

Youth Unemployment: The role of Transformative Learning in making the youth explore entrepreneurship

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Abstract

This article will discuss a longitudinal study over a 12-week period in 2017 to investigate Transformative Learning of university students in their final year of study at the University of KwaZulu-Natal, Durban South Africa. The sample participated in a systemic action learning and action research programme called SHAPE (Shifting Hope, Activating Potential Entrepreneurship). The article focused on the Transformative Learning stage called Disorienting Dilemma which is a personal crisis which arises because the old way of knowing or doing does not make sense anymore. Its major value in entrepreneurship is that, it is one of the exogenous factors which triggers entrepreneurial intentions and also acts as a catalyst to converting intention into entrepreneurial action. To facilitate Transformative Learning, this article will also discuss the relationship between Entrepreneurial Self-Efficacy and Disorientating Dilemma. Entrepreneurial Self-Efficacy is made up of multiple variables which are opportunity recognition, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy. The investigation found a statistically significant increase in female participants' evaluation of their own experience of Disorienting Dilemmas in the following dimensions of Entrepreneurial Self-Efficacy; opportunity identification, developing business relationships, managing own business and own ability to cope with stress and pressure associated with starting or owning a business after attending the SHAPE training programme. The only statistically significant improvement in Entrepreneurial Self-Efficacy for males was in their identification of business opportunities. The gendered differences experienced from the SHAPE programme are ascribable to cultural factors which expose males to more entrepreneurial activities than females. One of the key findings of the study is that, after the SHAPE training programme, males and females show equal inclination towards Entrepreneurial Self-Efficacy.

Key phrases

Disorienting Dilemma; Entrepreneurial Self-Efficacy; Entrepreneurial training; Transformative Learning; SHAPE training programme; Youth Entrepreneurship and Youth unemployment

1. INTRODUCTION

Transformative learning is a deep, structural shift in basic premises of thought, feelings, and actions which changes someone's core assumptions (Transformative Learning Centre 2016:Online). Transformative Learning is characterised by four main stages namely: Disorienting Dilemma, Critical Reflection, Rational Discourse and Action (Kitchenham 2008:268). The focus of this article is on Disorienting Dilemma which is the first stage in Transformative Learning and a pre-requisite for critical reflection as it marks the onset of Transformative Learning (Mezirow & Marsick 1978:4). A Disorienting Dilemma brings into sharp focus "questions of identity, meaning and direction of one's life" (Mezirow and Marsick 1978:12). Despite its fundamental importance in the Transformative Learning theory, it doesn't receive significant discussion (Mälkki 2012: 2). The purpose of this research is to evaluate the extent to which participants in the SHAPE training programme thought they had Disorienting Dilemmas (important experiences) which increased their Entrepreneurial Self-Efficacy.

A Disorienting Dilemma can be a slow gradual process, like the experience of being childless (Mälkki 2012:1-23) or a re-entry into college after a long hiatus (Mezirow and Marsick 1978:2-3). This slow almost imperceptible "non-determining start" leads to a phase of undirected and experimental inquiry (Nohl 2015:5). On the other hand, a Disorienting Dilemma can be triggered by a sudden event like being diagnosed with a chronic disease (Merriam 2006:24) or disorientation experienced during learning something new (Kakouris 2015:2).

Similarly, in an entrepreneurial context, people are driven into exploring entrepreneurship as a result of a variety of reasons and many of them are Disorienting Dilemmas. For example seeing friends being unemployed for a protracted period of time after finishing their degree programme or being retrenched from a job someone valued greatly.

Many times as a policy consideration, developing countries like South Africa might need to encourage youth entrepreneurship (Graham & Mlatsheni 2015:54). This is mainly to try and

reduce the high unemployment of school and college leaving youths (15-24 years) which is estimated at 52.2% for the third quarter of 2017 (Statistics South Africa 2017:25). Also about 60% of employed South Africans are employed by small to medium enterprises (Groepe 2015:5). Due to these national statistics, making people reflect on Disorienting Dilemmas during training becomes important to help trigger entrepreneurial intention and subsequent entrepreneurial action. Care should be taken when inducing Disorienting Dilemma, as transformation is associated with fear, resistance to change and grieving of what is lost (Scott 1997:41). Before exploring the importance of Disorienting Dilemmas, the next section defines the key terms of the study.

2. DEFINING DISORIENTING DILEMMA AND YOUTH ENTREPRENEURIAL SELF-EFFICACY

A Disorienting Dilemma in the youth is a real life crisis or a growing sense of dissatisfaction they experience (Mälkk, 2012:2). In a way, Disorienting Dilemmas are crises in which the old way of knowing or doing cannot make sense anymore which forces a person to critically reflect their assumptions or premises (Mezirow 1990:144). In this article, the Disorienting Dilemma considered is the youth's evaluation of their own personal experiences before and after attending the SHAPE training programme.

Entrepreneurial Self-Efficacy is an "Individual's beliefs regarding their abilities to attain success and control cognitions for successfully tackling challenging goals during the business start-up process" (Drnovšek, Wincentj & Cardon 2010:329-330). In line with literature, Entrepreneurial Self-Efficacy is made up of multiple variables which are (a) opportunity recognition, (b) relationship self-efficacy, (c) managerial self-efficacy and (d) tolerance self-efficacy (Chen, Greene & Crick 1998:295; van der Westhuizen 2016).

3. THE VALUE OF DISORIENTING EXPERIENCES

Disorienting experiences can be valuable, as they can trigger critical reflection (Tisdell 2017: 332). For example the disorientation experienced from being unemployed after completing a degree programme (Farenga & Ness 2015:150). Disorienting Dilemmas can also highlight the need to look for help, for example a doctoral student who realises he or she needs help is more likely to complete their difficult doctoral studies (West, Carr & Swanson 2016:1). So the value of a Disorienting Dilemma in Transformative Learning is in its ability to force an

individual to reconsider their underlying assumptions about an issue. In this study, those issues of interest are the elements of Entrepreneurial Self-Efficacy.

4. SOURCES OF DISORIENTING DILEMMA

According to Kroth and Cranton (2014: xiv), telling stories or reading stories can be a source of Disorienting Dilemma leading to critical reflection. They argue that stories can expose the reader to viewpoints different from oneself. An instructor or guest speaker can tell stories or use selected cases to create disorientation in the learner. The power of stories in a training program, according to Kroth and Cranton is that they can make a person question how they are positioned in a certain culture with certain power and privileges.

Disorienting Dilemmas don't have to be shocking and abrupt changes, they can be a result of an accumulation of small incidents that converge to initiate the transformative process (Hathaway 2017:3). For instance the journey into feminism for one participant in a research began inconsequentially by taking a graduate course on the subject (Clark & Wilson 1991:75). Similarly, seeing a friend who has completed his or her degree programme but remains unemployed for a long period of time could lead to a Disorienting Dilemma. So what could start as an inconsequential decision, like choosing to just attend a free entrepreneurship seminar, may end up creating Disorienting Dilemma enough for a young person to consider entrepreneurship as preferred career.

