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Comparing the effects of motivational and instructional self-talk on individual artistic creativity and entrepreneurial innovativeness.

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Abstract

This study is a qualitative quasi-experiment that compares the effects of self-talk in the creativity and innovativeness of individuals, using motivational self-talk and instructional self-talk. The experiment was conducted on three groups of individuals, i.e, (1) a control group with no cue cards supplied, (2) a group where a motivational cue card is supplied at task 3, (3) a group with an instructional cue card at task 3.

The study revealed that neither motivational self-talk nor instructional self-talk affected artistic creativity, although the instructional self-talk group scored higher on their second artworks.

The study further revealed that motivational self-talk had the same effect on individuals in a business context as the control group. The instructional self-talk group of participants surpassed the rest of the experimental groups in all tasks performed.

Keywords

Self-talk, (ST)

Motivational self-talk, (MST)

Instructional self-talk, (IST)

Thought self-leadership (TSL)

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Estelle Craig

2 November 2021

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Chapter 1: Introduction and Research Problem

.1 Introduction

This chapter defines the research problem being investigated in this study. This study compares the effects of motivational self-talk and instructional self-talk in a business context. Through an exploratory study, evidence was found that many facets of self-talk exist in the field of sport and sports psychology. This study aims to link self-talk and thought self-leadership to innovation and creativity within a business context.

.2 Background to the research problem

Innovation and creativity form the backbone of many organisations in present times. Irrespective of how employers encourage employees to broaden their scope and become innovative, it is the thoughts of the employees that govern the behaviours of the employees. In other words, thought-self leadership plays an important role in employees' innovative and creative cognitive behaviours (Hatzigeorgiadis & Galanis, 2017a).

One of the behaviours that link to thought self-leadership is self-talk (Alnakhli et al., 2020). Self-talk, also known as inner dialogues (Oleś et al., 2020), is a subconscious behavior used by individuals to either encourage or discourage oneself to perform a task. Self-talk is a cognitive technique used to influence thoughts, feelings, and behaviors to improve performance (Alnakhli et al., 2020; Walter et al., 2019).

Self-talk is an established practice amongst athletes (Hatzigeorgiadis & Galanis, 2017a). Several empirical investigations have focused on how self-talk has been applied across different research domains of sports science, such as goal orientation and self-regulation (Latinjak et al., 2017), performance enhancement (Latinjak et al., 2019; Van Raalte et al., 2016), and motor task and self-efficacy (Chang et al., 2014). However, despite having received keen interest from sports science scholars, Latinjak, Hatzigeorgiadis, Comoutos, and Hardy, (2019) have posited that the intricacies of self-talk are not fully understood in sports science and thus called for further studies to probe inquiry into the variations of self-talk as well as its antecedents and outcome differences (Neck & Manz, 1992). Additionally, despite

organisational science studies linking self-talk with thought self-leadership that began to emerge in the early 1990s (Godwin et al., 2016), investigation concerning how self-talk can be applied in the business setting and how self-talk can influence leaders remain scarce (Rogelberg et al., 2013). Studies that examine how different styles of self-talk can affect leaders' creativity and innovativeness are even more limited.

Studies have demonstrated that self-talk is practiced by every individual frequently through ordinary cues (Hase et al., 2019; Hatzigeorgiadis, 2014; Hatzigeorgiadis & Galanis, 2017a). According to Gesell, (2007) self-talk is a situational behaviour influencing mechanism. Depending on the situation that individuals find themselves in, behaviour is influenced either positively or negatively. Therefore, self-talk can be used as a tool to influence individuals in the workplace positively to enhance creativity and innovation by either motivating them or by instructing them to use self-talk.

Numerous types of self-talk can be found, (Łysiak, 2019; Oleś et al., 2020; R. Singh et al., 2017), for example, motivational or positive self-talk, instructional self-talk, and negative self-talk. In business studies, these form part of thought self-leadership. Neck et al., (1999) and Godwin et al., (2016) explain that thought self-leadership involves cognitive strategies such as self-dialogue and mental imagery to influence oneself. How we speak to ourselves can have a direct and profound impact on how individuals think and behave. Our self-talk impacts the way we solve problems and make decisions.

.3 Problem statement

Understanding self-talk and self-talk mechanisms are important for organisations as this will assist individuals and managers to recognise the effectiveness of self-talk within organisations, and enhance innovation and creativity within individuals thereby creating value for the organisation (Hatzigeorgiadis & Galanis, 2017a).

Self-talk is practiced by every individual daily through ordinary cues. According to Gesell, (2007) self-talk is a situational behaviour influencing mechanism. Depending on the situation that individuals find themselves in, behaviour is influenced either positively or negatively. Therefore, self-talk can be used as a tool to influence

individuals in the workplace positively to enhance creativity and innovation by either motivating or instructing employees to perform tasks through the use of self-talk.

Different types of self-talk are used by different individuals. Gainsburg & Kross, (2020) evaluated social-distance self-talk whereby individuals were talking about themselves in the third person, instead of talking to themselves. Motivational self-talk and instructional self-talk can be used through goal setting through introspection to alter one's own behaviour (Kross et al., 2014; Puchalska-Wasyl, 2015; Senay et al., 2010). The problem statement in this study refers to the basic understanding of self-talk and the use of self-talk in a business context.

This research has a narrow focus that aims to investigate how self-talk can affect leaders' creativity and innovativeness. Considering that enhancing creativity and innovation within organisations can be regarded as an important achievement our understanding of how self-talk can influence these leadership attributes remain critical (Rogelberg et al., 2013; Senay et al., 2010).

.4 Significance of the research

There exist numerous research journals on the positive effects of self-talk in sport and from a sport psychology perspective (Galanis et al., 2017; Hase et al., 2019; Latinjak et al., 2017; Latinjak et al., 2019), hence the interest of the researcher in the field of self-talk in a business context. Further research of self-talk into the field of business and business studies, also known as thought self-leadership, can be beneficial to organisations by creating a sustainable competitive advantage over competitors and rivals (Rogelberg et al., 2013; Senay et al., 2010).

.5 Scope of the research

The scope of this research was restricted to exploring the effects of motivational self-talk and instructional self-talk on artistic creativity, and entrepreneurial innovation, (Grandchamp et al., 2019), to create a sustainable competitive advantage in organisations. The researcher believed that non-entrepreneurs would demonstrate a significant improvement across the 3 self-talk experiments and that instructional self-talk would yield the best results.

.6 Conclusion

This chapter presented an introduction to the research paper and experiment by focusing on thought self-leadership, motivational self-talk, and instructional self-talk. This chapter further described self-talk in sport and the field of sport psychology and emphasised the need for further investigation into the field of business leadership and sustainable competitive advantage and organisational growth.

Chapter 2: Literature review

1.1 Introduction

This chapter aims to provide a succinct review of the relevant peer-reviewed academic articles of self-talk. The chapter will begin by discussing the relationship between thought self-leadership and self-talk. Thereafter, it will deliberate self-talk studies in different domains and self-talk in management. Subsequently, motivational self-talk and instructional self-talk will be discussed before it offers a conclusion.

1.2 Thought self-leadership and self-talk

Thought self-leadership is a process whereby individuals tend to influence themselves through a phenomenon known as self-talk or self-dialogue, to perform tasks (Neck et al., 1999; Rogelberg et al., 2013). Thought self-leadership is also described as a cognitive leadership strategy (Godwin et al., 1999; R. Singh et al., 2017) that entails internal reasoning or self-talk, to influence or encourage oneself to stay motivated and focused to achieve goals set by oneself or by management (Singh et al., 2017). Godwin et al., (1999) and Singh et al., (2017) further describe thought self-leadership as “habitual thinking” or “a consistent repetitive chain” of thoughts that influence an individual's decision-making process and performance.

Self-talk can be defined as a strategy used by individuals to address themselves with the purpose of being instructional or motivational, (Hardy, 2006; Latinjak et al., 2019). Godwin et al., (1999) and Singh et al. (2017) both drew on self-talk as the foundation strategy that influences thought self-leadership. Thought self-leadership affects the way individuals lead themselves (Singh et al, 2017), make decisions, solve problems and increase performance (Bellomo et al., 2020).

There have been many articles of self-talk by different authors over the years (Alnakhli et al., 2020; Godwin et al., 2016; Łysiak, 2019; Neck et al., 1999; Oleś et al., 2020; Rogelberg et al., 2013; Thibodeaux & Winsler, 2018; Walter et al., 2019). One of the most recent definitions or descriptions found was that of Bellomo et al., (2020), who describe self-talk as “a psychological skill that benefits motor performance by controlling and organising performers’ thoughts”. This psychological skill is used by individuals to motivate themselves in everyday tasks, (Alnakhli et al.,

2020; Neck et al., 1999; Thibodeaux & Winsler, 2018). This research adopts the definition proposed by (Latinjak et al., 2019) and defines self-talk as an act of verbalisation to address oneself through motivation or instruction.

1.3 Self-talk studies in different research domains

In recent years, self-talk has been observed mostly in sport psychology articles, with numerous articles published in journals such as *Journal of Applied Sport Psychology*, *Journal of Sport and Exercise Psychology*, and *The Sport Psychologist*, by authors such as Galanis et al., (2018), Hatzigeorgiadis & Galanis, (2017), Horcajo et al., (2019), Latinjak et al., (2019), Neck et al., (1999), Tod et al., (2011), Van Raalte et al., (2016, 2019), and Hase et al., (2019), to name only a few.

Furman et al., (2020) indicated in their research of healthy living and weight loss that distance-self talk had great benefits on individuals when using distance self-talk to influence their behaviour. Distance self-talk is a strategy used by individuals to encourage themselves to make healthier food choices and alter their eating habits (Furman et al., 2020).

Self-talk in well-being research by Kyeong et al., (2020) revealed that an increase in life satisfaction is possible when individuals practice positive self-talk and negative self-talk. They found that self-respect and self-criticism have an impact on basic psychological needs. However, self-criticism proved a greater impact on the negativity of individuals than the counterpart self-respect had on the positivity of individuals (Kyeong et al., 2020).

Self-talk can also increase rational thinking. In cognitive science, an experiment was conducted by Kross et al., (2017) on individuals and their “worry and risk perception” (Kross et al., 2017) with regards to Ebola. At the end of the experiment, the results indicated that the individuals using third-person self-talk had a reduction in their “worry” about Ebola, proving an increase in their rational thinking (Kross et al., 2017).

Kross et al., (2014) stated that “self-talk is a ubiquitous human phenomenon”. Self-talk as an “internal monologue” can alter individuals' behaviour through regulating their thoughts and feelings during social stress and anxiety, (Kross et al., 2014).

Self-talk studies can also be found in other research disciplines, such as education (Ada et al., 2019), sociology (Mukhtar, 2021), and philosophy (Geurts, 2018). However, the empirical studies of self-talk within the context of organisational science, creativity, and innovation remained scarce.

1.4 Self-talk studies in management sciences

Carmeli et al., (2006) and Lovelace et al., (2007) suggested that leaders should engage in self-talk more actively through “self-goal-setting, self-observation, self-reward, and self-management” to increase their productivity, creativity, and innovation within their roles. These leaders should also encourage their employees to engage in self-talk to increase their productivity (Lovelace et al., 2007). Neck & Manz, (1992) further stated that through self-talk employee performance can be enhanced by regulating their emotional state.

A study conducted by Rogelberg et al., (2013) on leaders and executives in organisations verified that constructive self-talk had a positive relation to effective leadership and the ability to lead others, as well as creativity and originality, whereas dysfunctional self-talk had a negative impact on creativity and originality.

Self-talk can be used to turn dysfunctional self-talk into functional self-talk to enhance employee performance. Self-talk can be taught and learned in an inexpensive manner, which in turn can have positive outcomes in a business context, to achieve organisational goals in highly competitive environments, (Millman, 2017). Millman, (2017), further explained that motivational self-talk, verbal self-guidance, when used by individuals with high self-efficacy, can have major positive outcomes due to the persistent behaviour to be successful.

1.5 Types of self-talk

Many different forms of self-talks exist and there are various ways to categorise them. The following sections discuss the three most common categories of self-talk:

- First-, second-, and third-person self-talk
- Positive and negative self-talk
- Instructional and motivational self-talk

1.5.1 First-, second- and third-person self-talk

Self-talk can be applied in three ways, through 1) first-person self-talk; 2) second-person self-talk; or 3) third-person self-talk (Gainsburg & Kross, 2020; Latinjak et al., 2019), and can be motivational or instructional in nature. First-person self-talk refers to talking to oneself, such as “I can do this” or “you can do this”, and second and third-person self-talk, as explained by Gainsburg and Kross, (2020) refer to “distance self-talk” whereby a person refers to themselves by either “we can do this” or addressing themselves by using their name.

According to Gainsburg and Kross, (2020), thought self-leadership is used in business as a strategy to influence oneself through positive thought controls, through second or third person self-talk. However, it requires training oneself in thought self-leadership and self-talk strategies to maintain positive and motivational self-talk.

Latinjak et al., (2019) described different self-talk strategies, in the form of pre-determined or self-determined self-talk, self-instructional self-talk, goal-directed self-talk, and reflexive self-talk.

Van Raalte et al., (2016) described different types of self-talk, that form part of the typical research studies. These include:

“...self-compassionate self-talk [...], calming self-talk [...], self-protective self-talk [...], task-irrelevant self-talk [...], humorous self-talk, self-talk related to others, associative self-talk related to enjoyment/appreciation [...], self-talk related to others [...], dissociative self-talk, which includes situation-irrelevant self-talk [...], repeating mantras [...] and self-talk pertaining to escape...” (Van Raalte et al., 2016, p. 142)

Godwin et al., (2016), developed a conceptual model in which they observed the influence of spirituality and self-leadership on one another and the thought patterns and self-efficacy on entrepreneurs. The findings in their research have relevance to this study.

In this research, all forms of self-talk incorporated in the research design will be from the first-person's perspective.

1.5.2 Positive and negative self-talk

Self-talks can also be distinguished from the perspective of the content of positive and negative self-talk. Positive self-talk is used by individuals to encourage or affirm a belief that a task can be performed and a goal achieved (Holland, 2020). Through the use of positive self-talk, individuals can enhance their focus and performance by regulating their feelings and thoughts (Tod et al., 2011).

Negative self-talk on the other hand impacts individuals in a negative sense when individuals make assumptions that they can not perform a certain task (Latinjak et al., 2019) or believe that they are unable to speak in a public forum or deliver a speech to an audience. Individuals practicing negative self-talk use inner-dialog such as "I will disappoint", or "I will fail" and "I have never done this before and I will be bad at it" (Holland, 2020; Millman, 2017).

In this research, all forms of self-talk incorporated in the research design will be of a positive nature.

1.5.3 Motivational self-talk and Instructional self-talk

Distinguishing if self-talk is cognitive or emotive in its nature can be deployed as another way to categorize them. Some self-talks aim to influence the emotional state of the individual and these self-talks can be considered motivational (Hardy, 2006; Latinjak et al., 2019). Whereas other self-talks are aimed to enhance cognitive strategy of individuals and can be considered as instructional self-talk (Hardy, 2006; Latinjak et al., 2019). The following sections will deliberate these two important self-talk strategies further as they are the foci of this empirical research.

1.5.3.1 Motivational self-talk

Motivational self-talk (MST) can be defined as "statements designed to facilitate performance by building confidence, increasing effort and energy expenditure and creating a positive mood" (Kolovelonis et al., 2011).

Bellemo et al., (2020) described motivational self-talk as a means of self-talk that drives individuals toward self-determination and improves self-confidence, to achieve a set goal by remaining focused during challenging tasks and situations.

Motivational self-talk is used to improve performance through psychological activation to perform challenging tasks by increasing one's confidence (Bellomo et al., 2020; Łysiak, 2019). Thibodeaux and Winsler, (2018) further explained that motivational self-talk “can encourage goal-directed behaviour and effort”, e.g., “I can do this”.

Kolovelonis et al., (2011) performed a self-talk study on students’ motor task performance during physical education. The results proved that motivational self-talk was more effective during the “modified push-ups test” in the experiment that they performed.

A study performed by Hase et al., (2019) concluded that the motivational self-talk group of participants, surpassed both the control and the instructional self-talk groups when performing a cardiovascular experiment.

Taking into account the research and experiments on motivational self-talk, it seems that motivational self-talk has a greater impact on individual performance than instructional self-talk.

1.5.3.2 Instructional self-talk

Instructional self-talk is a conscious process used by individuals during the learning process to guide themselves through a set of steps towards the successful execution of a skill or task (Bellomo et al., 2020).

