative data were examined before any analysis was conducted,
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32 as when the data are not normally distributed some state that a non-parametric test is more
33
34 suitable (Colman and Pulford, 2006). Quantitative analysis of the data was with paired
35
36 sample t-tests were used to analyse the data from time point one (T1) and time point two
37
38 (T2) for the coachees and the control group, in order to measure changes over time. For this
39
40 study, a cut-off point of 0.10 was used as it has been shown to be more appropriate due to
41
42 the small sample size (Pallant, 2005).
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46
47 Qualitative data analysis employed content analysis, which began with the first
48
49 interview and was conducted throughout the duration of the study. This method employs a
50
51 human based coding system that codes either words or phrases, depending on the responses
52
53 of participants: this process of coding interview material is critical as it is considered to be
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55 the heart and soul of the analysis process (Bernard, Wutich and Ryan, 2016). An a priori
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57 approach to data analysis was initially adopted, whereby a set of codes were designed prior
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3 to analysis based upon an in-depth review of the literature and the author's previous
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5 research (Hunt and Fielden, 2011). Following the design of a coding scheme, an analytic
6
7 hierarchy approach to data analysis was adopted and the stages of this approach include:
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9 identifying themes and concepts; labelling and tagging data by set concepts and themes;
10
11 sorting data by theme or concept (cross sectional analysis); summarising or synthesising
12
13 data; identifying and refining categories; detecting patterns and clustering; developing
14
15 explanations (answering how and why questions) (Ritchie and Lewis, 2003).
16
17

18 19 *On-Line Coaching Programme*

20
21 The online coaching programme lasted six months and was designed to provide business
22
23 support provision for female entrepreneurs in the North West of England. The model was
24
25 based on a tailored, one-to-one relationship, whereby one coach was matched with one
26
27 coachee. The programme was essentially designed to provide coaching via an online
28
29 programme, similar to MSN, however participants were not prevented from taking a blended
30
31 approach to their coaching relationship, i.e. telephone and face-to-face coaching.
32
33

34
35 Female entrepreneurs applied to the programme by completing an application form which
36
37 asked a range of questions, such as their type of business, their business goals and what they
38
39 hoped to achieve from the coaching relationship. Initially, 30 coaching pairs were selected,
40
41 matched by the programme team, based on the information contained in their application
42
43 forms, including business aims, goals and demographics (Hunt and Fielden, 2016). However,
44
45 only 24 coaching pairs completed the study due to personal and/or financial reasons. The
46
47 female entrepreneurs who participated in the control group were recruited through an open
48
49 day for business start-ups held by Train 2000, which is a business support organisation. In
50
51 addition, any female entrepreneur who could not be matched with a coach was, with their
52
53 consent, assigned to the control group. They were provided with all the necessary
54
55 information, for example the research process, aims of the research, and were assured of
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1
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3 confidentiality. Initially, 26 female entrepreneurs signed up to the control group but by T2
4
5 ten had dropped out due to failed businesses. Coaches and coachees were invited to a
6
7 'Networking Event' at the start of the programme which provided an opportunity for
8
9 participants to meet face to face. The day included interactive workshops examining various
10
11 models of coaching and exploring participants' hopes and fears regarding the programme. A
12
13 session was delivered on how to use the online software and how participants could use the
14
15 facility to engage in online coaching. The participants were also provided with a programme
16
17 pack, including a coaching handbook, which discussed the aims of the programme, the
18
19 differences between coaching and mentoring, what was required to be an effective coach and
20
21 coachee, the various phases of coaching, the coaching structure and forms of coaching
22
23 delivery.
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29 Following registration and attendance at the 'Networking Event' participants were
30
31 provided with a username and password to gain entry to the coaching website. The spark
32
33 software is similar to email and enabled participants to have instant online discussions with
34
35 their coach/coachee. It allows individuals to communicate online, although the contact is
36
37 instant and messages are sent and received much quicker than with traditional email systems,
38
39 spark is similar to MSN and Skype software.
40
41

42 **Research Findings**

43
44 The following analysis of quantitative and qualitative data is presented to determine to what
45
46 extent the four sources of entrepreneurial self-efficacy of the coaches developed from T1 to
47
48 T2 as a consequence of their participation on the coaching programme, with comparisons to
49
50 the control group at T2.
51
52