According to Qi and Veblen (2016: 104), a Disorienting Dilemma can be induced through an activity like learning music. They posit that learning an instrument, socialising with other people and presenting to large audiences have the capacity to present Disorienting Dilemmas which push the youth out of their comfort zones. In their study, music students needed to change the way they think about themselves and about their skills, which becomes a source of transformation. One participant reported how she had to learn not to be embarrassed of making mistakes, a skill which was transferrable to other areas of life.

Crises can be a source of disorientation which can lead to transformation. For instance one study explored the experience of non-traditional university students in Poland (Kurantowicz & Nizinska 2013:Online). These were students from poor backgrounds, who are enrolled into university with low levels of education (Kurantowicz & Nizinska 2013:Online). The volume

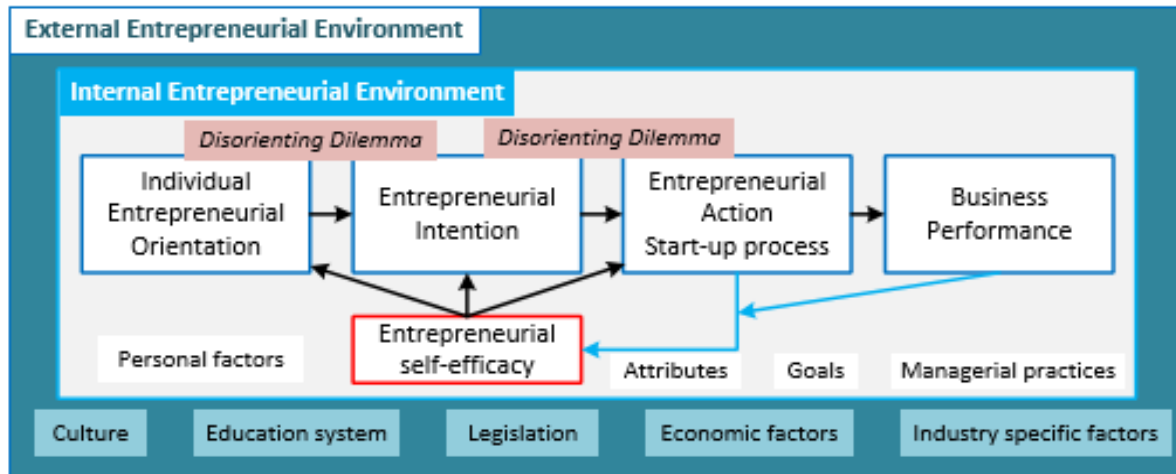
and complexity of work they encountered triggered a crises which led to some disorientation and subsequent transformation (Kurantowicz & Nizinska 2013:Online).

Conflict, if properly harnessed, can lead to a Disorienting Dilemma which initiates transformation. It can be leveraged in a classroom setting to create a Disorienting Dilemma which serves as the genesis of Transformative Learning (Bourjolly, Sands, Finley & Pernell-Arnold 2015:84). Conflict Can be used to unearth cultural beliefs which repress Entrepreneurial Self-Efficacy among the youth (Thébaud 2010:288). In many learning situations, especially multicultural ones, such conflict between cultural beliefs and Entrepreneurial Self-Efficacy is inevitable (Bourjolly *et al.* 2015:2). It is the way it is managed which can provide a basis for participants to critically reflect on their unspoken assumptions (Bourjolly *et al.* 2015:12). Conflict can then lead to Disorienting Dilemma as people start to question and reject some of their long held assumptions Entrepreneurial Self-Efficacy (Christie, Carey, Robertson & Grainger 2015:17). Having discussed sources of Disorienting Dilemma, the next section explores why Disorienting Dilemma is important in the entrepreneurial process.

5. WHY DISORIENTING DILEMMA IS IMPORTANT IN YOUTH ENTREPRENEURSHIP

In youth entrepreneurship, a Disorienting Dilemma can play an integral role at different stages in the process. For instance in the creation of youth entrepreneurial intention, some disorientation might need to happen to orient the person towards entrepreneurship. There is also a long time lag between the indicated intention to start a business and actually taking some entrepreneurial action (Brännback & Carsrud 2017:199) like attending the SHAPE training programme. This is illustrated in figure 1 below.

Figure 1: Disorienting Dilemma in the entrepreneurial process



Source: Author from reviewing the literature

The diagram above shows that a personal entrepreneurial process is influenced by external and internal entrepreneurial environments. The Disorienting Dilemma is shown above as a bridge between important entrepreneurial stages. Exogenous factors influence attitudes, which in turn influence entrepreneurial intention (Paul & Shrivatava 2016:2). These exogenous factors could be disorienting in nature. In reality a number of factors delay the conversion of intention into actual entrepreneurial action (start-up process) (Brockner, Higgins & Low 2004:213-214). When faced with the potential of failure and unemployment, many nascent entrepreneurs freeze at the apparent chasm between ideation and action (Brännback & Carsrud 2017:63-64).

The factors which stop entrepreneurial action can be divided into prevention focus and promotion focus factors (Brockner *et al.* 2004:203). The promotion focus factors are those factors which motivate the nascent entrepreneur into taking action while the prevention factors inhibit him or her (Brockner *et al.* 2004:203). Many times to bridge that chasm, there is need for a Disorienting Dilemma, induced or occurring naturally. This brings the discussion to the SHAPE training programme and what it attempts to achieve.

6. THE SHIFTING HOPE, ACTIVATING POTENTIAL ENTREPRENEURSHIP (SHAPE) TRAINING PROGRAMME

The particular training programme studied is called Shifting Hope, Activating Potential Entrepreneurship (SHAPE) and encourages participants to consider entrepreneurship as an alternative to formal employment (Van Der Westhuizen 2018). In essence one of the key outcomes of the programme is to increase participants' Entrepreneurial Self-Efficacy. The SHAPE programme's guiding theory is Theory U which is a social technology which attempts to achieve transformation by heightening an individual's state of attention which makes it possible for them to shift and transform (Scharmer & Kaufer 2013: 7 and Van Der Westhuizen 2018).

The particular season of SHAPE evaluated was run for 13 weeks in lecture theatres at the Westville campus of the University of KwaZulu Natal from 18 July 2017 to 24 October 2017. The SHAPE programme is an ongoing programme duly approved by the School of Management, Information Technology and Governance. This particular study received full ethical clearance from the Humanities and Social Sciences Research Ethics Committee of University of KwaZulu-Natal on 14 July 2017. The Protocol Reference Number is HSS/1045/017D.

The SHAPE programme induces some Disorienting Dilemma among participants by requiring them to reflect on their life in light of what they want to achieve in the future. In other words, are their behaviours and actions propelling them towards a desirable future or they are following thoughtlessly the path that their family, culture and university is expecting them to follow. The research questionnaire encourages participants to reflect on their life and events which have caused them to consider entrepreneurship as an alternative to formal employment. The events reflected upon usually involve some Disorienting Dilemma, that is, a growing sense of dissatisfaction experienced by an individual (Mälkki 2012:2), which caused them to explore entrepreneurship as an alternative or in addition to formal employment.