Instructional self-talk is used for the same outcome as motivational self-talk, but through instructing oneself to perform tasks in a specific manner. Instructional self-talk is therefore an important skill when employees are cross-trained within departments, or upskilled for new positions within an organisation. Instructional self-talk can be defined as “statements designed to enhance performance by stimulating

desired actions through attentional focus on the technical aspects of a skill” (Kolovelonis et al., 2011).

As with the motivational self-talk study discussed above in section 1.5.3.1, a cardiovascular experiment performed on students proved that instructional self-talk had little influence on individuals, (Kolovelonis et al., 2011).

This study will focus on motivational self-talk and instructional self-talk, and the effects of these on the creativity and innovation of individuals in a business context.

1.6 Motivational and instructional self-talk for artistic creativity and entrepreneurial innovativeness

In a study by Glăveanu, (2018) a working definition of artistic creativity is “the process leading to the generation of both new/original and useful/effective products”. However, this definition is product focused and defends the fact that there might be more types of creativity. For this reason, the experiment conducted in this study specifies the creativity to be artistic creativity, which in effect is a drawing supplied to individuals to be as creative as possible.

This study further adopted the definition of entrepreneurial innovativeness as proposed by Tehseen et al., (2021). The authors suggested entrepreneurial innovativeness “can be defined as a kind of organisational culture or ability to support as well as to be engaged in developing new ideas and translating them into important business opportunities” (Tehseen et al., 2021).

Creativity plays a major role in the ability to be innovative and produce novel work (Ghosh, 2015). In his study, Ghosh, (2015), revealed that although creativity is a forerunner of innovation, creativity alone is not sufficient in the quest for innovation. Many scholars (Carmeli et al., 2006; DiLiello & Houghton, 2006; Ghosh, 2015; Neck & Manz, 1992) suggested that self-leadership, through instructional self-talk and motivational self-talk, influences the ability to be creative and innovative.

Ghosh, (2015) in a study of thought self-leadership established that there was a noteworthy relationship between self-talk, thought self-leadership, creativity, and

innovativeness among employees. Rogelberg et al., (2013) acknowledged the importance of self-leadership on the effective leading of employees. DiLiello and Houghton, (2006) found that leaders with strong self-leadership abilities believe their potential for innovation and creativity to be influenced through positive workplace support.

Ghosh, (2015), and Hughes et al., (2018), describe creativity as the act of producing novel work and can be seen as the root of innovation. A study by Ghosh (2015), revealed that there is a positive relationship between self-talk, self-leadership, and creativity, which translates to considerable innovation in the workplace. Hughes et al. (2018), further emphasised that creativity and innovation result in organisational benefits through improved processes and procedures, and innovation in the workplace generates competitive advantage (Ghosh, 2015).

Carmeli et al., (2006), Rogelberg et al., (2013) and Ghosh, (2015) suggested further studies into the field of self-talk and thought self-leadership in the field of management sciences. These future studies can benefit organisational creativity and innovativeness positively (Carmeli et al., 2006; Ghosh, 2015; Rogelberg et al., 2013).

.7 Knowledge gap in existing literature

Despite limited studies in the field of thought self-leadership, self-talk, motivational self-talk, and instructional self-talk, these studies have certain gaps. These gaps will be elaborated on below:

- In some instances, studies on motivational self-talk and instructional self-talk were performed in the same experiment. These experiments were mostly in the field of sport and sports psychology. However, there still remains a limited understanding of self-talk in the field of organisational creativity and innovativeness (Hardy, 2006).
- In the literature review, the researcher could not find sufficient peer-reviewed journals on artistic creativity, especially in the field of organisational and business science.

- The researcher did not find sufficient literature on entrepreneurial innovativeness. A study into the field of entrepreneurial innovativeness could be beneficial.

Therefore, further research into the impact of instructional self-talk and motivational self-talk is needed in the field of management sciences, especially through the use of an experimental research approach to unravel the causality between the two different types of positive first-person self-talk, versus motivational self-talk and instructional self-talk, and individuals' creativity and innovativeness. Hence, this study will focus on the impact of motivational self-talk and instructional self-talk (both in the form of first-person positive type) on an individual's ability to be creative and innovative. The schematical representation of this research can be found in Figure 1.

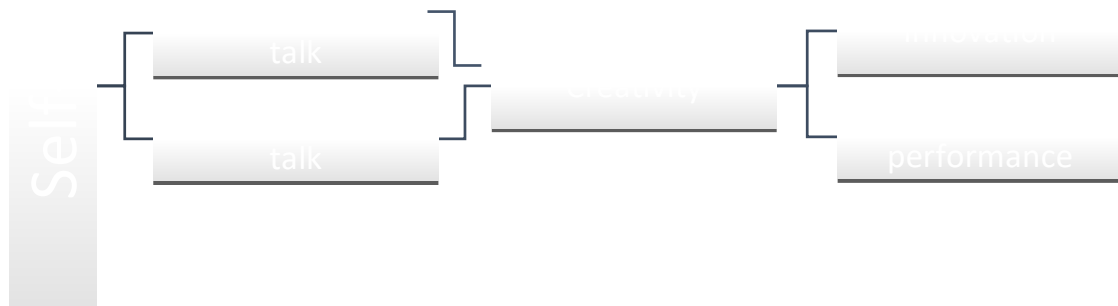


Figure 1: Schematical representation of the impact of first-person positive self-talk on innovation and performance, adapted from the "Simplified thought self-leadership model" by Neck & Manz, (1992)

.8 Conclusion

Godwin et al., (2016) stated that there are many thought self-leadership studies in the fields of management, psychology, and education. The researcher however found self-talk studies mostly in the field of sport and sports psychology. Of those studies related to self-talk and thought self-leadership, the researcher found the studies to be outdated, or older than five years.

It can therefore be concluded that motivational self-talk and instructional self-talk have an impact on creativity and innovation, and effectively on the motivation and

performance of individuals. As stated by many authors in the literature review above, there is a need for further research of self-talk, specific to the field of management sciences, as information is scarce in this field (DiLiello & Houghton, 2006; Ghosh, 2015; Hughes et al., 2018; Neck & Manz, 1992).

Chapter 3: Research Questions

3.1 Introduction

This chapter presents the research questions that formed the basis of this research experiment. These questions were formulated to explore the effects of motivational self-talk and instructional self-talk on individuals within a business context.

3.2 Research Question 1

What is the effect of motivational self-talk, instructional self-talk, and no self-talk on individuals' artistic creativity and entrepreneurial innovativeness?

Using a control group where no motivational self-talk or instructional self-talk was performed to evaluate whether there is a difference between motivational self-talk and instructional self-talk. Was there an improvement in business innovation during the second experiment?

Motivational self-talk had a greater impact on softball player performance (Chang et al., 2014). The question remains, does motivational self-talk influence innovation and creativity in a business context? However, in the same study by Chang et al., (2014) it was stated that instructional self-talk had a greater impact on fine motor skills, although they found in their laboratory experiment that both instructional self-talk and motivational self-talk had improvement in gross motor skills. However, does instructional self-talk influence innovation and creativity in a business context?

3.3 Research Question 2

What is the perception of the participants on motivational self-talk, instructional self-talk, and no self-talk on their respective artistic creativity and entrepreneurial innovativeness?

Research question 2 deals with the perception of the participant's performance during the experiment, i.e whether they perceived an improvement during tasks 3 and 4.

Chapter 4: Research methodology and design

4.1 Introduction

This chapter outlines the research methodology and design used in the study to analyse and answer the question:

- How does motivational and instructional self-talk impact on individual creativity and innovativeness?

The study utilised a qualitative quasi-experimental design. Data were gathered through a quasi-experiment conducted on individuals that volunteered for the experiment. The data were analysed and categorised using a 7-point Likert scale (Joshi et al., 2015) to evaluate the responses. The 7-point Likert scale proved to be more reliable with more options available to describe the responses with more variability and ease of use (Joshi et al., 2015). During the experiment, the researcher was sympathetic to participants' circumstances during the lockdown period and allowed one-on-one interviews to conduct each experiment, opposed to the group experiment initially planned. The researcher was cognisant of the potential concerns of bias, reliability, validity, ethical protocols in line with ethical research, and limitations of the experiment. These will all be presented in this chapter.

4.2 Research design

This study was conducted as a qualitative quasi-experiment (Saunders & Lewis, 2018) that determined the impact of motivational self-talk and instructional self-talk on creativity and innovation. In this study, data were gathered through an experiment conducted on participants who volunteered for the experiment. Qualitative research in this instance advanced a broader awareness and understanding of self-talk through the exploration during the experiment, (Bloomberg & Volpe, 2018). The purpose of the experiment was to explore the effects of self-talk on artistic creativity and entrepreneurial innovativeness.

4.2.1 Quasi-experiment

Differences between true experiments and quasi-experiments: In a true experiment, participants are randomly assigned to either the treatment or the control group, whereas they are not assigned randomly in a quasi-experiment.

A quasi-experimental design was adopted to conduct the experiment without randomisation of the participants. Each participant was allocated to one of the three groups with careful consideration. The experiment assumed an interpretivist philosophy whereby research was conducted in the field of self-talk, with the expectation of a generalised outcome (Saunders & Lewis, 2018), and was a cross-sectional experiment, and inductive in nature. Conclusions were therefore drawn from multiple participants at a specific point in time (Saunders et al., 2009).

The approach of this study was adopted from an experiment conducted by Chang et al., (2014) on softball players. In the field of sport psychology, Van Raalte et al., (2019) suggested that the history of self-talk in sport was primarily based on experiments conducted on individuals through cue cards, which were then interpreted and categorised to evaluate the effect of motivational self-talk and instructional self-talk. Bellomo et al., (2020), conducted a study using both instructional self-talk and motivational self-talk on golfers, in which they concluded that instructional self-talk resulted in better performance.

The overall approach of the experiment can be viewed in Table 1

Table 1: Different groups and experiments for this study

	Benchmark		Experiment	
	Task 1	Task 2	Task 3	Task 4
	Artistic creativity	Entrepreneurial innovativeness	Artistic creativity	Entrepreneurial innovativeness
Group 1	Benchmark		No cue card	
Group 2	Benchmark		Motivational self-talk cue card	
Group 3	Benchmark		Instructional self-talk cue card	

A benchmark is a standard or point of reference set to be used to evaluate progress or improvement. An experiment is conducted to test a research hypothesis or make a discovery and is conducted in a controlled environment (Singh, 2006). In this experiment, two benchmark tasks were set whereby each participant across the three groups received the same tasks to be used against the two tasks in the

experimental phase to evaluate whether motivational self-talk and instructional self-talk revealed improvement.

The experiment was conducted by interviewing an equal number of participants in three different groups one each of a: control group, a motivational self-talk group, and an instructional self-talk group. Each group had to perform two tasks. The control group performed both tasks without interruption and with no cue cards supplied. The first two tasks for groups 2 and 3 was a benchmark and the next two tasks, namely the experiment, were carried out after reading and responding to a cue card. The cue card for the instructional self-talk group of participants instructed them to reflect on their scenario before answering the question posed. With the motivational self-talk group of participants, a cue card with a motivational message was supplied. Each participant had to read this to themselves multiple times and had to use this self-talk while answering the questions posed in the second experiment.

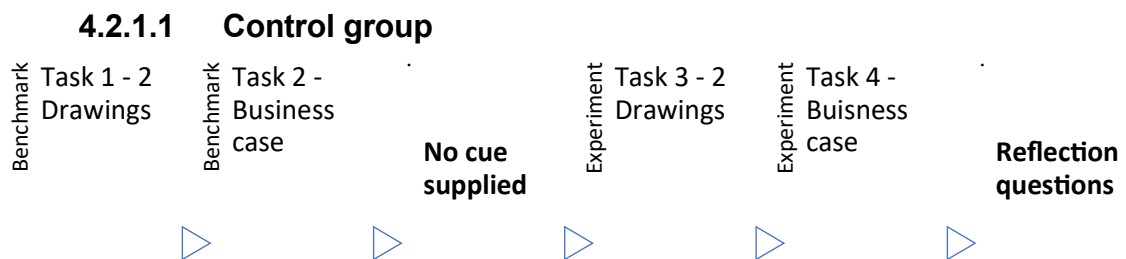


Figure 2: Control group

The entire experiment consisted of 4 tasks and 2 reflections questions. Task 1 was a drawing that had to be completed in Microsoft Word or Paint. Task 2 was a business scenario. These tasks were used as a baseline to establish whether there was an improvement during tasks 3 and 4. Task 3 was once again a drawing, and task 4 was another business scenario-type question. Each participant was then asked whether they felt a difference after using self-talk and whether they were more inspired during the execution of experiment 2. The control group did not receive any cues between experiment 1 and experiment 2.

4.2.1.2 Motivational self-talk

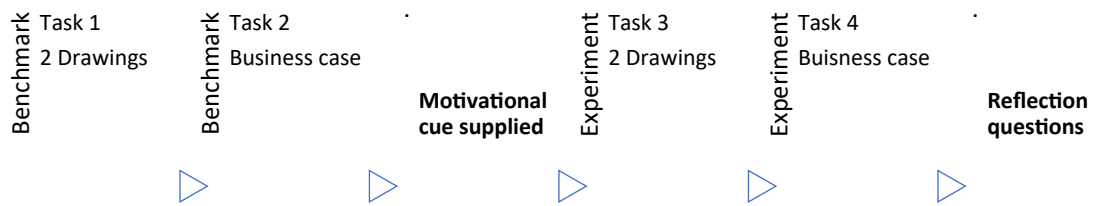


Figure 3: Motivational self-talk group

As with the control group and the instructional self-talk group, the motivational self-talk group received the same drawings and business scenario questions, however, the participants were supplied with a motivational cue between experiment 1 and experiment 2. Once again, tasks 1 and 2 were used as a baseline to establish whether there was an improvement during tasks 3 and 4. Each participant was then asked the same reflection questions as the control group.

4.2.1.3 Instructional self-talk group

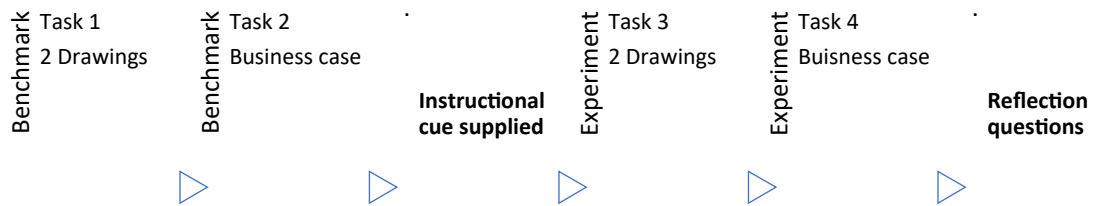


Figure 4: Instructional self-talk group

With the instructional self-talk group, the tasks and questions of the experiment were the same as with the control group, however, the participants were supplied with an instructional cue before they attempted experiment 2 (tasks 3 and 4). Once again, tasks 1 and 2 were used as a baseline to establish whether there was an improvement during tasks 3 and 4. Each participant was then asked the same reflection questions as the control group.

4.3 Research methodology

Research methodology is a systematic investigation into a field of study using specific processes and procedures to identify, select, and analyse information about a specific topic. (Singh, 2006)

4.3.1 Unit of analysis

The unit of analysis for this study focussed on individuals. Participants for each group were subjected to different cue cards as seen in Table 1. Each group of participants in the experimental group was evaluated against the control experiment tasks 1 and 2 on a Likert-7 scale (Joshi et al., 2015). After the responses of each participant were recorded, an average per group was calculated. The calculated average per group was then used to draw conclusions as set out in Chapter 5

4.3.2 Population

A research population generally consists of a large collection of individuals as the focal point of an inquiry (Saunders & Lewis, 2018). Due to the nature of the research project conducted by the researcher, it would be unfeasible for the researcher to conduct an experiment on an entire population, therefore, a simple population size of 30 participants was conducted using the snowballing effect, as explained in 4.3.4 below.

The population consisted of individuals that reside in South Africa, with diverse backgrounds. The population was categorised according to entrepreneurial background, business education, and formal education.

4.3.3 Research Samples

The sample size of this experiment consisted of three groups of participants. Each group consisted of an equal number of participants, with a total of 30 participants for the experiment.

Each group consisted of 10 participants as follows:

- Group 1 / Control group – 6 of the participants had entrepreneurial experience and 4 without entrepreneurial experience;
- Group 2 / Motivational self-talk – 4 participants with an entrepreneurial background and 6 without; and
- Group 3 / Instructional self-talk – 5 of the participants had an entrepreneurial background, and 5 participants without an entrepreneurial background.

The research sample selection was intended to have an equal number of participants with an entrepreneurial background in each group, i.e 5 with and 5 without entrepreneurial background. Due to not all participants of the initial list of volunteers arriving for the scheduled meetings, the researcher had to obtain more volunteers for the experiment which lead to the researcher carelessly misallocating individuals into the incorrect experimental group.