53 *Enactive Mastery*

54
55 The coachees believed their ability to define and develop their business goals had improved
56
57 throughout the duration of the programme and coachees felt that their coach had helped to
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1
2
3 clarify goals and objectives, enabling them to have positive experiences of planning and
4
5 achieving realistic objectives at T2 ($t(21)=2.22, p<0.05$). The results showed that the
6
7 coachee group experienced a significantly higher ability than the control group at T2 to
8
9 define short-term business goals ($t(22)=2.65, p<0.05$), and long-term business goals
10
11 ($t(21)=2.98, p<0.05$). In addition, these findings were supported by the interview data,
12
13 where seven coachees believed that their coach had been effective in helping them to clarify
14
15 and define their business goals. This clarity was achieved through discussing business
16
17 strategies and attempting to tease out the key issues in order to help coachees to plan more
18
19 effectively for the future: planning for the future appeared to be an effective way of gaining
20
21 clarity and a more concrete strategy for future development. These areas for development
22
23 would then be put into practice following the coaching session and the coachee would
24
25 feedback on their progress at the following session.
26
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30
31 *She helped me with my strategy and planning for the future... I was clearer regarding*
32
33 *the direction I wanted to head in. We would talk about where I was heading and what*
34
35 *I needed to do to get me there, I suppose having a plan for the future. The next session*
36
37 *we had I would discuss what had happened since we last 'met'.*
38
39

40
41 This clarity enabled coachees to be more confident regarding their business planning
42
43 and to be more focused when implementing action plans and subsequent business outcomes.
44
45 *"It made me more confident and made me more focused... and knowing that I had someone*
46
47 *there to talk to about it definitely made it easier".* The clarification of goals led to increased
48
49 entrepreneurial self-efficacy relating to defining business goals which was, in part, due to the
50
51 coaching relationships helping coachees to prioritise their business goals and objectives. Five
52
53 coachees stated that because of this they were then able to prioritise short and long-term
54
55 business and personal objectives. Although there is an array of issues which need to be
56
57 considered at the business start-up phase, prioritising tasks and responsibilities is an
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1
2
3 important part of the business process. Coachees believed that the coaching relationships had
4 provided them with increased direction for business planning and helped them to produce a
5 clear vision for the future of their business:
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9
10 *She (coach) was able to take confused ideas and make them very plain, without*
11 *changing the nature of what I was doing... providing clarity and allowed me to see*
12 *what I was actually trying to do.. I am responsible for solutions to problems, it's in*
13 *my hands, she helped me to understand the way I process and do things. She taught*
14 *me new skills to get what I wanted.*
15
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21 *Vicarious experience*

22
23 Coachees rated their satisfaction with business progress as higher at T2 compared with T1
24 (t(21)=2.09, p<0.05) and they tending to feel more motivated at T2 compared with T1
25 (t(22)=1.82, p<0.01). In addition, there was a significant difference between the coaches and
26 the control group at T2 regarding their ability to deal with risk and uncertainty (t(22)=2.91,
27 p<0.05) and marketing (t(23)=2.44, p<0.05), with coachees believing that their skills/ability
28 in each area had increased more than the control group. The control group tended to feel less
29 positive about future business plans (t(13)=-2.12, p<0.01), and the number of the control
30 group who who went on to actually start up a new business was almost 50 per cent less than
31 the coaches (i.e. 46 per cent compared to 81 per cent): potentially because of a perceived
32 lack of informal support at T2 compared to coachees. Coaches were also able to help
33 coachees to view their achievements from a more positive perspective, as one coachee
34 described how she had originally felt that she was underachieving and had not met her
35 original objectives. She went on to describe how she had discussed business progress with
36 her coach and how her coach had then presented the information back to her in a way that
37 showed her how much she had achieved. Her coach simply fed back information regarding
38 her three years of trading and her turnover and from this information the coachee had a
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3 moment of enlightenment where she realised how much she had achieved in a short time
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5 period. By simply packaging the information in a different way, the coach was able to
6
7 verbally persuade her coachee that she had in fact achieved more than she originally
8
9 believed.
10

11
12 *I got what I set out to achieve, but also got more than that. My biggest critic is me.*

13
14 *One thing said to [coach] was that I didn't feel I was making as much money, but*
15
16 *when [coach] actually discussed this and looked at average success (1st and 2nd year*
17
18 *trading) financially I was not where I wanted to be, but actually I had done well,*
19
20 *recovered what I lost.*
21
22