The SHAPE programme was deemed relevant for this study for a number of reasons. First reason being that its goal for transformation of students is clear, through its use of Theory U (Scharmer & Kaufer 2013:7). From a Theory U perspective, for transformation to occur there is need to access the deeper human capacity to create (Scharmer 2004:9). This is done

through *presencing*, that is, bringing into the present future potential (Scharmer 2004:10). Using this perspective then, the SHAPE programme attempts to get participants to connect with their deeper self in order to increase their Entrepreneurial Self-Efficacy (Van Der Westhuizen 2017).

Secondly it makes use of practising entrepreneurs who share their real world experiences, as opposed to being solely delivered by an academic. The SHAPE programme is relatively more experiential than your mainstream academic module. This is done through various activities such as group discussions, completing the business model canvas and business exhibition (Van Der Westhuizen 2017 and Van Der Westhuizen 2018). A previous study found that entrepreneurial education and training in South Africa is overly theoretical (Radipere 2012:11021) focused on producing graduates and not entrepreneurs (Jesselyn & Mitchell 2006:358).

7. RESEARCH QUESTION

This study answers the question: To what extent did the SHAPE programme change participants' own evaluation of personal Disorienting Dilemmas (important experiences) relevant to increase Entrepreneurial Self-Efficacy?

7.1 Research objectives

Research objective 1: To determine how Disorientating Dilemma influences student entrepreneurs' ability to identify business opportunities.

Research objective 2: To determine how Disorientating Dilemma influences student entrepreneurs' ability to develop business relationships.

Research Objective 3: To establish how Disorientating Dilemma influences student entrepreneurs' self-efficacy to manage their own business.

Research Objective 4: To determine how Disorientating Dilemma influences student entrepreneurs' ability to cope with stress and pressure associated with running a business.

7.2 Research Hypotheses

H0: There is no change in the evaluation of Disorienting Dilemmas by participants after attending the SHAPE programme.

H1: There is a change in the evaluation of Disorienting Dilemmas after attending the SHAPE programme which affects the way participants perceive their ability to identify business opportunities.

H2: There is a change in the evaluation of Disorienting Dilemmas after attending the SHAPE programme which affects the way participants perceive their ability to develop business relationships.

H3: There is a change in the evaluation of Disorienting Dilemmas after attending the SHAPE programme which affects the way participants perceive their ability to manage their own business.

H4: There is a change in the evaluation of Disorienting Dilemmas after attending the SHAPE programme which affects the way participants perceive their ability to cope with pressure and stress associated with starting and running a business.

7.3 Research methodology

The study follows a pragmatic action research paradigm. A pragmatic research paradigm is based on the understanding that reality is not stable, but constantly renegotiated, debated and interpreted in terms of its usefulness for a given situation (Patel 2015:Online). Unlike other research paradigms, pragmatism avoids taking a particular view about truth and reality and focuses mostly on trying to solve the problem at hand (Yvonne Feilzer 2010:1). In the case of this study, the problem at hand is identifying the role of Disorienting Dilemma in Entrepreneurial Self-Efficacy.

The methodology followed in this study is mostly quantitative design. Quantitative research is based on the ability to measure variables (Kumar 2014:17) and the data is presented in form of numbers (Punch & Oancea 2014:3). Usually the primary purpose of quantitative research is to determine whether a relationship exists between variables, and if it does, to determine the strength of that relationship (Mackey & Gass 2015:189).

In this study, a questionnaire was used to evaluate the extent of Disorienting Dilemma before and after the SHAPE training programme. The questionnaire had 31 questions, of which only 2 were open ended questions, 28 were based on a 5-point Likert scale and 1 was a closed question. For the open ended questions used in the study, the researchers went

through the responses and grouped them into 10 different categories each. These categories were coded into numerical values and participant responses were placed into these coded categories for further quantitative analysis.

This study followed a longitudinal research design. A longitudinal research design involves the repeated measurement of the same research subject over a period of time (Rajulton 2001:170). In this particular study, the sample was a convenient sample as responses were taken from participants who responded to posters advertising the SHAPE training programme. In addition, only those participants with both pre-SHAPE and post-SHAPE scores were included in the analysis. The researchers wanted to trace participants who had both pre and post-training scores in order to evaluate specific changes in their evaluation of own Disorienting Dilemmas.

7.4 Sample

A total of 138 participants completed the pre-SHAPE questionnaire, while 115 completed the post-SHAPE questionnaire. Of these participants, only 62 had both the pre-SHAPE and post-SHAPE completed questionnaires. Table 1A below shows the breakdown of participants who completed both the pre-SHAPE and post-SHAPE questionnaires.

Table 1A: The sample composition of the study

		Male	Female	
Age:	20 to 25 years	11	31	42
	26 to 30 years	5	6	11
	30 years PLUS	6	3	9
Total		22	40	62

Source: Calculated from survey results

From the above table, females significantly out-number males by almost 2: 1 in the sample of people with valid scores. About 68% of respondents are in the age group 20 to 25 years. Though there were more female participants than males in the whole SHAPE programme, the distribution was not as skewed in favour of females as in the sample. The gender

composition of the sample is also inconsistent with the 2015 general university student population which was 58.33% female and 41.67% male (Council of Higher Education 2017).

To test non-response bias an independent sample t-test was computed comparing aggregate scores of respondents with both pre and post SHAPE scores and respondents with only pre-SHAPE scores. The results are shown in table 1B below.

Table 1B: Group Scores - One time vs Two times Respondents

Group	No.	Mean	Std. Deviation	Std. Error Mean
Two Rounds	61	12.0656	3.63258	.46510
One Round	77	11.5195	3.30315	.37643

Source: Calculated from survey results

From the table above, 77 respondents did not completed the final round of questionnaires which led to their responses being excluded from further analysis. Their aggregate mean score for Disorienting Dilemma was slightly lower at 3.30315 compared to 3.63258 for respondents with both scores. To test response bias, that is, whether those who had two responses scored differently from those with one response, an independent samples t-test was performed. The results are show in table 1C below.