4.3.4 Sampling method and size

Initially, individuals were invited to participate in the experiment through a Google forms survey, whereby the purpose of the research was clearly explained (Saunders & Lewis, 2018), and that their anonymity would be assured. After the participants responded to the survey, a follow-up email was sent to those participants that accepted to be part of the experiment.

For the 30 individuals who indicated that they would like to form part of the experiment as they “opted-in” by completing the Google forms survey, an email with a date and time was sent to these prospective participants with a meeting invitation. Not all prospective participants arrived for the virtual meeting as per the set time. Follow-up emails were sent to those prospective participants that did not arrive and in some instances, confirmations were then received and new meetings were arranged with some of the participants.

After 12 days of one-on-one interviews/experiments, the researcher utilised her informal network to gain access to more participants. The number of participants was not reached and snowball sampling was utilised to obtain more participants. The process involved sending WhatsApp messages and emails to colleagues, friends, and family requesting them to forward the invitation to the experiment to their networks of friends. The researcher received numerous emails from prospective participants and set up three groups of interviews on two consecutive days. A total of 30 participants completed the experiment and the analysis of the data started.

4.3.5 Measurement instrument and data gathering process

The experiment was conducted by the researcher over 12 days with a total of 30 participants interviewed and responses submitted on the Google forms site, as described in section 4.2. As explained in section 4.2, the control group did not

receive a cue card between experiments 1 and 2. The instructional self-talk participants were supplied with an instruction to think of an outcome before they respond to the tasks in experiment 2, whereas the motivational self-talk participants were supplied with a cue card to motivate themselves. The cue supplied to the motivational self-talk group stated that they had to read “I am creative; I can do anything; I am innovative” to themselves multiple times before responding to the tasks in experiment 2. The tasks and questions are supplied in Appendix C: Experiment.

At the start of the interview, the researcher sent an email to the participants in the meeting, supplying them with the link to the Google Form site containing the experiment, along with task 1 and task 3 in the form of Microsoft Word attachments to ensure that the participants did not experience difficulty downloading the documents from the Google Forms site.

The researcher further explained to each participant how to use the “Draw” function on Microsoft Word. In some instances, the participants did not have the “Draw” function available in Word. The researcher assisted the participants with allocating the “Draw” function in the “Word Options Main tab”. In the cases where the participants did not have this function in the Main tab of Microsoft Word, the researcher then explained to the participants how to copy the task into Microsoft Paint to perform the tasks. Once the participant completed the tasks in either Microsoft Word or Paint, the researcher explained to the participants how to save and upload the file to the Google Forms site.

The effects of the experiment were analysed by 3 judges and the researcher. Each judge analysed all 3 groups of participants individually in the group that they participated in and according to the criteria set out in the rubric in Appendix D: Rubric. Once each participant was graded according to every task, the scores were then analysed at group level and calculated averages were given to each group of participants. Once all the judges finalised their analysis, the researcher compiled the findings into one document to evaluate whether motivational self-talk and instructional self-talk made a difference to a participant's creativity and innovativeness against the control group.

4.3.6 Analysis of the data

The data was obtained through an interview with the participants and recorded on a pre-generated Google forms site. After all, recipients were interviewed, the drawings and responses to the questions, along with the reflection question answers, were downloaded from the Google site. Each group of responses and participants were coded according to the experimental group, i.e. the control group was coded from C1 to C11, the instructional group was coded from IST1 to IST12, and the motivational group was coded from MST1 to MST11.

The responses were then sent via email to the 3 independent evaluators for analysis, using a standard rubric (Appendix D: Rubric) as supplied by the researcher. Each evaluator supplied responses to all recipients in a Microsoft Excel file. The researcher grouped these responses into one single file and analysed them to find an average per group. The results of the research will be supplied in chapter 5 below.

4.4 Quality controls

To ensure that researcher bias did not impact the study, the researcher created 3 different Google forms with the set questions and cues for each group of individuals. The researcher explained each question and then “muted” herself on Microsoft Teams to not influence or disturb the flow of the participants' thought processes. The goal of the experiment was not explained to the participants during the interview process, however, an explanation was supplied to each participant after they submitted their responses.

These responses were then emailed to the remaining 3 judges to evaluate independently using the rubric, in Appendix D: Rubric. An analysis was performed by the researcher, and the outcomes were supplied to the judges for further evaluation and commentary.

4.5 Limitations

Limitations to the study could be listed as follows:

- The study was conducted in the Gauteng region of South Africa. This could be a limitation due to demographics.
- The sample size described above consisted of individuals who volunteered for the experiment. This could be a limitation due to the limited sample size.
- Historically self-talk studies were performed in the field of sport and sports psychology. Not many self-talk studies in the fields of management and education in recent years.

4.6 Ethical considerations

The researcher applied for ethical clearance from the Gordon Institute of Business Science Ethics Committee before commencing with the self-talk experiment to ensure that the information requested from participants, and the experiment conducted would be treated with confidentiality and no personal information will be supplied to any third party (Bloomberg & Volpe, 2018). At the start of the experiment, the researcher went through the introduction and overview of the consent letter with each participant. If a participant felt uncomfortable with the experiment, they had the option to withdraw at any stage. To ensure anonymity, the researcher removed the names of all participants from the Microsoft Word documents and replaced such with a code from C1 to C10 for the control group, MST1 to MST10 for the motivational self-talk group, and IST1 to IST10 for the instructional self-talk group. The Microsoft Word documents with these codes and a single Microsoft Excel document with the business case answers with the same codings for the participants were supplied to the judges. The Excel document was also printed into a PDF document and was sent with the email to the judges. These responses are available in Appendix E: Experiment responses.

Chapter 5: Results

5.1 Introduction

This chapter presents the findings of the experiment on 30 individuals in 3 different groups, i.e a control group, a motivational self-talk group, and an instructional self-talk group. The key findings are presented as per the questions posed in chapter 3 and in relation to the responses received during the experiment.

This chapter will commence with business background information such as business education, level of position at work, and highest qualification of the participants. The reason for this information is to establish whether there is a correlation between business education and the effect that self-talk has on innovation and creativity. The chapter then proceeds to answer the research questions.

5.2 Participants background information

The control group of participants who volunteered for the experiment had a diverse range of backgrounds. The researcher aimed to allocate participants in a way to diversify the education level across the groups to establish a more reliable outcome. Figure 5 is a graphical representation of the educational background per experimental group.

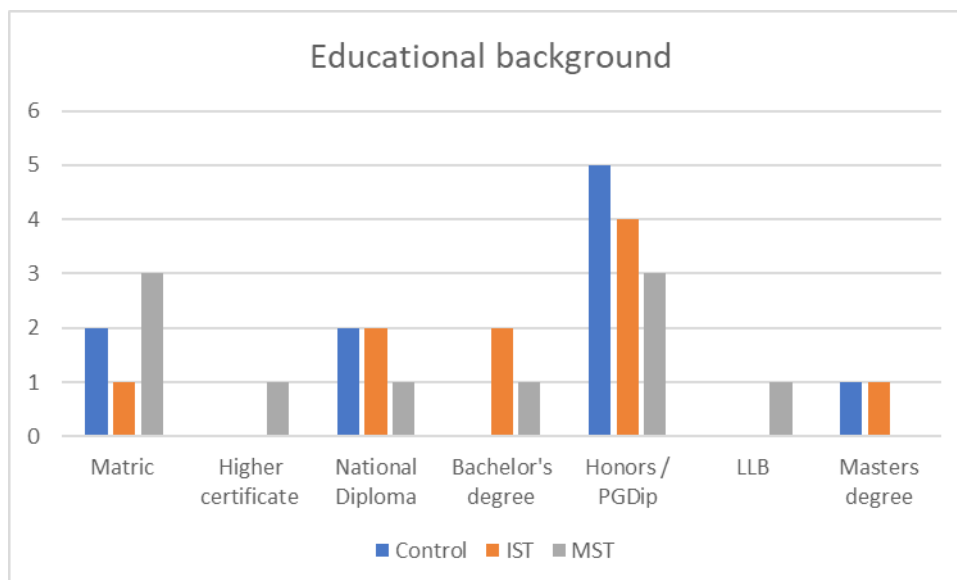


Figure 5: Educational background of participants

A further analysis was conducted into the entrepreneurial status of participants. The researcher aimed to allocate an equal number of participants with entrepreneurial backgrounds to each experimental group. As shown in Figure 6, an error was made on the part of the researcher and two individuals were allocated incorrectly to the wrong group.

Figure 6 presents a split of 4 participants with an entrepreneurial background, the instructional self-talk group with 5 participants and the motivational self-talk group had 6 participants with an entrepreneurial background.

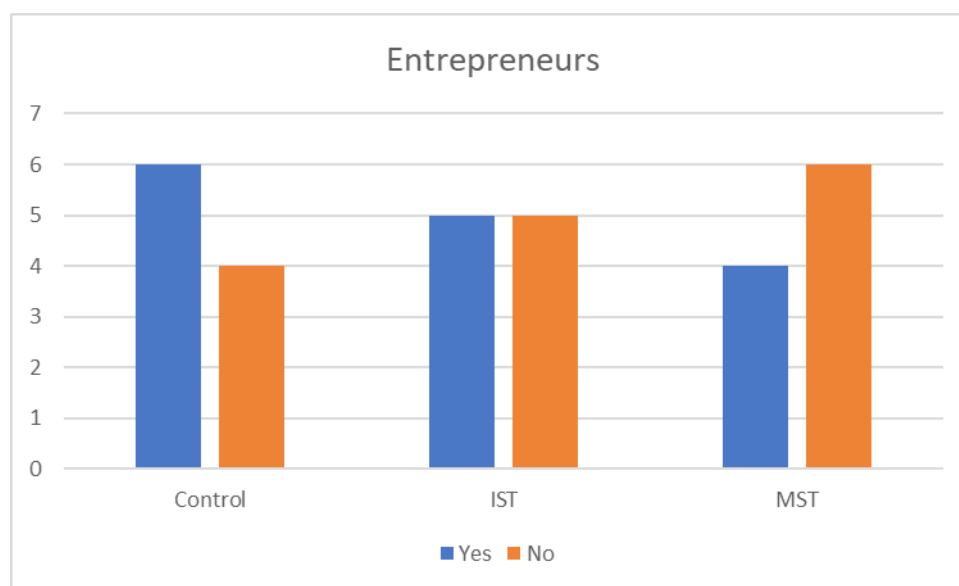


Figure 6: Entrepreneurial background

5.3 Research Question 1

- *What is the effect of motivational self-talk, instructional self-talk, and no self-talk on individuals' artistic creativity and entrepreneurial innovativeness?*

This research question aimed to evaluate whether motivational self-talk and instructional self-talk have an influence on individuals' performance and whether it made a difference if no self-talk was applied. An analysis was performed on the evaluations/ratings of the 3 judges. All judges' ratings were combined into a single Microsoft Excel sheet. Each participant rating was allocated according to the codings supplied by the researcher, and an average of each participant rating was calculated. The evaluations of each group of participants will be presented below.

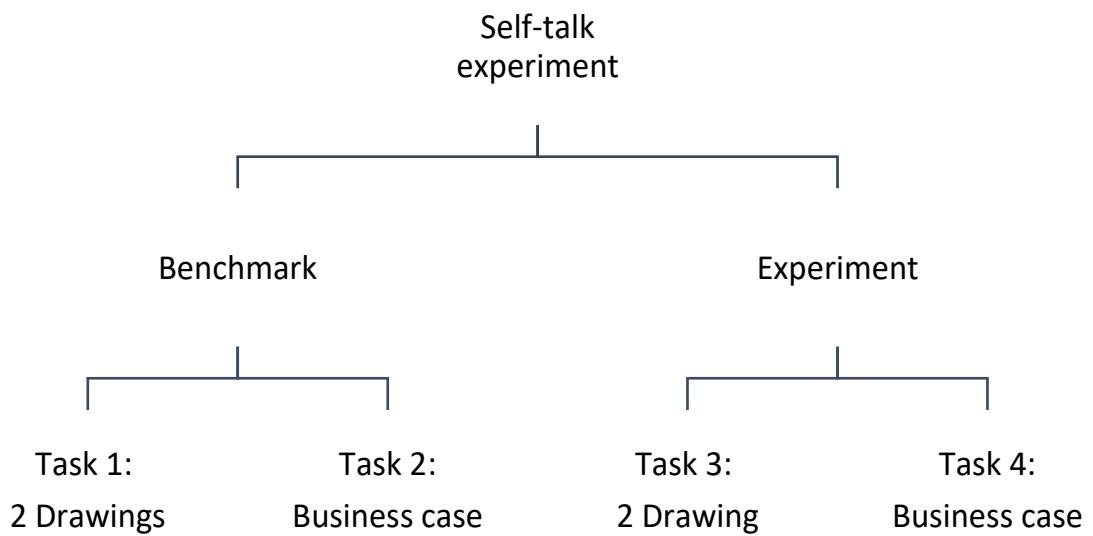


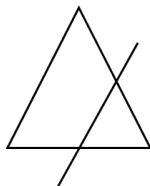
Figure 7: The self-talk experiment layout

5.3.1 Artwork creativity tasks

The artwork experiment was done on Microsoft Word where each participant had to download a given document with pictures already supplied. They had to use the illustration as a base to create 2 new art pieces in each experiment, i.e. task 1a and 1b, and task 3a and 3b. Both questions instructed the participants to use the illustration to create unique art pieces and then add a creative title to the art pieces.

Task 1:

Art work title:



Task 3:

Art work title:

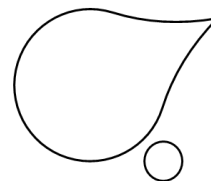


Figure 8: Artwork creativity task 1 and task 3

Task 1 and task 3 of the artwork creativity task, as presented in Figure 8 was used as a benchmark. Each participant received two identical pictures for each task (Appendix C) to create two unique art pieces. These art pieces were chosen as they look very similar to ensure that the researcher does not introduce new or other variables. This allowed the researcher and the judges to evaluate whether there was an effect after the self-talk cues were introduced.

5.3.2 Business innovation tasks

With the business case experiment, each participant across the 3 different groups received the same questions. The question for the experiment is listed below:

- *Task 2 - You have decided to start an ice-cream store in Sandton City right next to Nelson Mandela Square. List all the innovative ideas that will contribute towards making this store highly successful.*
- *Task 4 - You have decided to start a toy store in a farming community in the Northern Cape region. List all the innovative ideas that will contribute towards making this store highly successful.*

Chapter 4 outlines the methodology around the reasoning for each group, but in brief, the control group received no self-talk cues, the motivational self-talk group received a cue that they had to repeat to themselves multiple times before and during the second experiment, and the instructional self-talk group received a cue that instructed them to think about the art and business case before attempting the exercise, and also instructed them to answer the business case systematically. The outcomes are discussed below.

5.3.3 Control group

As discussed in Chapter 4, the participants of the control group did not receive any self-talk cues between the benchmark tasks and the experiment tasks. The findings are presented below in section 5.3.3.1 Table 2, section 5.3.3.2 Table 4, and section 5.3.3.3 .

5.3.3.1 Artistic creativity

Table 2 reveals that with the control group, 9 of the 10 participants got more innovative with their drawings in task 3, and 1 of the participants' drawings showed a decline in creativity from their first drawings.

Table 2: Control group: Artwork comparison

Improved	The same	Worse	Total
9	0	1	10

Table 3 below shows an increase of 52% in the artistic creativity of entrepreneurs, where the non-entrepreneurs showed an increase of 15%.

Table 3: Control group level of artistic creativity: Entrepreneurial analysis

Control group		
Entrepreneur	Ave Entrepreneur	Ave Non Entrepreneur
Benchmark		
Task 1a	3.38	3.81
Task 1b	3.29	4.56
Average of Task 1	3.33	4.19
Experiment		
Task 3a	4.33	4.69
Task 3b	4.38	4.81
Average of task 3	4.35	4.75
Level of creativity during task 3	52%	15%

5.3.3.2 Business case

The business case experiment however proved different. With the control group, the responses from the business case in the second experiment were not as innovative as the responses from the first experiment. Of the 10 participants, 3 improved during the second experiment, 2 did not improve but remained on average the same, but 5 of the participant responses were less innovative than their first responses, as shown in Table 4.

Table 4: Control group: Business case comparison

Improved	The same	Worse	Total
3	2	5	10

Table 5 below shows an increase in innovativeness for entrepreneurs at 6% and a decline of 9% in innovativeness for non-entrepreneurs.