23
24 The increases in positivity regarding future business progress appeared to be as a result of the
25
26 regular coaching contact: often coaches simply needed to discuss their plans with their coach
27
28 and to improve entrepreneurial self-efficacy. The coaches provided a sounding board with
29
30 whom coachees could discuss ideas and problems, increasing self-efficacy in their own
31
32 skills/abilities and future direction. *"It allowed me to discuss ideas with her and showed me*
33
34 *that I was heading in the right direction."*
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38 *... as far as my coach was concerned, the best thing she did for me was she almost*
39
40 *gave me permission to do what I was planning to do all along.. when I said to her I'm*
41
42 *planning to do this, or I'm thinking about doing that or I want to do it this way, she*
43
44 *said yes you are thinking it right do that – and she gave me permission to go ahead*
45
46 *and that I found enormously beneficial and gave me huge confidence that I'd actually*
47
48 *thought it through properly...I got from her just what I needed for the business.*
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51 *Social persuasion*

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53 Coachees were also more likely to feel in control of their business at T2 than the control
54
55 group, a significant difference was revealed among the coachees regarding the statement
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57 'when I achieve my business goals it is usually because I have worked hard for it'
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3 (t(20)=2.09, p<0.05). In addition, a there was a trend among coachees regarding the
4 statement 'whether or not I am successful in business depends mostly on my ability'
5
6 (t(20)=1.75, p<0.01), with coachees believing that their achievements depended mostly on
7
8 their ability rather than on outside forces. Another trend was in relation to locus of control,
9
10 with coachees feeling like they were more in control of their business at T2 than T1
11
12 (t(20)=1.75, p< 0.01). Furthermore, the interviews revealed that coaches appeared to
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14 develop their coachees through verbal persuasion, particularly focusing on their goals and
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16 objectives. Seven coachees stated that they had experienced an increase in confidence in
17
18 their own abilities, due to their coach validating business ideas and this confidence helped
19
20 them to continue with their business development.
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26 *It gave me a confidence boost, I wasn't expecting or looking for validation, she*
27
28 *showed me that I was going in the right direction and that I had actually achieved*
29
30 *more than I aimed to...She gave me validation. I am too stubborn to give up. She gave*
31
32 *me a confidence boost and underlined the belief in myself on a personal level.*
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36 Conversely, the control group reported a trend in relation to the statement, 'success in
37
38 business is mostly a matter of luck' (t(13)=1.79, p<0.01), and they were less likely at T2 to
39
40 feel supported in their business when compared to T1. Again, significant differences were
41
42 found between coaches and the control group at T2 with coachees received more support
43
44 from friends in balancing their work and home life (t(14)=-3.38, p<0.05), coachees friends
45
46 helping them developing new business ideas (t(14)=-2.82, p<0.05), and coaches friends
47
48 helping them develop short-term business goals (t(14)=-1.70, p<0.01). The control group
49
50 perceived that their informal sources of support became less effectiveness over time,
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52 reporting decreases in these areas of support between T1 and T2, whereas for the coaches the
53
54 trend was for an increase in these due to the coaches support.
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58 *Psychological arousal*
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3 Coachees rated themselves as more self-confident following completion of the programme
4
5 (t(22)=3.54, p<0.05) and verifying knowledge appeared to be an important part of building
6
7 entrepreneurial self-efficacy. Coaches also helped coachees to identify areas of strength and
8
9 areas which required further development. *“In many ways she reinforced my strengths, but
10
11 also actually reinforced my weaknesses and what I needed to work on.”* Eight coachees
12
13 emphasised the importance of coaches sharing their experience, which was seen as an
14
15 invaluable part of the coaching process. Seeing someone similar to themselves succeed in
16
17 business by sustained effort appeared to increase coachees’ entrepreneurial self-efficacy.

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21 *She really inspired me to get the ball rolling. She had been there and done it so I had
22
23 a lot of respect for her in terms of that. It made me realise that I just needed to get on
24
25 with it and that I could make it happen.*

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27
28 Analysis of the results showed that the control group’s entrepreneurial self-efficacy
29
30 remaining static over the period of the research, although, they did tend to feel less supported
31
32 in business at T2 when compared with T1 (t(13)=-2.12, p<0.014), less self-confident (t(13)=-
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34 2.11, p<0.01), and rated their motivational skills lower (t(14)=-1.97, p<0.01).