Table 1C: T-test Result - One time vs Two times Respondents

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	1.501	0.223	0.881	136	0.380
Equal variances not assumed			0.871	122.642	0.385

Source: Calculated from survey results

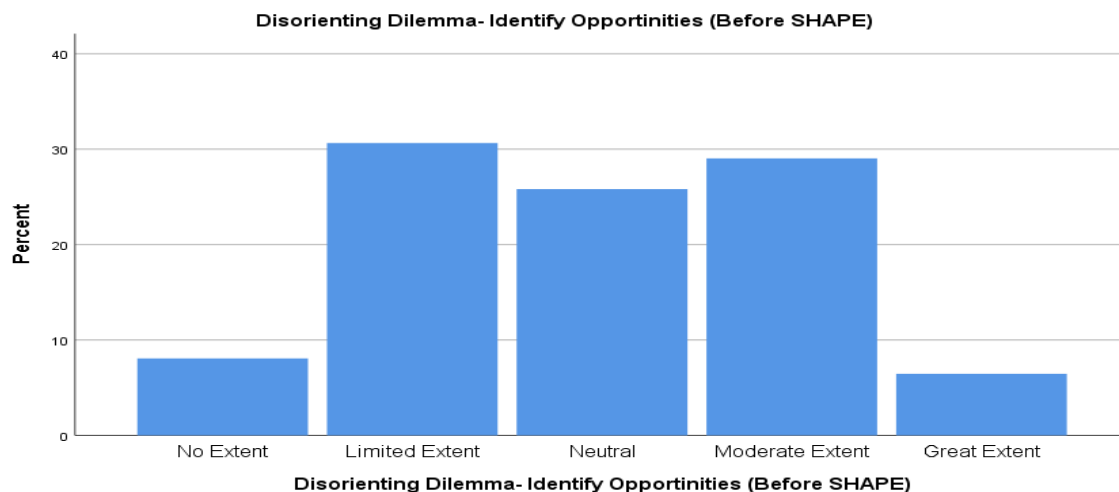
From the above table, the independent sample t-test indicated that scores were not significantly different between participants who completed only one questionnaire (M = 3.30315, SD = 3.30315) versus those with two (M = 3.05, SD = 1.03) and post-SHAPE (M= 3.63258, SD = 3.63258). The two-samples were then deemed unbiased, $t(136) = 0.881$, $p > .005$. Thus the results from further analysis are deemed not to be systematically biased.

7.5 Research Findings

7.5.1 Research Objective 1: To determine how Disorientating Dilemma influences student entrepreneurs' ability to identify business opportunities

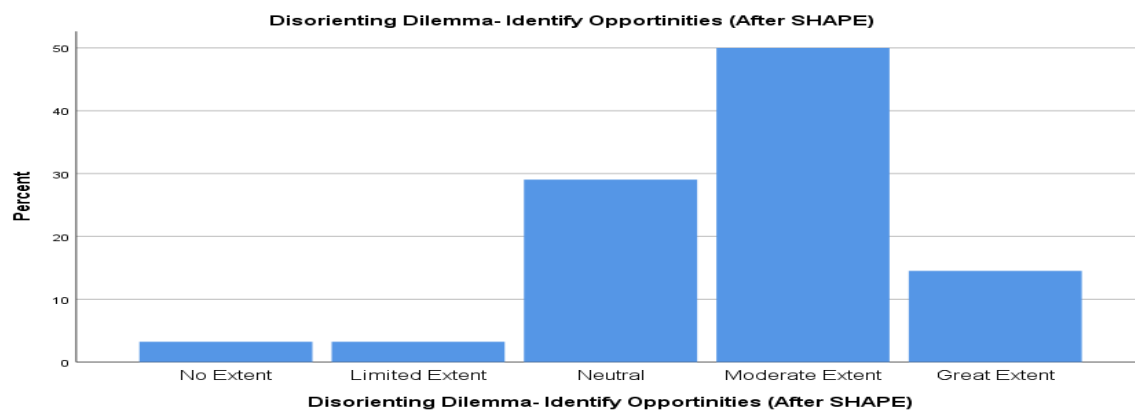
In analysing the responses to how participants perceive the role of Disorienting Dilemma in their ability to identify business opportunity, we start by showing the distribution of responses in figures 2A (pre-SHAPE) and 2B (post-SHAPE).

Figure 2A: The sample composition of the study: Business Opportunity (before shape)



Source: Calculated from survey results

Figure 2B: The sample composition of the study: Business Opportunity (after shape)



Source: Calculated from survey results

From assessing figures 2A and 2B above, it is apparent that there has been a shift in the distribution of responses from majority being more negative before the programme (38.7% to 37.5%, negative to positive responses), to significantly positive after the program (6.5% to 64.5%, negative to positive). To test whether the change is significant, below we conducted a paired sample t-test. A paired sample t test compares the means of two groups of people or cases which are matched, and at different time points (Ross & Willson 2017:17). The differences in mean is deemed significant if the p-value is less than 0.05 (Ross & Willson 2017:18). Table 2A shows the mean, standard deviation and standard error for the 62 people who responded to this question.

Table 2A: Paired Samples Statistics (Combined)

	Mean	N	Std. Deviation	Std. Error Mean
Disorienting Dilemma- Identify Opportunities (Before SHAPE)	2.95	62	1.093	.139
Disorienting Dilemma- Identify Opportunities (After SHAPE)	3.6935	62	.87943	.11169

Source: Calculated from survey results

From table 2A above, there is a 25% increase in the mean and a reduction of the standard deviation from $M = 1.093$ to $M = 0.87943$. Table 2B below shows the paired sample t-test.

Table 2B: Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Disorienting Dilemma- Identify Opportunities (Before SHAPE) - Disorienting Dilemma- Identify Opportunities (After SHAPE)	-.74194	1.43647	.18243	-4.067	61	.000

Source: Calculated from survey results

To test the null hypothesis that the means for pre-SHAPE level of Disorienting Dilemma ($M = 2.95$, $SD = 1.09$) and post-SHAPE ($M = 3.6935$, $SD = 0.87943$) were equal, a paired sample t-test was performed. The null hypothesis of equal level of Disorienting Dilemma was rejected, $t(61) = -4.067$, $p < .001$. Thus the SHAPE programme was effective in increasing the perceived role of Disorienting Dilemma in business opportunity identification.

The increase in sample means is significantly magnified for females, if we group the sample by gender. The results are shown in table 2C below

Table 2C: Paired Samples Statistics (by gender)

				Mean	N	Std. Deviation	Std. Error Mean
Male	Disorienting Dilemma- Identify	Opportunities (pre-SHAPE)		3.27	22	1.032	.220
	Disorienting Dilemma- Identify	Opportunities (post-SHAPE)		3.8182	22	.58849	.12547
Female	Disorienting Dilemma- Identify	Opportunities (pre-SHAPE)		2.78	40	1.097	.174
	Disorienting Dilemma- Identify	Opportunities (post-SHAPE)		3.6250	40	1.00480	.15887