Table 5: Control group: Entrepreneurial analysis

Control group		
Entrepreneur	Ave Entrepreneur	Ave Non Entrepreneur
Benchmark - Task 2		
Task 2	4.58	4.75
Task 4	4.79	4.31
Level of innovation during task 4	6%	-9%

5.3.3.3 Overall

The level of creativity between task 1 artwork 1a, and task 3 artwork 3a increased by 26% from a judge's rating of 3.55 to 4.48. Between task 1 artwork 1b and task 3 artwork 3b, the level of creativity increased from 3.80 to 4.55, making this an increase of 20% in creativity for artwork 2. When looking at the artwork holistically, the overall creativity increased by 23%, as shown in . However, the business case comparison presented a decrease in innovation with a judge's rating of 4.65 for task 2 and a rating of 4.60 for task 4, therefore presenting a 1% decline in innovation between tasks 2 and 4. The results are presented in and below.

Table 6: Control group: Rubric evaluations

Group 1: Control Group - No cue cards supplied					
Criteria	Task 1 rating	Task 2 rating	Task 3 rating	Task 4 rating	Analysis Exp 2/Exp 1
The level of creativity of Artwork 1 is high.	3.55		4.48		26%
The level of creativity of Artwork 2 is high.	3.80		4.55		20%
The level of innovativeness of the business tactics presented is high.		4.65		4.60	-1%
Average of the experiments	3.68	4.00	4.51	4.54	14%

Table 7: Control group: Judges' evaluations

Control group												
Entrepreneur		Yes	No	No	Yes	Yes	No	Yes	Yes	No	Yes	
Benchmark		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	Average
Task 1a	Average	5.25	4.00	4.50	2.75	3.00	3.00	1.50	2.50	3.75	5.25	3.55
Task 1b	Average	5.50	5.00	5.00	2.50	3.50	4.00	1.00	2.00	4.25	5.25	3.80
Average of Task 1		5.38	4.50	4.75	2.63	3.25	3.50	1.25	2.25	4.00	5.25	3.68
Task 2	Average	5.50	6.00	4.75	3.75	3.75	3.00	5.00	4.25	5.25	5.25	4.65
Average of Benchmark		5.4	5.0	4.8	3.0	3.4	3.3	2.5	2.9	4.4	5.3	4.0
Experiment		C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	Average
Task 3a	Average	6.00	4.75	5.00	4.75	4.00	5.00	2.75	4.00	4.00	4.50	4.48
Task 3b	Average	5.75	5.25	4.75	5.00	4.00	4.50	3.00	4.00	4.75	4.50	4.55
Average of task 3		5.88	5.00	4.88	4.88	4.00	4.75	2.88	4.00	4.38	4.50	4.51
Task 4	Average	5.50	5.50	4.25	4.00	4.50	2.75	5.00	4.75	4.75	5.00	4.60
Average of Experiment		5.75	5.17	4.67	4.58	4.17	4.08	3.58	4.25	4.50	4.67	4.54
Level of creativity during task 3		9%	11%	3%	86%	23%	36%	130%	78%	9%	-14%	23%
Level of innovation during task 4		0%	-8%	-11%	7%	20%	-8%	0%	12%	-10%	-9%	-1%
Level of innovation and creativity during Exp 2		6%	3%	-2%	53%	22%	23%	43%	46%	2%	-11%	14%

When comparing entrepreneurs with non-entrepreneurs in the control group against the benchmark, entrepreneurs' creativity and innovativeness increased 26%, and non-entrepreneurs increased overall by 6%. This is presented in Table 8.

Table 8: Control group, entrepreneurial analysis

Control group		
Entrepreneur	Ave Entrepreneur	Ave Non Entrepreneur
Benchmark		
Task 1a	3.38	3.81
Task 1b	3.29	4.56
Average of Task 1	3.33	4.19
Task 2	4.58	4.75
Average of Benchmark	3.75	4.38
Experiment		
Task 3a	4.33	4.69
Task 3b	4.38	4.81
Average of task 3	4.35	4.75
Task 4	4.79	4.31
Average of Experiment	4.50	4.60
	20%	5%
Entrepreneur		
Level of creativity during task 3	52%	15%
Level of innovation during task 4	6%	-9%
Level of innovation and creativity combined	26%	6%

5.3.4 Motivational self-talk

The motivational self-talk experimental group was presented with a cue requesting them to repeat the words “I am creative; I can do anything; I am innovative” while completing the experiment tasks 3 and 4. The results are presented in section 5.3.4.1 Table 9 and Table 10, section 5.3.4.2 Table 11 and Table 12, and section 5.3.4.3 Table 13 and Table 14.

5.3.4.1 Artwork

With the motivational self-talk group, 8 participants' innovativeness improved their artwork, and 2 participants' creativity decreased during the execution of the second drawing. This is represented in Table 9.

Table 9: Motivational self-talk: Artwork comparison

Improved	The same	Worse	Total
8	0	2	10

When comparing the effects of motivational self-talk with benchmark task 1, entrepreneurs showed an improvement of 12%, where non-entrepreneurs improved their artistic creativity by 50%.

Table 10: Motivational self-talk artistic creativity

MOTIVATIONAL SELF-TALK		
	Ave Entrepreneur	Ave Non Entrepreneur
Benchmark		
Task 1a	4.56	2.83
Task 1b	4.56	3.00
Average of Task 1	4.56	2.92
Experiment		
Task 3a	4.88	4.04
Task 3b	4.94	4.00
Average of task 3	4.91	4.02
Level of creativity during task 3	12%	50%

5.3.4.2 Business case

The business case for the motivational self-talk group reflected 5 case improvements, 2 participants on average remained the same, and 3 participants'

innovation with their answered decreased. Table 11 below is a representation of such.

Table 11: Motivational self-talk: Business case comparison

Improved	The same	Worse	Total
5	2	3	10

The motivational self-talk group of entrepreneurs improved their innovation by 8% with an increase of an average of 5.13 to 5.50. The non-entrepreneurs innovation on task 4 decreased from an average of 4.17 to 3.83, equating to a 9% decrease in innovation. Table 12 below demonstrated this entrepreneurial analysis.

Table 12: Motivational self-talk: Entrepreneurial analysis

MOTIVATIONAL SELF-TALK		
	Ave Entrepreneur	Ave Non Entrepreneur
Benchmark		
Task 2	5.13	4.17
Task 4	5.50	3.83
Level of innovation during task 4	8%	-9%

5.3.4.3 Overall

The level of creativity between task 1 artwork 1a and 1b, and task 3 artwork 1a and 1b increased by 24% and 21% respectively. The judge's ratings were 3.53 and 3.63 for task 1 artwork 1 and 2 respectively, and 4.38 for both artwork 3a and 3b (Table 13). The overall creativity increased by 22% (Table 14). The business case comparison however presented a decrease in innovation with a judge's rating of 4.55 for task 2 and a rating of 4.50 for task 4, therefore presenting a 1% decline in innovation between tasks 2 and 4. The overall creativity and innovation however showed an increase of 13%.

Table 13: Motivational self-talk: Rubric evaluations

Group 2: Experimental group 1 - Motivational ST cue card supplied					
Criteria	Task 1	Task 2	Task 3	Task 4	
The level of creativity of Artwork 1 is high.	3.53		4.38		24%
The level of creativity of Artwork 2 is high.	3.63		4.38		21%
The level of innovativeness of the business tactics presented is high.		4.55		4.50	-1%
Average of the experiments	3.58	3.90	4.38	4.42	13%

Table 14: Motivational self-talk: Judges' evaluations

MOTIVATIONAL SELF-TALK												
Entrepreneur		Yes	No	No	No	Yes	No	Yes	Yes	No	No	4
Benchmark		M5T1	M5T2	M5T3	M5T4	M5T5	M5T6	M5T7	M5T8	M5T9	M5T10	Average
Task 1a	Average	3.25	1.50	1.75	2.25	5.25	4.25	4.25	5.50	3.25	4.00	3.53
Task 1b	Average	2.75	1.75	1.75	2.75	5.50	5.00	4.25	5.75	3.50	3.25	3.63
Average of Task 1		3.00	1.63	1.75	2.50	5.38	4.63	4.25	5.63	3.38	3.63	3.58
Task 2	Average	5.00	3.50	4.50	3.00	5.75	4.75	4.50	5.25	4.00	5.25	4.55
Average of Benchmark		3.7	2.3	2.7	2.7	5.5	4.7	4.3	5.5	3.6	4.2	3.9
Experiment		M5T1	M5T2	M5T3	M5T4	M5T5	M5T6	M5T7	M5T8	M5T9	M5T10	Average
Task 3a	Average	4.25	3.75	2.75	3.50	5.75	5.00	4.00	5.50	5.25	4.00	4.38
Task 3b	Average	5.25	3.75	2.75	3.50	5.25	5.25	3.75	5.50	5.00	3.75	4.38
Average of task 3		4.75	3.75	2.75	3.50	5.50	5.13	3.88	5.50	5.13	3.88	4.38
Task 4	Average	5.25	1.75	4.75	3.00	6.00	5.75	5.50	5.25	3.75	4.00	4.50
Entrepreneur		Yes	No	No	No	Yes	No	Yes	Yes	No	No	
Average of Experiment		4.92	3.08	3.42	3.33	5.67	5.33	4.42	5.42	4.67	3.92	4.42
Level of creativity during task 3		58%	131%	57%	40%	2%	11%	-9%	-2%	52%	7%	22%
Level of innovation during task 4		5%	-50%	6%	0%	4%	21%	22%	0%	-6%	-24%	-1%
Level of innovation and creativity during Exp 2		34%	37%	28%	25%	3%	14%	2%	-2%	30%	-6%	13%

The overall analysis of the motivational self-talk group of participants showed an increase of 9% for the participants with an entrepreneurial background, with an average of 4.75 for the benchmark and 5.10 for the experiment. The non-entrepreneurial participants' combined level of innovation and creativity increased from 3.33 to 3.96 which equates to a 21% increase, as shown in .

Table 15: Motivational self-talk: Entrepreneurial analysis

MOTIVATIONAL SELF-TALK		
	Ave Entrepreneur	Ave Non Entrepreneur
Benchmark		
Task 1a	4.56	2.83
Task 1b	4.56	3.00
Average of Task 1	4.56	2.92
Task 2	5.13	4.17
Average of Benchmark	4.75	3.33
Experiment		
Task 3a	4.88	4.04
Task 3b	4.94	4.00
Average of task 3	4.91	4.02
Task 4	5.50	3.83
Average of Experiment	5.10	3.96
Level of creativity during task 3		12% 50%
Level of innovation during task 4		8% -9%
Level of innovation and creativity combined		9% 21%

5.3.5 Instructional self-talk

As with the motivational self-talk experimental group, the instructional self-talk group received a cue after experiment 1. The cue instructed the participants to plan the response to tasks 3 and 4. The instructional self-talk group was instructed to answer the business case systematically once they have decided how they will answer the business case.

5.3.5.1 Artwork

The artwork of all 10 participants improved in task 3 when compared with the artwork in task 1. The evaluations from the judges for each participant are presented in Table 16.

Table 16: Instructional self-talk: Artwork comparison

Improved	The same	Worse	Total
10	0	0	10

The instructional self-talk participants increased their artistic creativity by 75% and the non-entrepreneurs increased their creativity by 58%.

Table 17: Instructional self-talk: entrepreneurial analysis

INSTRUCTIONAL SELF-TALK		
	Ave Entrepreneur	Ave Non Entrepreneur
Benchmark		
Task 1a	3.35	3.70
Task 1b	3.35	3.75
Average of Task 1	3.35	3.73
Experiment		
Task 3a	5.00	5.25
Task 3b	4.90	5.25
Average of task 3	4.90	5.25
Level of creativity during task 3	75%	58%

5.3.5.2 Business case

With the business case question posed, 7 of the 10 participants in the instructional self-talk group improved, 1 participant remained the same, and 2 participants showed a decline with their innovation in answering the case.

Table 18: Instructional self-talk: Business case comparison

Improved	The same	Worse	Total
7	1	2	10

The business case analysis of the entrepreneurs and non-entrepreneurs showed a 7% and 18% increase respectively, as visible in .

Table 19: Instructional self-talk: Business case

INSTRUCTIONAL SELF-TALK		
	Ave Entrepreneur	Ave Non Entrepreneur
Benchmark		
Task 2	5.30	4.40
Task 4	5.70	5.05
Level of innovation during task 4	7%	18%

5.3.5.3 Overall

Table 20 below show an increase in creativity for artwork 1 and 2 of 45% and 43% respectively. The level of innovativeness increased by 11% and in total the innovation and creativity of the instructional self-talk group increased by 31% in experiment 2 ().

Table 20: Instructional self-talk: Rubric evaluations

Group 3: Experimental group 2 - Instructional ST cue card supplied					
Criteria	Task 1 rating	Task 2 rating	Task 3 rating	Task 4 rating	Analysis Exp2/Exp1
The level of creativity of Artwork 1 is high.	3.53		5.13		45%
The level of creativity of Artwork 2 is high.	3.55		5.08		43%
The level of innovativeness of the business tactics presented is high.		4.85		5.38	11%
Average of the experiments	3.54	3.98	5.10	5.19	31%

Table 21: Instructional self-talk: Judges' evaluations

INSTRUCTIONAL SELF-TALK												
Entrepreneur		No	No	No	No	Yes	Yes	Yes	Yes	Yes	No	
Benchmark		IST1	IST2	IST3	IST4	IST5	IST6	IST7	IST8	IST9	IST10	Average
Task 1a	Average	5.00	4.50	2.00	4.25	4.25	2.25	4.00	5.00	1.25	2.75	3.53
Task 1b	Average	5.25	4.75	1.75	3.75	5.00	3.00	3.50	4.00	1.25	3.25	3.55
Average of Task 1		5.13	4.63	1.88	4.00	4.63	2.63	3.75	4.50	1.25	3.00	3.54
Task 2	Average	3.50	3.50	3.75	5.00	5.50	5.75	5.50	5.25	4.50	6.25	4.85
Average of Benchmark		4.6	4.3	2.5	4.3	4.9	3.7	4.3	4.8	2.3	4.1	4.0
Experiment		IST1	IST2	IST3	IST4	IST5	IST6	IST7	IST8	IST9	IST10	Average
Task 3a	Average	5.25	5.00	4.75	5.50	5.75	4.75	5.00	5.50	4.00	5.75	5.13
Task 3b	Average	5.75	4.50	4.75	5.75	5.50	5.25	4.75	5.00	4.00	5.50	5.08
Average of task 3		5.75	4.50	4.75	5.75	5.50	5.25	4.75	5.00	4.00	5.50	5.10
Task 4	Average	5.00	4.75	4.25	4.75	5.50	6.25	6.00	6.50	4.25	6.50	5.38
Average of Experiment		5.33	4.75	4.58	5.33	5.58	5.42	5.25	5.67	4.08	5.92	5.19
Level of creativity during task 3		12%	-3%	153%	44%	19%	100%	27%	11%	220%	83%	44%
Level of innovation during task 4		43%	36%	13%	-5%	0%	9%	9%	24%	-6%	4%	11%
Level of innovation and creativity during Exp 2		16%	12%	83%	23%	14%	48%	21%	19%	75%	45%	31%

The entrepreneurial analysis in Table 22 below shows an increase for the participants with entrepreneurial background from an average of 4.00 to 5.20, equating to a 35% overall increase. The non-entrepreneurs however showed an increase from 3.95 to 5.18, which equates to a 36% increase.

Table 22: Instructional self-talk: Entrepreneurial analysis

INSTRUCTIONAL SELF-TALK		
	Ave Entrepreneur	Ave Non Entrepreneur
Benchmark		
Task 1a	3.35	3.70
Task 1b	3.35	3.75
Average of Task 1	3.35	3.73
Task 2	5.30	4.40
Average of Benchmark	4.00	3.95
Experiment		
Task 3a	5.00	5.25
Task 3b	4.90	5.25
Average of task 3	4.90	5.25
Task 4	5.70	5.05
Average of Experiment	5.20	5.18
Level of creativity during task 3	75%	58%
Level of innovation during task 4	7%	18%
Level of innovation and creativity combined	35%	36%

5.4 Summary of findings for research question 1

From the experiment, it emerged that artwork improved across the experimental groups. In the business context questions, however, the individual responses varied, with a decrease of innovation in both the control group and the motivational self-talk group.

5.5 Research Question 2

- *What is the perception of the participants on motivational self-talk, instructional self-talk, and no self-talk on their respective artistic creativity and entrepreneurial innovativeness?*

5.5.1 Introduction

The aim of research question 2 was to receive feedback from the participants on their own experience with the experiment. From the start of the experiment, none of the participants were informed of the goal of the experiment. The interviewer explained to each participant that the experiment is on self-talk and they have to complete 4 tasks of which they have to perform 4 drawings and 2 business-related cases. Once the experiment concluded, each participant was given 2 reflection questions to answer. These questions aimed to evaluate the participant's perception of whether self-talk was effective during their individual experiments.