35 36 37 **Discussion**

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40 The previous literature clearly illustrates that women face gender specific barriers to
41
42 business development (de Mel et al., 2012; Fielden et al., 2003; Fielden, Dawe and
43
44 Woolnough, 2006; Shelton, 2006; Shinnar et al., 2018) and that these often limit their
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46 business skill/ability levels, such as planning and interpersonal skills, e.g. entrepreneurial
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48 self-efficacy (Fielden et al, 2003; Mauer, Neergaard and Linstad, 2009; Still and Walker,
49
50 2006). Thus, it is important for both academics and policy makers to explore ways in which
51
52 business support assistance can be tailored for female entrepreneurs, in order to help them
53
54 develop their entrepreneurial self-efficacy and improve business outcomes. In doing so it is
55
56 important to understand the experiences of female entrepreneurs’ and how they perceive
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entrepreneurial support, so that provision can be truly tailored to their individual needs.

This study has provided female entrepreneurs with a 'voice' and enabled respondents to express how coaching has affected their entrepreneurial self-efficacy, as well as how that increased self-efficacy has been translated in to practice with regard to business goals etc.

Specifically, this study has shown that an online coaching programme targeted at female entrepreneurs can help to increase entrepreneurial self-efficacy and increase their potential for business success, while decreasing their chances of business failure. Over the course of the study, as coachees improved their entrepreneurial self-efficacy so did their *enactive mastery*; including strategic planning, defining long-term business goals, and dealing with risk and uncertainty; *vicarious experience*, by accessing the experiences of others; *social persuasion*, such as control and confidence; and *psychological arousal*, especially 'supportive' support. These are encouraging findings for coaching relationships, as entrepreneurial self-efficacy in a given domain that reflects an individual's innermost thoughts on whether they have the skills/abilities to overcome the barriers they face in business start-up and development, as well as the belief that they will be able to effectively convert those skills into business success (Bandura, 1997).

The majority of coaching models and frameworks assume that all coaching relationships are homogenous, which fails to differentiate between factors, such as gender (Shinnar et al., 2018). Consequently, this study focused on a coaching development programme, which was tailored to the needs of female entrepreneurs (Hunt and Fielden, 2011; 2016), with the specific aim of increasing the four sources of entrepreneurial self-efficacy identified by Bandura (1986). This focus has provided an important insight into how women learn in coaching relationships and particularly how they develop entrepreneurial self-efficacy. Individual coaching relationships appear to enhance female entrepreneurs' behaviours and development, in an environment which is solely inhabited by female entrepreneurs. The space

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2
3 in which on-line coaching relationships develop providing support which enables female
4 entrepreneurs to access support at a time and location which is appropriate and convenient for
5 them, overcoming one of the main barriers to accessing traditional forms of business support,
6 i.e. physical access (Fielden et al, 2003; Fielden and Hunt, 2011). Consequently, the findings
7 of this study add to the existing literature by showing *how* on-line coaching works and *how*
8 coaches can help to develop entrepreneurial self-efficacy of female entrepreneurs, through
9 learning and the acquisition of relevant knowledge. In addition, the findings substantiate the
10 benefits of this specific on-line coaching programme, which has the ability to be rolled out to
11 other groups of entrepreneurs; specifically those with access issues, e.g. those from ethnic
12 minorities or people with disabilities (Hunt and Fielden, 2016; Foley, 2018).

25 **Limitations and Future Research**

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28 The findings from this study provide both qualitative and quantitative data regarding the
29 impact of a tailored online coaching programme for female entrepreneurs, compared to a
30 control group. Because of the small sample size, a degree of caution should be taken in
31 generalising these findings, especially with the quantitative data the problem of ‘Type II’ error
32 should be considered, which can occur when reporting data from small samples (i.e. failing to
33 observe a difference when in truth there is one). Despite the small sample, a number of
34 statistically significant findings amongst the coachees and the control group were noted,
35 therefore adding weight to these findings. Similar studies that have taken a longitudinal
36 approach to data collection have all worked with relatively small samples (Megginson,
37 Garrett-Harris and Stokes, 2003; Stokes, Garrett-Harris and Hunt, 2003), which frequently
38 arises from a lack of adequate research funding and a lack of ‘supportive’ support from
39 relevant public and private sector organisations and networks.