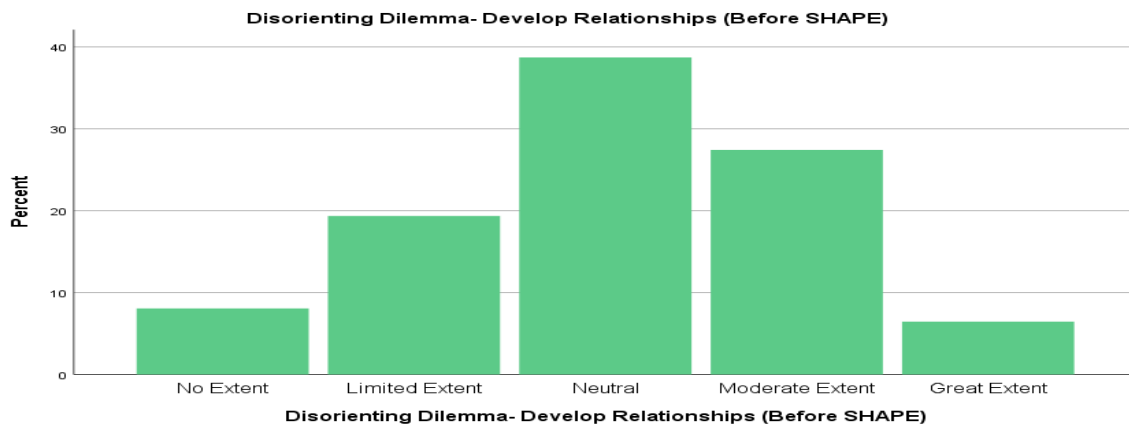
Source: Calculated from survey results

From table 2C above, while the mean for males increased by 16%, females had a 30.4% increase in mean, almost double. In order to test whether there was a significant difference in means between genders after the SHAPE program, an independent samples t-test was performed. According to Ross and Wilson (2007: 13), an independent sample t-test compares the means of two mutually exclusive two groups. They postulate that there is no assumption of normal distribution, only that if one of the samples has a significantly unusual distribution, the t-test will not give good results. If the sample sizes are different, especially with differing standard deviations, a smaller alpha value of $p < 0.01$ should be used to overcome the violation of requirement. The independent samples t-test revealed that the differences in mean between males and females was insignificant, $t(60) = 0.825, p > 0.01$.

7.5.2 Research Objective 2: To determine how Disorientating Dilemma influences student entrepreneurs' ability to develop business relationships

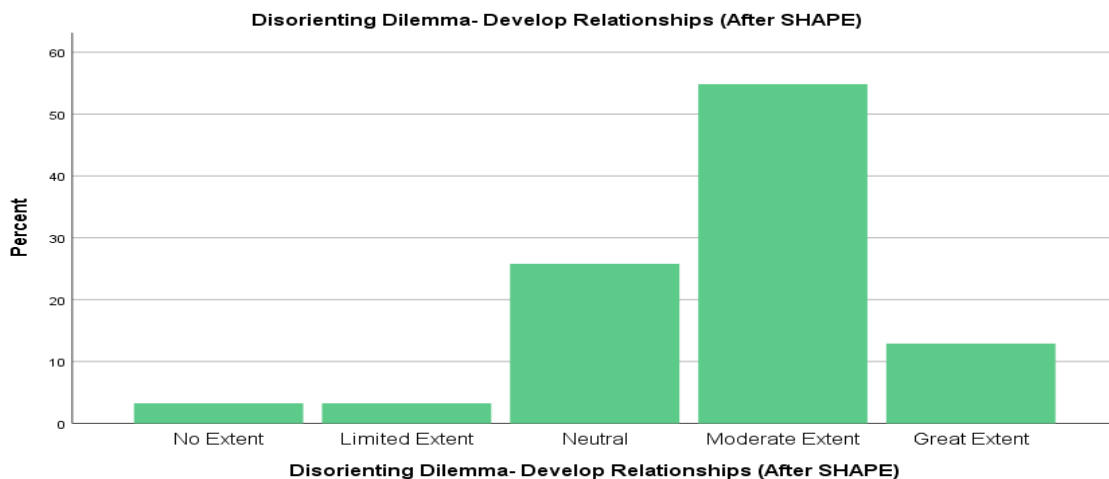
In analysing the responses to how participants perceive the role of Disorienting Dilemma in their ability to develop business relationships, we start by showing the distribution of responses in figures 3A (pre-SHAPE) and 3B (post-SHAPE).

Figure 3A: The sample composition of the study: Developing Relationships (before SHAPE)



Source: Calculated from survey results

Figure 3B: The sample composition of the study: Developing Relationships (after SHAPE)



Source: Calculated from survey results

From assessing figures 3A and 3B above, it is apparent that there has been a shift in the distribution of responses from majority being neutral (38.7%) before SHAPE, to significantly positive (67.7%) after SHAPE. To test whether the change is significant, below we

conducted a paired sample t-test. Table 3.A. shows the mean, standard deviation and standard error for the 62 people who responded to this question.

Table 3A: Paired Samples Statistics (Combined): Developing Relationships

	Mean	N	Std. Deviation	Std. Error Mean
Disorienting Dilemma- Develop Relationships (Before SHAPE)	3.0484	62	1.03111	.13095
Disorienting Dilemma- Develop Relationships (After SHAPE)	3.7097	62	.85674	.10881

Source: Calculated from survey results

From table 3A above, there is a 21.84% increase in the mean and a reduction of the standard deviation from 1.031 to 0.857. Table 3B below shows the paired sample test

Table 3B: Paired Samples T-Test (Combined): Developing Relationships

	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Disorienting Dilemma- Develop Relationships (Before SHAPE) - Disorienting Dilemma- Develop Relationships (After SHAPE)	-.66129	1.29239	.16413	-4.029	61	.000

Source: Calculated from survey results

To test the hypothesis that the means for pre-SHAPE level of Disorienting Dilemma (M = 3.05, SD = 1.03) and post-SHAPE (M= 3.71, SD = 0.857) were equal, a paired sample t-test was performed. The null hypothesis of equal level of Disorienting Dilemma was rejected, $t(61) = -4.029$, $p < .001$. Thus the SHAPE programme was effective in increasing the perceived role of Disorienting Dilemma in developing business relationships.

To further analyse, the samples were weighted by gender. The paired sample t-test results after weighing by gender show that the increase in sample means for males is insignificant ($p > 0.01$). The increase in sample mean for females remains significant ($p < 0.01$). The results are shown in table 3C below.

Table 3C: Paired Samples Tests (by gender): Developing Relationships

		Mean	Std. Deviation	Std. Error	t	Df	Sig. (2-tailed)
Male	Disorienting Dilemma- Develop Relationships (Before SHAPE) - Disorienting Dilemma-Develop Relationships (After SHAPE)	-.40909	1.09801	.23410	-1.748	21	.095
Female	Disorienting Dilemma- Develop Relationships (Before SHAPE) - Disorienting Dilemma-Develop Relationships (After SHAPE)	-.80000	1.38119	.21839	-3.663	39	.001