The questions posed to participants were as follows:

- *Q1. Did you feel a difference between using self-talk or not: If so, how so and why so? If not, why not?*
- *Q2. Do you think that the practicing of self-talk had an impact on the outcome of your tasks? i.e. were you more effective/successful while completing the second round of tasks? If so, how so and why so? If not, why not?*

After each participant answered these questions and submitted their experiment, the researcher explained the goal of the experiment and also informed the participants in which of the 3 groups they responded.

5.5.2 Control Group

Although the control group did not receive any form of self-talk cues during the experiment, from the responses to these questions it is evident that 8 out of 10 participants felt that self-talk made an impact on their ability to perform the second experiment. The responses are included in **Appendix E: Experiment responses**. Only 2 participants did not experience any self-talk or did not see that there was any self-talk cue supplied. However, some of the participants felt that they were overthinking the answers and once they stopped talking to themselves, they were able to “go with the flow” and get creative.

5.5.3 Motivational self-talk group

The motivational self-talk group of participants felt a difference with the second experiment after the self-talk cue, however, many of the participants felt more doubt about their ability to perform the tasks. In many cases, the participants answered that the ‘perfectionist in them’ came out and made it more difficult for them to perform the tasks, even though they were self-talking and telling themselves that they were capable of anything and that they were creative and innovative.

5.5.4 Instructional self-talk group

With the instructional self-talk group, each of the 10 participants felt a difference while answering the second experiment. Some of the participants felt more comfortable while answering the second experiment, however, many of the participants felt that the second experiment had put more pressure on them to perform better.

5.6 Summary of the findings for research question 2

Research question 2 was a reflection question posed to each participant. The responses varied according to each experimental group. In some cases the participants felt confident that they improved their overall creativity and innovativeness, however, they were unaware that they formed part of the control group. Some of the participants in the motivational and instructional group did not experience any self-talk, and only once the researcher explained the cues, did they recognise and understand the dynamics of the experiment.

5.7 Conclusion

The time allocated to the experiment was 90 minutes. The 90 minutes allocated to the experiment included the time the researcher spent on explaining the flow of the experiment and how to use the Draw tool in Microsoft Word and the explanation of each task. On average the experiment lasted 40 minutes for the control group, 55 minutes for the motivational self-talk group, and 70 minutes for the instructional self-talk group. In 1 instance of the instructional self-talk experiment, the experiment lasted the full 90 minutes. Each task was allocated 10 minutes and participants had the option to stop the timer once they finalised a task and move on to the next task.

Chapter 6: Discussion and Results

1

1.1 Introduction

This chapter continues with a detailed discussion of the results as presented in chapter 5. The results chapter is set out in the same order as chapter 5, and the discussion relates to each question and section of the questions in the same sequence.

1.2 Discussion of research question 1

- *What is the effect of motivational self-talk, instructional self-talk, and no self-talk on individuals' artistic creativity and entrepreneurial innovativeness?*

Research question 1 identified the importance of motivational self-talk and instructional self-talk on artistic creativity and innovativeness. The research question further examined the creativity and innovativeness of entrepreneurs and non-entrepreneurs. This research, therefore, extends the area of literature in the field of self-talk in a business context.

The literature alludes to the fact that motivational self-talk made a greater impact on individual performance than what was observed in a control group, as well as the instructional self-talk group, but this was limited to the field of sport and sports psychology (Hase et al., 2019). However, this experiment and the results suggest differently.

As suggested in Chapter 5, each participant was given 4 tasks. These tasks were broken down into a benchmark (tasks 1 and 2) and an experiment (tasks 3 and 4). Tasks 1 and 3 were evaluated against each other, and tasks 2 and 4 were analysed against each other to establish whether there was indeed improvement after a cue was supplied to the participants. A complete analysis and discussion will follow below.

1.2.1 Artwork creativity tasks

The illustrations supplied to the participants (Appendix C), in tasks 1 and 3 of the experiment instructed the participants to create unique art pieces with unique titles per art piece. This was used to test whether self-talk had an impact on artistic creativity (Glăveanu, 2018). The artwork creativity tasks will be discussed per group of participants in the sections to follow.

1.2.2 Business innovation tasks

As with the artwork creativity tasks, the business innovation tasks, tasks 2 and 4 were used to analyse the participant's ability to improve on the experimental task once a cue was supplied. In the case of the business innovation tasks, participants were allowed to think of entrepreneurial innovative ways to establish and build a successful business in a particular community (Tehseen et al., 2021). These cases were very similar.

1.2.3 Control Group

As stated throughout this research paper, the control group was not supplied with any cues at any point during the entire experimental phase. The results prove this case.

1.2.3.1 Artistic creativity

Chapter 5 above revealed the results of the artistic creativity of the control group. With that, the effects of no self-talk on artistic creativity proved that self-talk does not have an impact on artistic creativity. As suggested by Ghosh, (2015), self-talk has an impact on “creativity”.

The researcher further analysed the data and separated the entrepreneurs from the non-entrepreneurs. The scores allocated by the judges proved that entrepreneurs improved their artistic creativity by 52% whereas the non-entrepreneurs only improved by 15%. But when the scores allocated are further analysed, the non-entrepreneurs scored higher for both the benchmark task 1 and the experimental task 3.

1.2.3.2 Business case

The business case experimental data is in contrast with the artistic creativity, as was expected. In the control group, only 3 participants improved their business case idea from task 2 to task 4. This falls in line with the literature by Carmeli et al., (2006) DiLiello & Houghton, (2006), Ghosh, (2015), Godwin et al., (2016), and Neck & Manz, (1992) who suggested that creativity and innovation are influenced by self-leadership and self-talk, using motivational and instructional self-talk.

The analysis of the entrepreneurs versus non-entrepreneurs in the control group showed an improvement in the business case for the entrepreneurs, and a decrease for the non-entrepreneurs. Once again, the non-entrepreneurs started off a higher base score than the entrepreneurs. However, the end result proved that the entrepreneurs' improved score was higher than the base score of the non-entrepreneurs. Tehseen et al., (2021) suggested that organisational culture has an impact on entrepreneurial innovativeness. From the results in chapter 5, it is evident that there is a correlation between the results and the definition posed by Tehseen et al., (2021).

1.2.3.3 Overall

The overall creativity level increased, as stated in chapter 5, by 23% (task 3 vs task 1), the business case (task 4 vs task 2) decreased by 1%, bringing the overall experiment level of innovation and creativity for the control group to an improvement of 14%. The data presented in chapter 5 proved that entrepreneurs were more creative and the level of innovation was higher than the non-entrepreneurs.

The conclusion that the researcher drew from the artistic creativity exercise was that once the participants got more confident with the program they used to draw the artwork, the better the drawings became in the third task. According to the results of the business case, the researcher made the assumption that artistic creativity has no impact on innovation in the control group experiment.

1.2.4 Motivational self-talk

The motivational self-talk group of participants was given a motivational cue after the benchmark tasks 1 and 2, as explained in chapters 4 and 5. The motivational self-talk group results are in full contrast with the literature on motivational self-talk. The

literature stated that motivational self-talk had a greater impact on individual performance than both instructional self-talk and control groups (Hase et al., 2019).

1.2.4.1 Artistic creativity

In the motivational self-talk group, 8 of the participants improved their artistic creativity in task 4. In contrast with the control group, the entrepreneurs did not improve with a big margin as was the case with the control group. However, the base results of the entrepreneurs were much higher than the base for the non-entrepreneurs, hence the reason that perceived improvement for the non-entrepreneurs was much higher.

1.2.4.2 Business case

With the business case, the motivational self-talk group perceived innovation declined by 1% across the group, with the entrepreneurs improving by 8%, and the non-entrepreneurs declining by 9%. As was the case with the artistic creativity above in section 1.2.4.1, the base for the entrepreneurs was much higher than that of the non-entrepreneurs. However, the non-entrepreneurial participant's task 4 showed a decline in "innovation".

Once again, this is in contrast with the literature that stated that entrepreneurs are innovative (Tehseen et al., 2021) and that individuals taking advantage of motivational self-talk had higher performance (Kolovelonis et al., 2011), goal-driven (Thibodeaux & Winsler, 2018) and self-determined (Bellomo et al., 2020) to remain focussed during challenging tasks.

1.2.4.3 Overall

The overall analysis of the motivational self-talk group proved that the artistic creativity improved across the group by 22%. The level of innovativeness however decreased by 1% when comparing task 4 with task 2. The overall analysis of comparing the experiment post the motivational cue, with the benchmark tasks proved that motivational self-talk increased the ability, creativity and innovation of participants by 13%. However, when comparing the motivational self-talk group with the control group, the control group scored higher with an overall increase of 14%.

When looking at the literature, the assumption that creativity plays a role in the ability to be innovative (Ghosh, 2015), it can be argued that innovation alone is insufficient without creativity (Ghosh, 2015).

1.2.5 Instructional self-talk

As with the motivational self-talk group, the instructional self-talk participants were given an instructional cue after the benchmark tasks, as explained in chapters 4 and 5. The literature on instructional self-talk had shown that instructional self-talk did not have such an impact on individual performance as it had with the motivational self-talk group (Hase et al., 2019).

The results in this research are in total contradiction to that.

1.2.5.1 Artistic creativity

In the instructional self-talk group, all 10 of the participants improved their artistic creativity in task 4. The entrepreneurial candidates improved their artistic creativity in task 4 by 75% and the non-entrepreneurs improved theirs by 58% across the artwork tasks. The baseline for the entrepreneurs was marginally lower than the baseline for the non-entrepreneurs, however, the final scores for the entrepreneurs improved drastically in task 4.

1.2.5.2 Business case

The business case analysis of this experiment demonstrated an improvement of 11% in innovation across the group of participants, with entrepreneurs and non-entrepreneurs improving 7% and 18% respectively. Once again, the baseline for the entrepreneurs was much higher than that of the non-entrepreneurs. However, the non-entrepreneurs improved with a higher margin.

1.2.5.3 Overall

The overall results of the instructional self-talk group showed an improvement of 31%, with creativity improvement of 44% and innovation improvement of 11%. The literature assumed that instructional self-talk had little influence on participants in studies by Hase et al., (2019), and Kolovelonis et al., (2011). According to the results of this experiment, it is in total contradiction with the literature.

1.2.6 Summary of the discussion for Research Question 1

From the results presented above in section 1.2, it became evident that artistic creativity had improved across the three groups of participants. Further to that, the instructional self-talk group presented the researcher with the results proving that instructional self-talk had a more prominent impact on the participants in this experiment.

1.3 Discussion of research question 2

- *What is the perception of the participants on motivational self-talk, instructional self-talk, and no self-talk on their respective artistic creativity and entrepreneurial innovativeness?*

6.3.1 Introduction

As explained in chapter 5, the aim of research question 2 was to evaluate the perception of the participants across the three experimental groups. The responses received aimed to evaluate whether the participants firstly noticed the use of self-talk and secondly, whether they could feel the improvement in their performance when completing tasks 3 and 4.

The questions posed to the participants:

- *Q1. Did you feel a difference between using self-talk or not: If so, how so and why so? If not, why not?*
- *Q2. Do you think that the practicing of self-talk had an impact on the outcome of your tasks? i.e. were you more effective/successful while completing the second round of tasks? If so, how so and why so? If not, why not?*

6.3.2 Control Group

A majority of the participants in the control group perceived the effect of self-talk to have a positive effect on their ability to perform the experiment tasks, i.e tasks 3 and 4. Although these participants did not receive any cues, they perceived a difference within themselves to perform better.

6.3.3 Motivational self-talk

With the motivational self-talk group, although the participants felt a difference during the experiment tasks 3 and 4, many of the individuals perceived themselves to be under more pressure to perform better, and hence the reason for this group of participants to perform worse in the business case.

6.3.4 Instructional self-talk

As with the motivational self-talk group, the instructional self-talk group of participants perceived themselves to be under more pressure to perform better during experiment tasks 3 and 4.

6.3.5 Summary of the discussion for Research Question 2

In summary, the participants that did not receive a cue, i.e. the control group, felt more relaxed to answer the experiment tasks 3 and 4 with ease. Although they had the belief that they received self-talk, none of the participants received a cue, and yet they performed as was expected in relation to the other experimental groups.

Both the motivational self-talk and instructional self-talk participants felt under more pressure to perform, and yet the motivational self-talk results were more in line with the control group, and the instructional self-talk group performed much better than the rest of them.

6.4 Conclusion

In conclusion, participant perception about the experiment impacted them unwillingly. the researcher came to the conclusion that the experiment itself, whether participants were given a cue or not, created the expectation in the mind of the participants that they were given some sort of self-talk without their knowledge. With the control group, the placebo effect was evident.

Chapter 7: Conclusion and Recommendations

1

1.1 Introduction

This study set out to explore the effects of motivational and instructional self-talk on artistic creativity and entrepreneurial innovativeness. It did that through the literature of thought-self leadership (Hatzigeorgiadis & Galanis, 2017a), positive self-talk (Galanis et al., 2017; Hase et al., 2019; Kyeong et al., 2020; Latinjak et al., 2017), and motivational and instructional self-talk experiments (Hase et al., 2019; Kolovelonis et al., 2011). It became evident that both motivational self-talk and instructional self-talk play an important role in employees' innovative and creative cognitive behaviours.

In this study, an experiment was conducted on willing participants using the snowballing effect, as described in chapter 4.

1.2 Research findings

This quasi-experimental qualitative research design answered the research problem set out in chapter 1. The research problem posed the question of whether self-talk affected an individual's ability to be creative and innovative using creative and cognitive behaviours (Hatzigeorgiadis & Galanis, 2017b), through self-leadership and self-talk (Alnakhli et al., 2020), also known as inner-dialogues (Oleś et al., 2020), in a business context. Innovation and creativity form part of organisational competitive advantage (Walter et al., 2019).

The literature proposed that motivational self-talk had a major impact on individuals performance (Kolovelonis et al., 2011) through psychological activation (Bellomo et al., 2020; Łysiak, 2019). However, the results of this experiment, posed in the research questions in chapter 3 concluded that instructional self-talk had a greater impact on both business innovation and artistic creativity. Individuals in the instructional self-talk group scored higher overall on all tasks.

1.3 A proposed framework

This section proposes a model for creating organisational competitive advantage using motivational and instructional self-talk jointly.

Self-talk strategies are widely known in the field of sport and sports psychology. This experiment proved that motivational self-talk and instructional self-talk improved creativity across the self-talk experimental groups, as was stated by Ghosh, (2015). Further to that, instructional self-talk had an impact on both creativity and innovation in this experiment.

The proposed framework below Figure 9, will create competitive advantage for organisations when using motivational self-talk and instructional self-talk jointly.

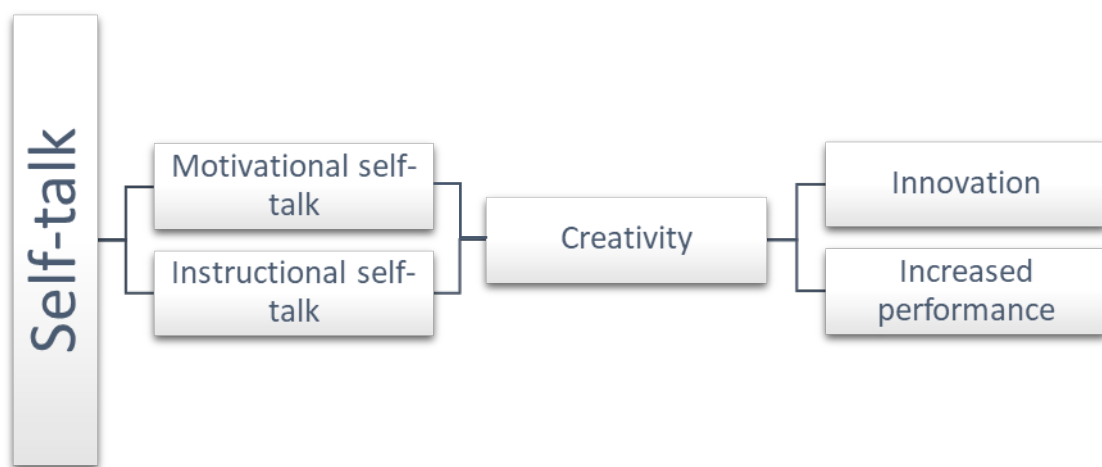


Figure 9: Schematical representation of the impact of first-person positive self-talk on innovation and performance, adapted from the "Simplified thought self-leadership model" by Neck & Manz, (1992)

1.4 Limitations

Limitations to the study

- The study was conducted in the Gauteng region of South Africa. This could be a limitation due to demographics.
- The sample size described above consisted of individuals who volunteered for the experiment. This could be a limitation due to the limited sample size.
- Historically self-talk studies were performed in the field of sport and sports psychology. Not many self-talk studies in the fields of management and education in recent years.