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42 In addition to the restricted sample size, it would have been useful to collect more
43 qualitative data, for example textual analysis of online conversations would be an effective way
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3 to explore what is actually occurring in the individual relationships, adding context to the data.
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5 Analysing online conversations would help to uncover exactly what is being discussed in
6
7 individual relationships and would provide an opportunity to highlight key discussion themes
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9 (Lewis, 2006). Analysing online conversations over time would also identify how the sources
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11 of self-entrepreneurship are being used between the coaches and coachees over the life of the
12
13 coaching relationship. Thereby giving weight to the individual sources, highlighting which
14
15 element of support are the most critical to the development of female entrepreneurs' self-
16
17 efficacy. This method of collecting and analysing data would help to overcome any problems
18
19 associated with self-report data and would help to examine if there were any contradictions
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21 between what was being reported in the questionnaires and interviews and what was being
22
23 discussed online.
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28 **Implications and Conclusions**

29
30 The impact of the increase in coachees' entrepreneurial self-efficacy experienced in this
31
32 study on their business development provides empirical evidence to demonstrate how
33
34 entrepreneurial self-efficacy can assist female entrepreneurs in overcome some of the
35
36 barriers they face when starting a new business. Creating more successful women owned
37
38 businesses will not only provide economic benefits but could also provide additional
39
40 entrepreneurial networks for female entrepreneurs. In addition, there would be more positive
41
42 female role models who could then coach other female entrepreneurs through the different
43
44 stages of business transition (Hunt and Fielden, 2016). Exposure to positive role models has
45
46 been found to have a direct effect on the different sources of entrepreneurial self-efficacy
47
48 (BarNir, Watson and Hutchins, 2011) and this circular affect should, in theory, keep on
49
50 increasing. The lessons drawn from this study demonstrate how 'supportive' support is a
51
52 key element in developing the four sources of entrepreneurial self-efficacy, which needs to
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54 be built in to future programmes designed to meet the needs of female entrepreneurs. If
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3 female entrepreneurs have access to the tailored support provided by coaching programmes,
4 such as the one used here, there should no limit as to the growth of female run enterprises in
5 developed or developing countries and supporting entrepreneurial activity is critical given
6 the world's economic climate. This is an important time for policy makers and governments
7 to provide 'supportive' support to aspiring female entrepreneurs and on-line coaching has
8 the potential to deliver that (Vasudevan and Wasilkowska, 2018).
9

10
11 This study contributes to learning and theoretical debates by providing an
12 understanding of the entrepreneurial self-efficacy needs of female entrepreneurs' can be met
13 through an on-line, tailored coaching programme, provided by women for women. It also
14 demonstrates how coaching interventions, including the use of online methods, can have a
15 positive impact on the four sources of entrepreneurial self-efficacy. The key to which is
16 having coaches that have experienced the same physical and psychological barriers during
17 business start-up as their coachees. This increases the relevance of *vicarious experiences*,
18 which in turn increases *enactive mastery*, *social persuasion* and *psychological arousal*.
19

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21 Considering the current global economic climate, it is increasingly important for
22 women to be supported in business start-up and development (Dennis, 2012) and countries
23 which actively promote women entering into business ownership will ultimately share the
24 gains in terms of wider social issues, i.e. improving education and health, and economic
25 growth (Harding, 2007). If female entrepreneurship is to be encouraged and supported,
26 provision needs to be designed and developed based on the needs and requirements of
27 female entrepreneurs, rather than simply conforming to traditional business support models
28 which have be shown to fail to meet the needs of the many female entrepreneurs (e.g.,
29 Fielden, Dawe and Woolnough, 2006; Hunt and Fielden, 2011). An online coaching
30 programme provided by women for women, which is tailored to the individual's business
31 and personal needs, has the ability to support female entrepreneurs through the difficult
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3 stages of business development. This opens up a career path for all women, as long as they
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5 receive support tailored to their needs so that they can develop and grow successful
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7 businesses.
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58 Table 1: Demographics for coachees and control group
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	Coachees (n=24)	Control (n=16)
Age Range(x)	25-56 (x=41)	27-58 (x=42)
Education Degree+	16	11
White British	20	13
Service Sector	20	14
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