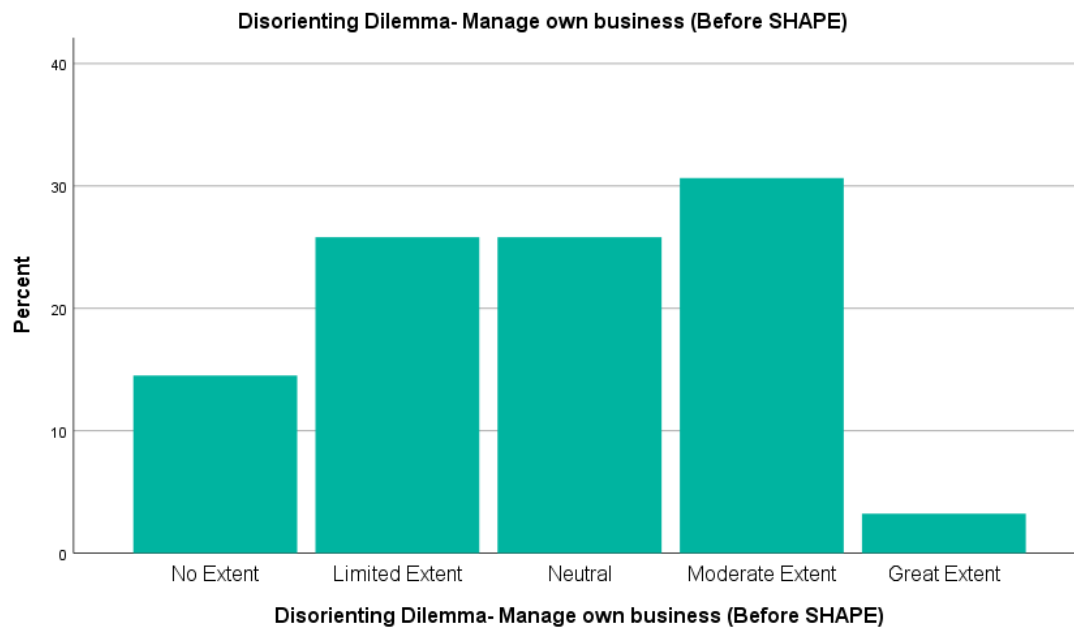
Source: Calculated from survey results

From table 3C above, while the mean for males increased by 12% (0.409), females had a 28.1% (0.800) increase in mean, more than double. To test whether there was a significant difference in means between genders after the SHAPE program; an independent samples t-test was further performed. The independent sample t-test revealed that the differences in mean between males and females after SHAPE was insignificant, $t(60) = 0.737, p > 0.01$.

7.5.3 Research Objective 3: To establish how Disorientating Dilemma influences student entrepreneurs' self-efficacy to manage their own business

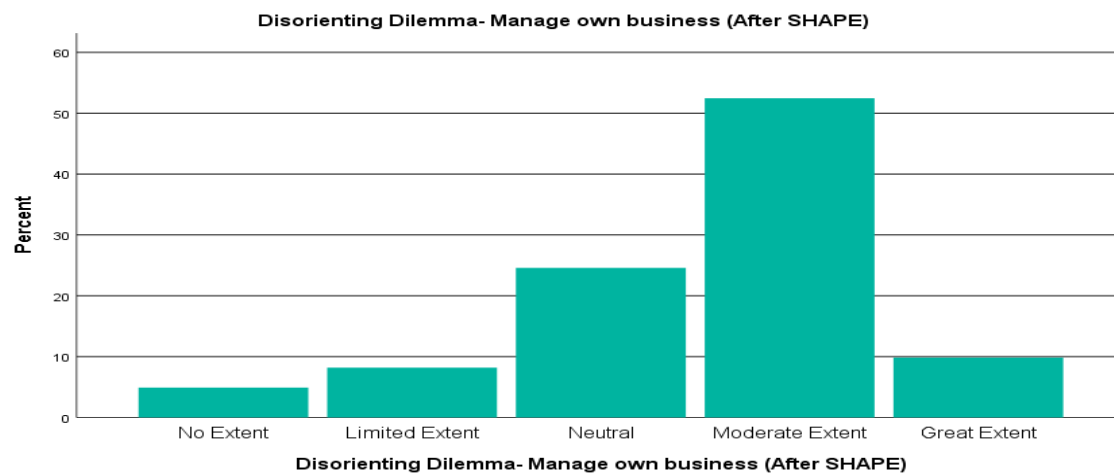
In analysing the responses to how participants perceive the role of Disorienting Dilemma in their ability to manage their own business, we start by showing the distribution of responses in figures 4A (for pre-SHAPE) and 4B (post-SHAPE).

Figure 4A: The sample composition of respondents: Manage own business (before shape)



Source: Calculated from survey results

Figure 4B: The sample composition of respondents: Manage own business (after shape)



Source: Calculated from survey results

From assessing figures 4A and 4B above, it is apparent there has been a shift in the distribution of responses from being neutral and negative (66.1%), to significantly positive (62.3%). To test whether the change is significant, below we use a paired sample t-test.

Table 4A shows the mean, standard deviation and standard error for the 61 people who responded to this question.

Table 4A: Paired Samples Statistics (Combined): Manage own business

	Mean	N	Std. Deviation	Std. Error Mean
Disorienting Dilemma- Manage own business (Before SHAPE)	2.8361	61	1.12813	.14444
Disorienting Dilemma- Manage own business (After SHAPE)	3.5410	61	.95871	.12275

Source: Calculated from survey results

From table 4A above, there is a 24.85% increase in the mean and a reduction of the standard deviation from 1.128 to 0.959. Table 4B below shows the paired sample test

Table 4B: Paired Samples Test (Combined): Manage own business

	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Disorienting Dilemma- Manage own business (Before SHAPE) - Disorienting Dilemma- Manage own business (After SHAPE)	-.70492	1.17394	.15031	-4.690	60	.000

Source: Calculated from survey results

To test the hypothesis that the means for pre-SHAPE level of Disorienting Dilemma ($M = 2.84$, $SD = 1.13$) and post-SHAPE ($M = 3.54$, $SD = 0.958$) were equal, a paired sample t-test was performed. The null hypothesis of equal level of Disorienting Dilemma was rejected, $t(60) = -4.69$, $p < .001$. Thus the SHAPE programme was effective in increasing the perceived role of Disorienting Dilemma in developing business relationships.

To further analyse, the samples were weighted by gender. The paired sample t-test results after weighing by gender show that the increase in sample means for males is insignificant ($p > 0.01$). The increase in sample mean for females remains significant ($p < 0.01$). The results are shown in table 4C below

Table 4C: Paired Samples Tests (by gender): Manage own business

		Mean	Std. Deviation	Std. Error	t	df	Sig. (2-tailed)
Male	Disorienting Dilemma- Manage own business (Before SHAPE) - Disorienting Dilemma- Manage own business (After SHAPE)	-.59091	1.05375	.22466	-2.630	21	.016
Female	Disorienting Dilemma- Manage own business (Before SHAPE) - Disorienting Dilemma- Manage own business (After SHAPE)	-.76923	1.24523	.19940	-3.858	38	.000