1.5 Suggestions for future research

Further experimental research into the impact of instructional self-talk and motivational self-talk is needed in the field of management sciences, to find the causality between positive first-person self-talk, instructional self-talk, and motivational self-talk, and the effect of such on individuals creativity and innovativeness.

Suggestions for future research may include the following:

- Include participants in different regions – other than Gauteng.
- Widen the sample size to at least 50 participants per experimental group. This might be difficult to attain, but the data will be more reliable with bigger sample size.
- Further self-talk experiments in the field of organisational, entrepreneurial, and education.

1.6 Conclusion

This quasi-experimental qualitative research proved that motivational self-talk did not have such a major effect on business innovation. The instructional self-talk experiment, although limited in the literature in a business context, proved that instructional self-talk influenced individuals to be more innovative.

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Appendix A: Ethical Clearance

**Gordon Institute
of Business Science**
University of Pretoria

**Ethical Clearance
Approved**

Dear Estelle Craig,

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

We wish you everything of the best for the rest of the project.

[Ethical Clearance Form](#)

Kind Regards

Appendix B: Google Forms “opt-in” Survey

MBA - Self-talk experiment

Dear Sir/Madam,

This survey is conducted as part of a research project, which shall be submitted as part of the fulfillment of a Masters in Business Administration degree from the Gordon Institute of Business Science.

The purpose of this survey is to recruit participants for the experiment that will be conducted on a scheduled date. The purpose of the experiment is to compare the effects of motivational self-talk and instructional self-talk on individual creativity and innovativeness. The interview / experiment will take approximately 60 minutes to complete.

Please answer all the questions as honestly and accurately as possible. Your participation in this survey is entirely anonymous. Your participation is voluntary, and you can withdraw at any time without penalty. By completing the survey, you indicate that you voluntarily participate in this experiment.

Thank you for your valued cooperation and assistance.

Should you have any questions, concerns or comments regarding this survey, please do not hesitate to contact the researcher at the details provided below.

Prepared by:

Estelle Craig

20803550@mygibs.co.za

Gordon Institute of Business Science

Supervised by:

Dr Jefferson Yu-Jen Chen

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Gordon Institute of Business Science

Current Position at work *

Entry level employee

Junior Manager

Middle Manager

Senior Manager

Executive

Other: _____

Business Education background - brief description *

Your answer _____

Do you have an Entrepreneurship background *

Yes

No

Please supply your email address below *

Your answer _____

Appendix C: Experiment

Self-Talk Experiment

Dear Sir/Madam,

This experiment is conducted as part of a research project, which shall be submitted as part of the fulfillment of a Masters in Business Administration degree from the Gordon Institute of Business Science.

The purpose of this experiment is to compare the effects of motivational self-talk and instructional self-talk on individual creativity and innovativeness. The interview / experiment will take approximately 90 minutes to complete.

Please answer all the questions as honestly and accurately as possible. Your participation in this experiment is entirely anonymous. Your participation is voluntary, and you can withdraw at any time without penalty. By completing the survey, you indicate that you voluntarily participate in this experiment.

Thank you for your valued cooperation and assistance.

Should you have any questions, concerns or comments regarding this survey, please do not hesitate to contact the researcher at the details provided below.

Prepared by:

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Supervised by:

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Gordon Institute of Business Science

Do you have entrepreneurial background? *

Yes

No

Next

Clear form

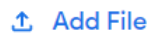
Experiment 1 - Task 1

Please download the attached Word document and complete the task.

<https://docs.google.com/document/d/1p-CdBaW8tfxpYEWwO5F11ahbb03DMuSD/edit?usp=sharing&ouid=109969378615567336299&rtpof=true&sd=true>

Once you have completed the task, please upload the file below

Upload file on this link *

 Add File

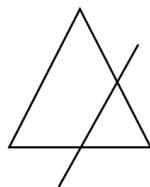
Back

Next

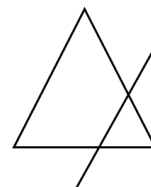
Clear form

Task 1: Use the illustrations below to create two unique art pieces by adding extra lines. Then add a creative title to best describe each piece.

Art work title:



Art work title:



Experiment 1 - Task 2

After completion of Task 1, please complete task 2

You have decided to start an ice-cream store in Sandton City right next to Nelson Mandela Square. List all the innovative ideas that will contribute towards making this store highly successful. *

Your answer

Back

Next

Clear form

Motivational self-talk cue

Take some time to read the following a few times. Believe they are true.

I am creative.
I can do anything.
I am innovative.

Back

Next

Clear form

Instructional self-talk cue

Take some time to visualise a few creative options first. Do not jump straight into the task, think before you answer the next two questions.

Back

Next

Clear form

Experiment 2 - Task 3

Please download the attached Word document and complete the task.

<https://docs.google.com/document/d/138c08MDIVixEHBOegKIU0207dTb4JGIh/edit?usp=sharing&oid=109969378615567336299&rtpof=true&sd=true>

Once you have completed the task, please upload the file below

Upload file on this link *

 Add File

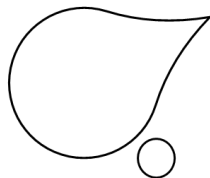
Back

Next

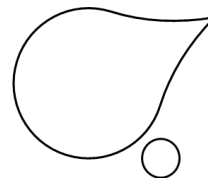
Clear form

Task 3: Use the illustrations below to create two unique art pieces by adding extra lines. Then add a creative title to best describe each piece.

Art work title:



Art work title:



Motivational self-talk cue

Take some time to think about customers and all components of a successful business before responding to the task! Answer the next section as creative as possible.

Back

Next

Clear form

Instructional self-talk cue

Take some time to think about customers and all components of a successful business before responding to the task! Answer the next question in a systematic manner

[Back](#) [Next](#) [Clear form](#)

Experiment 2 - Task 4

You have decided to start a toy store in a farming community in the Northern Cape region. List all the innovative ideas that will contribute towards making this store highly successful *

Your answer _____

[Back](#) [Next](#) [Clear form](#)

Final questions

Please answer the following questions with relation to the experiment

Q1. Did you feel a difference between using self-talk or not: If so, how so and why so? If not, why not? *

Your answer _____

Q2. Do you think that the practicing of self-talk had an impact on the outcome of your tasks. i.e. were you more effective/successful while completing the second round of tasks? If so, how so and why so? If not, why not? *

Your answer _____

[Back](#) [Submit](#) [Clear form](#)

Appendix D: Rubric

Experiment	Task 1	Task 2	Task 3	Task 4
Group 1: Control Group - No cue cards supplied				
Likert Scale				
On a Likert Scale of 1 to 7, rate the questions according to the following guideline: 1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = neutral, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree.				
Criteria	Task 1	Task 2	Task 3	Task 4
The level of creativity of Artwork 1 is high.				
The level of creativity of Artwork 2 is high.				
The level of innovativeness of the business tactics presented is high.				
Group 2: Experimental group 1 - Instructional ST cue card supplied				
Likert Scale				
On a Likert Scale of 1 to 7, rate the questions according to the following guideline: 1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = neutral, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree.				
Criteria	Task 1	Task 2	Task 3	Task 4
The level of creativity of Artwork 1 is high.				
The level of creativity of Artwork 2 is high.				
The level of innovativeness of the business tactics presented is high.				
Group 3: Experimental group 2 - Motivational ST cue card supplied				
Likert Scale				
On a Likert Scale of 1 to 7, rate the questions according to the following guideline: 1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = neutral, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree.				
Criteria	Task 1	Task 2	Task 3	Task 4
The level of creativity of Artwork 1 is high.				
The level of creativity of Artwork 2 is high.				
The level of innovativeness of the business tactics presented is high.				

Appendix E: Experiment responses

Control group

Respondents	Do you have entrepreneurial background?	You have decided to start an ice-cream store in Sandton City right next to Nelson Mandela Square. List all the innovative ideas that will contribute towards making this store highly successful.	You have decided to start a toy store in a farming community in the Northern Cape region. List all the innovative ideas that will contribute towards making this store highly successful	Q1. Did you feel a difference between using self-talk or not? If so, how so and why so? If not, why not?	Q2. Do you think that the practicing of self-talk had an impact on the outcome of your tasks. i.e. were you more effective/successful while completing the second round of tasks? If so, how so and why so? If not, why not?
C1	Yes	<p>Promotions (Pay for 3, get one free),</p> <p>Collaboration with other stores (Get a free ice-cream if you take a child with you to butcher-block, get kickbacks from butcher-block as their margins are much higher)</p> <p>Set up a photo booth to take a picture of yourself and old Nelson eating your ice-cream</p> <p>Flyers when you enter the lift</p> <p>Hire a clown to attract kids</p> <p>Balloons to attract attention</p> <p>A free raffle with each 3 ice-creams, stand a chance to win a free lunch at one of the surrounding stores</p> <p>Selling related items as well, such as slush puppies, milkshakes etc (Which could be more attractive for adults)</p>	<p>Put it next to a bakery</p> <p>Make sure that you get involved with the community, these communities support people they know</p> <p>Signage next to the main (and only) road</p> <p>Have a mascot of a puppy or pony (or similar) wearing the local rugby team's jersey - also sell this toy</p> <p>Ask other stores of you could show small toys on their counter where everyone pays, typically key chains, small bears etc</p> <p>Have a small raffle where you get entered into a draw to get a free tank of fuel if you spend more than a certain amount - ask the fuel owner if you can market that at this establishment as well</p>	Yes, was thinking more creatively the second round	Slightly more successful, because I was thinking creatively for a longer period as apposed to the first round.
C2	No	<ol style="list-style-type: none"> 1. Bold bright colours for the store -- prefer green and yellow neon lights in a 60's styled/themed ice cream store 2. Big display fridges with LED lights to show of colours and contrasts of the different ice creams 3. Various toppings displayed with fresh fruit daily - Always have 12 standard flavours and 12 inventive flavours daily 4. Offer fresh waffles and pancakes, there are not any pancake places in Sandton 5. Sell mini ice cream cakes - muffin size or individual slices, as the are only large sized ice cream cakes available in Sandton 6. Weekend ice cream making classes offered for kids 7. Bi-Monthly invent/create your own flavour ice cream completions 8. Sell doggie ice creams for customers with pet lovers 9. Pay by weight or calorie saving discounts for the healthier people that watch their figures who buy sorbet ice cream 10. Milkshake and designer shakes offered 11. Doing deep fried ice cream as there is no one selling it in Nelson Mandela square 12. sell lactose free milk ice creams 	<p>Due to it being in the Northern Cape need to pay attention that the community is not economically stable.</p> <ol style="list-style-type: none"> 1. The store need bright fun store name in Red Blue and Pink colours. 2. There must be space for kids to ride bikes and skate boards in the store. 3. A small pool/ pond to display the RC boats 4. A scaletrix set so kids and dads can have races, to in still family contact, raffles for toy racing cars 5. The girls toys must be displayed in shelves that represent a dolls house 6. Baby toys displayed in a crib 7. Boys toys displayed in a castle or garage 8. Have a gaming section set up with computers on the net so older kids can play online games and PlayStation and Xbox, have mini tournaments 9. Lego pits for babies and up to 10 year olds 10. Sell lots of wooden blocks and toys 11. Tea parties for mums and daughters with raffles for tea sets 	I did find a difference using self-talk. It was motivating and made me feel confident as the tasks progressed because I spoke to myself more and trusted myself	<p>I find that self-talk, impacted me positively, it made me relax and improved my confidence in the tasks, and I felt more productive and managed my time better.</p> <p>In my first task, I concentrated too much on the drawing and did not express myself properly. I was ridged and not free flowing. I was not comfortable.</p> <p>In the following tasks, my self talk was positive and fun and allowed me to complete the tasks in a more comfortable space.</p> <p>I felt comfortable and trusted myself more.</p>

C3	No	<p>Advertising around the square. Make sure to highlight how hot it is and that the people need a way to cool down in the posters.</p> <p>What will attract the most people? Colorful branding? Or will a more classy look attract the crowd (as this is in Sandton)</p> <p>Make sure there are tables and chairs for clients to sit down and enjoy their fantastic choices</p> <p>Don't just sell normal ice-cream. Sell soft-serve with cones, cups and with different dips like caramel, chocolate and different sprinkles that will attract you ones. Sell lollies and icescream on packets for those that want to get something quickly. But mostly, sell all the different ice-screams that the people can pick and choose from to put in their cup or cone that they dont normally buy anywhere else..</p>	<p>As this a farming community, I would start of by selling toys that the farmer's kids can use. Like Toy tractors, toy guns and slingshots for the boys.</p> <p>Also get the workers and the community to make local toys to sell like handmade steel toys. Draadkar\wire push cars are always favorite toys for boys to use outside.</p> <p>Also sell boardgames for the whole family to enjoy.</p> <p>Another idea is to sell something like gold pans so children can try their luck mining for gold in the local streams. Something the parents can join in on the fun (and for safety)</p>	<p>got frustrated in second one as I wanted to do more but cant do it well with a pc mouse</p>	<p>Not really. Had to think of something different each time.</p>
C4	Yes	<p>Catchy jingle to attract the children, Unique cups and scoops, superhero themed flavors, Shaped to order ice-creams, seasoning flavors, IG driven promos for the store</p>	<p>Check which animals and equipment are around the area and use those as key toy designs, Do farm visits with toys in truck, Run a weekly toy day to garner visibility, start a toy letter to be replied by the children with their favorite toys. Create a collectors line for adult-g geared toys. Create short story books around different toys and make them volume based to create future markets.</p>	<p>The tasks seemed to go the same because I was speaking to myself all the time.</p>	<p>I think self-talk aided me to orient myself on the different aspects of the tasks. Keeping me on the focussed path of task resolution.</p>
C5	Yes	<p>nice big ice cream cone as a display outside. colourful icecream in the cone, made to look like its melting. colour window displaying different ice creams. square tables & chairs, covered in a bright table cloth. kiddies corner with smaller tables & chairs where they can "build" there own ice creams adding sprinkles & chocolates... nice cheerful music that people can relax to.</p>	<p>a workshop bench where children can make there own toys. get old bicycles & help to repair them with children to keep. wooden toys that can be sanded down & repainted & repaired. if donations or peoples throw aways can be used then the farming kids could repair & buy at a minimal cost, & enjoy working o there own toy</p>	<p>They were the same...both were giving you the start of ideas, not forming your own from the beginning.... I would have been happier doing the experiment manually, as i am not very computer literate.</p>	<p>yes, as the idea or drawing was there & you had to use what you had & not your own ideas</p>
C6	No	<p>An easy way to choose and dish the ice cream. If the process of buying the ice cream is easy maybe people will be more willing to come because it won't be a struggle.</p> <p>Different flavours of ice cream. Means more different types of people.</p> <p>Making the shop stand out.</p> <p>A cool name for the shop.</p>	<p>Ensuring you are in an area where there are lots of children.</p> <p>Having a variety of toys for children to choose from.</p> <p>Recycling old toys to make new ones.</p> <p>Advertise the products.</p> <p>Have good quality products.</p>	<p>No I didn't. Not sure what self-talk I was supposed to use</p>	<p>I felt more confident doing the second experiment.</p>