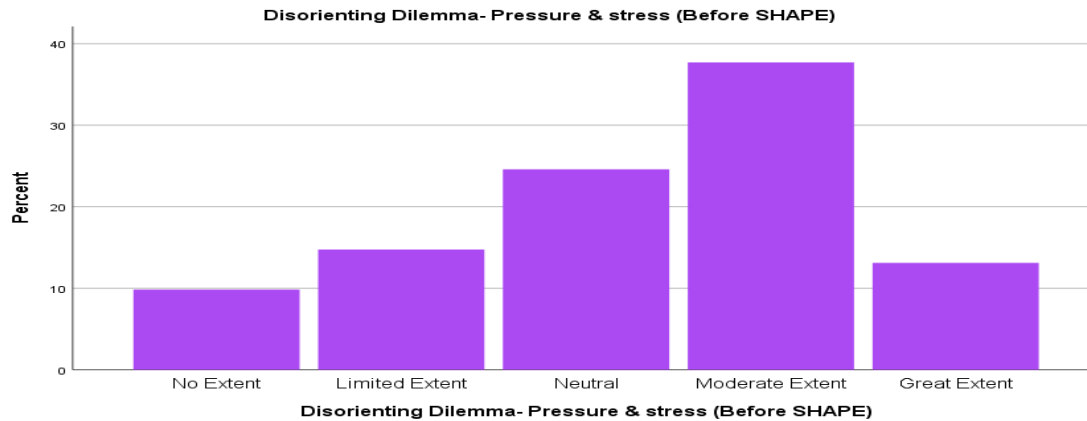
Source: Calculated from survey results

From table 4.C. above, while the mean for males increased by 19.4% (0.591), females had a 28.3% (0.770) increase in mean. To test whether there was a significant difference in means between genders after the SHAPE program; an independent samples t-test was further performed. The independent sample t-test revealed that the differences in mean between males and females after SHAPE was insignificant, $t(59) = 0.580$, $p > 0.01$.

7.5.4 Research Objective 4: To determine how Disorientating Dilemma influences student entrepreneurs' ability to cope with stress and pressure associated with running a business

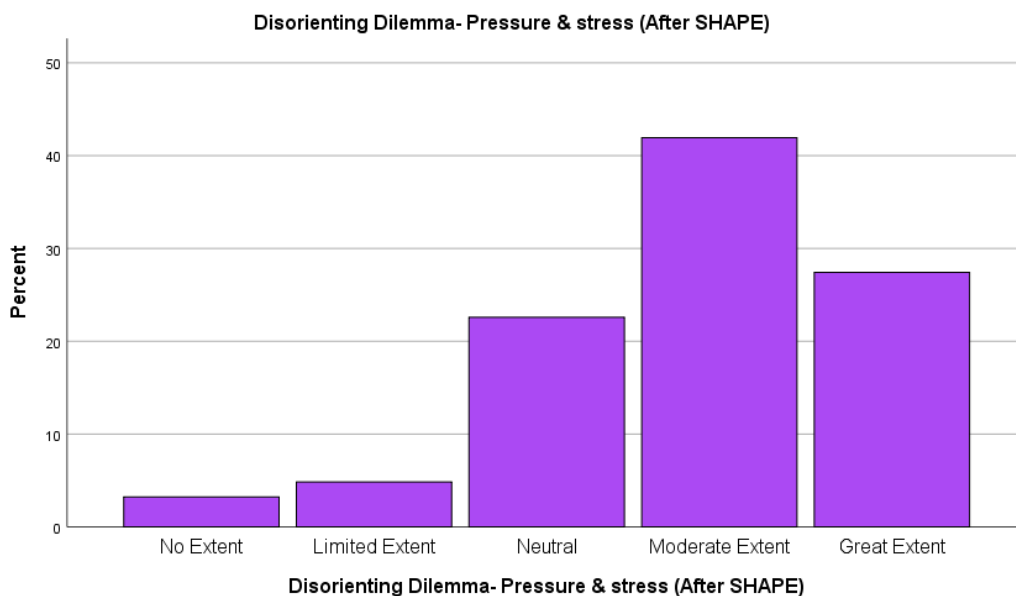
In analysing the responses to how participants perceive the role of Disorienting Dilemma in their ability to cope with pressure and stress associated with owning a business, we start by showing the distribution of responses in figures 5A (for pre-SHAPE) and 5B (post-SHAPE).

Figure 5A: The sample composition of the study: Manage to cope (before SHAPE)



Source: Calculated from survey results

Figure 5B: The sample composition of the study: Manage to cope (after SHAPE)



Source: Calculated from survey results

From assessing figures 5A and 5B above, it is apparent there has been a small shift in the distribution of responses from being positive (50.0%), to being more positive (69.3%). To test whether the change is significant, below we use a paired sample t-test. Table 5A shows the

mean, standard deviation and standard error for the 61 people who responded to this question.

Table 5A: Paired Samples Statistics (Combined): Manage own business

	Mean	N	Std. Deviation	Std. Error Mean
Disorienting Dilemma- Pressure & stress (Before SHAPE)	3.2951	61	1.17394	.15031
Disorienting Dilemma- Pressure & stress (After SHAPE)	3.8361	61	.98624	.12628

Source: Calculated from survey results

From table 5A above, there is a 16.42% increase in the mean and a reduction of the standard deviation from 1.174 to 0.986. Table 5B below shows the paired sample test results.

Table 5B: Paired Samples Test (Combined): Manage own business

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Disorienting Dilemma- Pressure & stress (Before SHAPE) - Disorienting Dilemma- Pressure & stress (After SHAPE)	-.54098	1.39730	.17891	-3.024	60	.004

Source: Calculated from survey results

To test the hypothesis that the means for pre-SHAPE level of Disorienting Dilemma (M = 3.30, SD = 1.17) and post-SHAPE (M= 3.84, SD = 0.986) were equal, a paired sample t-test was performed. The null hypothesis of equal level of Disorienting Dilemma was rejected, $t(60) = -3.024, p < .01$.

To further analyse, the samples were weighted by gender. The increase in sample means for females remained significant ($p < 0.01$) and males became insignificant ($p > 0.01$). The results are shown in table 5C below.

Table 5C: Paired Samples Tests (by gender): Cope with Stress

Gender: 1 = Male; 2=Female		Paired Differences			t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Male	Disorienting Dilemma- Pressure & stress (Before SHAPE) - Disorienting Dilemma- Pressure & stress (After SHAPE)	-.22727	.97257	.20735	-1.096	21	.285
Female	Disorienting Dilemma- Pressure & stress (Before SHAPE) - Disorienting Dilemma- Pressure & stress (After SHAPE)	-.71795	1.57194	.25171	-2.852	38	.007

Source: Calculated from survey results

To test whether there was a significant difference in means between genders after the SHAPE program, an independent samples t-test was further performed. The independent sample t-test revealed that the differences in mean between males and females after SHAPE was insignificant, $t(59) = -1.022$, $p > 0.01$.

7.5.5 Items selected by participants as disorienting

The questionnaire contained an open-ended question where participants indicated experiences which they deemed disorienting, for the purpose of their Entrepreneurial Self-Efficacy. The open ended responses were coded and categorised as in table 6 below. A total of 39 participants provided some response to this open-ended question as per table 6 below.