C7	Yes	<p>Using digital menus</p> <p>Kids friendly environment</p> <p>Artwork with bright colours</p> <p>Urban and African tradition mix of our store layout and interior décor</p> <p>Environmental friendly store</p> <p>Make everything recyclable</p> <p>Hire young staff members</p> <p>Use social media platform to promote the store</p> <p>Use social media influencers</p> <p>Design a customer interactive website for booking of tables</p> <p>Design an app for easy customer payments</p> <p>Use the app for customer feedback</p> <p>Have weekend promotions</p> <p>Have family focus promotions and offerings</p>	<p>Have a play ground area for kids</p> <p>Source some of the toys from local community members</p> <p>Focus on educational toys</p> <p>Doing promotions at schools</p> <p>Sponsor kids' events at the store</p> <p>Host family play day's events</p> <p>Create an app that is interactive</p> <p>Establish a primary school bursary fund for kids from disadvantaged communities</p> <p>Create a loyalty card program - my school</p>	<p>Yes. I had to also use my creative thinking in completing the tasks.</p>	<p>Yes, I think I was a bit more confident in completing the second round of tasks.</p>
C8	Yes	<p>Finding out what the customers in that area want the ice cream for.</p> <p>Find out the best times they like to have ice cream</p> <p>Find out the best place next to the mall is likely to get more customers</p> <p>Have the ice cream that the customers want at the times that they want it and at the place that they want it.</p> <p>Also target a place that is close to where most children are</p> <p>Sell in the summer</p> <p>Have different combo's</p> <p>Partner with a local store</p> <p>Have themed days</p>	<p>Find out what the kids in the community like and sell those types of toys</p> <p>Find out the best location where kids and their parents go and set up close to that location</p> <p>Find complementary stores that you could partner with</p> <p>Have pop up stores in remote areas where the customers do not have access to the store</p> <p>Have a returns policy - return toy for 50% of next toy</p> <p>Rent out toys</p>	<p>In both experiments , when I stopped trying to create something constructive and and let it flow, I created something much more "prettier".</p>	<p>For me, when I talk to myself more, I tend to stop myself from flowing with creativity. When I let go, I became more creative.</p>
C9	No	<p>The look and feel of the store. Balloons that look like ice cream (party look) Digital menu for people to place orders and choose their flavors. Charging station so that people can have their meetings while charging their devices. Meeting bookings with menu packaged deals e.g. 4 pax plus waffles and milkshakes- Monday for R500. Kiddies doodle wall that can be erased. Ice cream making classes on Saturdays-winning flavourful can be named after that person and featured for a week at the store</p>	<p>Have an educational section for early childhood development toys and host demo classes with kids to showcase how parents can use the toys while educating their kids at home. This will be everyday at certain times. Personalize some toys and add the kid's name or make it sing the kid's fav nursery rhyme.</p>	<p>I felt a bit different in the sense that I had a lot of doubts with trying to figure what to draw, I kept asking what should I draw and that made me dwell on the question more than coming up with ideas. The minute I kept quiet and puts me thought, I managed to just go with the flow of my thoughts.</p>	<p>On the second drawing I was self talking a lot which is why I couldn't come up with a desired art.</p>

C10	Yes	<p>The ice-cream store would be themed, changing every couple of weeks to align to fads, seasonal shifts and public holidays.</p> <p>We would incorporate influencers from TikTok and other digital platforms to act as brand ambassadors for the store making it more about the customer experience.</p> <p>We would offer an alcohol-infused range and a cannabis-infused range of ice cream in order to cater to our over 18's and more exotic tastes.</p> <p>Similar to Dominos Pizza, we would offer incentives through a "whats your flava" competition whereby customers could design their own signature flavour and if voted most popular over a certain period, would be incorporated into the offering and provide a percentage of financial royalties to said winner of the competition.</p>	<p>The toy store would operate as a concept store, holding very little stock, all product purchases would be flown in by drone to this far flung community.</p> <p>There would be a digital interface whereby customers could pay for Virtual and Augmented experiences.</p> <p>This shop would provide a means of escape from the mundane, everyday life.</p> <p>It would effectively be a modern day arcade for the farming community.</p>	<p>I noticed a discernible difference when I used self-talk, it seemed to help me focus my thoughts.</p>	<p>I battled more with the second round of tasks, but seemed to do more self-talk in the first set of tasks, without prompting. There was a difference!</p>
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Motivational self-talk group

Total score	Do you have entrepreneurial background?	You have decided to start an ice-cream store in Sandton City right next to Nelson Mandela Square. List all the innovative ideas that will contribute towards making this store highly successful.	You have decided to start a toy store in a farming community in the Northern Cape region. List all the innovative ideas that will contribute towards making this store highly successful	Q1. Did you feel a difference between using self-talk or not: If so, how so and why so? If not, why not?	Q2. Do you think that the practicing of self-talk had an impact on the outcome of your tasks. i.e. were you more effective/successful while completing the second round of tasks? If so, how so and why so? If not, why not?
MST1	Yes	Being in Sandton it need to be upmarket with unique flavours combinations It needs to appeal to the health conscious and to those with special dietary requirements, vegan, lactose intolerant friendly etc ... the health kick vibe will need to go hand in hand with a hip and vibe kind of shop front with a café style feel for those who want to savour the flavours but also cater for the on the go customer. Only sugar cones on offer as this is a premium product for premium clients. An added selling point will be to appeal to the kids while convincing mom that it is healthy and there is a flavour just for her to.. adding a cappuccino in a cone offering might just sway that busy businessman to drop by and grab his morning coffee in a unique way. Appealing to the body conscious and the gym freaks with a high whey protein combo could also just help cast that net further in terms of potential customers ... why have a protein shake when you can have a iced protein cone ... ;)	Being a farming community, chances are that they have strong family values, they have a culture of work hard and not too much time for playing so I believe that the toys would have to appeal to these values whilst at the same time appeal to the children. Chances are that Frikkie the Farmer is not going to be too happy with his son wanting to play with LGBTQ barbie* The had better be some educational toys there, some tractors and "On the Farm" accessories. Board games and items that would bring the family together would be important .. then to get dads involved one would have to have a special section in the store called "toys" for dads ... the latest Drones and gadgets that dad could "use" of play with would be a must ... hey if the budget allows then lets sneak in the odd quad bike and off road buggie ...	I can not say that I felt a significant a perceivable difference when using self talk. I guess i am normally quite a positive person and believe in my own abilities.	In terms of whether I was more successful or not I think I perhaps was, in that the second question or business proposal was far more complicated a scenario to comprehend but the fact that one had used positive affirmations to remind oneself of the creativity and innovation in us all I was able to at least apply myself to the task at hand despite the initial reluctance to even take on the challenge of the proposal.
MST2	No	Get the marketing right, get influencers to promote the store. Have pop up stores in malls. Have a place where I can host kiddies parties and kiddies entertainment. Make flavours that the public can relate to, allow customers to come up and vote for new flavours to try out.	Use eco-friendly material for the toys.	Yes, it boosts my confidence and reassures me	Yes, I challenged myself to try the first drawing that came to my mind instead of going for the easier one.
MST3	No	Advertising in advance, i.e. 'Coming soon' / Flavor of the week campaigns / Invite your buddy to a 'chill out' session / Monthly 'Suggest a flavor and make it onto our menu' drives / Vote for which flavor you thinks sells most and win / 'Out with the old, in with the new' clients suggests which flavor should go and which flavor should be added to the menu / Team building ideas - come make your own ice cream	Ensure that you know the demographics of those living in the area, so that you cater to the needs of all income levels. Invite children to come and test out a new toy ever now and then and give discount on their next buy for participating. Have family fun days with staff invited with their children. Have a 'Sponsor' day around Christmas where families can sponsor a new toy for the needy and orphaned children.	On the drawing yes, on the ideas for the business not so much. It felt repetitive.	On the drawing yes, I felt a bit more creative and more confident. On the next task, it felt the same as the initial task. Not sure, probably because I still doubt myself too much.
MST4	No	Alcohol flavours for the adults, toys and colourful things for the kids, nannies to look after the kids while the parents shop.	Music festivals, kids to make toys out the best grown products, Art classes	It put alot more pressure on me, to be innovative, creative where as I was carefree with the 1st	No I wasn't

MST5	Yes	<p>Firstly, it needs to be kid-friendly, so kids can convince their parents to stop there. Because kids are messy with ice creams, there can be special fun bibs for them to wear while there and little basins where they can rinse their hands/faces. For the kids, they can choose all kinds of sprinkles / sweets to add.</p> <ul style="list-style-type: none"> - It should also appeal to the health-conscious, so dairy-free options (example coconut milk) and low sugar, or frozen yoghurt should also be available. - To slot in with the team of Nelson Mandela square, we can have a "rainbow-nation" theme and decorations, colourful pictures on the walls of true SA spirit etc. - Unique ice cream flavours to fit in with the heritage theme - like milk tart, malva, maybe vetkoek with ice cream inside (SA version of deep fried ice cream) - We can have as a main attraction the rainbow-blaster ice-cream, which is a HUGE multicoloured ice-cream of multiple flavours and if you can manage to eat the entire ice cream you can write your name on one wall. 	<p>The Northern Cape, especially the farming community, is sparsely populated and not very rich. Therefore, I do not think they will be my customers, but the farming community will rather be my employees and business partners.</p> <p>I will start a unique online toy store, selling hand-made toys by the farming communities. It could be farm-themed, e.g. wooden tractors, tin/wire cars, and stuffed toys made from real sheep wool.</p> <p>Other ideas for toys can be: Bead-jewellery kits, mini-farms (like lego type blocks and figures), also plant-kits to grow little vegetable gardens. Even a mini-clothes range.</p> <p>Farmers or community all over can contribute their handwork to this store, but all products will be sold under the same brand. The stock can also be redistributed to stores all over the country.</p> <p>A percentage of the proceeds could go towards the education of children in rural remote areas.</p>	<p>Yes, using self-talk made me want to perform and be more creative. It was definitely a motivator. Without self-talk I felt a little less purposeful.</p>	<p>I surprisingly struggled more with the second round of pictures, as if self talking and telling myself I can do anything, made me expect more of myself and I became critical of my ideas, whereas in the first round of pictures I felt less pressure to come up with something truly creative.</p> <p>Both the writing exercises I got more creative as I carried on and got more involved in them as I continued, but I do think self-talk helped me think "out-of-the-box" more (for the drawing and writing exercises both)</p>
MST6	No	<p>Name the ice creams after struggle heroes eg. Mandela's Ubuntu, Biko Rainbow Treat etc. Name the store The Flavour Struggle. Have the store painted like the South African Flag. Have the servers dressed in traditional costume. Chairs and tables outside the store to resemble African drums (tables) and the chairs to be upholstered in material that resembles traditional beadwork or African wildlife. Have servers walking around Sandton City with 'ice cream packs' in cooler back packs offering samples of the ice creams (like the sellers at sports matches). Have competitions to win free ice cream for you and 4 friends if you come up with a unique flavour combination and a good name.</p>	<p>Ensure that the toys relate to the community values eg - tractors, seed heads etc. Sell one of a kind farming related items eg an exact replica of the item on the dad's farm (although this will cost extra it will be exclusive to that child as no other child's dad would have a tractor, dolls house, dad's bakkie, favourite dog etc). Visit the farms with items like a travelling toy store to encourage interest in your store (you could kit out a combi with your logo and different toys on display that you can sell or can be ordered). Make sure your combi is at all the farmers markets to advertise your store. Make the store interesting for children to come into - have a dedicated play area where they could play a board game or play with sample toys so that they would want to encourage their parents to buy the items for them. Arrange games afternoons for the children that stay the school hostels as a lot of farming families send their children to boarding school. these can either be done at the school or at the store. If you arrange things like 3 legged races, wheelbarrow races etc the school fields would be better, and you could offer prizes for first place in the races. Board games could be played in the evenings at the hostel or at the store depending on the school/parent preference.</p>	<p>Not really, I am usually more motivated by interaction with others</p>	<p>Not really, I think the different store concepts required different thought processes to achieve ideas on how to innovate to make the store successful. It also depends on past experiences that you have had as to the ideas you can come up with and how you relate to the subject matter. For example if you are a fan of ice cream you may have more exciting ideas, where if you grew up on a farm you may relate better to how to sell toys in that type of community. A city dweller who has never been to the Northern Cape would not relate at all and their concepts may not be viable for that type of community.</p>

MST7	Yes	<p>Big colourful signage with a unique proposition of class and sophistication when it comes to decorating the ice cream - perhaps edible lace which can be draped over the ice cream with edible rose gold/ gold/silver/ metallic red diamond sprinkles. The decor and ice cream treats (waffles and sandwiches and sundaes) will have a Marie Antoinette type vibe with comfortable seating, wifi access and private seating areas for people dining alone. There will also be a loyalty programme awarding regular visitors with an opportunity to design their own ice cream flavour or treat that will be offered at the shop, under their name for a month.</p>	<p>For the NC there is little water and little to do. apart from tonnes of game farms. I would transform the toy store into a toy wonderland - creating a recreational area where families can visit with their kids. there can be go kart tracks, climbing walls, obstacle courses and foofy slides as well as a kiddies market and entertainment. I would cater for additional activities such as create your own toy - be it a custom design remote control car/truck/ plane or a customised doll or bear. In addition there can be a craft area where you can do various arts and craft projects. Lastly, I would have a kiddies kitchen section whereby kids can bake or cook to their hearts content, creating an entire fun filled eco system for the kids. The success from the store will stem from the multi faceted area not only being able to purchase the toy you want but also being able to immediately enjoy what you bought and interact with other kids with similar interests.</p>	<p>Yes I did feel a difference - a lot more pressure to perform and be creative and innovative in the second round.</p>	<p>Yes it impacted my tasks but somewhat negatively - with the pressure to be creative and innovative, I doubted a lot of what I did and whether I was hitting the brief (the perfectionist in me kicked in). I do have a self belief that I can figure anything out in time... but the time constraints definitely allowed doubt to creep in vs my own expectations.</p>
MST8	Yes	<p>The ideas to make an ice cream store successful is to attract as many people as possible through a fun and gamification experience.</p> <p>1) Adding an Artificial Reality (AR) experience to the store to make it highly interactive</p> <p>2) Each ice-cream has a unique flavour that the customer can purchase and experience a relevant experience. eg. Hawaii coconut flavour leads to an AR experience. The idea will be designing multiple AR scene that attach to the world top tourism spots and customers can experience them all right at Nelson Mandela Square. The experience is highly sharable and can be access directly on customer's mobile phone.</p> <p>3) Make the experience sharable with other vendors/ stores in Sandton City stores, as their own tool for marketing. For example, a brand collaboration with Poetry to have a fruit sorbet ice cream with an experience of an AR spring picnic. Another brand collaboration with Nandos, can be a chili and dark chocolate flavoured ice cream in Portugal.</p>	<p>The components of a successful business involve: products/ services, distributions, marketing, finance as well as understanding your customers (who is involved in this farming community, what are their needs and wants).</p> <p>The Northern Cape region does livestock farming, grapes, dates, cotton, cereal crops, vineyards.</p> <p>The toy store is not only for children but young people learning how to become entrepreneurial with the farming environment they are in.</p> <p>The toy products can be learning models, such as Lego blocks to build the livestock related models. Games can be provided to teach young people how to start a farm from start to finish in an interactive way, ideas from the Monopoly and Rich Dad & Poor Dad.</p> <p>The venue of the store can be an entertainment venue or to organise for the farming community to take their family here and experience fun games together.</p> <p>This store can be a local tourism spot that attract tourists.</p>	<p>Self-talk definitely helps, the second time around I completed the drawing faster.</p>	<p>I think both experiences I was effective. Probably because I'm in Marketing and practised to be constantly experimenting new things. I'm also an artist. I think the second round, I had a more wholistic view onto the challenge that was given. The first experiment I focus on the innovation more than the wholistic picture.</p>

MST9	No	<ol style="list-style-type: none"> 1. Have different flavors 2. Paint your store bright to draw attention 3. Play some music 4. Wear cool clothes 5. Have a create your own section 6. Have a sit in area 7. Playing area for kids 8. Have activities on Sundays Afternoon 	<ol style="list-style-type: none"> 1. Offer free toys to orphans 2. Work with charities 3. Allow people to donate 4. Ask big stores to contribute and work with you 5. Your toys should say something about farming 6. Environmentally friendly 7. Host exhibitions 	I did. I managed to think clearly with no disturbances and I was on my own I had to depend and rely on my instincts. I told myself I can do it and I did.	Yes. I was very effective, and I did not have to think twice. I trusted myself and I finished in time. I was positive about myself.
MST10	No	<p>The first step would be to list the ice cream in the restaurants in the square as part of the desert menu, waiters/waitresses would offer it to consumers to try it, once consumers give feedback to the waiters/waitresses they would then give the consumers a 15% off voucher for them to come buy at the ice cream shop.</p> <p>The second part would be to have the product sampled in the square to the target market we would be going after, with spring coming in everyone would like to have a little taste of the ice cream. We will be giving out small sampling cups, just for the taste. The sampling would take place at the various entrances to the mall.</p> <p>Big and bold advertising leading to the mall would essential, we can launch the the new store during the school holidays where the is enough traffic coming into the mall. A kids play would be built on a temporary basis to entice the kids to come and play also tasting the ice cream to convince parents to buy a big scoop and take it home.</p>	<p>The first thing I would do is to stock and sell toys that are related to farming. I would partner with a local supplier in the area where farmers buy their goods and give out complimentary small toys to the buyers for their kids at home.</p> <p>The second step would be to sell in the toys at the local pre-schools, the kids would interact with the toys daily and ask their parents to buy them the toys they play with at school. Target market would be both private and public schools.</p>	Yes I did, the experiment makes you concentrate and talk to yourself in a way that this would come into reality. You handle the whole experiment as something that you foresee in the future and its something that you can own. Such experiments are needed to assist us in having a growth mindset, even in the smallest of ideas.	Yes it does, you talk to yourself first and dive into deep thoughts to come up with the best possible solution.