Table 6: Disorienting Experiences specified by participants

	N	Percent
Employed by an organisation/ Internship	19	44.2%
Significant life experience e.g. business failure, pregnancy, death in family	7	16.3%
Owned a business/ promoted or sold something	3	7.0%
Unemployed or bored with nothing to do	1	2.3%
University/ school projects experiences	5	11.6%
Finding unexploited opportunities or formal investigation of opportunities	1	2.3%

Close relation has a business	6	14.0%
Other	1	2.3%
Total	43	100.0%

Source: Calculated from survey results

From the above table, it is apparent that participants identified their working experience as the most appropriate (44.2% of participants) for entrepreneurial purposes. Other experiences which were identified by participants as important experiences include; a close relative having own business (14%) and some other significant life experience like business failure (16.3%).

8. DISCUSSION

Hypothesis 1

Hypothesis 1 postulated that *there is a change in the evaluation of Disorienting Dilemma after attending the SHAPE programme which affects the way participants perceives their ability to identify business opportunities*. This hypothesis is supported if we evaluate the increase in mean of samples for both genders and when we weigh the samples by gender. After weighing the samples by gender, females found the program to be more effective than males, as denoted by the greater increase in their mean score. The males mean was 15.1% higher than females at the beginning of the SHAPE program, but at the end of the program the difference in means was not statistically significant, when tested using the independent samples t-test. These results were inconsistent with some previous research which found that females' entrepreneurial intention did not increase as much as males after some entrepreneurial training (Westhead & Solesvik 2016:25-26). The differences between the studies could be due the differences in the specific entrepreneurial constructs being evaluated. This study evaluates change in Entrepreneurial Self-Efficacy while the other study (Westhead & Solesvik 2016:1) evaluated change in entrepreneurial intent.

Hypothesis 2

Hypothesis 2 postulated that *there is a change in the evaluation of Disorienting Dilemma after attending the SHAPE programme which affects the way participants perceive their ability to develop business relationships*. This hypothesis is supported if we evaluate the increase in sample means for both genders. After weighing the samples by gender, the

hypothesis was only supported for female participants. The SHAPE programme was found to be effective in increasing the perceived role of Disorienting Dilemma in the ability of female participants to develop business relationships. The mean for male participants was 19.6% higher than female participants at the beginning of the SHAPE program. At the end of the program, the differences in means were not statistically significant, when tested using the independent samples t-test.

Hypothesis 3

Hypothesis 3 postulated that *there is a change in the evaluation of Disorienting Dilemma after attending the SHAPE programme which affects the way participants perceive their ability to manage their own business*. This hypothesis is supported if we evaluate the increase in sample means for both genders. However, when the samples were weighed by gender, the hypothesis was only supported for female participants. The SHAPE programme was found to be effective in increasing the perceived role of Disorienting Dilemma in the ability of female participants to manage their own businesses. The mean for male participants was 12.13% higher than female participants at the beginning of the SHAPE program. At the end of the program, the difference in means was not statistically significant using the independent samples t-test.

Hypothesis 4

Hypothesis 4 postulated that *there is a change in the evaluation of Disorienting Dilemma after attending the SHAPE programme which affects the way participants perceives their ability to cope with pressure and stress associated with starting and running a business*. This hypothesis is supported if we evaluate the increase in sample means for both genders. However, when the samples were weighed by gender, the hypothesis was only supported for female participants. The SHAPE programme was found to be effective in increasing the perceived role of Disorienting Dilemma in the ability of female participants to cope with stress and pressure of starting and running a business.

This implies that there were activities in the SHAPE programme which helped participants, especially females feel more confident about their ability to identify business opportunities, manage their own businesses, develop business relationships and cope with pressure and stress of starting a business. The improvement in outcomes could also be due to the use of

role models, entrepreneurs who already have successful businesses, group work and the business model canvas. In this sense, the SHAPE programme can be said to be effective especially for female participants.

8.1 Items selected by participants as disorienting

The role of practical working experience as key to increasing Entrepreneurial Self-Efficacy cannot be over-emphasised. This might point to the need to expose entrepreneurship students to business experiences. This could be done through short term student business attachments or encouraging students to find part time employment opportunities especially in small to medium enterprises. Even if they were to get entry level positions, with adequate briefing about what they are to learn they are likely to benefit in terms of increased skills and increased Entrepreneurial Self-Efficacy.

9. IMPLICATIONS FOR MANAGERS

This article highlights the importance of Disorienting Dilemma as a catalyst for change. Organisational change is generally resisted and a Disorienting Dilemma can be induced to trigger the change process. However if triggered, managers need to have trained professionals who can deal with potentially significant negative outcomes such as shame, arguments, stress, anxiety and depression (Roberts 2013:103).

Management can also leverage on disorienting situations such as conflict to sustain change required (Bourjolly *et al.* 2015:84). Following Mezirows' (1990:146) Transformative Learning process, management can facilitate critical reflection on important issues facing the organisation, followed by guided open discussion where underlying assumptions are questioned and an action plan agreed upon.

The results from SHAPE training also highlight differences in training outcomes experienced by different sexes. This highlights the need for organisations to spend time evaluating the current knowledge and skills status of employees they want to train. Training without this initial evaluation can be time wasting for participants and a waste of resources by the organisation. In addition to evaluating individual training needs, there is a need to appreciate the cultural norms which negatively impact females in many cases (Herrington, Kew & Mwanga 2017:28).

10. LIMITATIONS

A limitation of this study is that students self-selected to attend the 13 weeks program. This means the study mostly catered for people who are already interested in entrepreneurship, and not an average student. This limits the generalisability of the research results.

11. CONCLUSION

From this research, it is evident that the SHAPE program is more effective for female participants. The differences in means between female and male participants is statistically significant (using t-test) at the beginning of the programme but similar for both sexes at the end. The reason that the program is more effective for females could be ascribed to the fact that males are more likely to be involved in entrepreneurial activities (Herrington *et al.* 2017:28). In this sense, females are starting off from a low base due to lack of exposure. In most cultures, females face a plethora of problems which range from cultural factors, high levels of domestic responsibilities, lack of role models, fewer business oriented networks, culturally induced lack of assertiveness and confidence (Herrington *et al.* 2017:28). What is heartening is that after the 13-week training, there are no statistically significant differences in scores between males and females.

While celebrating the success of SHAPE with females, further research is needed on the sustainability of the improvements identified, over the long term. Since the survey results were taken immediately after the training programme, participants were likely experiencing the positive halo effect of the programme. What could warrant further research is to conduct a survey of the same participants after 6-months of the programme, to see if the change was sustained.

What is disconcerting from the results is the general lack of improvement in male results. The lack of improvement might mean that male participants did not experience anything novel from the SHAPE training programme. This might mean that the program was pitched perfectly for females, whilst males found it too basic to experience change. Or could it be that female participants were more open to the influence of a woman run program?

Working experience was deemed by participants as the most appropriate place where people can get appropriate business ownership experiences. This is especially telling, given

that many of the working experiences reported was related to working in entrepreneurial organisations.

With this in mind, I would conclude by arguing that it could benefit the SHAPE program immensely to have qualifying criteria for participants. They would then accept only members who satisfy certain level of entrepreneurship knowledge, who would benefit most from this training. This would help avoid wasting time for those participants who are too advanced in their knowledge of entrepreneurship to benefit much.

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