Instructional self-talk group

Respondents	Do you have entrepreneurial background?	You have decided to start an ice-cream store in Sandton City right next to Nelson Mandela Square. List all the innovative ideas that will contribute towards making this store highly successful.	You have decided to start a toy store in a farming community in the Northern Cape region. List all the innovative ideas that will contribute towards making this store highly successful	Q1. Did you feel a difference between using self-talk or not: If so, how so and why so? If not, why not?	Q2. Do you think that the practicing of self-talk had an impact on the outcome of your tasks. i.e. were you more effective/successful while completing the second round of tasks? If so, how so and why so? If not, why not?
IST1	No	it will be a young and hip store, serving all sorts of homemade ice-cream, flavors, textures, colours, toppings with tables and chairs outside with some popular music so that couples with children can go for an outing to a store that caters for all their tastes, they can sit and relax after a day of shopping	by putting your customers first. survey the region to see population and background, what the store requires in carrying toys, expensive vs cheaper, quality vs quantity, stock quantity, listening to your customers as to what they would require in toys, maybe installing a playball area within the store so that children can play while shopping and maybe a coffee and soft drink station for parents to relax while they play. Perhaps having a swing, old tractor, or merry go round in front of or somewhere close to the store as a play area. Faming community children may have different needs from children that grow up in the city. They might want a john deer model tractor instead of a baby doll.	answering the 1st experiment was easier as you could start and go with your gut. answer the others and having to think about it made it alot harder. although thinking it through gives better ideas than maybe just going for it and following your gut	it was more difficult as you had to think about it. where in the first instance ideas just flowed. I struggled more with the second one
IST2	No	Visual marketing in Sandton Square Promotions within the square Bright and bold décor with large colorful prints Options to create your own ice cream flavors by mixing ice creams. Have an option for a kiddies section to make their own ice cream cones and build their own ice cream cups.	Sell practical basic toys Sell educational toys Sell toys that require interaction from the person playing with the toy Sell toys relevant to the area or community like large toy tractors and trucks Make the store accessible and chose a high traffic street or road Go to the local schools and do some demonstrations. Create a payment scheme for the children to pay the toy off with pocket money and collect once paid for, teaching value of money and commitment. <u>Create an exchange program for old second hand toys and recycle.</u>	Not a significant difference, as it is all virtual. Not a lot of interaction.	I think i was more efficient yes as the you start to use the system and become a bit more comfortable.
IST3	No	Exotic flavours Only the best ingredients used Ingredients not found locally One of a kind shapes and sizes Let people mix own flavours and design own shapes	Farming tool toys that is of quality and robust Motorised toy farming equipment Realistic farming toys that actually can perform small scale tasks Display toys on realistic small scale model farms on premises Use local materials from farms to support farmers <u>Employ local community members</u>	Yes, had more confidence	Yes, had more of an open mind and start thinking out of the box
IST4	No	Make the decor & general styling of the store and branding vibrant and lively Allow customers to make their own creations by letting them choose several flavours & toppings. Source or produce interesting flavours, not your usual 'vanilla' flavours. Make use of packaging and eating utensils that are made from sustainable materials, affirming commitment to environmental friendly practices. Provide options such as lactose free & vegan/plant-based. Periodically provide limited-edition flavours inspired by films, countries, ethnicities/cultures Provide quick delivery to offices in the area	Stock toys that are replicas of farming equipment and livestock found on farms Stock toys that are durable but simple that will last a long time, toys that can become heirlooms Stock toys that are not easily attained from other local retailers, but that are inexpensive Source toys that are hand-made by locals in the area Stock toys that are educational but yet exciting & fun An online store to service not only the Northern Cape but also the rest of South Africa, perhaps even internationally Store appearance & branding should not convey opulence, but value for money & good family values	With no preparation time, the first question/experiment felt constraint, had to go with initial instinct. The second experiment I felt more critical about what I deliver, self-talk did change as I got closer to the time limit, moving toward more of a resigment and settling with what was delivered.	Yes. Felt less anxious about completing the task, also delivered more creatively in my opinion.
IST5	Yes	Niche market and flavours such as cocktail inspired ice cream, such as mojito, ect. Experience focussed to get customers to return. Good venue for celebrating success, birthdays, and other events. Great venue design and interior, look and feel of the store. 5 start service from staff and waiters. Relaxing atmosphere aimed at celebrating. Complementary dishes on the menu that goes with the ice cream theme. Easy online booking system. Instragram and social media presence.	Types of toys that kids in the region wants/likes to play with. Potentially educational toys for children from farming communities. Parent's values such as sustainable manufacturing and sourcing of materials. Manufacture locally to support South Africa and the local economy (grow and improve SA). Job creation and the feel good factor for parents when they buy the toys for their kids or other kids. Distribution channels that support green and sustainable logistics. Repurposing raw materials through recycling initiatives. Revenue models and cost models that align with the value proposition. Marketing to attract the target customer segment. Social investment back into the community. Partnerships within the community members to improve the community.	Yes, felt an immediate difference after the self talk. Had a better well rounded idea and thought of things that I would not have though of when I jumped straight into answering the questions without self talk.	Yes. Tasks with self-talk felt more innovative and not just falling back in to the usual thinking patterns.

IST6	Yes	<p>Firstly, I would make use of social media to create brand awareness. I would use Instagram to take artistic and catchy photos of the different flavors of ice cream, inviting social media influencers to come and create their own signature flavors and advertise this on their pages. I would also make use of colourful and catchy branding to attract attention in the mall. I would include uniquely south african flavors like milk tart or hot cross buns and do "seasonal or festive" themed campaigns like halloween themed flavours in October or christmas themed flavors in December. I would run promotions in conjunction with other stores to promote the brand at a mall level and then promote the store on radio and on youtube, catering for younger generations as well as the more health conscious, by offering sugar free and dairy free options. I would use analytics to understand the foot traffic in the mall at certain times of the week to target marketing and advertising towards this target market accordingly (for example, buy one get one free marketing after 2:30 pm, when school ends and children are likely to be in the mall). I would also engage with restaurants to use my ice cream in their desserts as well as stores to start stocking prepackaged ice creams to increase sales.</p>	<p>I would first establish the demographics of the children in the area. I would then establish the amount of disposable income that parents in the area have in order to gauge how sustainable the offering will be. Given that this is a farming community, I would offer educational toys and books in the store, so that parents would have peace of mind that their children have access to toys that provide more than just entertainment. I would seek to provide cost effective options in my store, so that the shop could cater to everyone's budget. I would promote the store at schools in the area, other shops and even bakeries etc so that when ever someone orders a cake for a birthday, they are presented with an option for gifting as well. I would then engage with local schools to enter into collaborative partnerships, where toys and books can be purchased from my store for donations to the school as well as educational goods as well. I would perform market research to keep abreast of trends in the toy market, so that I can provide customers with current options and provide children in the area with a place where they can find any item they see online. I would also host "fun days" where children can come in once a month and sample and rate new toys, creating a fun atmosphere and outing for children to look forward to. I would do this in conjunction with local bakeries and shops to create something wonderful for the children of the community.</p>	<p>Yes - there is a difference between using self talk and not. I felt that through using self talk, I could clarify my thoughts better. I do believe that the use of self talk also assisted with my understanding of what I was expected to do.</p>	<p>I think self talk had a definite effect on the outcome. I felt that I had performed better when using self talk as hearing the required action in my own voice made the expected performance clearer to me. I also felt that I had a more clear vision of what I wanted to do.</p>
IST7	Yes	<p>Since there is already Haagen Das around the corner and Baglios at the square, and a Wimpy with soft serve very close by... would need to perform a different job, or do the same job very differently....</p> <p>Initial ideas: - Vegan ice cream... need to research TAM - would need alternatives to all the above e.g. 'vanilla' / less expensive option for parents wishing to placate kids - with toppings etc. Upmarket option with great flavours for adults. One ice cream stop for all your ice cream needs... (this could be an idea even without the vegan angle)</p> <p>- AnyTime ice cream: different offerings at different times of the day / for different times - breakfast ice cream - healthy, sugar free with fruit breakfast option - Lunch - on-the-go offer Ice Creams on sticks as well as in in cups with fruit salad more filling as well as refreshing. - home time: packed in ice / mini/ disposable cooler bag to take home to the family without dripping. Can stay in an office / car for a few hours without melting: Test for feasibility.</p>	<p>On the basis of absolutely nothing, I will start with an hypothesis that kids where might want affordable but still aspirational toys...</p> <p>Store would need community support, would involve parents, teachers and communal leaders in early consultations - assuming parents would be the main buyers with kids as key influencers... would need to understand culture there: Do parents buy what kids want or what they think kids need etc...</p> <p>Toys that connect farm kids to other kids in other communities? Give kids that cannot get access to unique social requirements more access ? This might be more internet / tools than toys...</p> <p>Educational toys for young kids if not already available</p> <p>Kids love to imitate their parents : farming toys ? Parents might not want to be imitated - more aspirational toys like doctor / medical sets? Would do customer discovery on this stuff...</p> <p>Place the store somewhere all kids pass on the way home from school. Get into the school with a steady supply of educational toys , books etc that might be hard for the school to source</p>	<p>I felt less under pressure initially with the 2nd one. First time around I felt under more pressure to come up with something and get started immediately. However, by the time I got to the last one I just wanted to get it over with and therefore preferred to start straight away.</p>	<p>Actually I found it very hard to come up with ideas for the pictures by staring at them. Most of my images 'emerged' once I got started. I found it easier to start and then decide what it should become than to try design something up front. I didn't really find the time beforehand helpful.</p>

15T8	No	<p>Firstly i would determine the type of people i would like to have at the store. if it is for children the obvious decorations and ideas would be different. So i would first do a survey. in this survey i would then have a link for the different categories where i would ask different questions relation to if it is for children , tweens, or the adult group. i would also check the international market to see what tourists would like to experience. From there i would determine which type of ice cream store i would have.</p> <p>for example if it was for an adult ice cream store i would have different flavours of ice cream have an ice cream month where the decorations and information about the store is different to the previous month. the decoration would also be related to that flavour. if it is a turkish delight ice cream my decorations would be in line with those colours.</p> <p>I would also make the store open for a longer period of time on the weekends and summer holidays. (Summer is the time when you have to get your most income) Remembering that i would have to compete against some mega brand ice cream stores and also a hotel which makes amazing food. So if for the month i am doing turkish delight i would have the decorations as stated, i would also have the dress up theme for the staff for the weekend only as that is the most popular time with visitors. I would also allow for a starbuck style where they have seating where someone can sit and enjoy the ice cream if they want to. Every weekend i would make a form of a taster for people to try the flavour of the month.</p> <p>I would also look at having ice cream days where people can come and try the ice cream like you have a beer testing, but the hours would be set up in blocks of 2 hours where people can book and come in and have a taste testing day with all the flavours.</p>	<p>As previous stated with the ice cream one i would do a survey. they are the best route to come up with ideas. I would have to remember the clients that i would like to introduce to my store as well as the economical aspect of the area. In the farming community they have children but i would need to be able to market myself to the different age groups. Remembering that in my survey i need to look at the different ages. i must not forget the adults. As they also enjoy their toys- mecano and lego. So my survey will be for parents, children and teens as well as for adults with out kids.</p> <p>The shop must also be able to sustain the different periods when kids are away especially older ones. as they tend to go to boarding schools. The toy store would also have to be in an area which is easily accessible to the community as well have the ability to have fiber for the store for me to mail the community as well as have an area for the client.</p> <p>So once survey is done and the area is picked remembering the economic of the area i would then start on the ideas for the store.</p> <p>Have the usual mailing lists that i would have the people subscribed to so i can send out emails to show then the stores as well as the products and specials.</p> <p>i would have different areas of the store where i can have them spend the day at the store.</p> <p>Have different sections based on ages and allow them to play with the toys. Be able to have an area for birthday parties that the whole family can come and experience- have an outdoor area where they can sit and have something to eat etc.</p> <p>I would then have an area where the teens can go and play the latest games. if it becomes a popular thing i would charge a fee for them to use the area like an internet cafe. All the while remembering that the parents can go have something to eat and drink in the toy store allowing them to also keep an eye on the kids.</p> <p>For the adult section this is usually the more expensive side of the store where more money would be spent. so i would use the information form the survey to have demonstrations and show days of the more adult equipment of toys.</p> <p>I would also hold interactive days where the toy store wont just be toy stores in the usual sense. i would incorporate a science or technology day where there is more scientific and technological</p>	<p>For me personally i try (and i fail at it often) to slow down when it comes to answering things and think it through and self talk in more of the work i do in every day life with my career. For me i found the first section i was more nervous about what i might of interrupt the answer as and thus i was second guessing my ability to answer the question. i do feel that there is a huge difference in the self talk. People don't self talk through things and just do which causes a huge impact on a lot of things. By having the self talk you are able to take the information and read through and answer and bring your thoughts together before answering.</p>	<p>i found for the second round of questions i was a lot calmer in how i looked at the questions and my focus was more clear- i would go with the nerves being the issue but also it could be the fact that i had to realize that i have to listen to my own voice and not worry that the answer would be wrong. I had to answer to how i felt in the picture and my answers for the toy store where different to the first section. The self talk in this exercise was more important to remind me slow down and breath before the answering of things.</p>
15T9	Yes	<ol style="list-style-type: none"> 1. Morden design shop where customers can take trendy photos 2. Bright and colourful display for the flavours on offer 3. Customers should be able to create their own flavour mix 4. Free tasting bay for customers to try out the flavours 5. The store should be automated as much as possible 6. The ingredients shall be locally sources and organic 7. The ingredients should contain as less sugar as possible 8. I would collaborate with Celebrities periodically to make the store trend on social media 9. You want to position the store to be an iconic place 	<p>The toy store should be built to resemble a farm, with different sections representing different farming activities, i.e- the crops section and the live stock section. The majority of toys to be sold should be farming equipment, off-road vehicles, tractors, windmills etc. The store should be perceived not only to be selling toys for kids but it should appeal also to adult farmers. The toy store could also showcase the latest farming technology in the form of toys.</p>	<p>Yes, when I was given prior warning to think greatly about my answer, I tend to overthink the issues and as a result, it took me longer to generate ideas.</p>	<p>Yes, I felt more confident with my first round of tasks because my approach was simplistic, however I felt that in the second round I was over thinking about the task and I was not comfortable with my output.</p>

IST10	No	<p>What does the customer want and need:</p> <ul style="list-style-type: none"> - Need to ascertain which flavours hit the sweet spot: Do A/B testing by introducing and removing new flavours - Have a competition where customer can nominate new flavours <p>Sandton city (pre-COVID pandemic) was visited by international travelers so give them the South African experience AND simultaneously cater for local heritage by introducing local favourites such as melktert, malva pudding etc.</p> <p>Social media presence with influencers - new way to do marketing.</p> <p>Host ice cream making workshops - but unique: Most people do not have the expensive ice cream churners at home so give them the opportunity to come make their own flavours and sell it - to see if their ice cream is a hit</p> <p>Plant based ice-creams (i.e. non dairy)</p> <p>Season flavours (create uniqueness) example pumpkin spice over halloween and it is for a limited time only, "if you snooze you loose".</p> <p>Sustainable freezing of ice cream: Possible to use solar power for cooling mechanisms.</p> <p>Robot which can serve customers autonomously - robot arm which can grab a cone / cup and fill with a soft serve like machine.</p> <p>Smart phone app where customers can interact with the store - voting on flavours, nominate on flavours, loyalty points, payment gateway, order in advance and just pick up, order from the robot.</p>	<p>The Northern Cape farming community is desolated and isolated, with very little customer traffic. A unique value proposition exists as toys from this area can be marketed as authentic and target all customers through nostalgia.</p> <p>This business needs to thrive in a digital space and need to have a very good e-commerce platform / base. The brand will be authentically sourced and produced in the northern cape, but caters for all in South Africa and South African abroad, with nostalgic toys from their youth.</p> <p>Online marketing is to be strong through target market influencers, social media, google ads, etc.</p> <p>Partnership with a logistics company for the distribution network across South Africa.</p> <p>Sell the experience in the region by inviting customers to come visit the store / factory to have their hand at toy making and design, have nostalgic truly South African lunch, and possibly a stay over at a local establishment. Toy design made by customers can be printed with 3D printers in store and some customer designs can be advertised in the app to see if there is a take up.</p> <p>A toy store might sell drones, so deliver high priced items with a drone to certain areas as well.</p> <p>Partner with a restaurant chain to provide them with toys as part of their kids meals - again, being authentic South African. Example Nandos.</p>	<p>Yes: It allows to gather my thoughts and plan a response. The actual execution is then quicker and more targeted, i.e. I knew what I wanted to write / draw so just had to do it.</p>	<p>Yes: Could finish the drawings well in advance of time and a better structured response to the 2nd question.</p>
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